

Dr. Burgess's **ATLAS** of  
MARINE AQUARIUM  
**Fishes**

THIRD EDITION

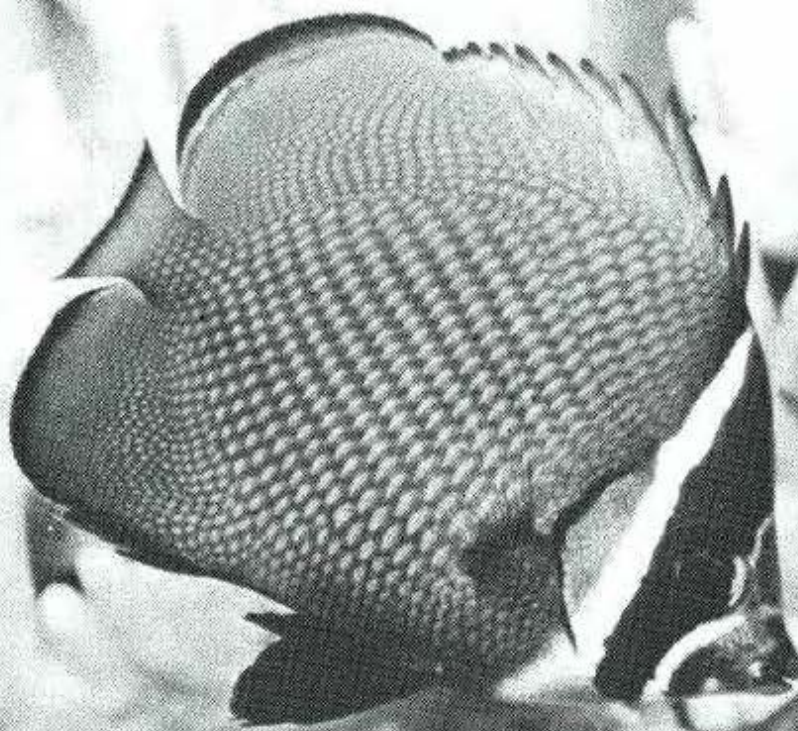


over 4000 fishes illustrated and discussed

Dr. Warren E. Burgess • Dr. Herbert R. Axelrod • Raymond E. Hunziker III

**DR. BURGESS'S**  
**ATLAS**  
**OF**  
**MARINE**  
**AQUARIUM**  
**FISHES**

*Third  
Edition*



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Title page photo of *Chaetodon collare* by K. Paysan.



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## ***Preface to the Third Edition***

As you know, there have been two earlier editions of *Dr. Burgess's Atlas of Marine Aquarium Fishes*, each cast in the same basic mold as regards how the pages—in both the original edition and the supplemental pages that were added to make the second edition—are laid out. In this new edition, we've changed the way the supplemental pages are laid out. Instead of arranging them in the eight-to-the-page format that is now used throughout almost the entire *Atlas*, we have paid attention to the requests of hobbyists who have told us that some of the marine species that are now available are so beautifully colorful (or so odd-looking) that it's a shame to restrict photos of them to the relatively small space that the existing format permits. They've asked us why we don't use bigger photos on the pages added to each new edition, and to be entirely honest we didn't really have any answer other than to say that we've always done it that way.

That's not a very good answer, we know—especially when you consider that T.F.H. Publications has always been in the forefront of changes that result in better ways of doing things. Therefore we're giving up the method we've used traditionally for adding new sections to this book and its companion volume, *Dr. Axelrod's Atlas of Freshwater Aquarium Fishes*, and are using the new photos at a larger size. We are coincidentally changing the format of the captions applied to the new photos in this book to eliminate the symbols and provide the name of the family of each fish right within each caption. Additionally, we're putting the common name for each of the new fishes right within the caption, which for many readers will be a welcome change indeed.

The new pages are at the back of the book on pages 657 through 672, so you won't have any trouble finding them. Additionally, we have indexed them separately from the existing major index, which will make it easier for readers to search for particular species that they know did not appear in the first two editions.

If you get a chance, please let us know whether you approve of the new style for the newly added pages; we'd be glad to hear from you.

## INTRODUCTION

This *Atlas of Marine Fishes* is designed mainly as a pictorial aid for the identification of marine fishes. The thousands of photographs are all that will be needed for most aquarists to identify species that they are keeping in their tanks or that they have seen in their local marine fish store. They will also be able to find for the most part fishes that they are likely to collect along their own shores, including those that occur only in the cooler waters of temperate coasts. Further, many fishes are included that are too big for hobbyists but will be seen in the ever-popular public aquariums where large reef tanks or oceanariums house larger fishes, including sharks. Whenever possible, different aspects of a single species are shown. That is, where juveniles are different from adults or males differ from females, both (or even all three) are shown. Ichthyologists have even been fooled by some species that appear so different as a juvenile or as one or the other sex. This has prompted additional names for fishes that had already been named previously. The name applied to the fishes in these photographs is the name that as far as known is the currently accepted name for the fish and supersedes any name applied to it in our previous publications. The most recent scientific papers and books were used to determine the correct names. However, certain obstacles are always present that prevent identifying some of the species with absolute certainty. First of all, since the fish is represented in a photograph only and not "in the flesh" where some of the diagnostic counts or measurements could be made, educated guesses must be made using what available information there is. This information may be color pattern, geographic locality, or even identifications by a photographer who is knowledgeable in fish systematics and has actually seen the fish itself.

Whenever possible color proofs were sent to experts in the field for identification. Dr. Gerald R. Allen kindly identified members of the family Pomacentridae, Dr. Victor G. Springer did the same for the blennies, Dr. Guido Dingerkus identified the elasmobranchs, Dr. William N. Eschmeyer did the scorpionfishes, Dr. William F. Smith-Vaniz did the carangids and some blennies, and Dr. Douglas Hoese tackled the gobies. Unfortunately, some plates were not available to these experts at the time so these identifications were accomplished to the best of my (W.E.B.) ability and should not reflect on the expertise of these scientists.

The common names applied to these fishes were taken from current scientific literature whenever possible. Unfortunately, in some instances (as also happened in the scientific names) there was disagreement (even by the same author in two papers), so that one or the other name was selected. Space does not permit the inclusion of alternate common names or scientific synonyms.

In keeping with the intent of this book to provide the best means to identify the marine fishes, a section is devoted to presenting an out-

line drawing of a representative of many of the families. As a further aid to aquarists, a short description of the best means of keeping fishes of each family accompanies each drawing. Carrying this one step further, along with the scientific name under each photograph can be seen numerical and pictorial symbols giving a brief account of the species's basic requirements for living, a number indicating the range, and a family number so that each fish can be easily placed in its systematic position. An aquarist recognizing his fish in the photographs can utilize the information in the caption or can refer to the information in the general family care write-ups in the front part of this book. The fishes are presented in systematic order according to Nelson (1984, *Fishes of the World*, John Wiley & Sons, NY), with the cartilaginous fishes first and the plectognaths last.

The range given is approximate. This is partially due to inadequate knowledge of the true range of certain species as well as the limitations dictated by the space available in this book. For example, a species that is found only in the Hawaiian Islands unfortunately must be indicated as a "6" even though Hawaii encompasses only a small portion of the area covered by that number. On the other hand, when a species infringes only a small distance into the adjoining numbered range only the number for the greater area is given. For example, a Caribbean species that occasionally extends its range along the U.S. coastline to, perhaps, the Carolinas, will be indicated only as a "2". A map showing the numbered areas appears on page 23.

The symbols are also approximations. Depicting the type of feeding by a single symbol is virtually impossible. An omnivorous fish that is not particular about its diet should be accorded every feeding symbol. But space limitations force us to indicate only the most likely food(s) of a given fish. It should be remembered that a well-balanced diet is always best.

Like most things, there are sure to be changes, especially in the nomenclature of the fishes. Even so, this book should prove to be the standard for identifying marine aquarium fishes for some time to come.



## AQUARISTIC SECTION

This section is provided as an introductory guide to the maintenance of marine fishes in the aquarium. Habits and requirements are given for each family, or in some cases related groups of families. Included are data such as temperament and compatibility, water conditions, relative hardiness, size, aquascape type, and feeding habits. The family listings (names and numbers) are based on the systematic listing by Nelson (1984), which is found on pages 24-25.

For families that have representatives common in the aquarium hobby, a generalized drawing is included to help with identification. Each drawing immediately precedes the corresponding written entry. After narrowing an unidentified fish down to the family level using these drawings, turning to the pictorial section of the book should give you a good chance of identifying it down to the species level. The selection of families illustrated by drawings may seem somewhat arbitrary, but effort was made to include only those that often appear in pet shops or are commonly collected by hobbyists in coastal areas.

Not all of the families listed here are suitable for home aquaria, and the writeups indicate the reasons why—many are simply too large, others too delicate, others too dangerous! In general, fishes that commonly reach an adult size in excess of a foot or so are suitable only for large public aquaria, and information on many of these species is included for the benefit of such aquaria.

It should be noted that these entries are only generalizations; individual species of some families vary widely with regard to their aquarium care. The butterflyfishes of the family Chaetodontidae are a good example—some species are very hardy, eat almost anything, and are good fishes for the beginner. Others eat only live coral and other hard-to-get items, and these are almost impossible for the average hobbyist to maintain. It is always best to research each individual species, preferably before a specimen is purchased. A good reference for this purpose is *Exotic Marine Fishes* (T.F.H. H-938), as well as much of the scientific literature.

### 1) MYXINIDAE

Hagfishes. Ravenous predators and scavengers, consuming dead and dying fishes. Usually found in groups. Produce large volumes of mucus that may be troublesome in small systems. Not compatible with any other fishes. Dark tank, cool water.

### 2) PETROMYZONTIDAE

Lampreys. Parasitic predators on living fishes. Cool, well-oxygenated water. Not compatible with fishes not intended as prey.

### 4) CHIMAERIDAE

Chimaeras. Cool water, dim light. Foods include benthic invertebrates and fishes. Good aquarium foods include chopped fish, crab, and shrimp. Most are too large for home aquaria, though young specimens are sometimes kept. Compatible with fishes too large to be easy prey.

### 6) CHLAMYDOSELACHIDAE

Filled sharks. Dark, cold tank. Foods include benthic invertebrates and fishes. Too large for home aquaria; rarely kept even by public aquaria.

### 7) HEXANCHIDAE

Sixgill sharks. Dark, cold tank. Sensitive to changes in water conditions. Eat fishes, crabs, shrimp. Will outgrow home aquaria but are unlikely to be seen outside of public aquaria anyway.

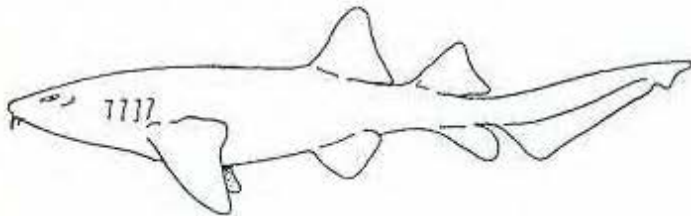


### 8) HETERODONTIDAE

Horn sharks. Relatively inactive, often resting on the bottom. Provide shaded grottos for shelter. Eat fishes, crustaceans. In captivity will accept live goldfish, chopped clam, shrimp, crab. Peaceful with fishes too large to swallow whole. Spines can cause injury; handle with care.

**9) RHINCODONTIDAE**

Whale sharks. Peaceful plankton feeders. Too large for any aquarium.

**10) ORECTOLOBIDAE**

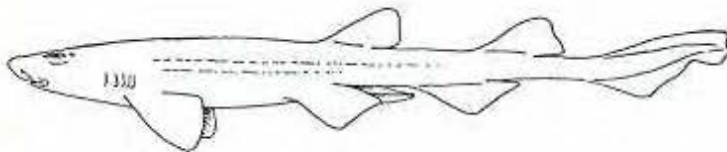
Nurse sharks and relatives. Feed on benthic invertebrates. Good aquarium foods include live goldfish, chopped clam, crab, shrimp. Warm, well-lit tank. Peaceful with fishes too large to swallow, but should not be kept with any invertebrates not intended as food. Active and fast-growing, reaching a large size; large tank necessary. Relatively hardy.

**11) ODONTASPIDAE**

Sand tiger sharks. Aggressive fish eaters. Large tank needed, only suitable for public aquaria.

**12) LAMNIDAE**

Mackerel sharks. Pelagic. Very large, often aggressive. Wide variety in diet within this family; various species feed on plankton, fishes, marine mammals. Not suitable for home aquaria and not yet kept with success in public aquaria.

**13) SCYLIORHINIDAE**

Catsharks. Among the best sharks for home aquaria. Somewhat sensitive to adverse changes in water quality, but otherwise hardy. Many are quite attractive, and many remain moderately small. Goldfish, shrimp or prawn, chopped clam, and beef heart are good foods. Large tanks with caves preferred. Peaceful with most fishes, but may attempt to eat many invertebrates.

**14) CARCHARHINIDAE**

Requiem sharks. Active, aggressive predators with powerful jaws and sharp teeth. Very sensitive and generally make poor captives. Very large tanks with no sharp corners are required; these sharks swim tirelessly. Will eat live or chopped fish as well as squid, shrimp, crab.

**15) SPHYRNIDAE**

Hammerhead sharks. Pelagic, extremely poor survival in captivity. Extended head lobes easily damaged. Very sensitive to any change in water conditions. Fish eaters, will also take squid.

**16) SQUALIDAE**

Dogfish sharks. Fairly hardy in captivity; not terribly prone to disease and not too sensitive to changes in water quality. Venomous dorsal spines in some species; handle with care. Good foods include goldfish or chopped fish, chopped clam, squid, shrimp, crab. Large tanks with no sharp edges and few obstructions. Peaceful with fishes of like size.

**19) PRISTIDAE**

Sawfishes. Very large, and small specimens are fast-growing, thus generally unsuitable for home aquaria but are often kept in public aquaria. Sensitive; "saw" is easily injured. Fish eaters, will accept chopped fish and squid. Soft substrate needed, as these rays will sometimes bury themselves.

**20) TORPEDINIDAE**

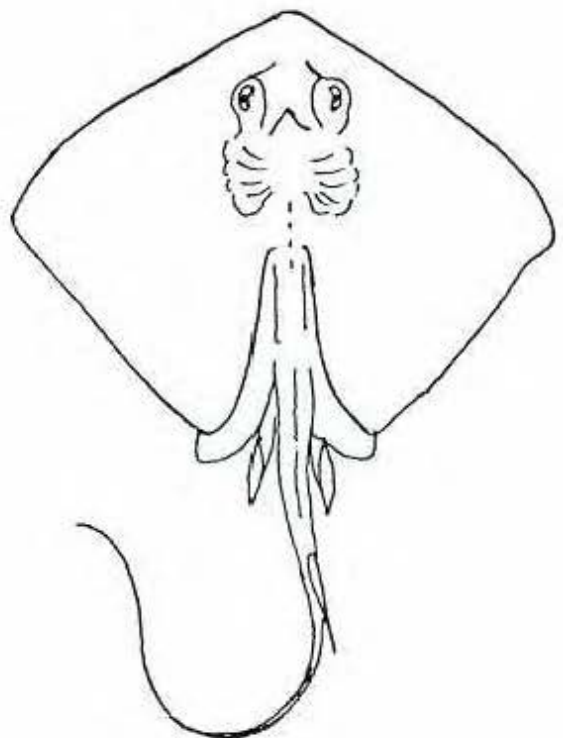
Torpedo rays. Sluggish bottom dwellers and sand burrowers. Not overly sensitive to water quality. Eat small fishes and benthic invertebrates—foods: chopped fish, crab, shrimp, prawn, squid. Electric organs present, which can deliver a startling but sublethal shock.

**21) RHINOBATIDAE**

Guitarfishes. Inactive rays; need soft substrate for burying. Fairly hardy and not disease-prone. Like dim light. Eat mostly benthic invertebrates; almost any crustacean meat and chopped fish will be accepted. Some rather large—big tanks needed. Peaceful with most other fishes.

**22) RAJIDAE**

Skates. Bottom dwellers, need soft sand for burying themselves. Eat shellfish and crustaceans; good foods include crab, shrimp, prawn, chopped clam, squid. Peaceful with other fishes. Large tanks necessary—many grow large. Fairly hardy and not too sensitive to changes in water quality.

**23) DASYATIDAE**

Stingrays. Bottom dwellers, need soft substrate. Most grow very large and require big tanks. Barbed tail spine is dangerous—handle with extreme care. Will eat most meaty foods and will devour any tankmate small enough to swallow.

**26) MYLIOBATIDAE**

Eagle rays. Pelagic, often schooling. Unsuitable for all but the largest public aquaria. Foods include most shellfish and crustaceans. Warm water, very sensitive to any change in water quality. Venomous tail spines present.

**27) MOBULIDAE**

Mantas. Huge, plankton-eating pelagic rays. Very peaceful. Very sensitive, not suitable for aquaria.

**31) LATIMERIIDAE**

Coelacanth. Never kept in aquaria. Dim light preferred. Eats fishes, crustaceans.

**43) ELOPIDAE**

Ladyfishes. Fast-moving schooling fishes. Large, spacious aquaria needed. Warm water, eat crustaceans and small fishes. Peaceful. Somewhat sensitive in captivity.

**44) MEGALOPIDAE**

Tarpons. Very active; brightly lit large tanks with no obstructions needed. Eat any fishes small enough to swallow. Hardy and long-lived. Peaceful with fishes of like size. Very large; large tanks needed.

**45) ALBULIDAE**

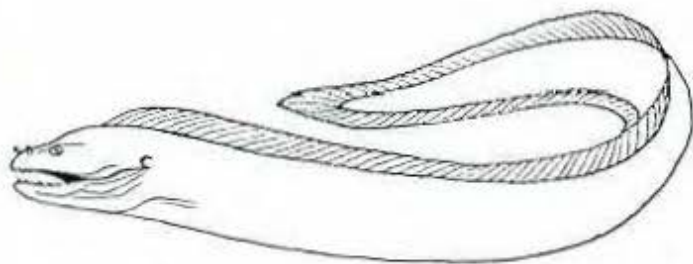
Bonefish. Large and spacious aquaria needed. Soft substrate a must; bonefish root about for benthic invertebrates. Foods: shrimp, crab, chopped clam, small live feeder fish. Peaceful, but very nervous and sensitive to the slightest environmental change.

**49) ANGUILLIDAE**

Eels. Very hardy, not disease prone. Will eat anything remotely edible. Relatively peaceful with fishes too large to swallow. Relish many invertebrates, however. Grow very quickly and will outgrow many home aquaria. Not sensitive to water quality, and can withstand any salinity from freshwater to full marine.

**51) MORINGUIDAE**

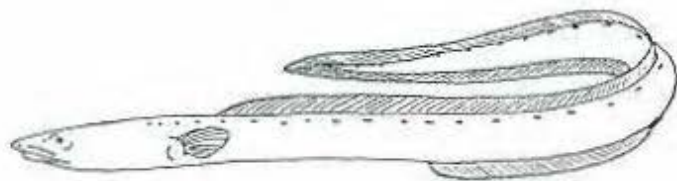
Small, wormlike burrowing eels. Feed mostly on worms and small crustaceans. Delicate; rarely seen in captivity.

**54) MURAENIDAE**

Moray eels. Large, with powerful jaws and teeth. Can bite; handle with care. Warm water. Hardy, not disease prone. Large tanks needed for most species. Will eat any fishes or crustaceans that can be captured, but generally peaceful with larger fishes. Foods: goldfish, chopped fish, scallops, shrimp, crab, squid. Provide caves and rockwork for shelter.

**58) OPHICHTHIDAE**

Snake eels. Large but shy than morays. Many burrow; provide soft sand or fine gravel. Peaceful but may eat small fishes. Primarily crustacean and mollusc eaters. Very hardy.

**62) CONGRIDAE**

Conger eels. Large, active, aggressive. Provide rockwork for shelter. Mainly fish eaters. Good foods for captives include feeder fish, chopped fish, scallops, clam, shrimp, squid. Large tanks necessary.

**69) CLUPEIDAE**

Herrings. Active schooling fishes. Keep in large groups in large, spacious tank. Delicate scales and fins easily damaged. Very disease prone. Eat mostly planktonic crustaceans—live brine shrimp is a good substitute for captives. Peaceful.

**70) ENGRAULIDAE**

Anchovies. Pelagic schooling fishes, need to be kept in large groups in large tanks. Delicate and easily stressed; difficult to keep. Eat planktonic crustaceans; feed live brine shrimp. Peaceful.

**72) CHANIDAE**

Milkfish. Large and active, do not take well to aquaria. Feed on crustaceans, small fishes, algae.

**137) OSMERIDAE**

Smelts. Large schools, large tanks. Delicate and disease prone. Will eat small fishes or chopped fish or crustacean meat.

**139) SALANGIDAE**

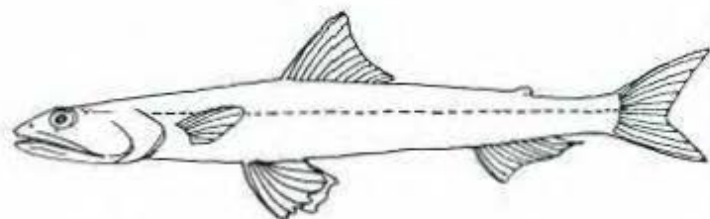
Lancelike smelt allies. Delicate in captivity. Large schools, large tanks. Eat planktonic crustaceans.

**144) GONSTOMATIDAE, 147) CHAULINODONTIDAE, 148) STOMIIDAE, 150) MELANOSTOMIIDAE**

Viperfishes, dragonfishes, and allies. Deepsea fishes. Toothy predators. Because of need for darkness, cold, and pressure, never kept in captivity.

**153) AULOPIDIDAE**

Benthic predators similar to lizardfishes. Will eat all fishes small enough to swallow; may attack larger ones. Also eat crustaceans. Good foods for captives include chopped fish and shrimp. Large tanks necessary for many species.

**157) SYNODONTIDAE**

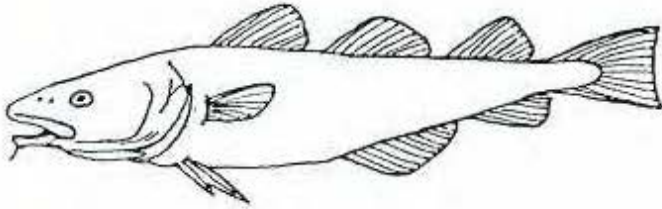
Lizardfishes. Benthic predators, often lie partly buried in soft sand. Very aggressive; will eat most fish and crustaceans. Live fish and shrimp preferred as food—will rarely accept nonliving foods. Very delicate and subject to transport shock—acclimate as gently as possible. Water quality must be excellent.

**163) ALEPISAUROIDAE**

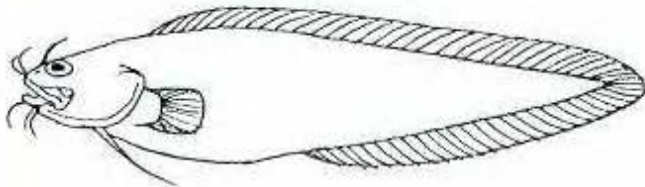
Lancetfishes. Pelagic predators. Rarely kept even in public aquaria and unlikely to adapt to captivity.

**166) MYCTOPHIDAE**

Lanternfishes. Bioluminescent midwater fishes; superficially sardine-like. Very delicate; sensitive to water quality and rather disease prone. Plankton feeders—live brine shrimp is a good substitute.

**171) MORIDAE, 174) GADIDAE, 176) MACROURIDAE**

Codfishes and allies. Mostly coldwater, often deepwater, often large. Spacious tanks required. Groups preferred. Foods: fish, crustaceans. Most somewhat delicate but some are kept in public aquaria.

**177) OPHIDIIDAE**

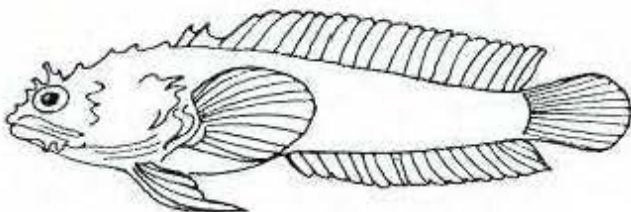
Cusk eels and brotulids. Usually sluggish bottom dwellers. Food mostly benthic invertebrates; feed shrimp, crab, chopped clam, squid. Dim tank with caves and other hollows preferred. Usually peaceful with fishes too large to swallow.

**178) CARAPIDAE**

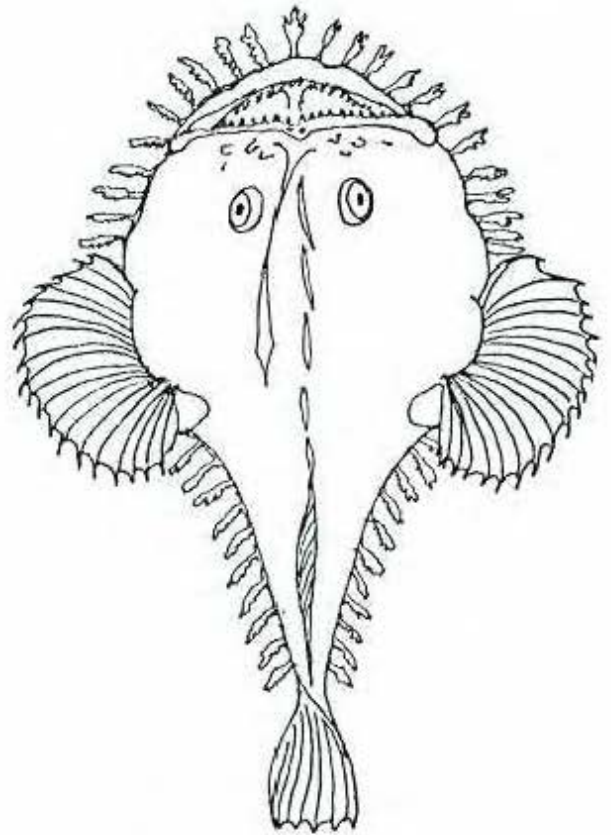
Pearlfishes. Inhabit body cavities of sea cucumbers and sometimes molluscs. Emerge to feed on small invertebrates; good foods would be brine shrimp, bloodworms, glassworms. Peaceful but delicate and shy.

**179) BYTHITIDAE**

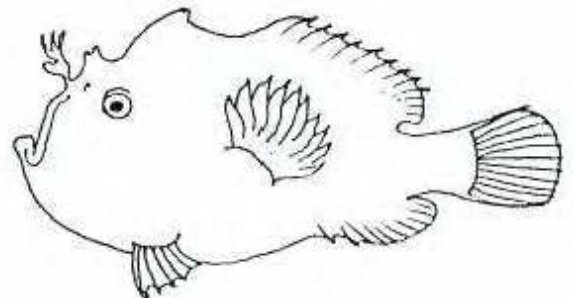
Livebearing brotulas. Benthic; peaceful; fairly hardy. Will eat chopped clam, shrimp, bloodworms, brine shrimp, prepared foods. Dim tank with hollows.

**181) BATRACHOIDIDAE**

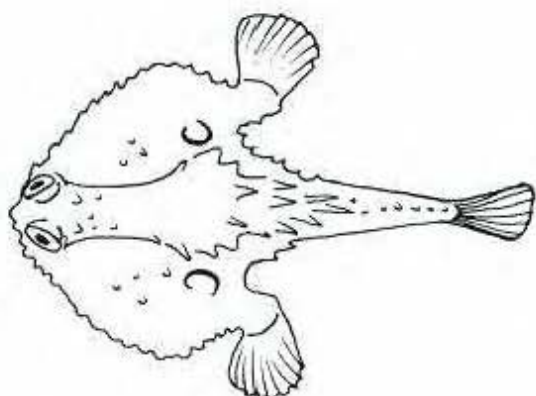
Toadfishes. Big-headed benthic predators; will eat anything that can be swallowed. Large teeth and strong jaws—handle with care. Especially fond of crustaceans and molluscs. Like hollows, but place decor with care, as toadfishes like to dig and may undermine decorations.

**182) LOPHIIDAE**

Goosefishes. Large, toothy anglerfishes—handle with care. Will eat anything—no compatible tankmates. Very large. Need soft substrate. Not too sensitive to water quality variations.

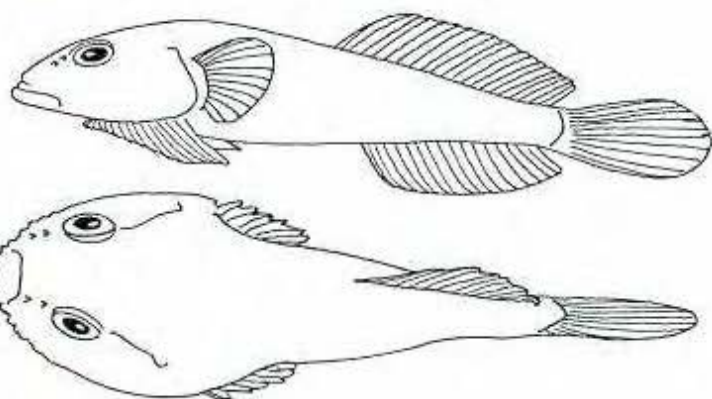
**183) ANTENNARIIDAE**

Frogfishes. Lethargic benthic anglerfishes that lure and ambush passing fishes. Can swallow prey nearly as large as themselves. Cannibalistic. Hardy, but prone to hunger strikes if overfed. Provide coral ledges for perching.



### 186) OGCOEPHALIDAE

Battfishes. Slow moving, benthic. Very peaceful and shy. Food mostly small crustaceans and polychaete worms but also "angle" for small fishes. Many refuse to feed in captivity, but sometimes live brine shrimp or glass shrimp will be accepted. Cannot compete with faster-moving fishes. Dim tank with soft substrate preferred.



### 198) GOBIESOCIDAE

Clingfishes. Benthic. Very hardy. Very tolerant of water quality changes; very resistant to disease. Generally peaceful, but very small fishes may be eaten. Often become tame. Foods: prawn, brine shrimp, bloodworms, chopped clam, chopped squid.

### 200) EXOCOETIDAE

Flyingfishes. Not easily confined, but small specimens sometimes adapt to aquaria. Jumpers; keep tank tightly covered. Peaceful, but will eat small fishes. Wide, shallow tank without obstructions. Feed bloodworms, brine shrimp, glassworms, flake foods.

### 201) HEMIRAMPHIDAE, 202) BELONIDAE

Halfbeaks and needlefishes. Swift surface predators. Good jumpers. Very delicate and prone to capture and transport shock. Elongate bills easily damaged. Very nervous and prone to panic in aquaria. Round tanks with no sharp corners preferable.

### 213) ATHERINIDAE, 214) ISONIDAE

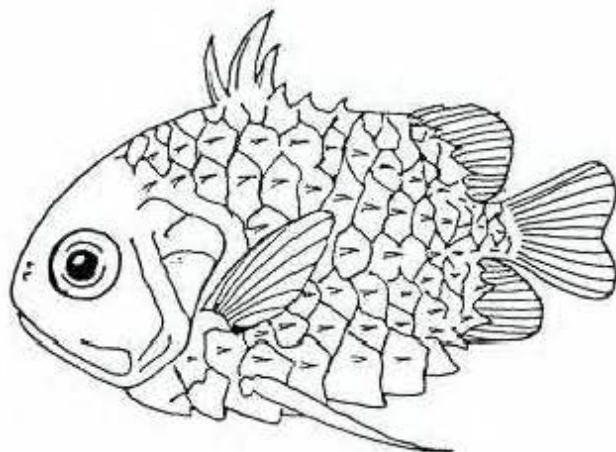
Silversides and relatives. Surface-to-midwater planktivores. Large schools preferred. Large, spacious tanks needed. Very sensitive to any change in water quality. Deciduous scales easily damaged. Very prone to fungus. Easily killed by transport shock. Foods: brine shrimp, bloodworms, glassworms.

### 218) LAMPRIDIDAE

Opahs. Warmwater, very large. Feed mostly on small fishes. Poorly known.

### 223) REGALECIDAE

Oarfishes. Elongate, very delicate. Feed on small fishes and planktonic invertebrates. Never kept.

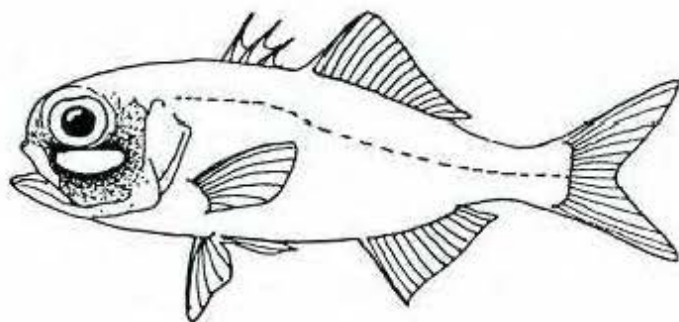


### 229) MONOCENTRIDIDAE

Pinecone fishes. Warmwater, very slow, peaceful, and shy. Rather sensitive to water quality. Possess bioluminescent organs; prefer dim tank. Feed mostly on small crustaceans, but often refuse to feed in captivity. Try live brine shrimp, live glass shrimp, bloodworms, glassworms.

### 230) TRACHICHTHYIDAE

Slimeheads. Similar to squirrelfishes; nocturnal predators. Generally peaceful but may eat small fish and crustaceans. Hardy. May be aggressive with conspecifics.

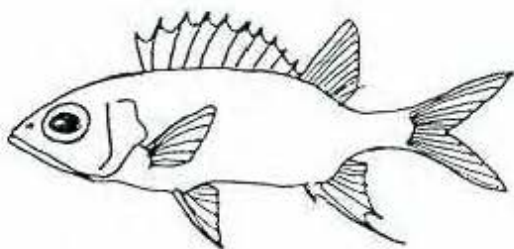


### 231) ANOMALOPIDAE

Flashlight fishes. Possess bioluminescent organs; dim tank. Prefer to be kept in groups. Not overly sensitive. Feed on small crustaceans, fishes. Peaceful. Feed guppies, brine shrimp, bloodworms, prepared foods.

### 234) BERYCIDAE

Alfonsinos. Squirrelfish-like. Peaceful but will eat small fishes and crustaceans. Foods: guppies, brine shrimp, prepared foods. Hardy.



### 235) HOLOCENTRIDAE

Squirrelfishes. Generally peaceful, but will eat small fishes and crustaceans. Nocturnal; provide shaded hollows. Very hardy and tolerant of water quality variations. Most species school. Some become quite large. Foods: small feeder fishes, chopped clam, prawn, brine shrimp, bloodworms, all prepared foods.

### 236) POLYMIXIIDAE

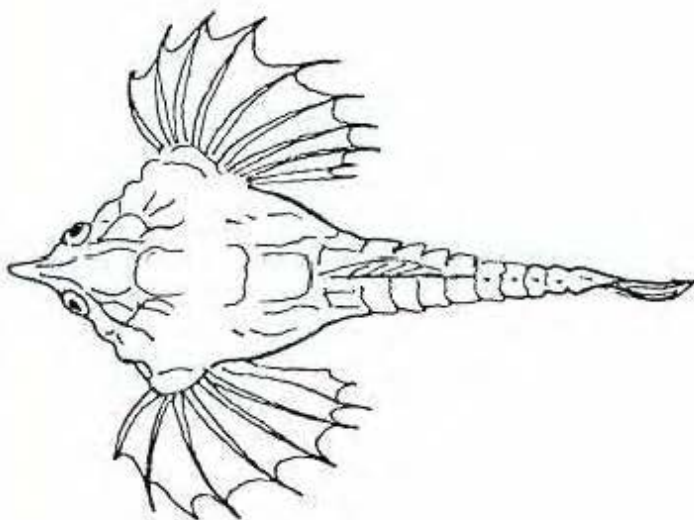
Beardfishes. Generally similar to squirrelfishes in temperament and care.

### 244) MACRUROCYTTIDAE, 245) ZEIDAE, 248) CA-PROIDAE

Dories, boarfishes, and allies. Rarely seen in aquaria, but are fairly hardy. Many grow quite large. Feed on fishes and crustaceans but are usually peaceful with tankmates too large to swallow.

### 250) AULORHYNCHIDAE, 251) GASTEROSTEIDAE

Tubesnouts and sticklebacks. Often coolwater fishes. Very easy to keep but are territorial and fight viciously with conspecifics if crowded. Peaceful with other species. Hardy. Very tolerant of salinity variations; many species can stand fresh water. Planted tank. Foods: Brine shrimp, bloodworms, glassworms, prepared foods.



### 253) PEGASIDAE

Sea moths. Slow-moving bottom fishes. Peaceful, not competitive; do not keep with swifter fishes. Not disease prone, but often difficult to feed. Prefer small living invertebrates; try brine shrimp, bloodworms.

### 254) AULOSTOMIDAE, 255) FISTULARIDAE

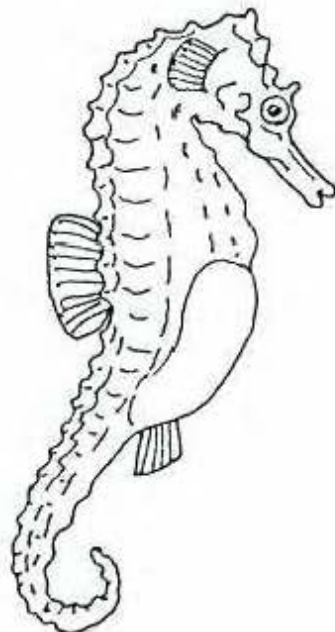
Trumpetfishes and cornetfishes. Generally warmwater. Fairly hardy. Ambush predators. Prefer planted tank for hiding. Eat small fishes, crustaceans; feed guppies, goldfish, prawn.

### 256) MACRORHAMPHOSIDAE, 257) CENTRISCIDAE

Snipefishes and shrimpfishes. Armored but slow and shy. Do not compete well with other species. Not prone to disease, but sometimes difficult to feed. Eat mostly small invertebrates; try live brine shrimp, bloodworms, glassworms.

### 258) SOLENOSTOMIDAE

Ghost pipefishes. Habits and care same as family Syngnathidae.

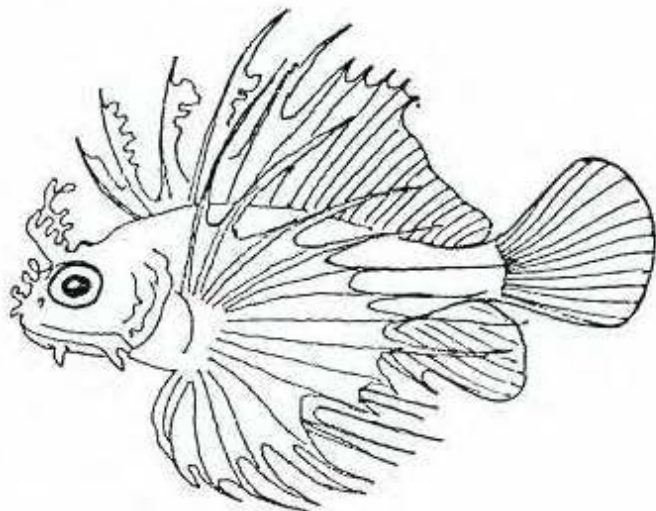


### 259) SYNGNATHIDAE

Seahorses and pipefishes. Very slow and shy—do not keep with competitive species. Have bred in aquaria. Branched corals, sea fans, plants needed for shelter or anchorage. Not disease prone but very sensitive to any decline in water quality. Sometimes difficult to feed, as tubular mouths accommodate only tiny foods, like brine shrimp, bloodworms, glassworms, livebearer fry.

### 260) DACTYLOPTERIDAE

Flying gurnards. Benthic; generally peaceful. Large pectoral fins easily damaged—transport with care. Eat mostly bottom invertebrates, small fishes. Hardy.



**262) SCORPAENIDAE**

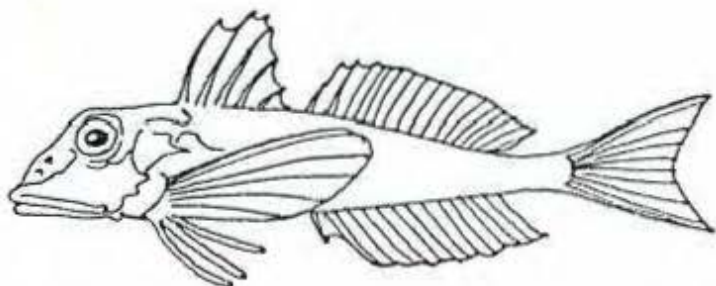
Scorpionfishes. Venomous; handle with extreme care. Usually very hardy; not sensitive to water variations, not disease prone. Can swallow fishes nearly their own size, but peaceful with fishes too large to eat. Prefer coral-aquascaped tanks with ledges and caves. Many grow large. Foods: goldfish, prawn.

**263) SYNANCEIIDAE**

Stonfishes. Similar in care to scorpionfishes, but venom is deadly to humans. Best not kept at all!

**264) CARACANTHIDAE, 265) APLOACTINIDAE, 266) PATAECIDAE**

Velvetfishes. Benthic. Generally peaceful and small. Good for reef tanks, as plants and invertebrates supply good camouflage. Feed small feeder fishes, prawn. Generally hardy but uncommon in captivity.

**268) TRIGLIDAE**

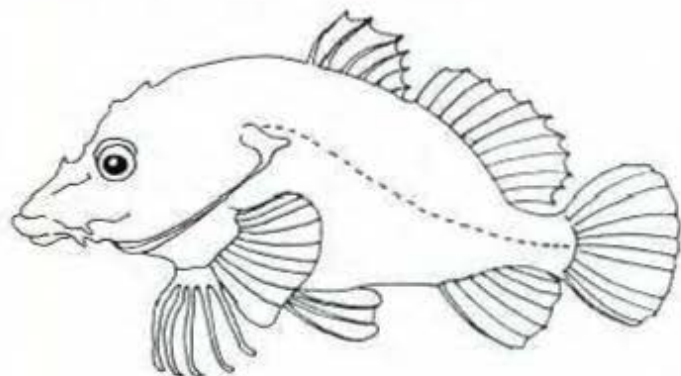
Searobins. Active benthic predators. Like a fairly open substrate area on which to "crawl" around. Spiny but nonvenomous. Will eat anything that can be swallowed. Sometimes aggressive with conspecifics. Very hardy.

**269) PLATYCEPHALIDAE**

Flatheads. Similar in care to searobins.

**271) ANOPILOPOMATIDAE,****272) HEXAGRAMMIDAE**

Sablefishes and greenlings. Large, midwater or benthic. Often cold-water species that require large tanks. Feed mostly on crustaceans, molluscs, fishes; good captive foods include chopped fish or clam, shrimp, crab, squid. Rocky tanks with plants.

**276) COTTIDAE**

Sculpins. Generally small (but there are exceptions), very territorial with conspecifics but relatively peaceful with other species. Spiny; handle with care. Usually very tolerant of environmental variations, and many are very adaptable to salinity changes. Like plenty of hiding places and a cool, dim tank. Will eat small fishes and invertebrates; good foods include guppies or goldfish, brine shrimp, bloodworms, glassworms, chopped clam, prawn.

**280) AGONIDAE**

Poachers. Coldwater, benthic. Peaceful. Sensitive to variations in water quality. Generally eat small invertebrates: try brine shrimp, bloodworms, glassworms, small prepared foods.

**281) CYCLOPTERIDAE**

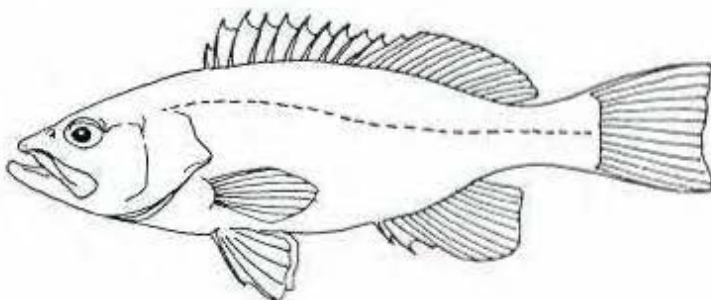
Lumpfishes and snailfishes. Benthic, coldwater. Need water that is heavily aerated. Some rather large. Very hardy; few disease problems. Peaceful with anything too large to swallow. Foods: chunks of clam, squid, shrimp, crab, also brine shrimp and bloodworms for smaller species.

**282) CENTROPOMIDAE**

Snooks. Large shallow water, estuarine predators; too big for most tanks. Require plenty of open swimming room. Eat mostly live fishes but may accept chunks of fish, mollusc, crustacean meats. Fairly tolerant of salinity variations. Fairly hardy. Related family (Ambassidae—often considered subfamily of Centropomidae) includes the small, planktivorous glassfishes, which are peaceful and harmless.

**283) PERCICHTHYIDAE**

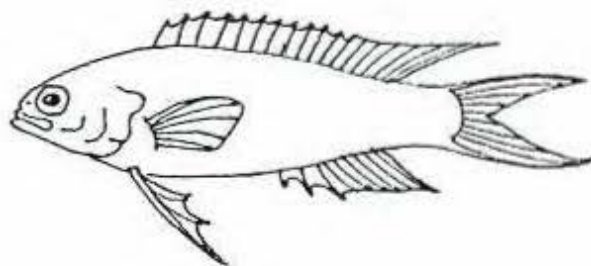
Temperate basses. Very large, generally suitable only for large public aquaria. Very active fish eaters. Sensitive to water quality fluctuations.

**284) SERRANIDAE**

Groupers and sea basses. Large-mouthed predators, often aggressive with conspecifics but peaceful with other fishes if they cannot be swallowed. Will eat crustaceans and some molluscs but leave most other invertebrates alone. Like to dig in bottom substrate. Coral aquascape with shadowy grottos preferred. Many very large when full-grown. Foods: feeder fishes, chopped clam, squid, shrimp, crab. Very hardy.

**285) GRAMMISTIDAE**

Soapfishes. Peaceful but will eat small fishes. Hardy, disease resistant. However, when stressed or attacked, may release a toxic mucus that can kill tankmates. Shy; coral caves preferred. Often tame easily. All foods accepted.



**286) PSEUDOCROMIDAE, 287) GRAMMIDAE**

Dottybacks and basslets respectively. Mostly tropical. Small, peaceful grouper-like fishes, generally do not bother fish or invertebrate tankmates. May be aggressive with conspecifics, however. Prefer heavily aquascaped tanks with lots of hiding places. Good in reef aquaria. Most are hardy fishes. Small foods: brine shrimp, bloodworms, glassworms, small slivers of chopped clam or shrimp. Most will learn to take flake foods and other prepared diets.

**288) PLESIOPIDAE**

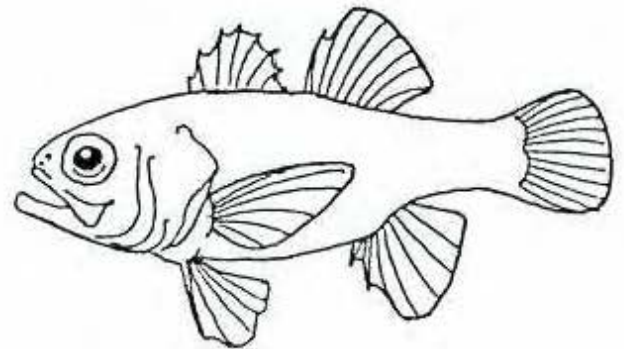
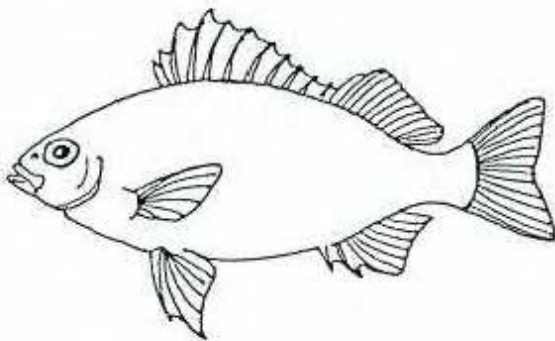
Devilfishes or roundheads. Shy at first, but very hardy. Like shadowy grottos. May be aggressive with conspecifics. Usually slow to feed at first—start with live guppies and wean over to brine shrimp, prawn, chopped clam, prepared foods. Very disease resistant.

**289) ACANTHOCLINIDAE**

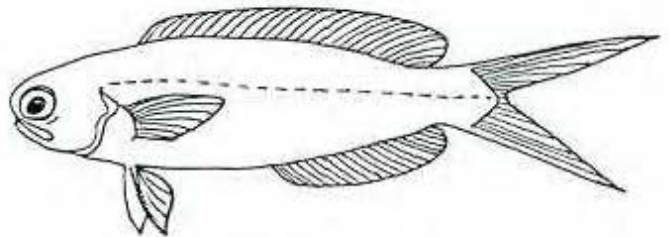
Habits and care as for dottybacks (Pseudochromidae).

**290) GLAUCOSOMATIDAE**

Similar to serranids in appearance, habits, and care.

**297) APOGONIDAE**

Cardinalfishes. Most small and peaceful. Good for reef tanks. Somewhat light-shy. Many are schooling fishes. Have spawned in aquaria. Mostly tropical temperatures. Hardy and resistant to disease and water quality variations. Foods: brine shrimp, bloodworms, glassworms, chopped clam, shrimp. Large species will accept small guppies.

**291) TERAPONIDAE, 293) KUHLIIDAE**

Grunters and aholeholes. Schools preferred. Large, spacious aquaria. Very hardy; not prone to disease; very tolerant of water quality fluctuations. Wide salinity tolerance. Foods: brine shrimp, bloodworms, prawn, all prepared foods, feeder fishes.

**299) SILLAGINIDAE, 300) MALACANTHIDAE**

Smelt-whitings and tilefishes. Most aquarium species are small, colorful, and shy. Feed mostly on small invertebrates. Good for reef aquaria. Often feed poorly, but good foods would include live brine shrimp, bloodworms, glassworms, chopped clam. They are very sensitive to any fluctuation in water quality. Prone to transport shock; acclimate with care.

**301) LABRACOGLOSSIDAE, 302) LACTARIIDAE**

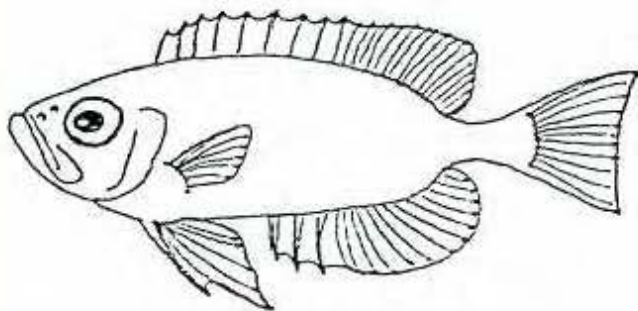
False trevallies and relatives. Midwater schooling fishes; large spacious tank needed. Feed mostly on small fishes; incompatible with smaller fishes.

**303) POMATOMIDAE**

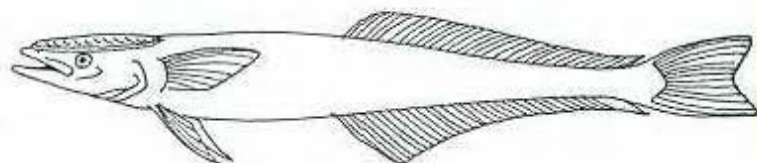
Bluefishes. Ravenous schooling predators; incompatible with all other species. Very large tanks needed. Fairly hardy. Wide salinity tolerance.

**304) RACHYCENTRIDAE**

Cobia. Active, very large. Feed on fishes and crustaceans, so incompatible with most other species.

**296) PRIACANTHIDAE**

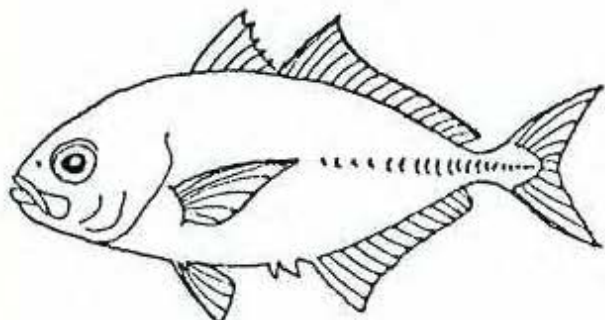
Bigeyes. Nocturnal predators, peaceful and shy with all they cannot swallow. Prefer dark overhangs and grottos in their tanks. Hardy, but some too large for average home aquaria.





**305) ECHENEIDIDAE**

Remoras. Very hardy in aquaria. May attach to larger fishes with sucker disc (for transport only; no injury is involved). However, this does annoy some fishes. Best hosts are sharks. Live, frozen, prepared foods accepted with gusto.

**306) CARANGIDAE**

Jacks. Fast-moving schooling fishes. Fairly hardy but require large tanks. Somewhat prone to transport shock. Many species have wide salinity tolerance. Will eat small fishes but are usually peaceful with those of like size. Foods: fish, chopped clam, prawn, squid.

**307) NEMATISTIIDAE**

Roosterfish. Care similar to Carangidae.

**308) CORYPHAENIDAE**

Dolphinfishes. Young specimens sometimes kept but are delicate; feed brine shrimp, bloodworms. Adults are swift, pelagic—not suitable for any but large public aquaria.

**309) APOLECTIDAE**

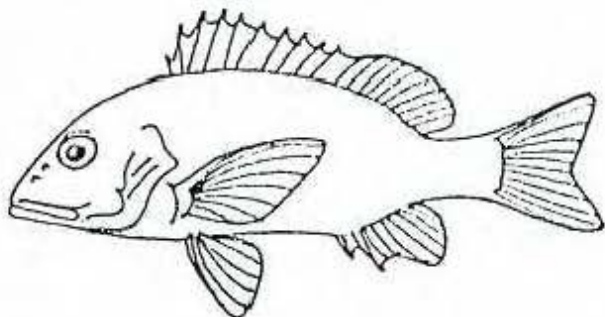
Habits and care similar to Carangidae.

**310) MENIDAE, 311) LEIOGNATHIDAE, 312) BRAMIDAE**

Moonfish, slipmouths, pomfrets, respectively. Mostly oceanic schooling fishes. Peaceful but active; spacious tanks necessary. Sensitive to fluctuations in water quality. Foods: small fishes, brine shrimp, bloodworms, squid, chopped clam.

**314) ARRIPIDAE**

Australian salmon. Midwater schoolers feeding on small fishes. Cool water, large tanks. Hardy but seldom seen.

**315) EMMELICHTHYIDAE, 316) LUTJANIDAE, 317) CAESIONIDAE**

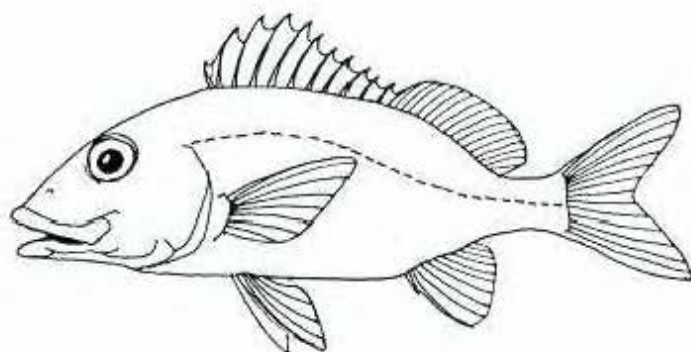
Rovers, snappers, fusiliers, respectively. Bottom to midwater schooling fishes. Very hardy, not prone to disease. Not sensitive to water quality fluctuations, and many species are euryhaline. Peaceful with fishes too large to swallow. Many species grow large and need big tanks. Coral/rock aquascape. All foods accepted.

**318) LOBOTIDAE**

Tripletails. Very hardy, euryhaline. Young specimens need planted tanks for camouflage. Peaceful with large fishes, will eat small ones. Most grow large but are fairly sedentary; provide caves for shelter.

**319) GERREIDAE**

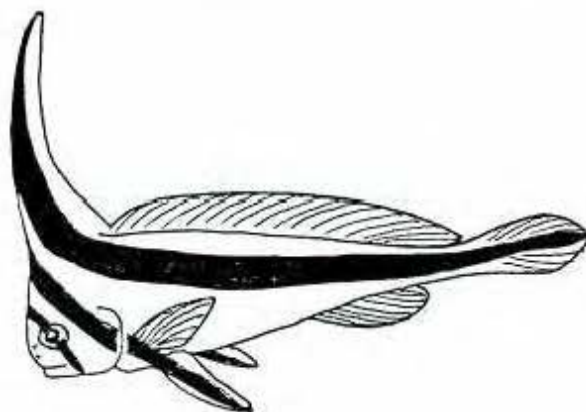
Mojarras. Small, active schooling fishes. Peaceful, relatively hardy, euryhaline. Need plenty of open swimming room. Feed on planktonic crustaceans—live brine shrimp is a good substitute.

**320) HAEMULIDAE, 321) INERMIIDAE, 322) SPARIDAE**

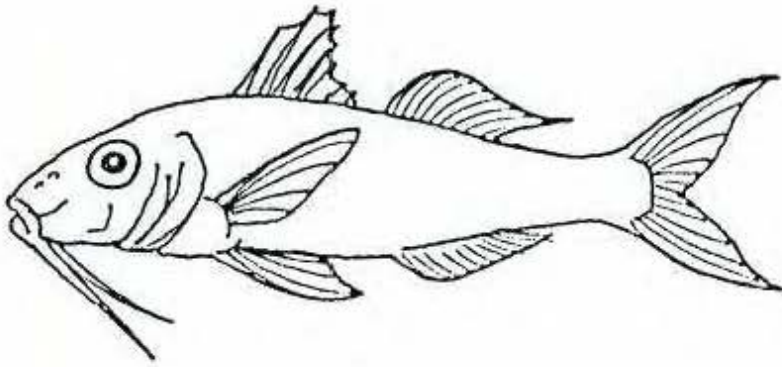
Grunts, bonnetmouths, porgies, respectively. Generally, snapper-like fishes. Midwater- to bottom-schoolers. Very hardy; disease resistant; tolerant of variations in water quality. Coral/rock/plant aquascapes. Often aggressive. All foods taken, but many species also graze on algae.

**324) LETHRINIDAE, 325) NEMIPTERIDAE**

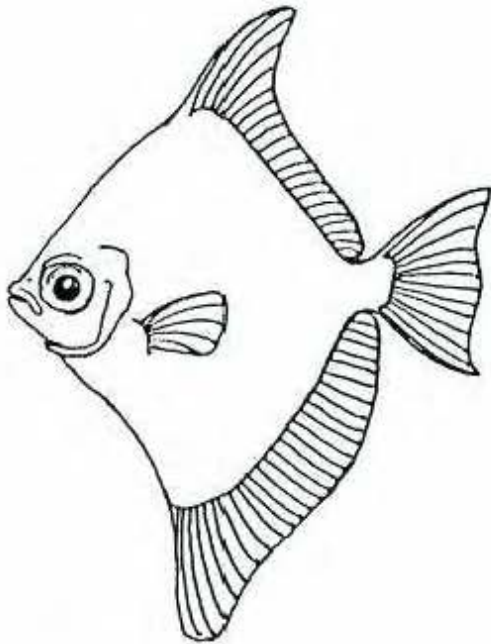
Emperors and threadfin breams. Similar in appearance, behavior, and requirements to snappers.

**326) SCIAENIDAE**

Drums. Bottom dwellers feeding on benthic invertebrates. Fairly hardy, but tropical species are prone to *Cryptocaryon* infection. Most species (except the very largest) are peaceful and shy. Coral/rock aquascape. Prefer groups of same species. Foods: brine shrimp, bloodworms, glassworms, chopped clam, frozen prepared foods.

**327) MULLIDAE**

Goatfishes. Use barbels to find benthic invertebrates. Excellent scavengers. Hardy when acclimated, but very prone to transport shock. Peaceful. Soft substrate preferable. Foods: chopped clam, prawn, crab, brine shrimp, bloodworms, all prepared foods.

**328) MONODACTYLIDAE**

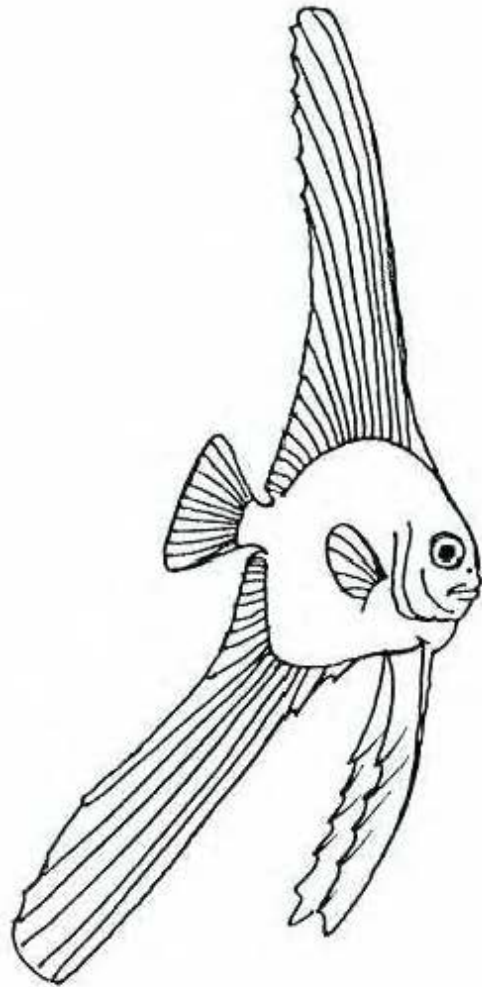
Monos. Brackish to marine. Planted aquaria, roots and rocks as decorations. Prefer groups of same species, but tend to be scrappy. Generally peaceful with other species. Not overly sensitive to water quality, but prone to ich. Foods: bloodworms, brine shrimp, glassworms, prepared foods.

**329) PEMPHERIDIDAE**

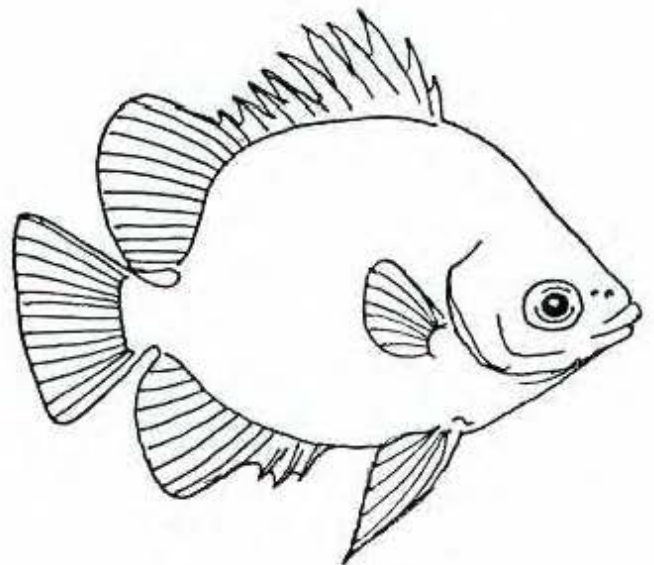
Sweepers. Small fishes, school in massive shoals in open water adjoining reefs; large tanks necessary. Very delicate and sensitive; not often seen in the hobby. Feed on planktonic invertebrates—try brine shrimp and bloodworms.

**334) KYPHOSIDAE**

Sea chubs. Open-water schoolers; large tanks. Often reach a large size. Very hardy. Peaceful but will eat small fishes. Algae necessary in diet. Other foods include clam, squid, crab, prawn.

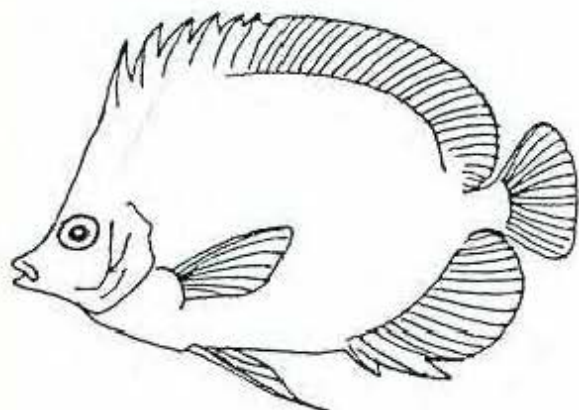
**335) EHIPPIDIDAE**

Spadefishes and battfishes. Very hardy (with the exception of *Platax pinnatus*) but grow quite large. Very peaceful. Young prefer plant thickets for camouflage. Need very deep tanks. Coral/rock aquascape for mature specimens. All foods taken vigorously.

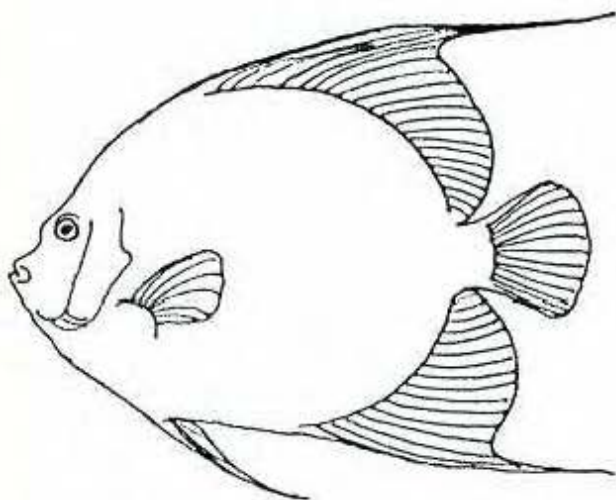


**336) SCATOPHAGIDAE**

Scats. Brackish to marine; very hardy but prone to lymphocystis. Not overly aggressive but sometimes nip at fins. Prefer schools but are often scrappy with conspecifics. Algae necessary in diet. Other foods: brine shrimp, bloodworms, prepared foods.

**338) CHAETODONTIDAE**

Butterflyfishes. Very beautiful reef fishes. Of variable hardness. Some feed only on live corals and are almost impossible to keep alive in captivity. Most are sensitive to any change in water quality, and some are fairly disease-prone. Butterflyfishes are very peaceful with other species but may be aggressive with conspecifics, except for mated pairs collected together. Foods: brine shrimp, bloodworms, glassworms, chopped clam, frozen prepared foods.

**339) POMACANTHIDAE**

Angelfishes. Hardy with relatively few exceptions. Not sensitive to most variations in water quality, but some suffer in the presence of high nitrates. Most are fairly disease-resistant but some species are prone to lymphocystis. Generally peaceful, but large specimens are often dominant fishes. Often aggressive with conspecifics. Coral/rock aquascape with lots of nooks will partition territories. Algae very necessary in diet. Other foods: brine shrimp, bloodworms, glassworms, chopped clam, prawn, boiled spinach.

**340) ENOPLSIDAE**

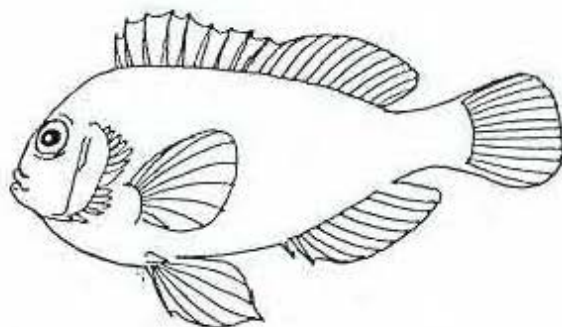
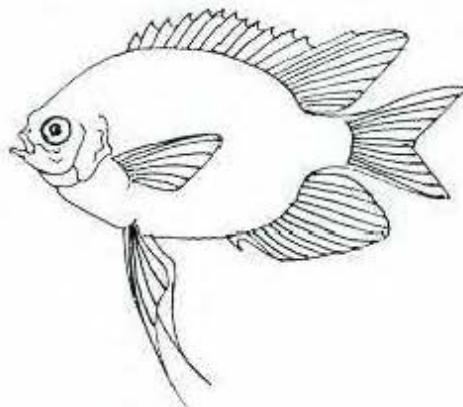
Oldwife. Hardy, accepts all foods.

**343) OPLEGNATHIDAE**

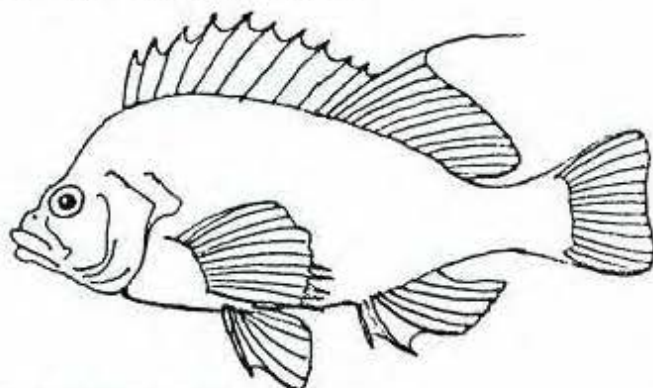
Knifejaws. Peaceful but may eat small fishes. Will consume most crustaceans and many molluscs. Coral/rock aquascape. Foods: shrimp, crab, chopped clam.

**345) EMBIOTOCIDAE**

Surfperches. Most need cool aquaria, but are otherwise hardy. Some reach a large size. Livebearers. Peaceful but will eat small fishes. Algae necessary in diet. Rock/plant aquascape.

**346) POMACENTRIDAE**

Damselfishes (including anemonefishes). Very hardy and resistant to disease. Very scrappy with conspecifics, and very territorial in relations with other species. Lots of coral decorations will help to break up territories. Among the easiest of marine fishes to breed; they are parental-guarding substrate spawners. Anything edible will be accepted. Algae is also welcome.

**348) CIRRHITIDAE**

Hawkfishes. Benthic predators. Like high coral heads as "perches" and vantage points. Some species grow rather large. Peaceful, extremely hardy. Coral/rock aquascape. Foods: guppies, bloodworms, brine shrimp, chopped clam, prepared foods.

**350) APLODACTYLIDAE, 351) CHILODACTYLIDAE, 352) LATRIDIDAE**

Morwongs and relatives. Generally similar to hawkfishes in habits and care, but most are somewhat larger.

**353) OWSTONIIDAE, 354) CEPOLIDAE**

Owstoniids and bandfishes. Somewhat delicate, not generally available. Feed on small invertebrates.

**355) MUGILIDAE**

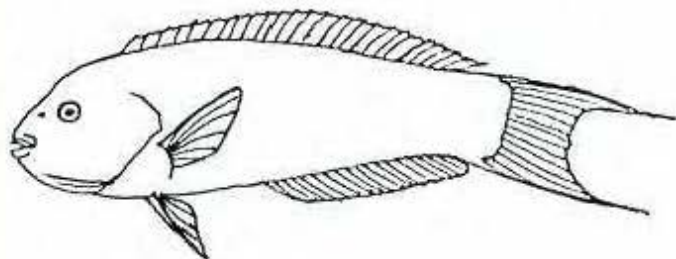
Mulletts. Fast-swimming schoolers. Euryhaline. Excellent jumpers—tank must be well-covered. Feed on small invertebrates in substrate, but will accept most aquarium foods. Sensitive to fungal infections. Prone to transport shock; acclimate carefully. Large spacious tanks necessary.

**356) SPHYRAENIDAE**

Barracudas. Large midwater predators. Some are schooling fishes. Very large tanks needed. Toothy; handle with care. Usually accept only live fishes, but acclimated specimens will sometimes accept chunks of fish. Hardy and long-lived, but aggressive and difficult to house with other fishes.

**357) POLYNEMIDAE**

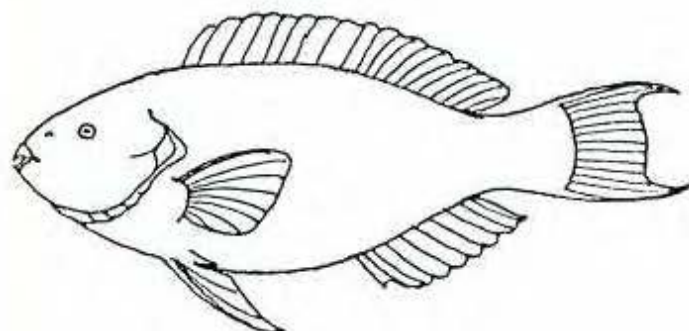
Threadfins. Benthic fishes. Peaceful, active. Feed on small fishes and crustaceans.

**358) LABRIDAE**

Wrasses. Most very hardy and peaceful. Most are at least territorial with conspecifics—provide plenty of room. Most invertebrates will not be molested except for small crustaceans. Many burrow in sand; soft substrate needed. Coral aquascape. With few exceptions, all foods will be taken. Good for reef aquaria.

**359) ODACIDAE**

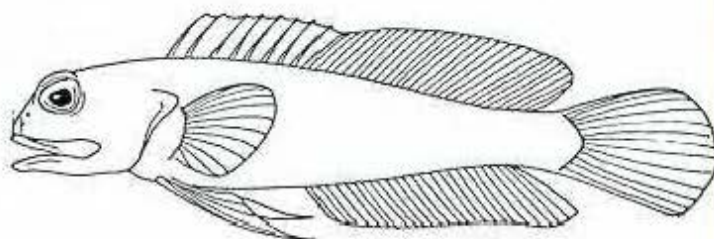
Weed whittings. Wrasselike, care similar. Cool water and plant/rock aquascape. Seldom seen.

**360) SCARIDAE**

Parrotfishes. Moderately hardy, but some species are delicate. Often difficult to feed. Coral heads heavily encrusted with algae necessary in diet. Other foods: brine shrimp, chopped clam, bloodworms. Peaceful with other fishes but sometimes aggressive with conspecifics. Some species very large and need big tanks.

**361) BATHYMASTERIDAE, 362) ZOARCIDAE, 363) STICHAEIDAE, 365) PHOLIDIDAE, 366) ANARHCHADIDAE**

Eelpouts, wolfishies, and relatives. Bottom dwellers, some very large. Cool to cold water. Most eat benthic invertebrates, but fishes that can be caught will also be eaten. Rock aquascape with caves preferred. Very hardy. Foods: whole or chopped fish, clam, squid, also shrimp and crab.

**375) OPISTHOGNATHIDAE**

Jawfishes. Secretive. Excavate burrows in sand and gravel bottoms. Very territorial with conspecifics, but conflicts are largely bluff. Peaceful with other species. Good with most invertebrates; excellent in reef aquaria. Hardy. Foods: brine shrimp, bloodworms, glassworms, prepared foods.

**376) CONGROGADIDAE**

Eelblennies. Very hardy. Some are euryhaline. Aggressive; will eat many tankmates (both fish and invertebrate). Bred in captivity. Foods: goldfish, chopped clam, prawn. Rocks and caves needed for shelter.

**379) NOTOGRAPTIDAE**

Similar to eelblennies in habits and care.

**380) PHOLIDICHTHYIDAE**

Convict blenny. Hardy. Prefers groups of conspecifics. Coral/rock aquascape with shady hollows. Peaceful. All foods accepted.

**381) TRICHODONTIDAE**

Sandfishes. Ambush predators. Need soft sand for burying. Incompatible with fishes small enough to swallow. Somewhat delicate and disease prone. Food: Small feeder fishes.

**382) TRACHINIDAE**

Weeverfishes. Venomous, some lethally so. Ambush predators. Seldom kept.

**383) URANOSCOPIDAE**

Stargazers. Capable of delivering startling but sublethal electrical shock. Ambush predators; soft sand needed for burrowing. Will eat any fishes and crustaceans small enough to swallow. Some quite large and need big tanks. Foods: small live fishes as well as shrimp and crab meat. Very hardy.

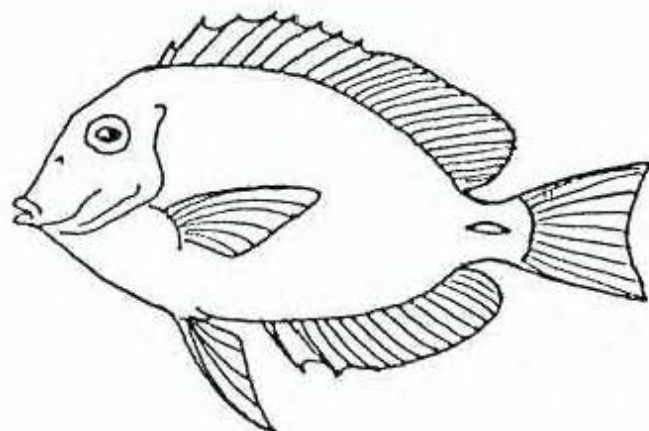
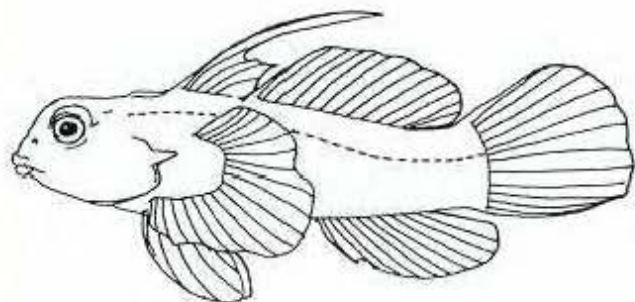
**384) TRICHONOTIDAE, 385) CREEDIIDAE, 386) LEPTOSCOPIDAE, 388) MUGILOIDIDAE**

Sanddivers, sandperches, and relatives. Similar to sandfishes and lizardfishes in habits and care.



**390) TRIPTERYGIIDAE, 391) DACTYLOSCOPIDAE,  
392) LABRISOMIDAE, 393) CLINIDAE, 394) CHAE-  
NOPSIDAE, 395) BLENNIIDAE**

Blennies and their relatives. Most are small, benthic fishes. Often very territorial with both conspecifics and other species; provide plenty of room. Extremely hardy, disease resistant, and tolerant of variations in water quality. Provide rocky caves and plenty of plants. Most eat small invertebrates, and algae is an important dietary item to many species. Other foods: brine shrimp, bloodworms, glassworms, chopped clam, most prepared foods including flake food.



**409) ACANTHURIDAE**

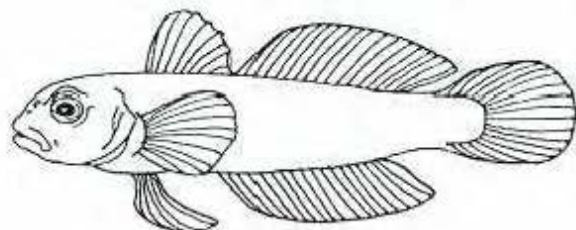
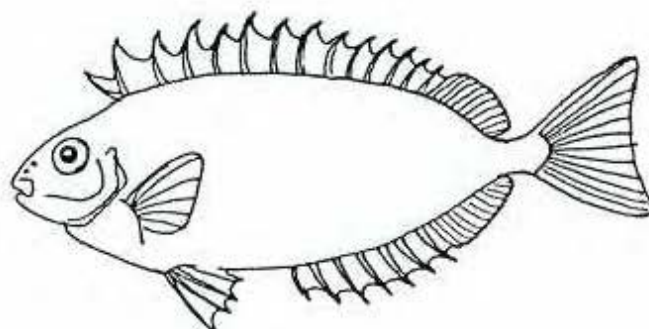
Surgeonfishes. Algal grazers. Peaceful with other species; may be aggressive with conspecifics. Generally hardy but somewhat prone to *Oodinium* and *Cryptocaryon*. Coral aquascape. Foods: boiled spinach and vegetable-based prepared foods, brine shrimp, bloodworms, chopped clam.

**399) CALLIONYMIDAE**

Dragonets. Benthic micropredators. Some hardy, others very delicate. Excellent for reef tanks. Very peaceful with other fishes, but may fight among themselves. Very slow-moving, deliberate feeders that cannot compete with voracious feeders like damselfishes. Foods: brine shrimp, bloodworms, glassworms.

**402) ELEOTRIDIDAE**

Sleeper gobies. Ambush predators. Euryhaline. Lethargic; need shadowy holes for shelter. Very hardy and disease resistant. Many grow large; big tanks needed. Rocks, plants, driftwood. Foods: small fishes, chunks of beef heart, clam, squid, shrimp.



**403) GOBIIDAE**

Gobies. Benthic micropredators. Most small and peaceful, but territorial with their own species. Most fairly hardy. Some commonly bred in captivity (especially *Gobiosoma* sp.). Coral aquascape including empty mollusc shells. Excellent in reef tanks. Foods: brine shrimp, bloodworms, glassworms, prepared foods.

**404) GOBIOIDIDAE, 405) TRYPAUCHENIDAE, 407)  
MICRODESMIDAE**

Eel-like gobies. Some are burrowers; soft substrate needed. Feed on small benthic invertebrates. Delicate and seldom seen.

**410) SIGANIDAE**

Rabbitfishes. Dorsal spines venomous; handle with care. Habits and care as for Acanthuridae.

**412) GEMPYLIDAE, 413) TRICHIURIDAE**

Snake mackerels and cutlassfishes. Elongate, pelagic, often deep-water. Piscivorous. Delicate; never kept.

**414) SCOMBRIDAE**

Tunas and mackerels. Extremely active pelagic schooling fishes. Too large except for public aquaria. Delicate and prone to shock. Many very large. Food almost exclusively small fishes.

**415) XIPHIIDAE, 417) ISTIOPHORIDAE**

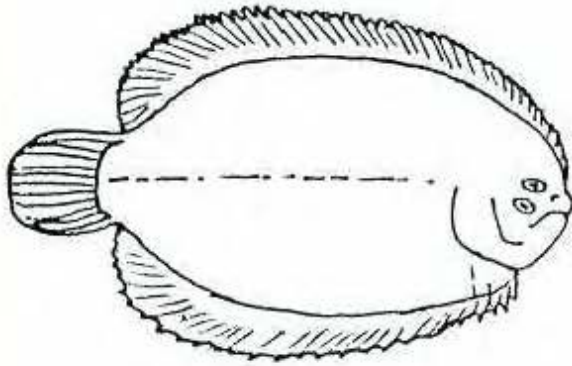
Swordfishes. Pelagic piscivores. Do not adapt well to captivity—bills easily damaged.

**419) CENTROLOPHIDAE, 420) NOMEIDAE**

Medusafishes and driftfishes. Often commensal with jellyfishes or other pelagic cnidarians. Usually small and peaceful, but other fishes will be in danger from cnidarian host. Somewhat delicate and sensitive to water quality variations. Feed on planktonic invertebrates; good substitutes are brine shrimp and bloodworms.

**423) STROMATEIDAE**

Butterfishes. Open-water schooling fishes. Delicate; prone to transport injury and shock. Foods: brine shrimp, bloodworms.

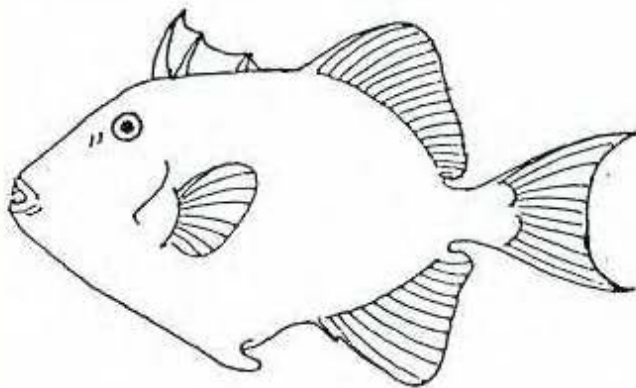


**432) PSETTODIDAE, 434) BOTHIDAE, 435) PLEURONECTIDAE, 436) CYNOGLOSSIDAE, 437) SOLEIDAE**

Flatfishes. Benthic; need soft sand for burying. Some very large. Often euryhaline. Tropical as well as coldwater species. Generally peaceful with other fishes but will eat most benthic invertebrates. Fairly hardy. Foods: Chopped fish, shrimp, crab, squid.

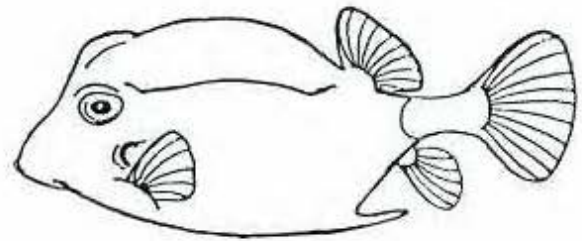
**438) TRIACANTHODIDAE, 439) TRIACANTHIDAE**

Spikefishes and triplespines. Relatively peaceful. Feed on small benthic invertebrates. Seldom kept.



**440) BALISTIDAE**

Triggerfishes and filefishes. Triggers are aggressive, sometimes downright vicious. Files are a bit more peaceful but still may be nippy. Teeth and jaws powerful; large specimens may bite. Given to rearranging aquascape. Large triggers may attack heaters, filters, etc. Incompatible with most other species, and usually aggressive with conspecifics. Will eat anything remotely edible and may sample things that are not!

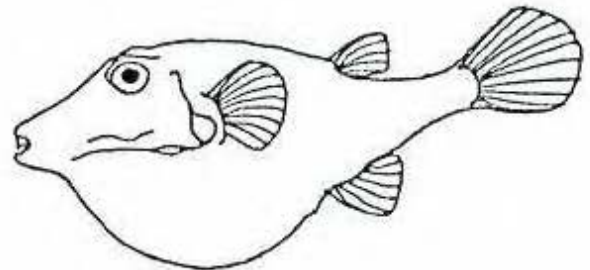


**441) OSTRACIONIDAE**

Boxfishes. Very peaceful and shy. Slow moving; do not compete well with more active fishes. Some species will exude toxins when stressed, so acclimate with care. Fairly hardy but may be slow to begin feeding. Foods: brine shrimp, bloodworms, chopped clam.

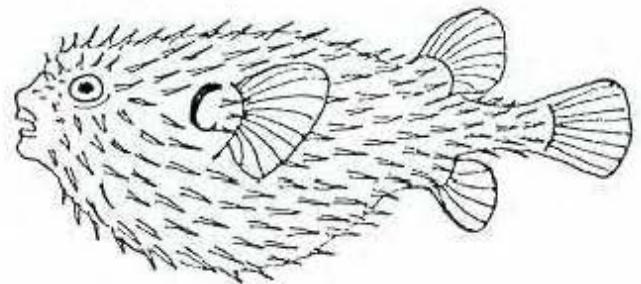
**442) TRIODONTIDAE**

Three-toothed puffer. Habits and care as for Tetraodontidae.



**443) TETRAODONTIDAE**

Puffers. Very hardy. May be nippy. May inflate when disturbed. If inflated with air, deflation often troublesome. All foods taken.



**444) DIODONTIDAE**

Porcupinefishes. Habits and care as for Tetraodontidae.

**445) MOLIDAE**


Moias. Huge, never kept. Feed mostly on jellyfishes.


## CAPTIONS


The captions, where possible, identify the fishes, the family they belong to, their range, feeding habits, aquarium lighting, temperament, aquarium decor, and swimming habits, as well as the specific gravity of the water that best suits them, optimum temperature, greatest size, and the minimum capacity of the aquarium that best suits them.


### SYMBOLS:

#### Feeding:


 represents prepared foods, usually frozen. Very few marine fishes will do well on flake food although some types are quite nutritious.


 represents invertebrates. Although the symbol is obviously a worm, most marine fishes prefer crustaceans and/or molluscs. Many fishes have specific diets and must be supplied certain invertebrates or they will decline (ex. some butterflyfishes need live coral polyps). Please refer to the family write-ups in this book as well as other TFH marine fish books for more detailed information.


 represents live fishes.

 represents plant matter. This is usually in the form of algae and can be provided rather easily by growing your own in the tank or buying prepared algal foods from your dealer.


**Light:** These symbols represent the amount of light recommended for the tank. Remember, however, that some fishes are nocturnal and will be seen only when light levels are low. Others are at their best during the days, showing their colors off in direct sunlight.

 Bright with occasional sunlight

 As dark as possible as long as fishes are visible





 Bright, no sunlight

**Aggressiveness/Compatibility:** Here again there is commonly no cut-and-dried distinction. A fish may be quite peaceful when small, but its appetite grows with its size and it may soon be foraging on the other tankmates. Others may be aggressive only during spawning seasons.


 Peaceful community fish


 Not recommended for beginners


**Tank Decoration:**


-  represents a tank that should be supplied with plant life (normally algae). In some instances algae must be supplied because the inhabitants of the tank feed on it; in others it is decorative.
-  represents coral for the tropical tanks and rocks for the more temperate aquaria.
-  represents a balance between the two where corals (or rocks) are used along with plants for decoration. The new reef tanks would come under this designation.
-  represents a sand or gravel bottom. Sand is required by some fishes (burrowers, etc.), while marine aquarists use dolomite or similar material in order to maintain the proper pH balance.

**Tank Level:** Fish Locality: Many species are tied to one area of the tank. There are bottom species (like flatfishes) and surface fishes (like needlefishes) and some that will stay just about in the middle range all the time. Most species of marine fishes are wanderers and will swim pretty much around the tank investigating every corner.

 Bottom swimmer

 Swims in middle of water

 No special swimming level

 Top swimmer

**°C:** the temperature in degrees centigrade at which the species is most comfortable. There is of course a range at which the fish will live that extends above and below this figure.

**sg:** specific gravity. Again, this is an optimum figure. Specific gravity can be easily obtained by use of a simple hydrometer.

**cm:** the length of a fish (standard length). This is the maximum length a fish is said to attain. Most specimens seen are normally much smaller, and aquarium specimens are generally smaller yet. Many species grow so large only juveniles are kept by aquarists. An inch equals 2.54 cm.

**L:** the smallest possible size of the tank needed for an average adult of that particular species, given in liters. A gallon is equal to about 3.8 liters.

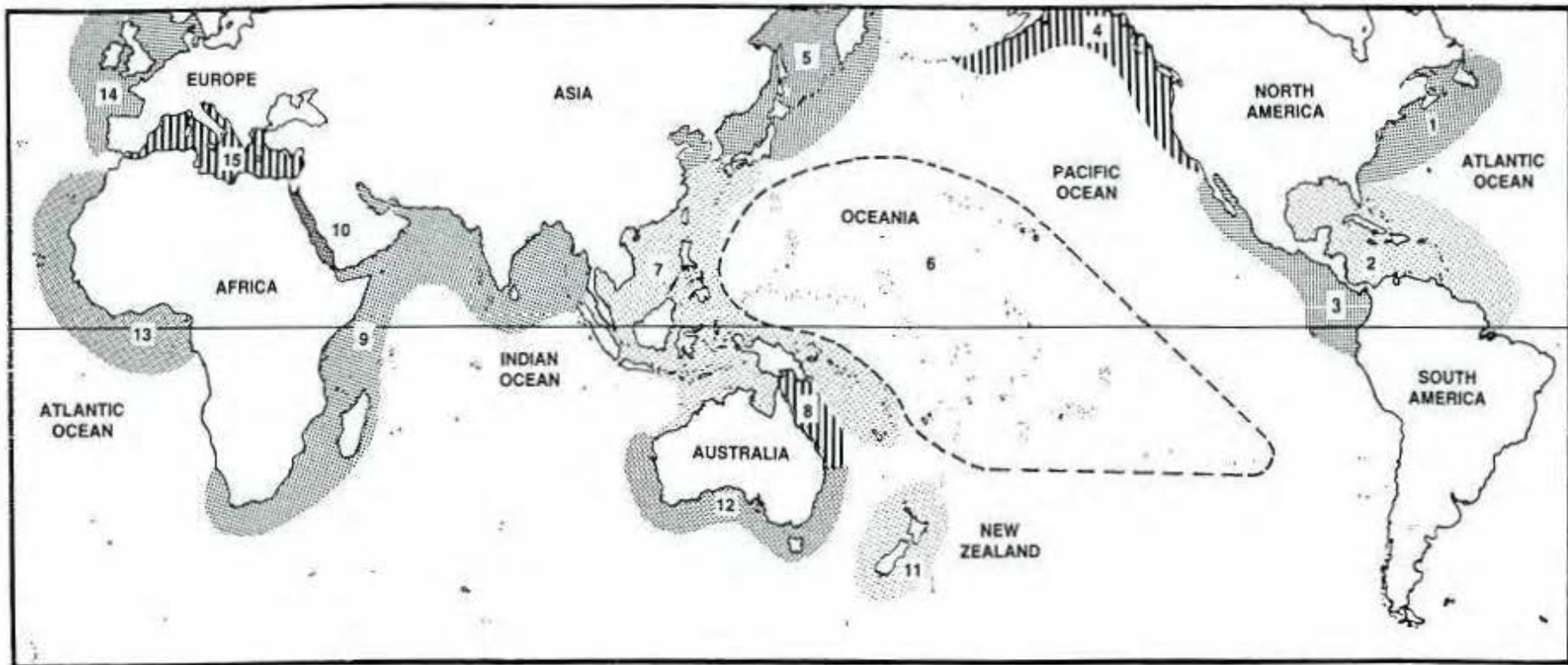
**Range Number:**

Range numbers give approximate ranges of the species. Ex. Indo-Pacific = 6-9; Indo-West Pacific = 7-9.

**Family Number:**

Family numbers follow the species name. The list of families is given on pp. 24 and 25.





Geographic regions are keyed to numbers for easy species caption reference. These regions are highly arbitrary and many species do not confine themselves to these limits. Also species may inhabit only a small portion of the delimited area. But this does give a reasonable approximation of the fishes' range which should help aquarists determine the environment needed for proper maintenance of the fishes.

- |                                |                                       |
|--------------------------------|---------------------------------------|
| 1. Temperate Western Atlantic. | 9. Northern and Western Indian Ocean. |
| 2. Tropical Western Atlantic.  | 10. Red Sea.                          |
| 3. Tropical Eastern Pacific.   | 11. New Zealand.                      |
| 4. Temperate Eastern Pacific.  | 12. Temperate Australia.              |
| 5. Temperate Western Pacific.  | 13. Tropical Eastern Atlantic.        |
| 6. Oceania.                    | 14. Temperate Eastern Atlantic.       |
| 7. Tropical Western Pacific.   | 15. Mediterranean Sea.                |
| 8. Great Barrier Reef.         |                                       |

## Systematic List of the Families of Fishes of the World (after Nelson, 1984)

- Myxiniformes**  
1 Myxinidae
- Petromyzontiformes**  
2 Petromyzontidae
- Chimaeriformes**  
3 Callorhynchidae  
4 Chimaeridae  
5 Rhinochimaeridae
- Hexanchiformes**  
6 Chlamydoselachidae  
7 Hexanchidae
- Heterodontiformes**  
8 Heterodontidae
- Lamniformes**  
9 Rhincodontidae  
10 Orectolobidae  
11 Odontaspidae  
12 Lamnidae  
13 Scyliorhinidae  
14 Carcharhinidae  
15 Sphyrnidae
- Squaliformes**  
16 Squalidae  
17 Pristiophoridae  
18 Squatinidae
- Rajiformes**  
19 Pristidae  
20 Torpedinidae  
21 Rhinobatidae  
22 Rajidae  
23 Dasyatidae  
24 Potamotrygonidae  
25 Hexatrygonidae  
26 Myliobatidae  
27 Mobulidae
- Ceratodontiformes**  
28 Ceratodontidae
- Lepidosireniformes**  
29 Lepidosirenidae  
30 Protopteridae
- Coelacanthiformes**  
31 Latimeriidae
- Polypteriformes**  
32 Polypteridae
- Acipenseriformes**  
33 Acipenseridae  
34 Polyodontidae
- Lepisosteiformes**  
35 Lepisosteidae
- Amiiformes**  
36 Amiidae
- Osteoglossiformes**  
37 Osteoglossidae  
38 Pantodontidae  
39 Hiodontidae  
40 Notopteridae
- 41 Mormyridae  
42 Gymnarchidae
- Elopiformes**  
43 Elopidae  
44 Megalopidae  
45 Albulidae  
46 Halosauridae  
47 Notacanthidae  
48 Lipogenyidae
- Anguilliformes**  
49 Anguillidae  
50 Heterenchelyidae  
51 Moringuidae  
52 Xencongridae  
53 Myrocongridae  
54 Muraenidae  
55 Nemichthyidae  
56 Cyematidae  
57 Synphobranchidae  
58 Ophichthidae  
59 Nettastomatidae  
60 Colocongridae  
61 Macrocephenchelyidae  
62 Congridae  
63 Derichthyidae  
64 Serrivomeridae  
65 Saccopharyngidae  
66 Eurypharyngidae  
67 Monognathidae
- Clupeiformes**  
68 Denticipitidae  
69 Clupeidae  
70 Engraulidae  
71 Chirocentridae
- Gonorynchiformes**  
72 Chanidae  
73 Gonorynchidae  
74 Kneriidae  
75 Practolaemidae
- Cypriniformes**  
76 Cyprinidae  
77 Psilorhynchidae  
78 Homalopteridae  
79 Cobitidae  
80 Gyrinocheilidae  
81 Catostomidae
- Characiformes**  
82 Citharinidae  
83 Hemiodontidae  
84 Curimatidae  
85 Anostomidae  
86 Erythrinidae  
87 Lebiasinidae  
88 Gasteropelecidae  
89 Ctenoluciidae  
90 Hepsetidae
- 91 Characidae
- Siluriformes**  
92 Diplomystidae  
93 Ictaluridae  
94 Bagridae  
95 Cranoglanidae  
96 Siluridae  
97 Schilbidae  
98 Pangasiidae  
99 Amblycipitidae  
100 Amphiliidae  
101 Akysidae  
102 Sisoridae  
103 Clariidae  
104 Heteropneustidae  
105 Chacidae  
106 Olyridae  
107 Malapteruridae  
108 Ariidae  
109 Plotosidae  
110 Mochokidae  
111 Doradidae  
112 Auchenipteridae  
113 Pimelodidae  
114 Ageneiosidae  
115 Helogenidae  
116 Cetopsidae  
117 Hypophthalmidae  
118 Aspredinidae  
119 Trichomycteridae  
120 Callichthyidae  
121 Loricariidae  
122 Astroblepidae
- Gymnotiformes**  
123 Sternopygidae  
124 Rhamphichthyidae  
125 Hypopomidae  
126 Apterodontidae  
127 Gymnotidae  
128 Electrophoridae
- Salmoniformes**  
129 Esocidae  
130 Umbridae  
131 Argentinidae  
132 Bathylagidae  
133 Opisthoproctidae  
134 Alepocephalidae  
135 Searsiidae  
136 Lepidogalaxiidae  
137 Osmeridae  
138 Plecoglossidae  
139 Salangidae  
140 Sundasalangidae  
141 Retropinnidae  
142 Galaxiidae  
143 Salmonidae
- Stomiiformes**  
144 Gonostomatidae  
145 Sternoptychidae  
146 Photichthyidae  
147 Chauliodontidae  
148 Stomiidae  
149 Astronesthidae  
150 Melanostomiidae  
151 Malacosteidae  
152 Idiacanthidae
- Aulopiformes**  
153 Aulopidae  
154 Chlorophthalmidae  
155 Scopelarchidae  
156 Notosudidae  
157 Synodontidae  
158 Giganturidae  
159 Paralepididae  
160 Anotopteridae  
161 Evermannellidae  
162 Omosudidae  
163 Alepisauridae  
164 Pseudotrichonotidae
- Myctophiformes**  
165 Neoscopelidae  
166 Myctophidae
- Percopsiformes**  
167 Percopsidae  
168 Aphredoderidae  
169 Amblyopsidae
- Gadiformes**  
170 Muraenolepididae  
171 Moridae  
172 Melanonidae  
173 Bregmacerotidae  
174 Gadidae  
175 Merlucciidae  
176 Macrouridae
- Ophidiiformes**  
177 Ophidiidae  
178 Carapidae  
179 Bythitidae  
180 Aphyonidae
- Batrachoidiformes**  
181 Batrachoididae  
182 Lophiidae  
183 Antennariidae  
184 Brachionichthyidae  
185 Chaunacidae  
186 Ogocephalidae  
187 Caulophrynidae  
188 Ceratiidae  
189 Gigantactinidae  
190 Neoceratiidae  
191 Linophrynidae  
192 Oneirodidae

- 193 Thaumatoichthyidae  
 194 Centrophrynidae  
 195 Diceratiidae  
 196 Himantolophidae  
 197 Melanocetidae  
**Gobiesociformes**  
 198 Gobiesocidae  
 199 Alabetidae  
**Cyprinodontiformes**  
 200 Exocoetidae  
 201 Hemiramphidae  
 202 Belonidae  
 203 Scomberesocidae  
 204 Oryziidae  
 205 Adrianichthyidae  
 206 Horaichthyidae  
 207 Aplocheilidae  
 208 Cyprinodontidae  
 209 Goodeidae  
 210 Anablepidae  
 211 Jenynsiidae  
 212 Poeciliidae  
**Atheriniformes**  
 213 Atherinidae  
 214 Isonidae  
 215 Melanotaeniidae  
 216 Neostethidae  
 217 Phallostethidae  
**Lampriformes**  
 218 Lampridae  
 219 Veliferidae  
 220 Lophotidae  
 221 Radiicephalidae  
 222 Trachipteridae  
 223 Regalecidae  
 224 Stylephoridae  
 225 Ateleopodidae  
 226 Mirapinnidae  
 227 Eutaeniophoridae  
 228 Megalomyceteridae  
**Beryciformes**  
 229 Monocentrididae  
 230 Trachichthyidae  
 231 Anomalopidae  
 232 Diretmidae  
 233 Anoplogastridae  
 234 Berycidae  
 235 Holocentridae  
 236 Polymixiidae  
 237 Stephanoberycidae  
 238 Melamphaidae  
 239 Gibberichthyidae  
 240 Rondeletiidae  
 241 Barbourisiidae  
 242 Cetomimidae  
**Zeiformes**  
 243 Parazenidae  
 244 Macrurocyttidae  
 245 Zeidae  
 246 Oreosomatidae  
 247 Grammicolepididae  
 248 Caproidae  
**Gasterosteiformes**  
 249 Hypoptychidae  
 250 Aulorhynchidae  
 251 Gasterosteidae  
**Indostomiformes**  
 252 Indostomidae  
**Pegasiformes**  
 253 Pegasidae  
**Syngnathiformes**  
 254 Aulostomidae  
 255 Fistulariidae  
 256 Macrorhamphosidae  
 257 Centriscidae  
 258 Solenostomidae  
 259 Syngnathidae  
**Dactylopteriformes**  
 260 Dactylopteridae  
**Synbranchiformes**  
 261 Synbranchidae  
**Scorpaeniformes**  
 262 Scorpaenidae  
 263 Synanceiidae  
 264 Caracanthidae  
 265 Aploactinidae  
 266 Pataccidae  
 267 Congiopodidae  
 268 Triglideae  
 269 Platycephalidae  
 270 Hoplichthyidae  
 271 Anoplopomatidae  
 272 Hexagrammidae  
 273 Zaniolepididae  
 274 Normanichthyidae  
 275 Ereuniidae  
 276 Cottidae  
 277 Cottocomephoridae  
 278 Comephoridae  
 279 Psychrolutidae  
 280 Agonidae  
 281 Cyclopteridae  
**Perciformes**  
 282 Centropomidae  
 283 Percichthyidae  
 284 Serranidae  
 285 Grammistidae  
 286 Pseudochromidae  
 287 Grammidae  
 288 Plesiopidae  
 289 Acanthoclinidae  
 290 Glaucosomatidae  
 291 Teraponidae  
 292 Banjosidae  
 293 Kuhlidae  
 294 Centrarchidae  
 295 Percidae  
 296 Priacanthidae  
 297 Apogonidae  
 298 Dinolestidae  
 299 Sillaginidae  
 300 Malacanthidae  
 301 Labracoglossidae  
 302 Lactariidae  
 303 Pomatomidae  
 304 Rachycentridae  
 305 Echeineidae  
 306 Carangidae  
 307 Nematistiidae  
 308 Coryphaenidae  
 309 Apolectidae  
 310 Menidae  
 311 Leiognathidae  
 312 Bramidae  
 313 Caristiidae  
 314 Arripidae  
 315 Emmelichthyidae  
 316 Lutjanidae  
 317 Caesionidae  
 318 Lobotidae  
 319 Gerreidae  
 320 Haemulidae  
 321 Inermiidae  
 322 Sparidae  
 323 Centranchidae  
 324 Lethrinidae  
 325 Nemipteridae  
 326 Sciaenidae  
 327 Mullidae  
 328 Monodactylidae  
 329 Pempheridae  
 330 Leptobramidae  
 331 Bathyclupeidae  
 332 Toxotidae  
 333 Coracinidae  
 334 Kyphosidae  
 335 Ephippidae  
 336 Scatophagidae  
 337 Rhinoprenidae  
 338 Chaetodontidae  
 339 Pomacanthidae  
 340 Enoplosidae  
 341 Pentacerotidae  
 342 Nandidae  
 343 Oplegnathidae  
 344 Cichlidae  
 345 Embiotocidae  
 346 Pomacentridae  
 347 Gadopsidae  
 348 Cirrhitidae  
 349 Chironemidae  
 350 Aplodactylidae  
 351 Cheilodactylidae  
 352 Latrididae  
 353 Owstoniidae  
 354 Cepolidae  
 355 Mugilidae  
 356 Sphyraenidae  
 357 Polynemidae  
 358 Labridae  
 359 Odacidae  
 360 Scaridae  
 361 Bathymasteridae  
 362 Zoarcidae  
 363 Stichaeidae  
 364 Cryptacanthodidae  
 365 Pholididae  
 366 Anarhichadidae  
 367 Ptilichthyidae  
 368 Zaproridae  
 369 Scytalinidae  
 370 Bovichthyidae  
 371 Nototheniidae  
 372 Harpagiferidae  
 373 Bathydraconidae  
 374 Channichthyidae  
 375 Opistognathidae  
 376 Congrogadidae  
 377 Chiasmodontidae  
 378 Champsoodontidae  
 379 Notograpidae  
 380 Pholidichthyidae  
 381 Trichodontidae  
 382 Trachinidae  
 383 Uranoscopidae  
 384 Trichonotidae  
 385 Creediidae  
 386 Leptoscopidae  
 387 Percophidae  
 388 Mugiloididae  
 389 Cheimarrhichthyidae  
 390 Tripterygiidae  
 391 Dactyloscopidae  
 392 Labrisomidae  
 393 Clinidae  
 394 Chaenopsidae  
 395 Blenniidae  
 396 Icosteidae  
 397 Schindleriidae  
 398 Ammodytidae  
 399 Callionymidae  
 400 Draconettidae  
 401 Rhyacichthyidae  
 402 Eleotrididae  
 403 Gobiidae  
 404 Gobioididae  
 405 Trypauchenidae  
 406 Kraemeriidae  
 407 Microdesmidae  
 408 Kurtidae  
 409 Acanthuridae  
 410 Siganidae  
 411 Scombrolabracidae  
 412 Gempylidae  
 413 Trichiuridae  
 414 Scombridae  
 415 Xiphiidae  
 416 Luvaridae  
 417 Istiophoridae  
 418 Amarsipidae  
 419 Centrolophidae  
 420 Nomeidae  
 421 Ariommatidae  
 422 Tetragonuridae  
 423 Stromateidae  
 424 Anabantidae  
 425 Belontiidae  
 426 Helostomatidae  
 427 Osphronemidae  
 428 Luciocephalidae  
 429 Channidae  
 430 Mastacembelidae  
 431 Chaudhuriidae  
**Pleuronectiformes**  
 432 Psertodidae  
 433 Citharidae  
 434 Bothidae  
 435 Pleuronectidae  
 436 Cynoglossidae  
 437 Soleidae  
**Tetraodontiformes**  
 438 Triacanthodidae  
 439 Triacanthidae  
 440 Balistidae  
 441 Ostraciidae  
 442 Triodontidae  
 443 Tetraodontidae  
 444 Diodontidae  
 445 Molidae

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Many thanks to those who have helped in other ways such as continuing to provide reprints of their papers or by identifying the color proofs sent to them. Unfortunately, lack of time prevented others from completing this task and they must accept our identifications based on the literature at hand. Hopefully future editions will be able to carry any corrections made in the interim.

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## WEIGHTS &amp; MEASURES

CUSTOMARY U.S. MEASURES  
AND EQUIVALENTS

## LENGTH

1 inch (in)	= 2.54 cm
1 foot (ft)	= 12 in = .3048 m
1 yard (yd)	= 3 ft = .9144 m
1 mile (mi)	= 1760 yd = 1.6093 km
1 nautical mile	= 1.152 mi = 1.853 km

## AREA

1 square inch (in <sup>2</sup> )	= 6.4516 cm <sup>2</sup>
1 square foot (ft <sup>2</sup> )	= 144 in <sup>2</sup> = .093 m <sup>2</sup>
1 square yard (yd <sup>2</sup> )	= 9 ft <sup>2</sup> = .8361 m <sup>2</sup>
1 acre	= 4840 yd <sup>2</sup> = 4046.86 m <sup>2</sup>
1 square mile (mi <sup>2</sup> )	= 640 acre = 2.59 km <sup>2</sup>

## WEIGHT

1 ounce (oz)	= 437.5 grains = 28.35 g
1 pound (lb)	= 16 oz = .4536 kg
1 short ton	= 2000 lb = .9072 t
1 long ton	= 2240 lb = 1.0161 t

## VOLUME

1 cubic inch (in <sup>3</sup> )	= 16.387 cm <sup>3</sup>
1 cubic foot (ft <sup>3</sup> )	= 1728 in <sup>3</sup> = .028 m <sup>3</sup>
1 cubic yard (yd <sup>3</sup> )	= 27 ft <sup>3</sup> = .7646 m <sup>3</sup>
1 fluid ounce (fl oz)	= 2.957 cl
1 liquid pint (pt)	= 16 fl oz = .4732 l
1 liquid quart (qt)	= 2 pt = .946 l
1 gallon (gal)	= 4 qt = 3.7853 l
1 dry pint	= .5506 l
1 bushel (bu)	= 64 dry pt = 35.2381 l

METRIC MEASURES  
AND EQUIVALENTS

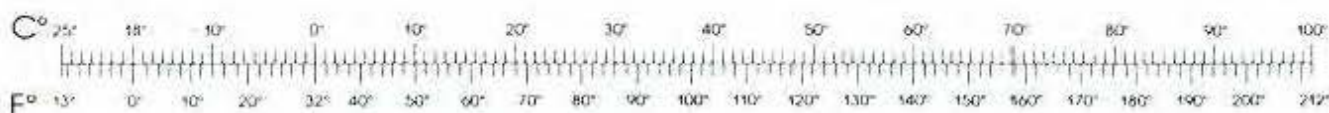
1 millimeter (mm)	= .0394 in
1 centimeter (cm)	= 10 mm = .3937 in
1 meter (m)	= 1000 mm = 1.0936 yd
1 kilometer (km)	= 1000 m = .6214 mi

1 sq centimeter (cm <sup>2</sup> )	= 100 mm <sup>2</sup> = .155 in <sup>2</sup>
1 sq meter (m <sup>2</sup> )	= 10,000 cm <sup>2</sup> = 1.196 yd <sup>2</sup>
1 hectare (ha)	= 10,000 m <sup>2</sup> = 2.4711 acres
1 sq kilometer (km <sup>2</sup> )	= 100 ha = .3861 mi <sup>2</sup>

1 milligram (mg)	= .0154 grain
1 gram (g)	= 1000 mg = .0353 oz
1 kilogram (kg)	= 1000 g = 2.2046 lb
1 tonne (t)	= 1000 kg = 1.1023 short tons
1 tonne	= .9842 long ton

1 cubic centimeter (cm <sup>3</sup> )	= .061 in <sup>3</sup>
1 cubic decimeter (dm <sup>3</sup> )	= 1000 cm <sup>3</sup> = .353 ft <sup>3</sup>
1 cubic meter (m <sup>3</sup> )	= 1000 dm <sup>3</sup> = 1.3079 yd <sup>3</sup>
1 liter (l)	= 1 dm <sup>3</sup> = .2642 gal
1 hectoliter (hl)	= 100 l = 2.8378 bu

## TEMPERATURE



$$\text{CELCIUS}^{\circ} = 5/9 (\text{F}^{\circ} - 32^{\circ})$$

$$\text{FAHRENHEIT}^{\circ} = 9/5 \text{C}^{\circ} + 32^{\circ}$$

## PICTORIAL IDENTIFICATION SECTION

The following pictorial identification section includes thousands of photographs of marine fishes from around the world. The families are in systematic sequence according to Nelson (1984), or as close to that as practical. (See pages 26 and 27.) The individual photos are coded with a family number for ready reference. In some cases some photos are out of sequence due to reasons beyond our control, but the family numbers should make it easy to place these "orphans" in their proper sequence.

Aquarists can scan through these pages until they find the correct family for the fish they are trying to identify. They can then look more carefully at the species depicted until they find the photo that most closely resembles their fish. One has to remember that differences in size, sex, geography, and even temperament may cause the fish to look different. However, in most cases an identification can be made with reasonable certainty. Once a correct name is arrived at the species can be researched in other references or the caption may provide all the information needed.

The captions are set up as follows:

Line 1: Scientific name and family number

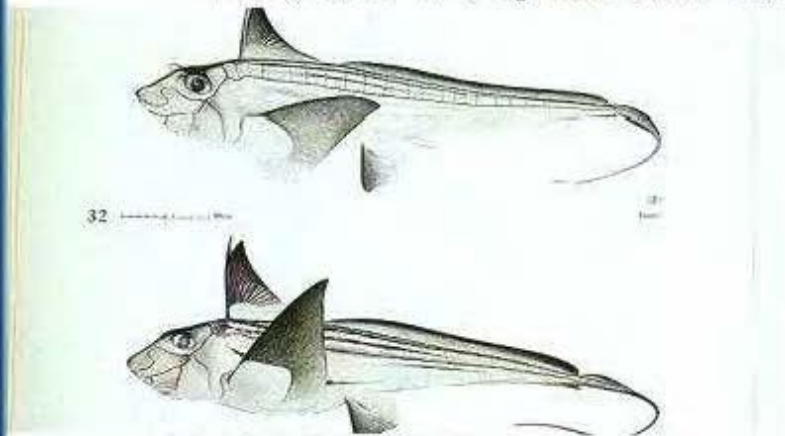
Line 2: Range number (or, in the case of fishes with worldwide distribution, the abbreviation for "circumtropical"), feeding symbol, light symbol, compatibility symbol, tank decor symbol, tank level symbol, temperature in degrees Celsius, specific gravity, size of fish, capacity of tank. (Full text dealing with symbols found in the captions begins on page 23.)



*Eptatretus stouti* 1  
4 ~ ● ✖ ☒ ☒ 14°C sg: 1.022 64 cm 500L



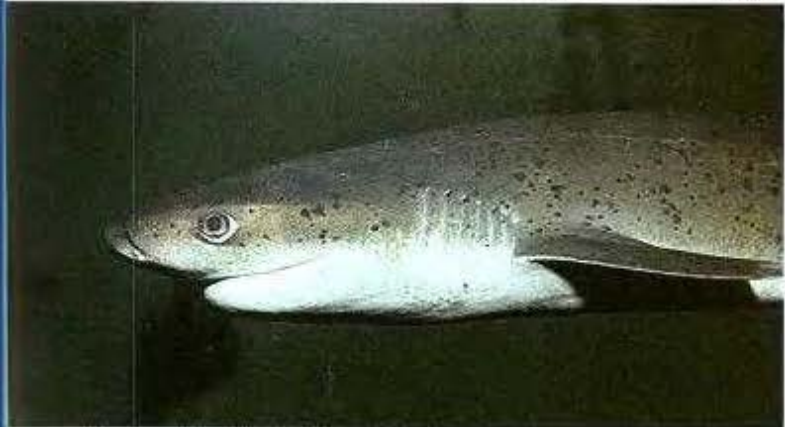
*Eptatretus* sp. (*stouti*?) 1  
4 ~ ● ✖ ☒ ☒ 14°C sg: 1.022 64 cm 500L



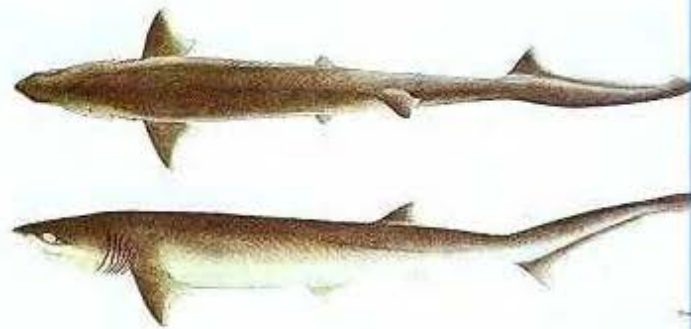
*Chimaera phantasma* 4  
5 ~ ● ♥ ☒ ☒ 14°C sg: 1.022 100 cm 1200L



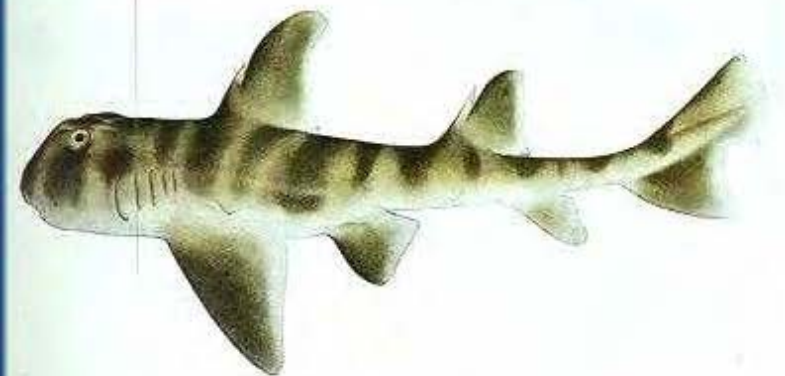
*Chlamydoselachus anguineus* 6  
1, 4, 11, 14 ~ ● ✖ ☒ ☒ 14°C sg: 1.022 200 cm 2000L



*Notorynchus cepedianus* 7  
Antitropical ~ ● ✖ ☒ ☒ 20°C sg: 1.022 200 cm 3000L



*Hepttranchias perlo* 7  
Circumtropical ~ ● ✖ ☒ ☒ 25°C sg: 1.022 137 cm 3500L

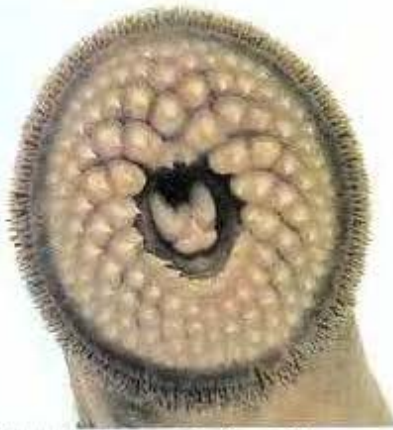


*Heterodontus japonicus* 8  
7-9 ~ ○ ✖ ☒ ☒ 26°C sg: 1.022 150 cm 2000L



*Heterodontus portusjacksoni* 8  
12 ~ ○ ✖ ☒ ☒ 26°C sg: 1.022 138 cm 3500L





*Petromyzon marinus* 2  
1 ~ ♀ ♂ ♀ ♀ 14°C sg: 1.020 100 cm 500L



*Hydrolagus collei* 4  
4 ~ ♀ ♂ ♀ ♀ 14°C sg: 1.022 96 cm 1000L



*Heterodontus francisci* 8  
3-4 ~ ♀ ♂ ♀ ♀ 26°C sg: 1.022 96 cm 1000L



*Heterodontus zebra* 8  
7 ~ ♀ ♂ ♀ ♀ 26°C sg: 1.022 100 cm 1000L



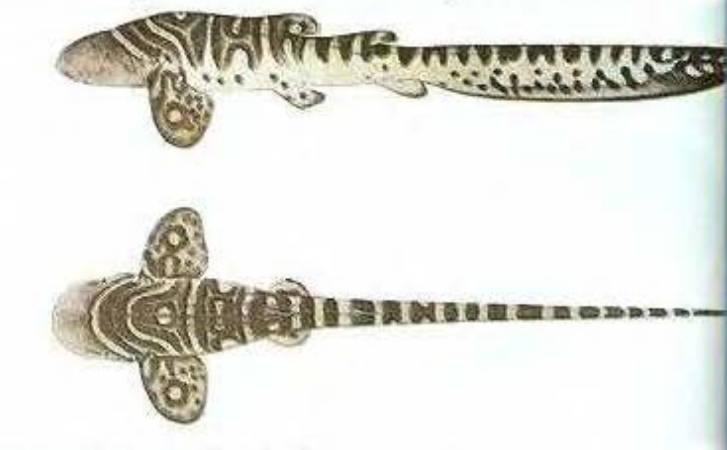
*Heterodontus mexicanus* 8  
3 ~ ♀ ♂ ♀ ♀ 26°C sg: 1.022 96 cm 1000L



*Rhincodon typus* 9  
circumtropical ~ ♀ ♂ ♀ ♀ 26°C sg: 1.022 1000-1200 cm



*Stegostoma varium* 10  
7-9 ~ ♀ ♂ ♀ ♀ 26°C sg: 1.022 230 cm 2500L



*Stegostoma varium* 10  
7-9 ~ ♀ ♂ ♀ ♀ 26°C sg: 1.022 230 cm 2500L



*Ginglymostoma cirratum* 10  
1-3 ~ ♀ ♂ ✖ ☐ 26°C sg: 1.022 430 cm 5000L



*Ginglymostoma cirratum* 10  
1-3 ~ ♀ ♂ ✖ ☐ 26°C sg: 1.022 430 cm 5000L



*Nebrius concolor* 10  
7-9 ~ ♀ ♂ ✖ ☐ 26°C sg: 1.022 300 cm 3500L



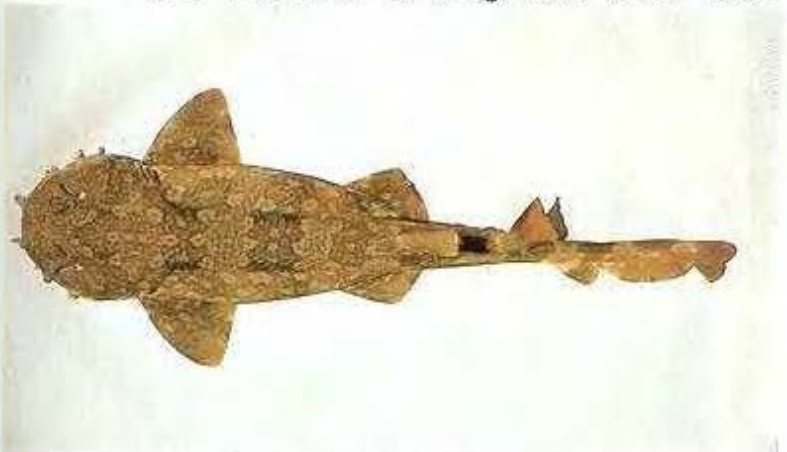
*Hemiscyllium trispeculare* 10  
7-8 ~ ♀ ♂ ✖ ☐ 26°C sg: 1.022 62 cm 1000L



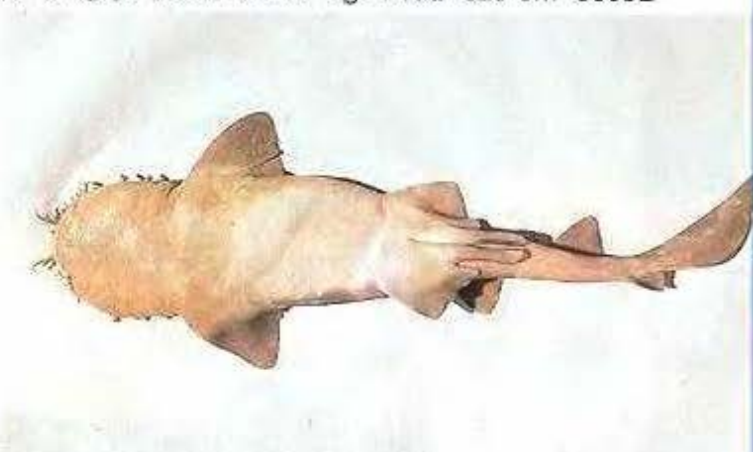
*Hemiscyllium ocellatum* 10  
8 ~ ♀ ♂ ✖ ☐ 26°C sg: 1.022 92 cm 1000L



*Orectolobus maculatum* 10  
12 ~ ♀ ♂ ✖ ☐ 26°C sg: 1.022 320 cm 5000L



*Orectolobus japonicus* 10 ♂  
7 ~ ♀ ♂ ✖ ☐ 26°C sg: 1.022 100 cm 1200L



*Orectolobus japonicus* 10 ♂  
7 ~ ♀ ♂ ✖ ☐ 26°C sg: 1.022 100 cm 1200L



*Orectolobus ornatus* 10  
8 ~ ♀ ♂ ✕ ☐ ☐ 26°C sg: 1.020 215 cm 3000L



*Sutorectus wardi* 10  
12 ~ ♀ ♂ ✕ ☐ ☐ 24°C sg: 1.022 50 cm 500L



*Eucrossorhinus dasypogon* 10  
7-8 ~ ♀ ♂ ✕ ☐ ☐ 26°C sg: 1.022 120 cm 2000L



*Eucrossorhinus dasypogon* 10  
7-8 ~ ♀ ♂ ✕ ☐ ☐ 26°C sg: 1.022 120 cm 2000L



*Chiloscylium confusum* 10  
7-9 ~ ♀ ♂ ✕ ☐ ☐ 25°C sg: 1.022 220 cm 3000L



*Chiloscylium griseum* 10  
7-9 ~ ♀ ♂ ✕ ☐ ☐ 25°C sg: 1.022 240 cm 3000L



*Chiloscylium plagiosum* 10  
7-9 ~ ♀ ♂ ✕ ☐ ☐ 25°C sg: 1.022 100 cm 2000L



*Chiloscylium punctatum* 10  
7 ~ ♀ ♂ ✕ ☐ ☐ 26°C sg: 1.022 110 cm 2000L



*Odontaspis taurus* 11  
Circumtropical ~ ☉ ✂ 📏 📐 26°C sg: 1.022 318 cm 5000L



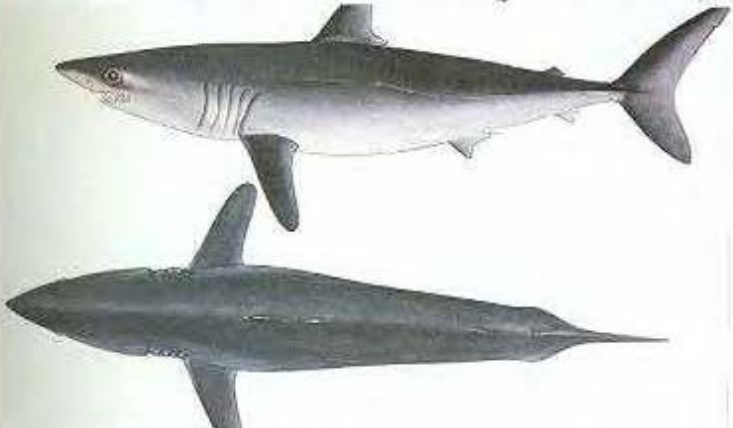
*Odontaspis ferox* 11  
Circumtropical ~ ☉ ✂ 📏 📐 26°C sg: 1.022 360 cm 5000L



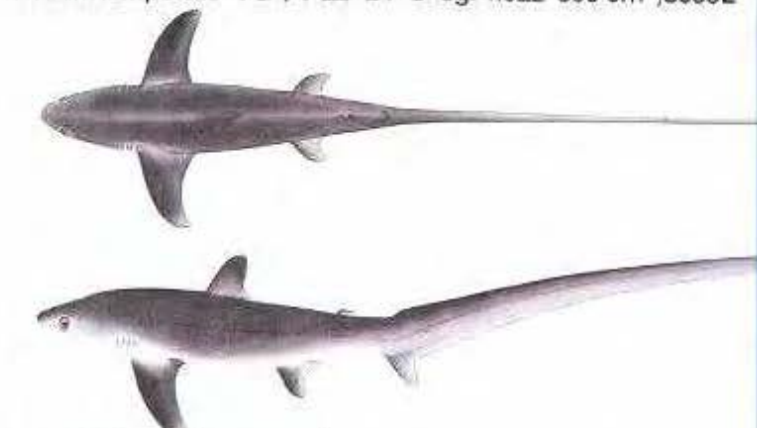
*Cetorhinus maximus* 12  
Circumtemperate ~ ☁ ☉ ♥ 📏 📐 18°C sg: 1.022 900 cm 5000L



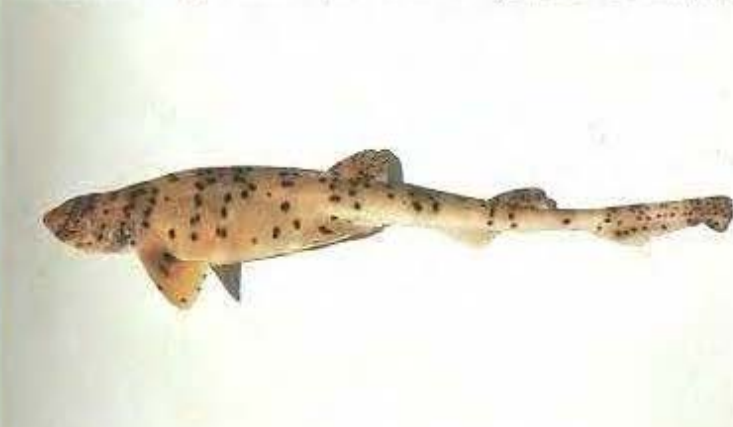
*Isurus oxyrinchus* 12  
Circumtemperate ~ ☁ ✂ 📏 📐 24°C sg: 1.022 300 cm 5000L



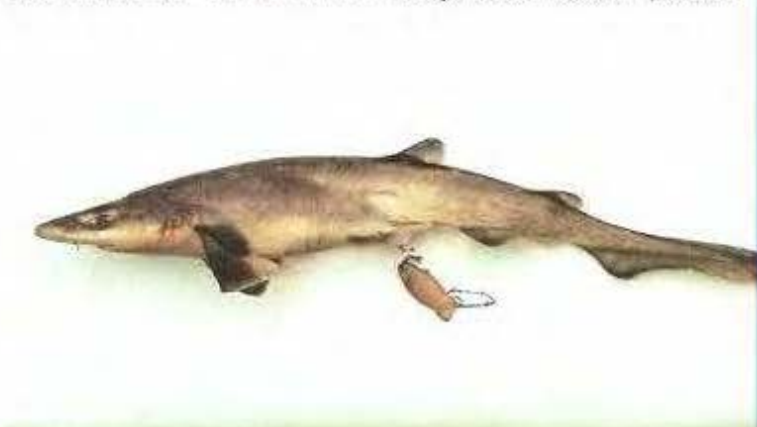
*Isurus oxyrinchus* 12  
Circumtemperate ~ ☁ ✂ 📏 📐 24°C sg: 1.022 300 cm 5000L



*Alopias superciliosus* 12  
Circumtropical ~ ☉ ✂ 📏 📐 26°C sg: 1.022 450 cm 5000L



*Haelaelurus buergeri* 13  
7-9 ~ ☁ ☉ ✂ 📏 📐 26°C sg: 1.022 50 cm 500L



*Galeus sauteri* 13  
7 ~ ☁ ☉ ✂ 📏 📐 26°C sg: 1.022 40 cm 500L



*Scylliorhinus canicula* 13  
13-14 ~ ♀ ♂ ✖ 📏 📏 24°C sg: 1.022 80 cm 1000L



*Chiloscyllium punctatum* 10  
7 ~ ♀ ♂ ✖ 📏 📏 26°C sg: 1.022 110 cm 1500L



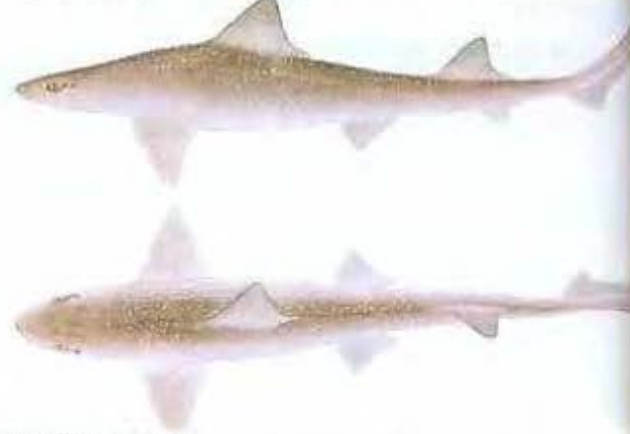
*Cephaloscyllium ventriosum* 13  
3-4 ~ ♀ ♂ ✖ 📏 📏 23°C sg: 1.023 100 cm 1500L



*Atelomycterus macleayi* 13  
8 ~ ♀ ♂ ✖ 📏 📏 26°C sg: 1.022 62 cm 1000L



*Mustelus henlei* 14  
3-4 ~ ♀ ♂ ✖ 📏 📏 25°C sg: 1.022 94 cm 2000L



*Mustelus manazo* 14  
7 ~ ♀ ♂ ✖ 📏 📏 26°C sg: 1.022 150 cm 3000L



*Triaenodon apicalis* 14  
6, 7 ~ ♀ ♂ ✖ 📏 📏 26°C sg: 1.022 120 cm 3000L



*Triaenodon obesus* 14  
7-10 ~ ♀ ♂ ✖ 📏 📏 26°C sg: 1.022 250 cm 5000L



*Triakis scyllia* 14  
5, 7 ~ ~ ~ ~ ~ 25°C sg: 1.022 100 cm 1200L



*Triakis semifasciatus* 14  
4 ~ ~ ~ ~ ~ 24°C sg: 1.023 200 cm 2500L



*Galeocerdo cuvieri* 14  
Circumtrop. ~ ~ ~ ~ ~ 26°C sg: 1.022 730 cm >5000L



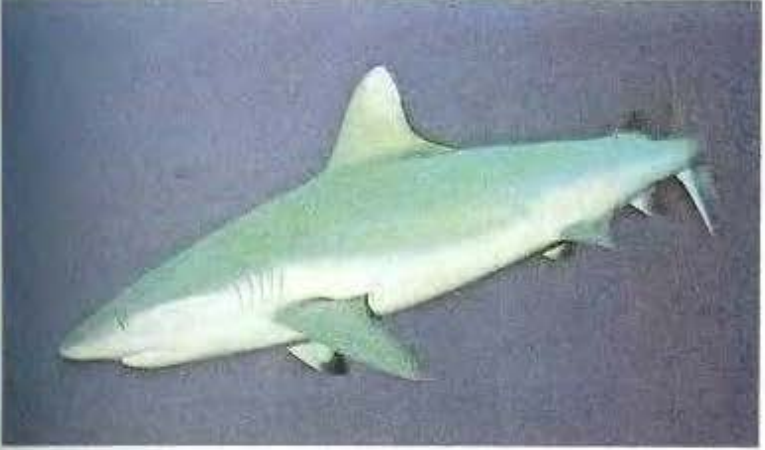
*Carcharhinus amblyrhynchos* 14  
6-9 ~ ~ ~ ~ ~ 26°C sg: 1.022 250 cm 2500L



*Carcharhinus melanopterus* 14  
6-10 ~ ~ ~ ~ ~ 26°C sg: 1.020 200 cm 2000L



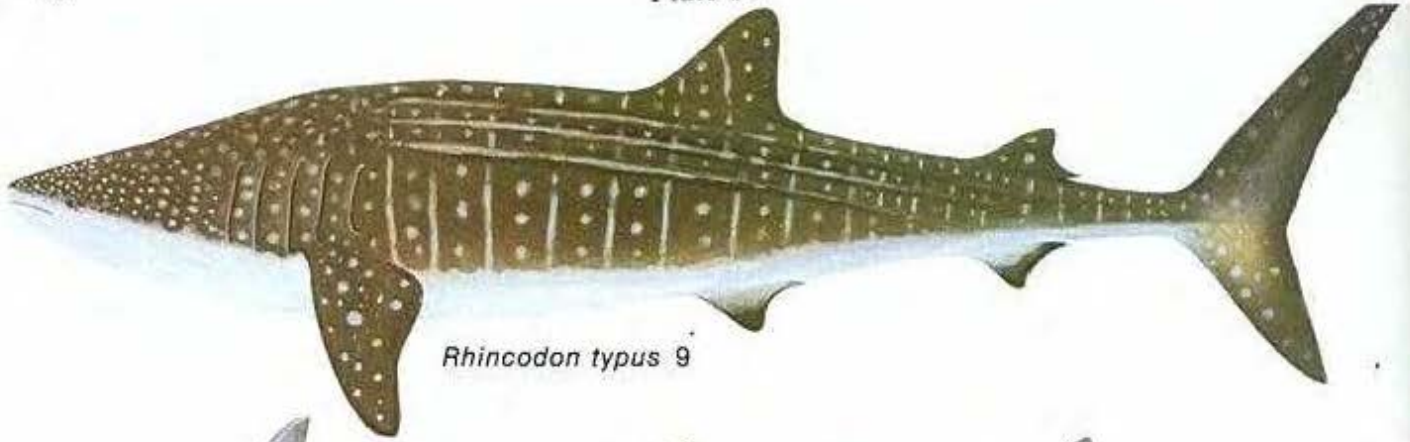
*Carcharhinus plumbeus* 14  
Circumtrop. ~ ~ ~ ~ ~ 26°C sg: 1.020 220 cm 2000L



*Carcharhinus wheeleri* 14  
9-10 ~ ~ ~ ~ ~ 26°C sg: 1.020 170 cm 2000L



*Negaprion brevirostris* 14  
1-2, 13 ~ ~ ~ ~ ~ 26°C sg: 1.020 340 cm 3500L



*Rhincodon typus* 9



*Isurus oxyrinchus* 12



*Isurus oxyrinchus* 12



*Galeocerdo cuvier* 14



*Triaenodon obesus* 14



*Carcharhinus longimanus* 14



*Carcharhinus amblyrhinchos* 14



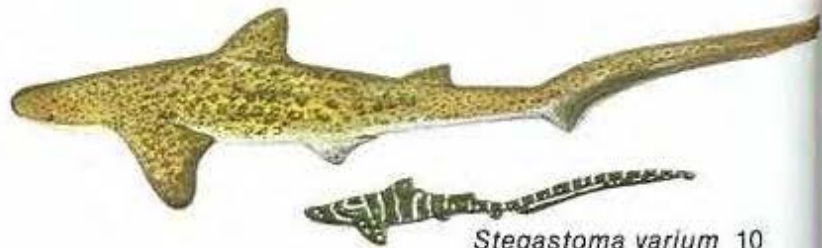
*Carcharhinus melanopterus* 14



*Carcharhinus albimarginatus* 14



*Negaprion acutidens* 14



*Stegastoma varium* 10

*Sphyrna lewini* 15

*Sphyrna zygaena* 15



*Sphyrna lewini* 15

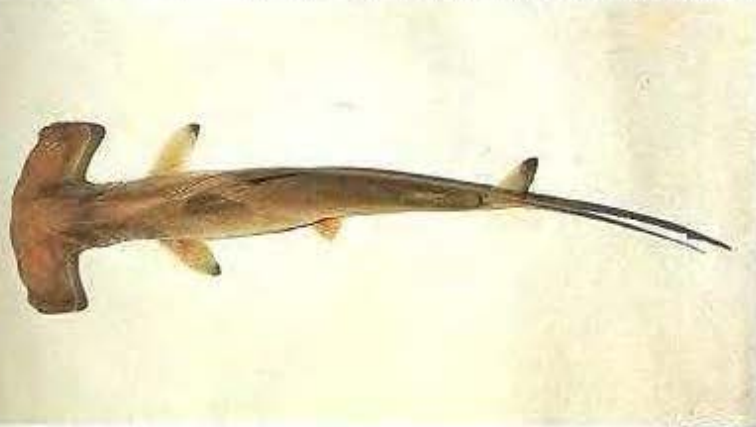




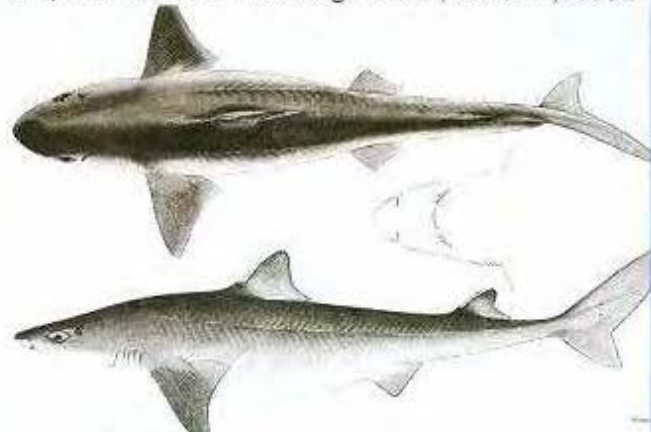
*Sphyrna lewini* 15  
Circumtrop. ~ ○ ✖ ☒ 26°C sg: 1.022 300 cm }5000L



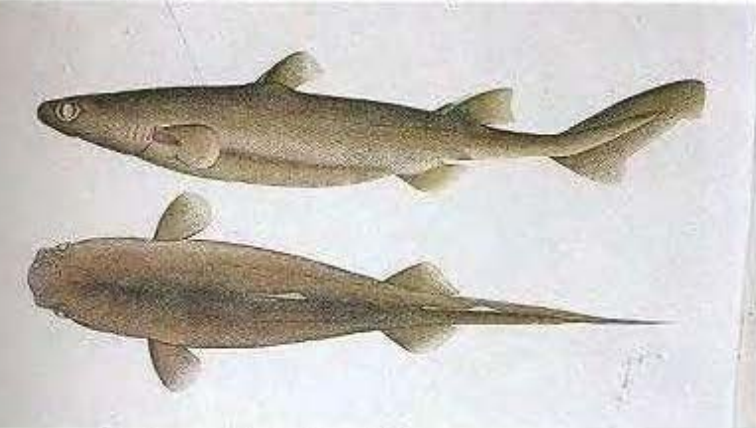
*Sphyrna zygaena* 15  
Circumtemp. ~ ○ ✖ ☒ 26°C sg: 1.022 }300 cm }5000L



*Sphyrna lewini* 15  
Circumtrop. ~ ○ ✖ ☒ 26°C sg: 1.022 300 cm }5000L



*Squalus mitsukurii* 16  
All oceans ~ ~ ○ ✖ ☒ ☒ 26°C sg: 1.022 100 cm 2000L



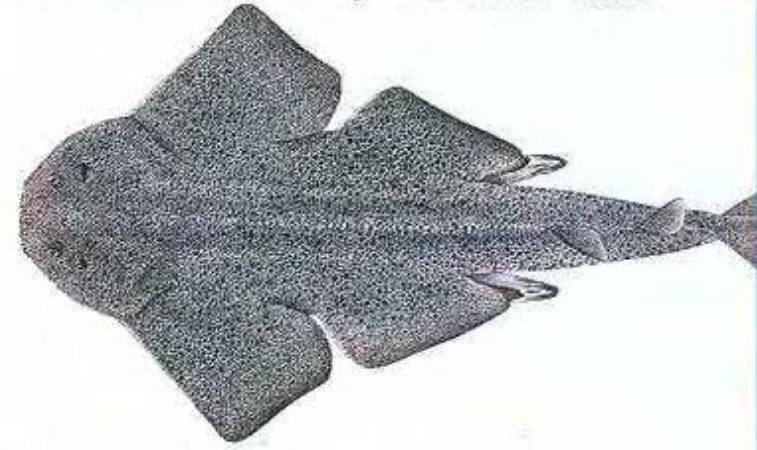
*Centroscyllium ritteri* 16  
5 ~ ~ ○ ✖ ☒ ☒ 24°C sg: 1.023 100 cm 2000L



*Squalus suckleyi* 16  
~ ~ ○ ✖ ☒ ☒ 24°C sg: 1.023 75 cm 1500L

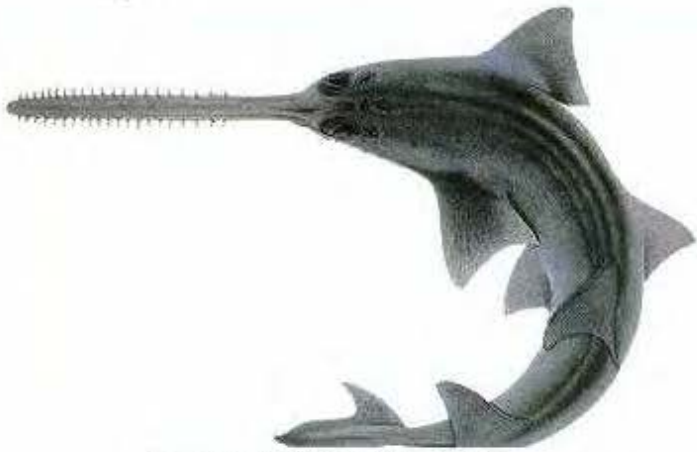


*Squatina californica* 18  
4 ~ ~ ○ ✖ ☒ ☒ 21°C sg: 1.023 150 cm 2000L

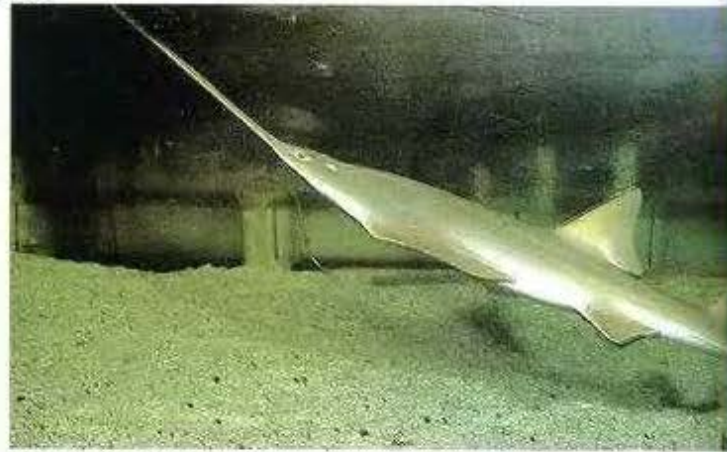


*Squatina japonica* 18  
7 ~ ~ ○ ✖ ☒ ☒ 25°C sg: 1.022 300 cm 5000L





*Anoxypristis cuspidata* 19  
6-7, 9-10 ~ 26°C sg: 1.022 }5000L



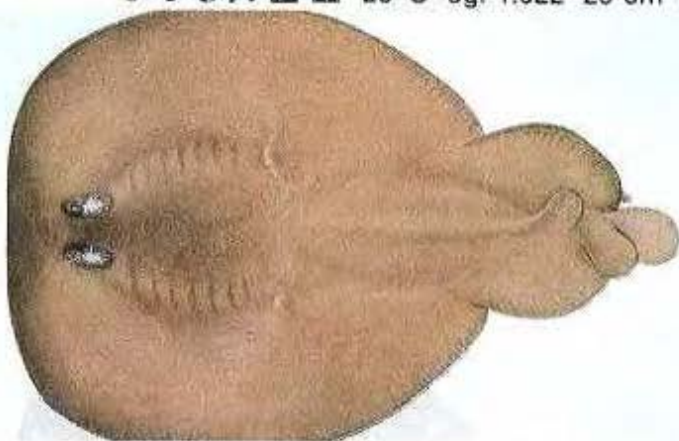
*Pristis pectinata* 19  
Trop. Atl. ~ 26°C sg: 1.022 600 cm }5000L



*Diplobatos ommata* 20  
3 ~ 26°C sg: 1.022 20 cm 300L



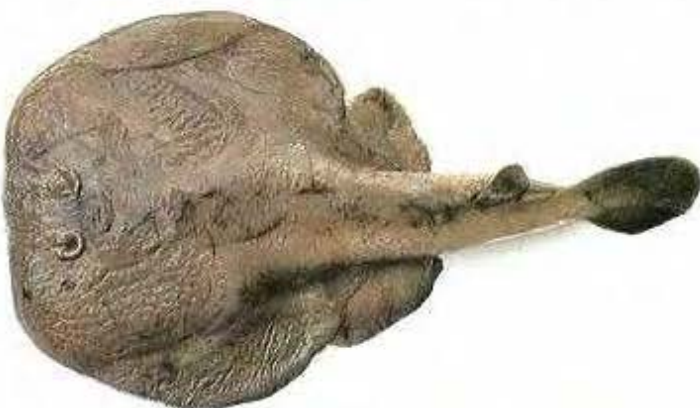
*Hypnos monoptyerygium* 20  
12 ~ 22°C sg: 1.020 70 cm 800L



*Hypnos subnigrum* 20  
8, 12 ~ 24°C sg: 1.022 70 cm 800L



*Narcine brunneus* 20  
9 ~ 26°C sg: 1.022 20 cm 300L



*Narke japonica* 20  
7 ~ 26°C sg: 1.022 40 cm 500L



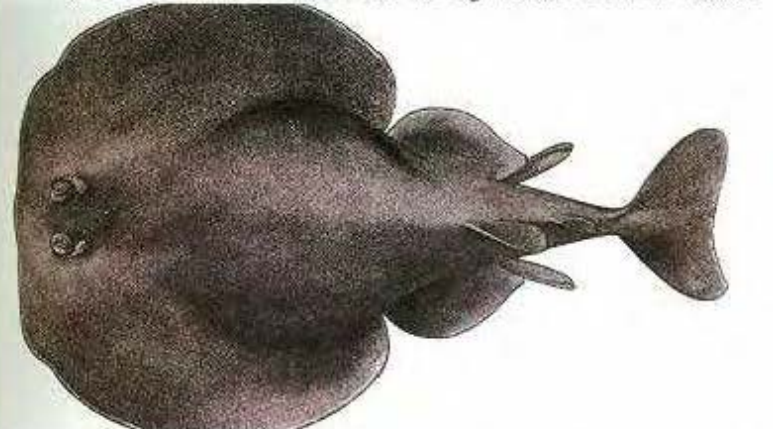
*Narcine brasillensis* 20  
1-2 ~ 26°C sg: 1.022 45 cm 500L



*Torpedo nobiliana* 20  
1, 13-15 ~ ~ ~ ~ ~ 25°C sg: 1.022 180 cm 3500L



*Torpedo sinuspersici* 20  
9-10 ~ ~ ~ ~ ~ 26°C sg: 1.022 130 cm 2500L



*Torpedo tokionis* 20  
7 ~ ~ ~ ~ ~ 26°C sg: 1.022 100 cm 1500L



*Trygonorhina fasciata* 21  
7-8 ~ ~ ~ ~ ~ 26°C sg: 1.020 100 cm 1500L



*Platyrrhina sinensis* 21  
5 ~ ~ ~ ~ ~ 24°C sg: 1.023 70 cm 700L



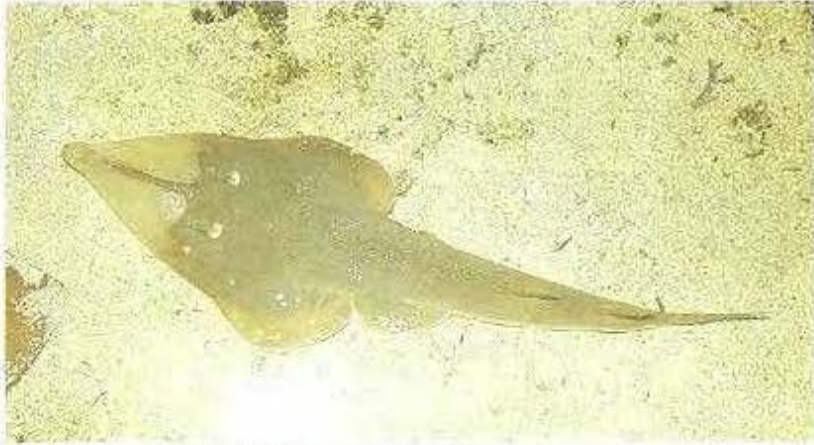
*Platyrrhinoidis triseriata* 21  
4 ~ ~ ~ ~ ~ 18°C sg: 1.024 91 cm 1500L



*Zapteryx exasperata* 21  
3 ~ ~ ~ ~ ~ 26°C sg: 1.022 91 cm 1500L



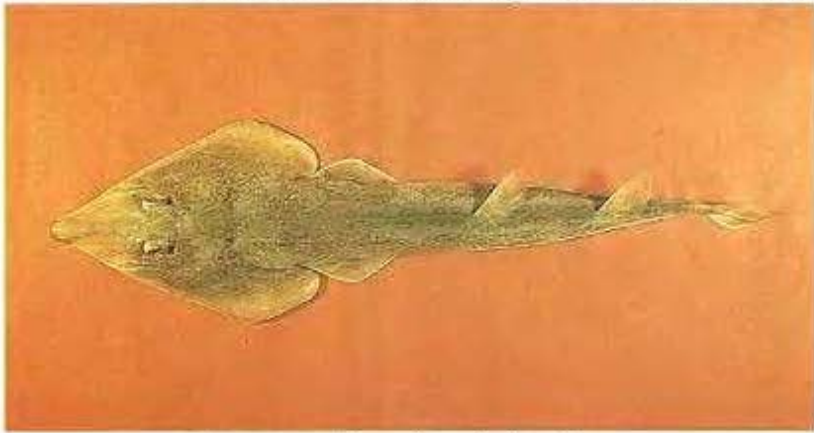
*Rhinobatos productus* 21  
4 ~ ~ ~ ~ ~ 18°C sg: 1.024 170 cm 3500L



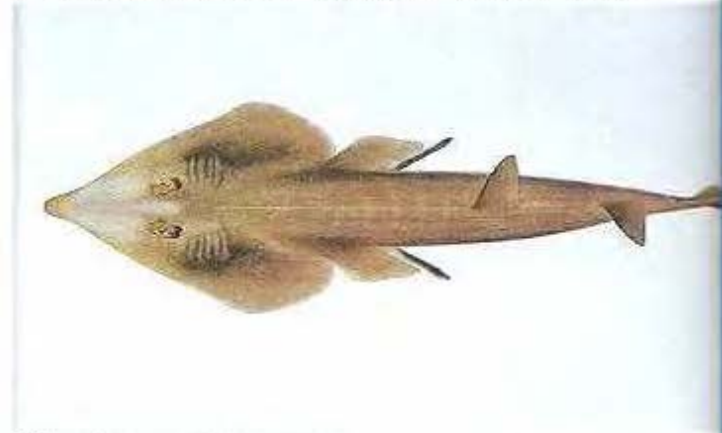
*Rhinobatos armatus* 21  
7-9 ~ ♀ ♥ ☑ ☑ 26°C sg: 1.022 120 cm 1200L



*Rhinobatos formosensis* 21  
7 ~ ♀ ♥ ☑ ☑ 26°C sg: 1.022 100 cm 1000L



*Rhinobatos hynnicephalus* 21  
7 ~ ♀ ♥ ☑ ☑ 26°C sg: 1.022 100 cm 1000L



*Rhinobatos schlegeli* 21  
7, 9 ~ ♀ ♥ ☑ ☑ 26°C sg: 1.022 100 cm 1000L



*Rhinobatos vincentiana* 21  
12 ~ ♀ ♥ ☑ ☑ 23°C sg: 1.024 100 cm 1000L



*Raja porosa* 22  
7 ~ ♀ ♥ ☑ ☑ 26°C sg: 1.022 50 cm 500L



*Taeniura lymma* 23  
7-10 ~ ♀ ♥ ☑ ☑ 26°C sg: 1.022 25 cm 250L



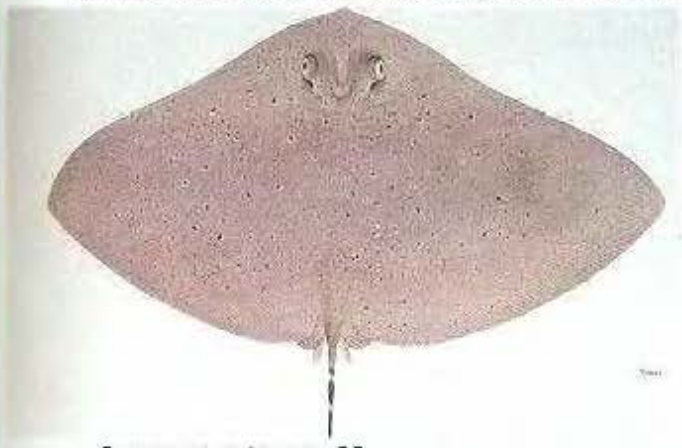
*Trygonoptera testaceus* 23  
7-8, 12 ~ ♀ ♥ ☑ ☑ 26°C sg: 1.022 60 cm 600L



*Himantura uarnak* 22  
6-10 ~ ~ ~ ~ ~ 26°C sg: 1.022 200 cm 3500L



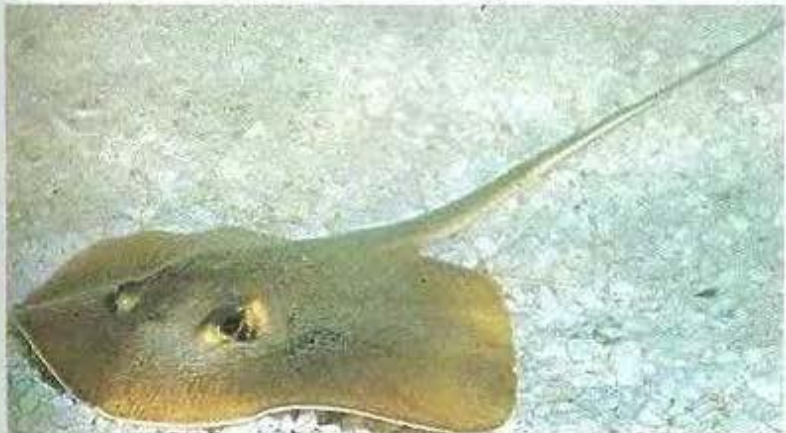
*Amphotistius kuhllii* 22  
7-10 ~ ~ ~ ~ ~ 26°C sg: 1.022 50 cm 1500L



*Gymnura micrura* 22  
7, 9 ~ ~ ~ ~ ~ 26°C sg: 1.020 44 cm 1500L



*Gymnura japonica* 22  
5, 7, 9 ~ ~ ~ ~ ~ 26°C sg: 1.022 180 cm 3500L



*Dasyatis akajei* 22  
5, 7 ~ ~ ~ ~ ~ 25°C sg: 1.022 45 cm 800L



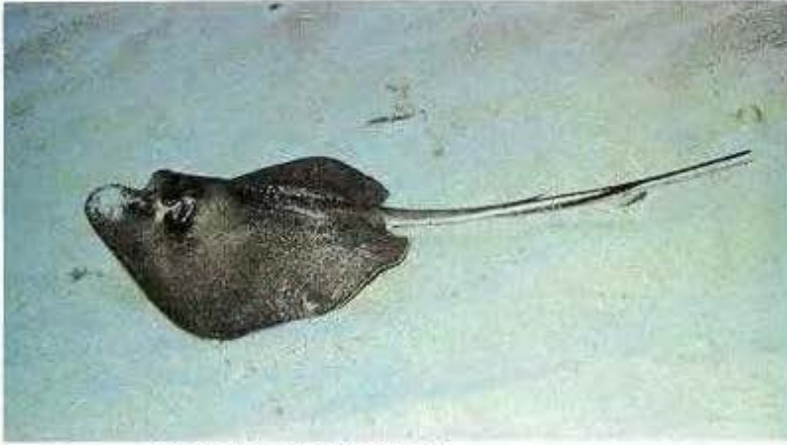
*Dasyatis brevicaudata* 22  
9, 11-12 ~ ~ ~ ~ ~ 26°C sg: 1.022 210 cm 3500L



*Dasyatis hawaiiensis* 22  
6 ~ ~ ~ ~ ~ 26°C sg: 1.022 120 cm 1500L



*Dasyatis sephen* 22  
5, 7-9 ~ ~ ~ ~ ~ 26°C sg: 1.022 200 cm 3500L



*Dasyatis americana* 22  
2 ~ ♀ ♂ ✱ ☐ ☐ 24°C sg: 1.022 90 cm 1500L



*Urogymnus africanus* 22  
9 ~ ♀ ♂ ✱ ☐ ☐ 26°C sg: 1.022 100 cm 1500L



*Urolophus aurantiacus* 22  
5 ~ ♀ ♂ ✱ ☐ ☐ 24°C sg: 1.022 40 cm 800L



*Urolophus mucosus* 22  
12 ~ ♀ ♂ ✱ ☐ ☐ 22°C sg: 1.022 35 cm 700L



*Urolophus halleri* 22  
3 ~ ♀ ♂ ✱ ☐ ☐ 26°C sg: 1.022 56 cm 800L



*Urolophus jamaicensis* 22  
2 ~ ♀ ♂ ✱ ☐ ☐ 26°C sg: 1.022 62 cm 800L

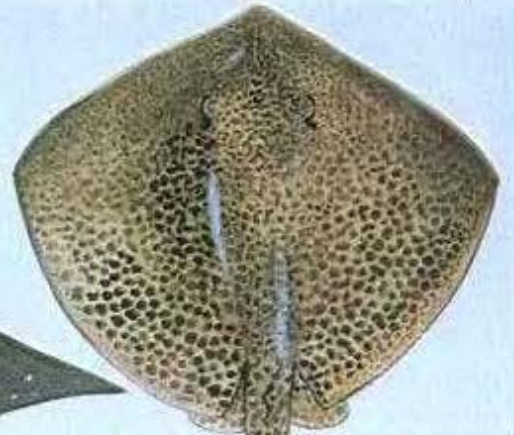


*Urolophus lobatus* 22  
12 ~ ♀ ♂ ✱ ☐ ☐ 23°C sg: 1.024 200 cm 3500L



*Urolophus concentricus* 22  
3 ~ ♀ ♂ ✱ ☐ ☐ 26°C sg: 1.022 45 cm 800L

*Aetobatus narinari* 26



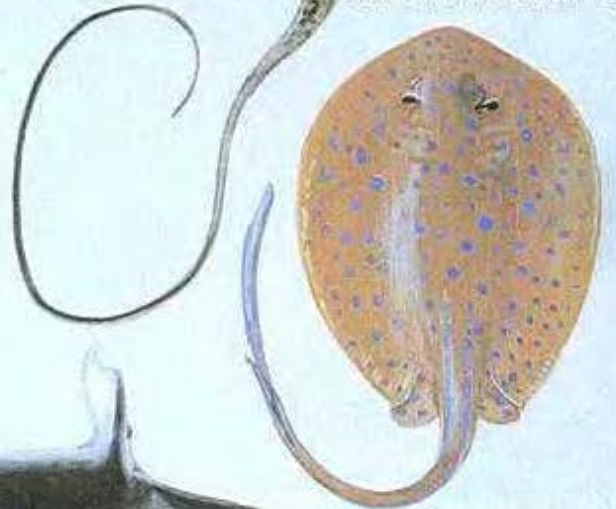
*Himantura uarnak* 23



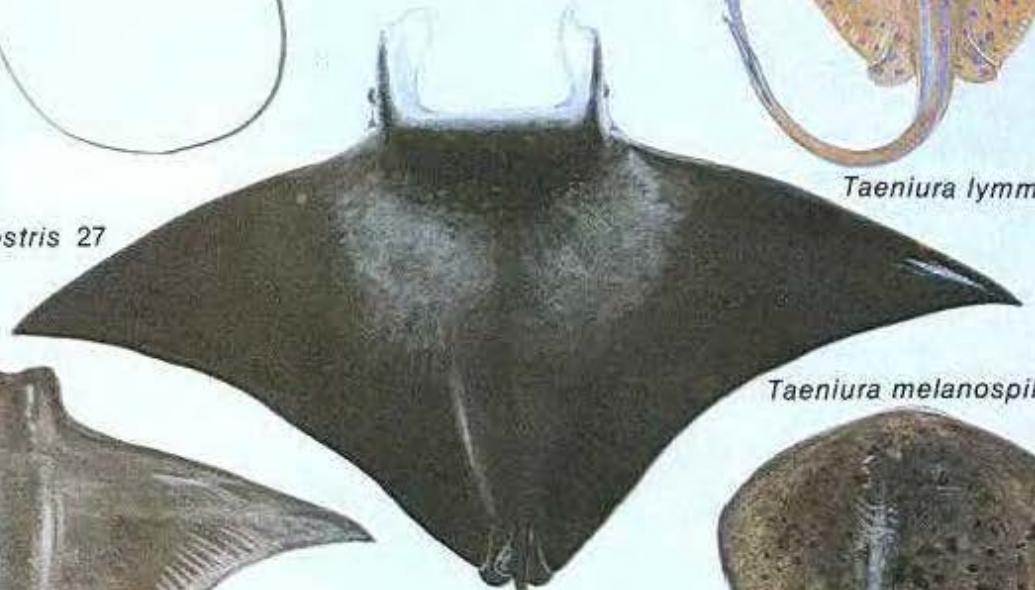
*Rhynchobatus djeddensis* 21



*Manta birostris* 27



*Taeniura lymma* 23



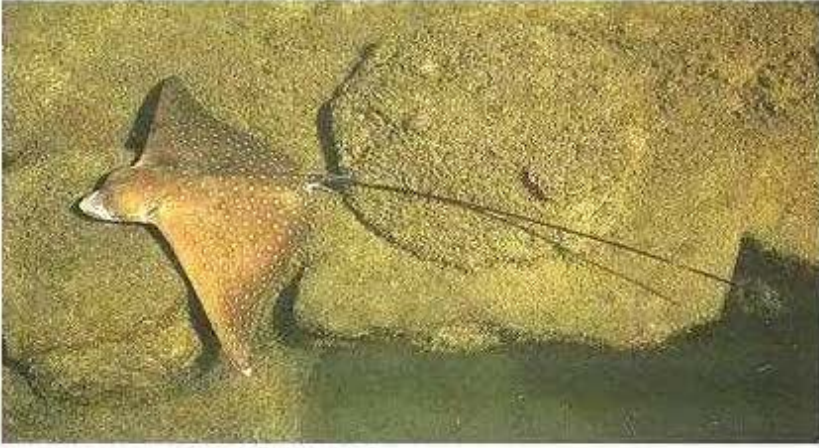
*Taeniura melanospila* 23



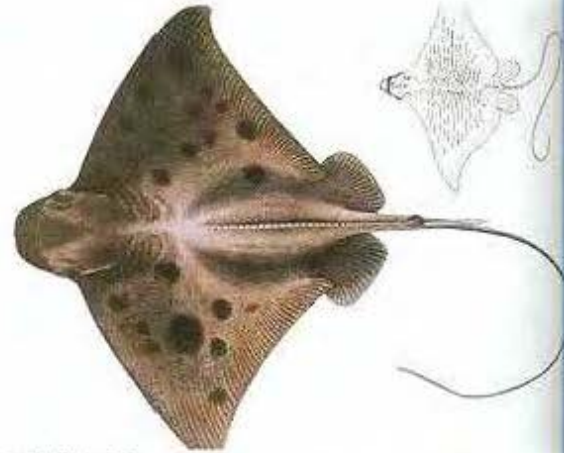
*Rhinoptera neglecta* 26



*Torpedo marmoratus* 20



*Aetobatus narinari* 26  
Circumtrop. ♀ ♂ ♀ ♂ ♀ ♂ 26°C sg: 1.022 230 cm }5000L



*Myliobatis tobijei* 26  
7 ♀ ♂ ♀ ♂ ♀ ♂ 26°C sg: 1.022 130 cm 4000L



*Mobula diabolis* 27  
7-12 ♀ ♂ ♀ ♂ ♀ ♂ 26°C sg: 1.022 178 cm }5000L



*Manta hamiltoni* 27  
3, 6-9 ♀ ♂ ♀ ♂ ♀ ♂ 26°C sg: 1.022 670 cm }5000L

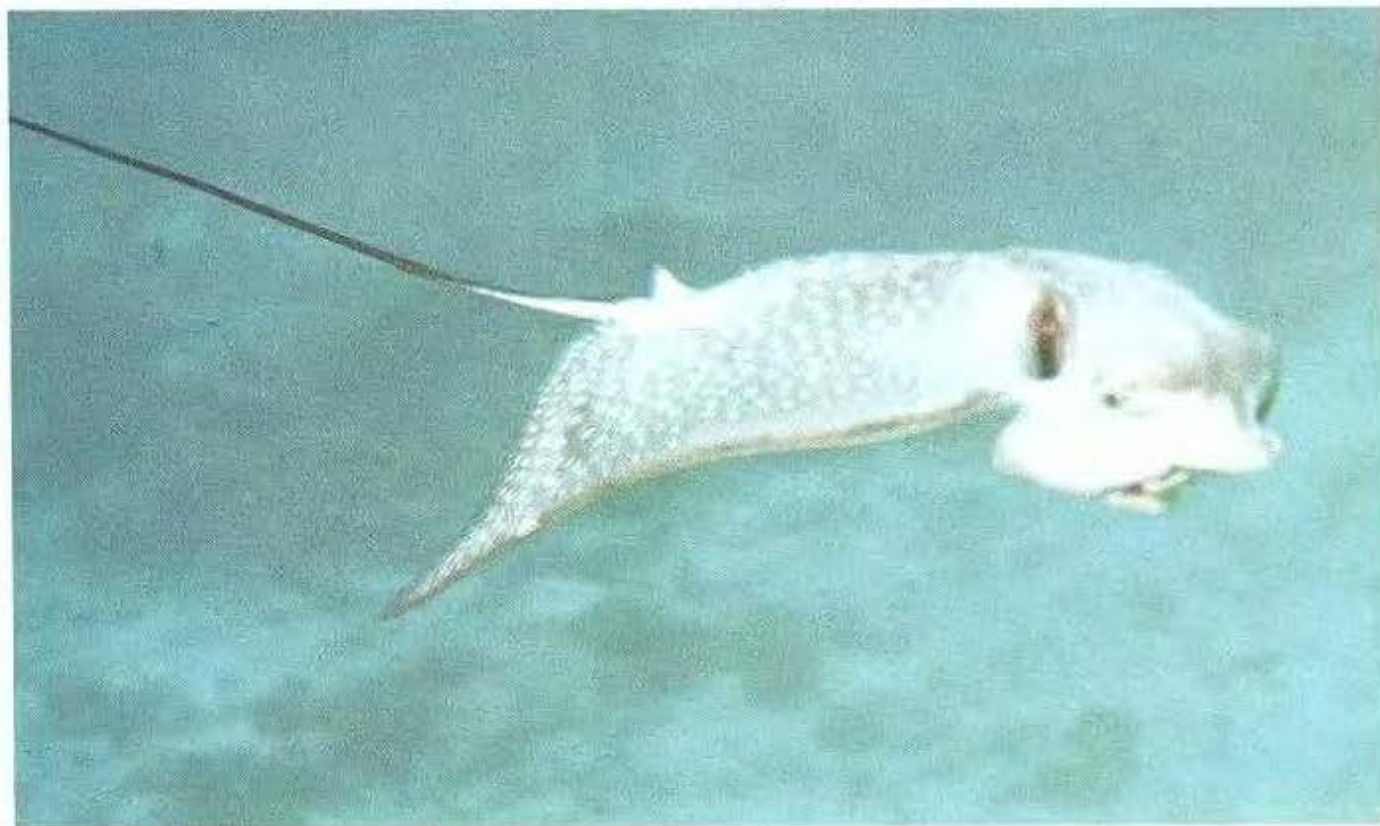


*Manta birostris* 27  
Circumtrop. ♀ ♂ ♀ ♂ ♀ ♂ 26°C sg: 1.022 670 cm }5000L



*Manta birostris* 27  
 Circumtrop. ~ ~ ● ♥ ☒ 26°C sg: 1.022 670 cm >5000L

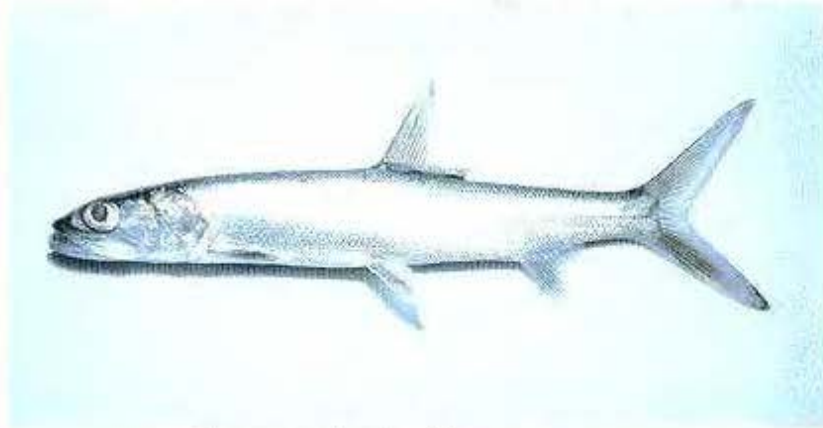
*Aetobatus narinari* 26  
 Circumtrop. ~ ~ ● ✕ ☒ 26°C sg: 1.022 230 cm >5000L



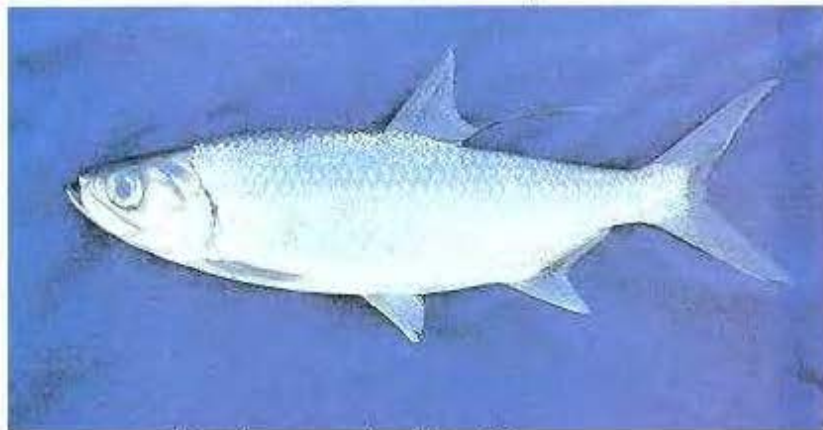




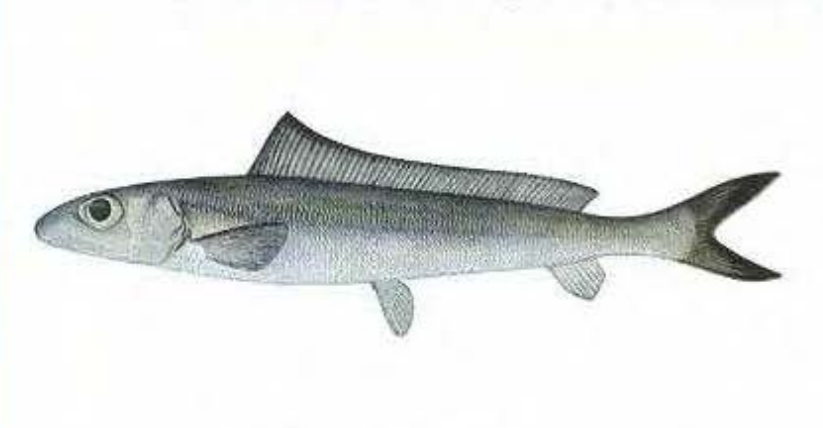
*Latimeria chalumnae* 31  
9 ♀ ♂ ♀ ♀ ♀ 21°C sg: 1.023 135 cm 5000L



*Elops machnata* 43  
6-9 ♀ ♂ ♀ ♀ ♀ 26°C sg: 1.022 80 cm 2000L



*Megalops cyprinoides* 44  
12 ♀ ♂ ♀ ♀ ♀ 26°C sg: 1.018 150 cm 2500L



*Pterothrissus gissu* 45  
5 ♀ ♂ ♀ ♀ ♀ 24°C sg: 1.023 60 cm 1500L



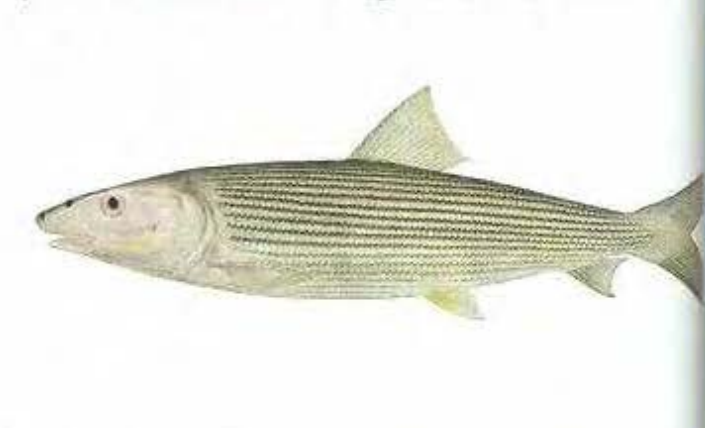
*Elops hawaiiensis* 43  
6, 7 ♀ ♂ ♀ ♀ ♀ 26°C sg: 1.022 60 cm 1500L



*Megalops atlanticus* 44  
2, 13 ♀ ♂ ♀ ♀ ♀ 26°C sg: 1.018 240 cm 5000L



*Megalops atlanticus* 44  
2, 13 ♀ ♂ ♀ ♀ ♀ 26°C sg: 1.018 240 cm 5000L



*Albula vulpes* 45  
Circumtrop. ♀ ♂ ♀ ♀ ♀ 26°C sg: 1.018 60 cm 1500L

#18



*Gymnothorax kidako* 54  
5, 7 ~ 20 ~ 25 ~ 30 ~ 35 ~ 40 ~ 45 ~ 50 ~ 55 ~ 60 ~ 65 ~ 70 ~ 75 ~ 80 ~ 85 ~ 90 ~ 95 ~ 100 ~ 105 ~ 110 ~ 115 ~ 120 ~ 125 ~ 130 ~ 135 ~ 140 ~ 145 ~ 150 ~ 155 ~ 160 ~ 165 ~ 170 ~ 175 ~ 180 ~ 185 ~ 190 ~ 195 ~ 200 ~ 205 ~ 210 ~ 215 ~ 220 ~ 225 ~ 230 ~ 235 ~ 240 ~ 245 ~ 250 ~ 255 ~ 260 ~ 265 ~ 270 ~ 275 ~ 280 ~ 285 ~ 290 ~ 295 ~ 300 ~ 305 ~ 310 ~ 315 ~ 320 ~ 325 ~ 330 ~ 335 ~ 340 ~ 345 ~ 350 ~ 355 ~ 360 ~ 365 ~ 370 ~ 375 ~ 380 ~ 385 ~ 390 ~ 395 ~ 400 ~ 405 ~ 410 ~ 415 ~ 420 ~ 425 ~ 430 ~ 435 ~ 440 ~ 445 ~ 450 ~ 455 ~ 460 ~ 465 ~ 470 ~ 475 ~ 480 ~ 485 ~ 490 ~ 495 ~ 500 ~ 505 ~ 510 ~ 515 ~ 520 ~ 525 ~ 530 ~ 535 ~ 540 ~ 545 ~ 550 ~ 555 ~ 560 ~ 565 ~ 570 ~ 575 ~ 580 ~ 585 ~ 590 ~ 595 ~ 600 ~ 605 ~ 610 ~ 615 ~ 620 ~ 625 ~ 630 ~ 635 ~ 640 ~ 645 ~ 650 ~ 655 ~ 660 ~ 665 ~ 670 ~ 675 ~ 680 ~ 685 ~ 690 ~ 695 ~ 700 ~ 705 ~ 710 ~ 715 ~ 720 ~ 725 ~ 730 ~ 735 ~ 740 ~ 745 ~ 750 ~ 755 ~ 760 ~ 765 ~ 770 ~ 775 ~ 780 ~ 785 ~ 790 ~ 795 ~ 800 ~ 805 ~ 810 ~ 815 ~ 820 ~ 825 ~ 830 ~ 835 ~ 840 ~ 845 ~ 850 ~ 855 ~ 860 ~ 865 ~ 870 ~ 875 ~ 880 ~ 885 ~ 890 ~ 895 ~ 900 ~ 905 ~ 910 ~ 915 ~ 920 ~ 925 ~ 930 ~ 935 ~ 940 ~ 945 ~ 950 ~ 955 ~ 960 ~ 965 ~ 970 ~ 975 ~ 980 ~ 985 ~ 990 ~ 995



*Rhinomuraena quaesita* 54

7 ~ ~ ~ ● ✖ 📷 📏 26°C sg: 1.022 120 cm 1000L

*Gymnothorax* sp. 54

6-9 ~ ~ ~ ● ✖ 📷 📏 26°C sg: 1.022 200 cm 800L





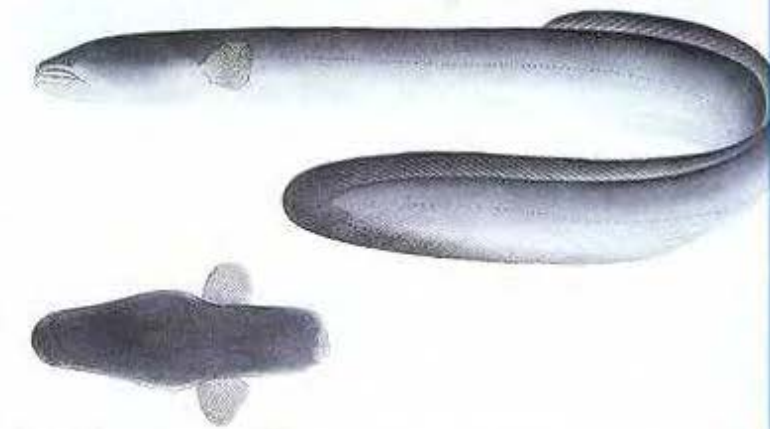
*Anguilla dieffenbachii* 49  
11-12 ~ ♀ ♂ ♀ ♂ ♀ ♂ 24°C sg: 1.018 90 cm 1000L



*Anguilla anguilla* 49  
13, 14 ~ ♀ ♂ ♀ ♂ ♀ ♂ 21°C sg: 1.018 90 cm 1000L



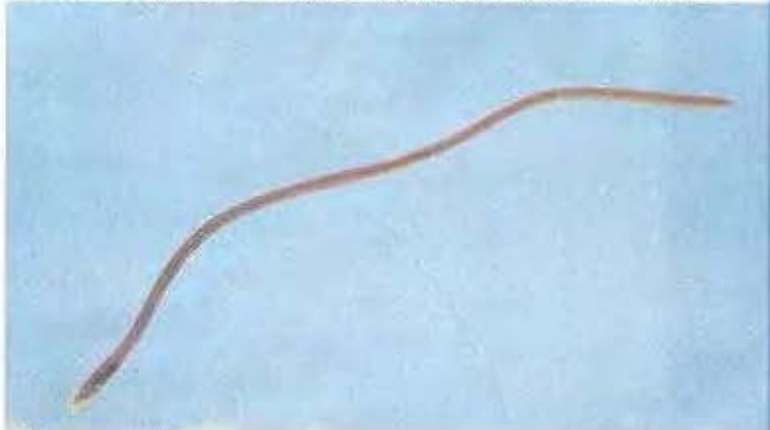
*Anguilla japonica* 49  
5 ~ ♀ ♂ ♀ ♂ ♀ ♂ 22°C sg: 1.018 100 cm 1000L



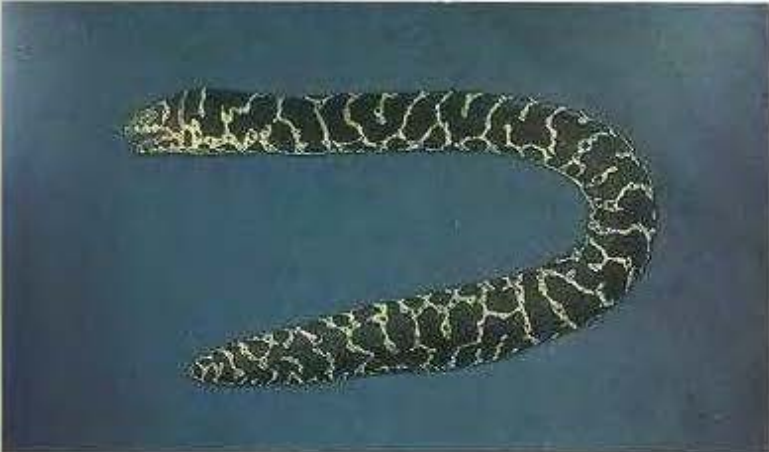
*Anguilla australis* 49  
12 ~ ♀ ♂ ♀ ♂ ♀ ♂ 23°C sg: 1.018 100 cm 1000L



*Moringa microchir* 51  
7, 9 ~ ♀ ♂ ♀ ♂ ♀ ♂ 26°C sg: 1.020 39 cm 400L



*Muraenichthys* sp. 58  
6, 7 ~ ♀ ♂ ♀ ♂ ♀ ♂ 26°C sg: 1.020 30 cm 300L



*Echidna catenata* 54  
2 ~ ♀ ♂ ♀ ♂ ♀ ♂ 26°C sg: 1.020 70 cm 500L



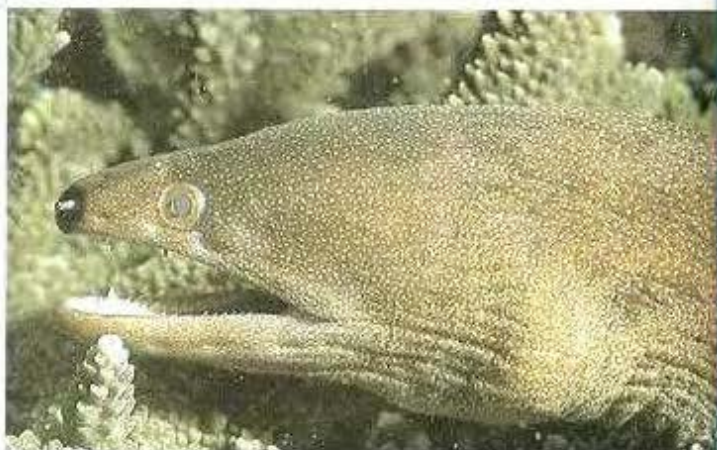
*Echidna pozyzona* 54  
7 ~ ♀ ♂ ♀ ♂ ♀ ♂ 26°C sg: 1.022 60 cm 500L

54



*Gymnomuraena zebra* 54  
3, 6, 7 ~ ♀ ♂ ✖ ☑ 26°C sg: 1.022 90 cm 500L

#19



*Gymnothorax eurostus* 54  
5-7, 9 ~ ♀ ♂ ✖ ☑ 26°C sg: 1.022 80 cm 500L



*Gymnothorax fimbriatus* 54  
9 ~ ♀ ♂ ✖ ☑ 26°C sg: 1.022 80 cm 500L



*Uropterygius concolor* 54  
7, 9 ~ ♀ ♂ ✖ ☑ 26°C sg: 1.022 32 cm 300L



*Gymnothorax rueppelliae* 54  
6-10 ~ ♀ ♂ ✖ ☑ 26°C sg: 1.022 55 cm 300L



*Gymnothorax steindachneri* 54  
6 ~ ♀ ♂ ✖ ☑ 25°C sg: 1.023 91 cm 700L



*Gymnothorax thyrsoideus* 54  
7 ~ ♀ ♂ ✖ ☑ 26°C sg: 1.022 80 cm 500L



*Gymnothorax woodwardi* 54  
12 ~ ♀ ♂ ✖ ☑ 26°C sg: 1.022 75 cm 500L



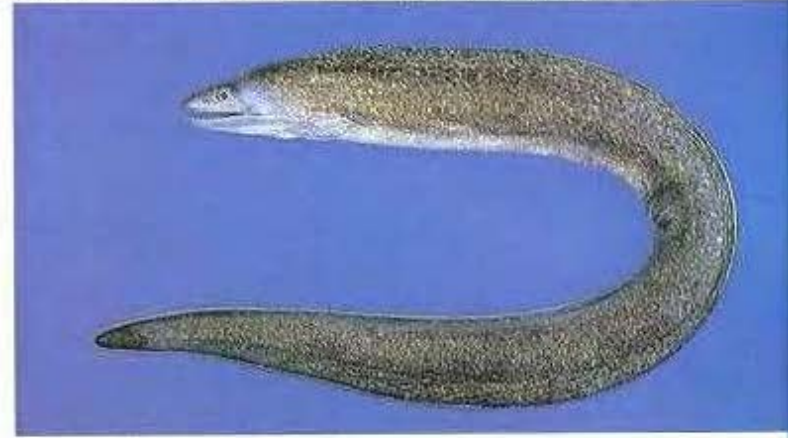
*Gymnothorax flavimarginatus* 54  
3, 6-9 ~ ~ ● ✖ ☑ 26°C sg: 1.022 100 cm 500L



*Siderea picta* 54  
6-9 ~ ~ ● ✖ ☑ 26°C sg: 1.022 68 cm 400L



*Gymnothorax moringa* 54  
2 ~ ~ ● ✖ ☑ 26°C sg: 1.022 70 cm 400L



*Gymnothorax vicinus* 54  
2 ~ ~ ● ✖ ☑ 26°C sg: 1.022 120 cm 500L



*Gymnothorax castaneus* 54  
3 ~ ~ ● ✖ ☑ 26°C sg: 1.022 120 cm 500L



*Gymnothorax funebris* 54  
1, 2 ~ ~ ● ✖ ☑ 26°C sg: 1.022 240 cm 800L



*Gymnothorax panamensis* 54  
3 ~ ~ ● ✖ ☑ 26°C sg: 1.022 30 cm 200L



*Gymnothorax mordax* 54  
3-4 ~ ~ ● ✖ ☑ 24°C sg: 1.023 200 cm 800L



*Gymnothorax flavimarginatus* 54  
3, 6-9 ~ ~ ~ ~ ~ 26°C sg: 1.022 80 cm 400L



*Gymnothorax melatremus* 54  
9 ~ ~ ~ ~ ~ 26°C sg: 1.022 26 cm 120L



*Gymnothorax nudivomer* 54  
6, 10 ~ ~ ~ ~ ~ 26°C sg: 1.022 100 cm 400L



*Gymnothorax flavimarginatus* 54  
3, 6-9 ~ ~ ~ ~ ~ 26°C sg: 1.022 80 cm 400L



*Gymnothorax margaritophorus* 54  
7, 9 ~ ~ ~ ~ ~ 26°C sg: 1.022 36 cm 200L



*Gymnothorax meleagris* 54  
7, 9 ~ ~ ~ ~ ~ 26°C sg: 1.022 90 cm 400L



*Gymnothorax permistus* 54  
9 ~ ~ ~ ~ ~ 26°C sg: 1.022 75 cm 300L



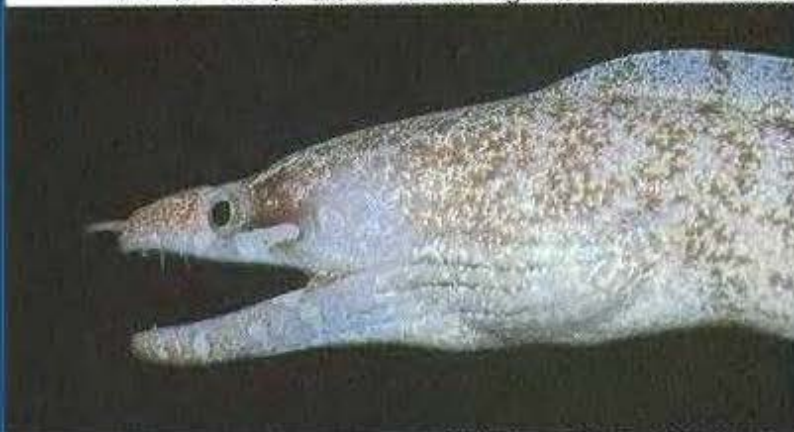


*Siderea picta* 54

6-9 ~ ~ ~ ~ ~ 26°C sg: 1.022 68 cm 300L

*Gymnothorax undulatus* 54

6-9 ~ ~ ~ ~ ~ 26°C sg: 1.022 150 cm 500L

*Gymnothorax zonipectus* 54

6-9 ~ ~ ~ ~ ~ 26°C sg: 1.022 31 cm 100L

*Gymnothorax flavimarginatus* 54

3, 6-9 ~ ~ ~ ~ ~ 26°C sg: 1.022 80 cm 400L

*Gymnothorax favagineus* 54

6-9 ~ ~ ~ ~ ~ 26°C sg: 1.022 250 cm 800L

*Gymnothorax flavimarginatus?* 54

3, 6-9 ~ ~ ~ ~ ~ 26°C sg: 1.022 80 cm 400L

*Gymnothorax prasinus* 54

12 ~ ~ ~ ~ ~ 26°C sg: 1.022 30 cm 100L

*Muraena pardalis* 54

6-9 ~ ~ ~ ~ ~ 26°C sg: 1.022 100 cm 400L



*Echidna nebulosa* 54  
6-9 ~ ~ ~ ● ✖ ☑ 26°C sg: 1.022 70 cm 300L



*Enchelycore bayeri* 54  
7, 9 ~ ~ ~ ● ✖ ☑ 26°C sg: 1.022 70 cm 300L



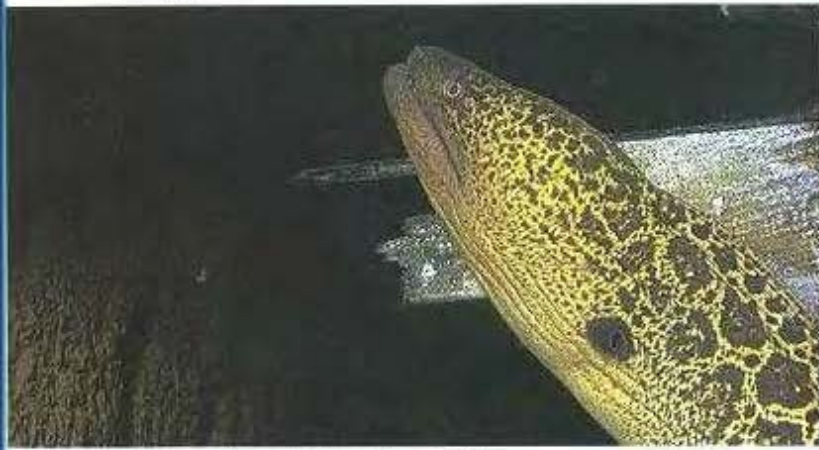
*Gymnothorax brederi* 54  
6-9 ~ ~ ~ ● ✖ ☑ 26°C sg: 1.022 65 cm 300L

*Gymnothorax favagineus* 54  
6-9 ~ ~ ~ ● ✖ ☑ 26°C sg: 1.022 250 cm 2500L

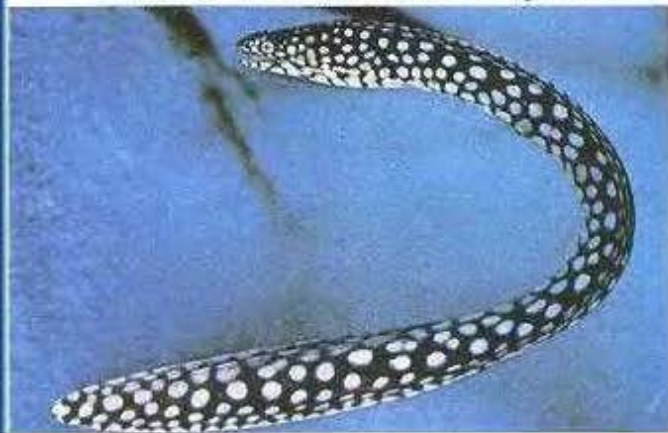


*Siderea grisea* 54  
9-10 ~ ~ ~ ● ✖ ☑ 26°C sg: 1.022 38 cm 400L

*Gymnothorax javanicus* 54  
6-10 ~ ~ ~ ● ✖ ☑ 26°C sg: 1.022 250 cm 1000L



*Gymnothorax javanicus* 54  
6-10 ~ ~ ~ ~ ~ 26°C sg: 1.022 250 cm 1000L



*Muraena melanotis* 54  
13 ~ ~ ~ ~ ~ 26°C sg: 1.022 100 cm 400L



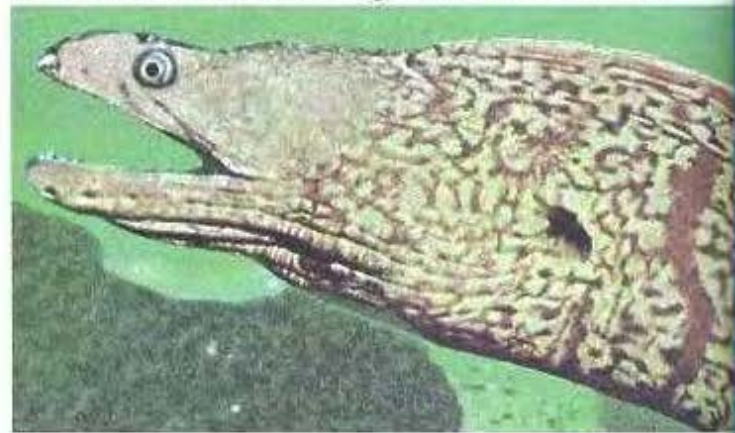
*Muraena lentiginosa* 54  
3 ~ ~ ~ ~ ~ 26°C sg: 1.022 60 cm 400L



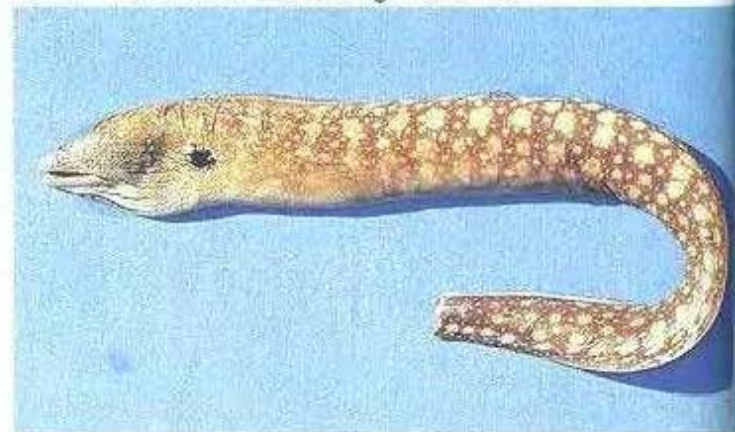
*Muraena miliaris* 54  
2, 13 ~ ~ ~ ~ ~ 26°C sg: 1.022 60 cm 400L



*Gymnothorax prasinus* 54  
11 ~ ~ ~ ~ ~ 26°C sg: 1.022 100 cm 400L



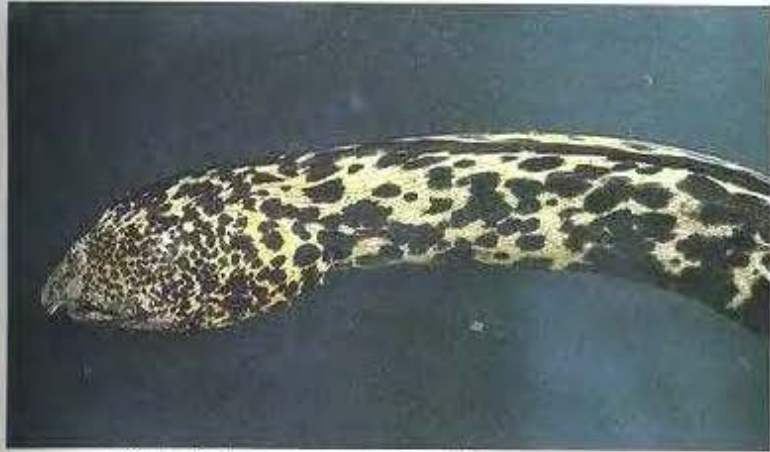
*Muraena helena* 54  
13 ~ ~ ~ ~ ~ 26°C sg: 1.022 50 cm 400L



*Muraena clepsydra* 54  
3 ~ ~ ~ ~ ~ 26°C sg: 1.022 50 cm 400L



*Uropterygius tigrinus* 54  
6 ~ ~ ~ ~ ~ 26°C sg: 1.022 120 cm 800L



*Callechelys marmoratus* 58  
6-9 ~ ♀ ♂ ✖ 📺 📺 26°C sg: 1.022 57 cm 600L



*Pisodonophis cancrivorus* 58  
7, 9 ~ ♀ ♂ ✖ 📺 📺 25°C sg: 1.022 100 cm 1000L



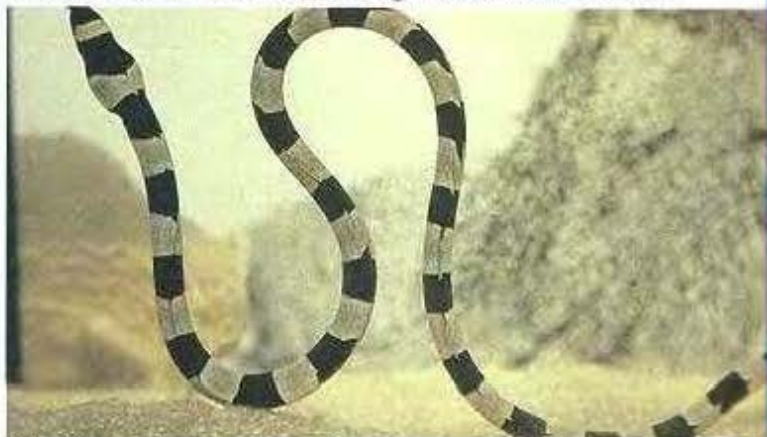
*Muraenichthys tasmaniensis* 58  
12 ~ ♀ ♂ ✖ 📺 📺 25°C sg: 1.023 35 cm 300L



*Leiuranus semicinctus* 58  
6-9 ~ ♀ ♂ ✖ 📺 📺 26°C sg: 1.022 60 cm 500L



*Myrichthys aciminatus* 58  
2 ~ ♀ ♂ ✖ 📺 📺 26°C sg: 1.022 102 cm 1000L



*Myrichthys colubrinus* 58  
7-9 ~ ♀ ♂ ✖ 📺 📺 26°C sg: 1.022 75 cm 750L



*Myrichthys maculosus* 58  
3, 6-9 ~ ♀ ♂ ✖ 📺 📺 26°C sg: 1.022 100 cm 1000L



*Myrichthys ocellatus* 58  
2 ~ ♀ ♂ ✖ 📺 📺 26°C sg: 1.022 100 cm 1000L



*Ophichthus ophis* 58  
1-2 ~ ~ ~ ~ ~ 24°C sg: 1.022 122 cm 1200L



*Quassiremus notoehir* 58  
3 ~ ~ ~ ~ ~ 26°C sg: 1.022 85 cm 1000L



*Sphagebranchus flavicauda* 58  
7 ~ ~ ~ ~ ~ 25°C sg: 1.022 30 cm 300L



*Apterichtus ansp* 58  
2 ~ ~ ~ ~ ~ 25°C sg: 1.022 54 cm 500L



*Aprognathodon platyventris* 58  
2 ~ ~ ~ ~ ~ 26°C sg: 1.022 23 cm 300L



Ophichthid eel 58  
2 ~ ~ ~ ~ ~ 26°C sg: 1.022 45 cm 500L



*Muraenesox cinereus* 62  
5, 7-10 ~ ~ ~ ~ ~ 26°C sg: 1.022 200 cm 2000L



*Gnathophis nystromi* 62  
5, 7 ~ ~ ~ ~ ~ 26°C sg: 1.022 45 cm 450L

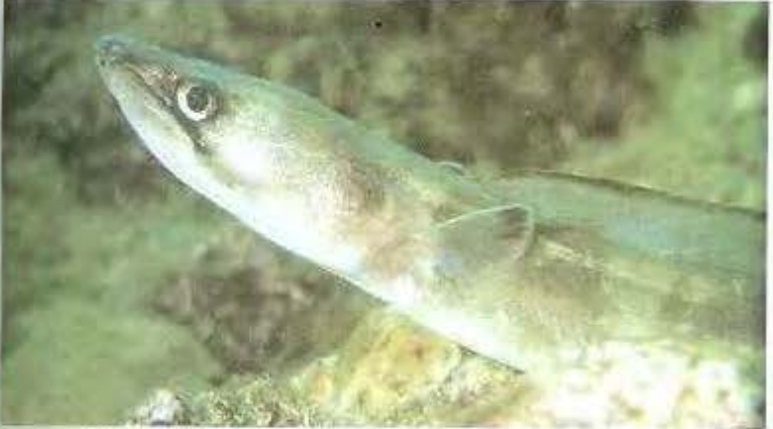
*Anago anago* 62  
6-9 ~ ~ ~ ~ ~ 26°C sg: 1.022 60 cm 600L



*Conger japonicus* 62  
5 ~ ♀ ♂ ✖ 📷 📺 26°C sg: 1.022 240 cm 2500L



*Ariosoma impressa* 62  
2 ~ ♀ ♂ ✖ 📷 📺 26°C sg: 1.022 18 cm 200L



*Conger cinereus* 62  
7, 9 ~ ♀ ♂ ✖ 📷 📺 26°C sg: 1.022 103 cm 1000L



*Conger wilsoni* 62  
7, 9 ~ ♀ ♂ ✖ 📷 📺 26°C sg: 1.022 150 cm 1500L



*Heteroconger halis* 62  
2 ~ ♀ ♂ ✖ 📷 📺 26°C sg: 1.022 51 cm 500L



*Gorgasia preclara* 62  
7, 9 ~ ♀ ♂ ✖ 📷 📺 26°C sg: 1.022 40 cm 400L



*Taenioconger digueti* 62  
3 ~ ♀ ♂ ✖ 📷 📺 26°C sg: 1.022 63 cm 600L



*Taenioconger* sp 62  
7 ~ ♀ ♂ ✖ 📷 📺 26°C sg: 1.022 30 cm 300L



*Rhinomuraena quaesita* 54  
7 ~ ~ ~ ~ ~ 26°C sg: 1.022 120 cm 1000L



*Myrichthys maculosus* 58  
3, 6-9 ~ ~ ~ ~ ~ 26°C sg: 1.022 100 cm 1000L



*Gorgasia preclara* 62  
7, 9 ~ ~ ~ ~ ~ 26°C sg: 1.022 40 cm 400L



*Gorgasia maculata* 62  
9 ~ ~ ~ ~ ~ 26°C sg: 1.022 25 cm 300L



*Rhinomuraena quaesita* 54  
7 ~ ~ ~ ~ ~ 26°C sg: 1.022 120 cm 1000L



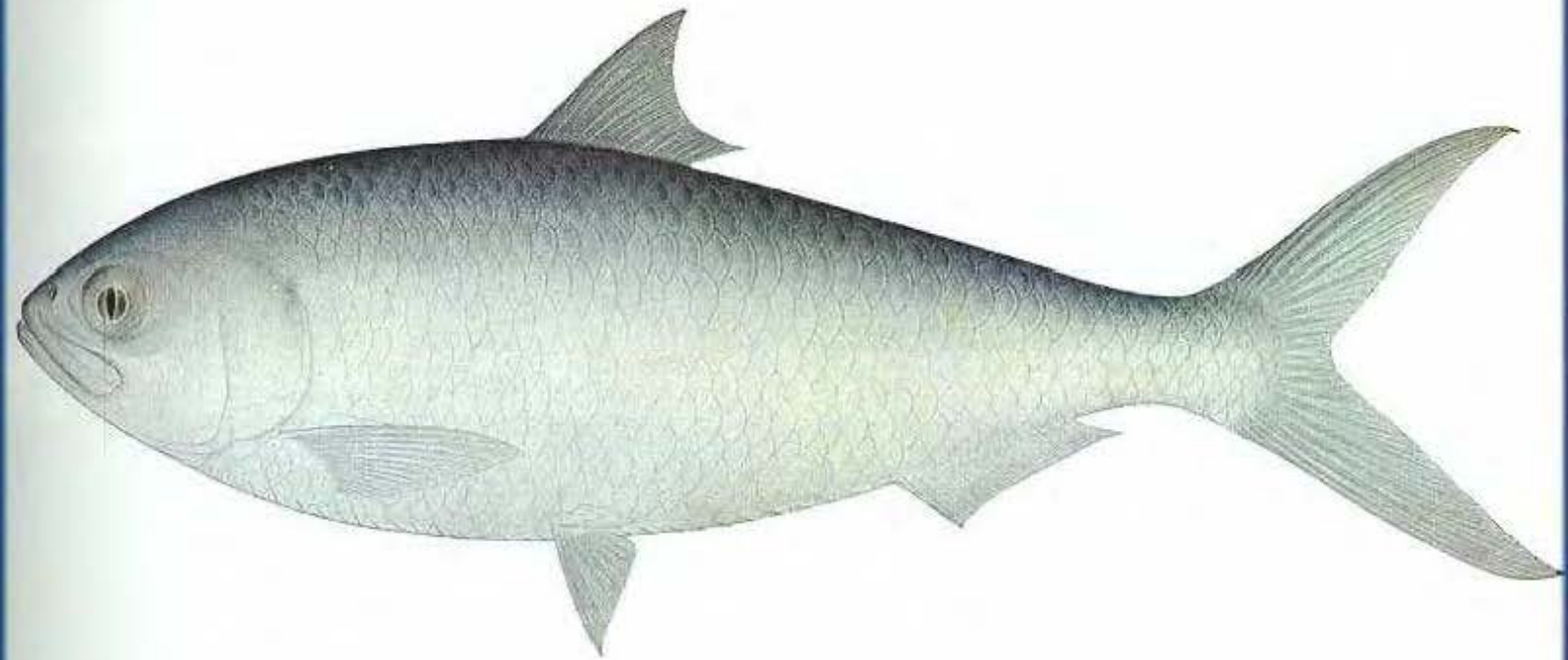
*Brachysomophis cirrhocheilus* 58  
7, 9 ~ ~ ~ ~ ~ 26°C sg: 1.022 110 cm 1200L



*Taenioconger hassi* 62  
7, 9 ~ ~ ~ ~ ~ 26°C sg: 1.022 36 cm 400L

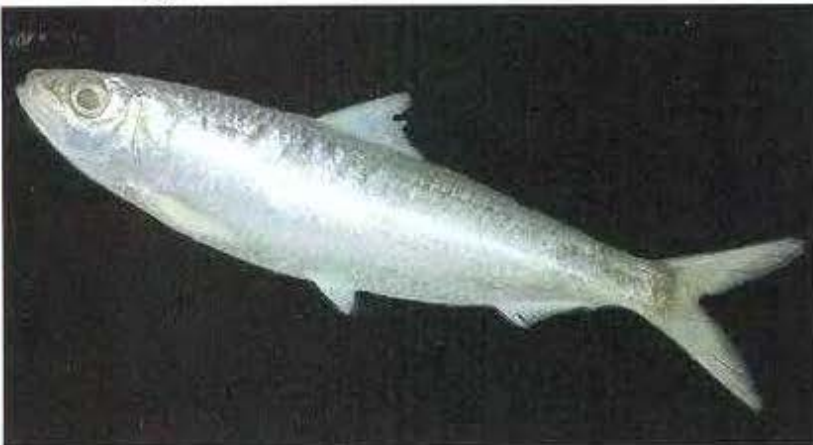


*Dussumieria hasselti* 69  
7~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 15 cm 200L



*Hilsa reevesii* 69  
7~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 25 cm 250L

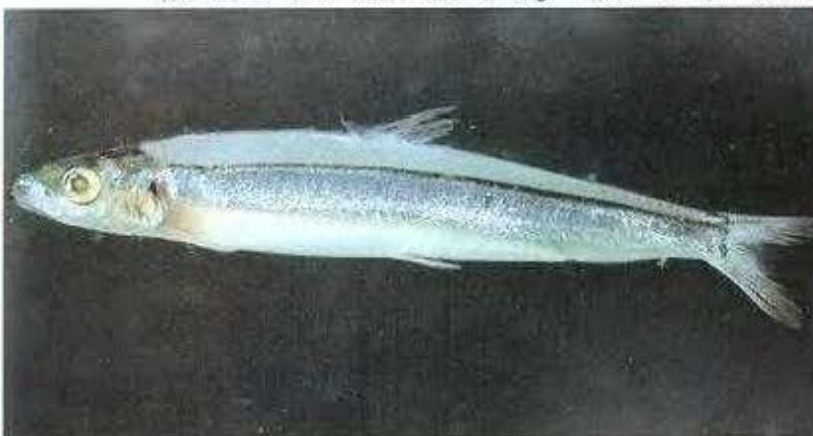




*Amblygaster leiogaster* 69  
7, 9-10 ~ ♀ ♂ ♥ 📏 📏 26°C sg: 1.022 25 cm 300L



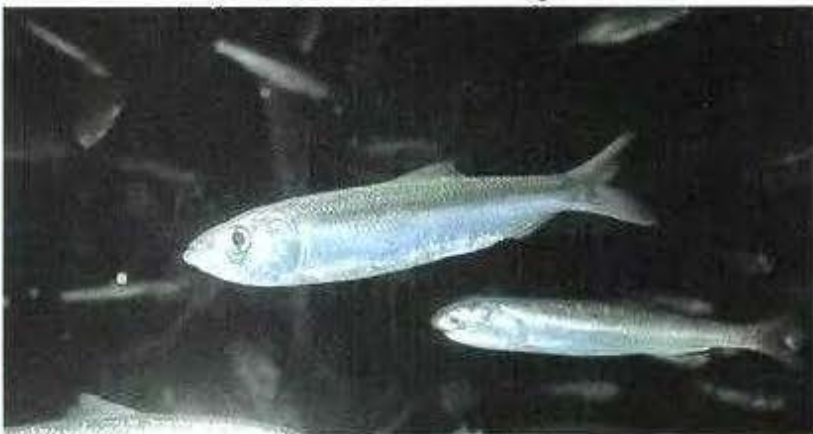
*Amblygaster sirm* 69  
7, 9 ~ ♀ ♂ ♥ 📏 📏 26°C sg: 1.022 25 cm 300L



*Spratelloides japonicus* 69  
6-10 ~ ♀ ♂ ♥ 📏 📏 26°C sg: 1.022 10 cm 100L



*Spratelloides robustus* 69  
8, 12 ~ ♀ ♂ ♥ 📏 📏 26°C sg: 1.022 10 cm 100L



*Clupea harengus pallasii* 69  
4-7 ~ ♀ ♂ ♥ 📏 📏 26°C sg: 1.022 35 cm 400L



*Etrumeus teres* 69  
Circumtrop. ~ ♀ ♂ ♥ 📏 📏 26°C sg: 1.022 30 cm 300L



*Sardinella cf. jussieu* 69  
7-10 ~ ♀ ♂ ♥ 📏 📏 26°C sg: 1.022 18 cm 200L



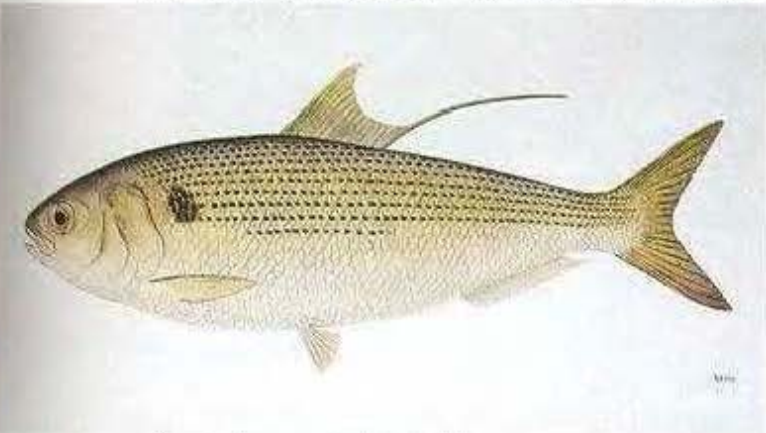
*Jenkinsia* sp. 69  
2 ~ ♀ ♂ ♥ 📏 📏 26°C sg: 1.022 7 cm 80L



*Anodontostoma chacunda* 69  
7, 9 ~ ♀ ♥ 📏 📏 26°C sg: 1.022 17 cm 200L



*Dorosoma petenense* 69  
1-2 ~ ♀ ♥ 📏 📏 24°C sg: 1.023 22 cm 250L



*Konosirus punctatus* 69  
5-9 ~ ♀ ♥ 📏 📏 24°C sg: 1.023 30 cm 300L



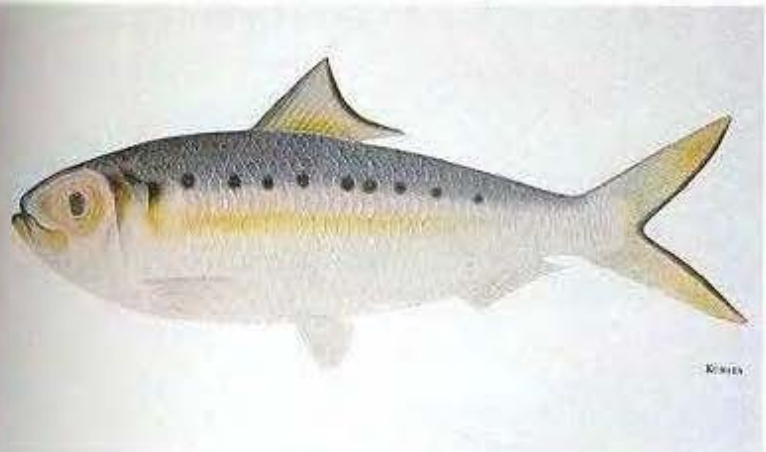
*Nematalosa japonica* 69  
5, 7 ~ ♀ ♥ 📏 📏 22°C sg: 1.024 25 cm 300L



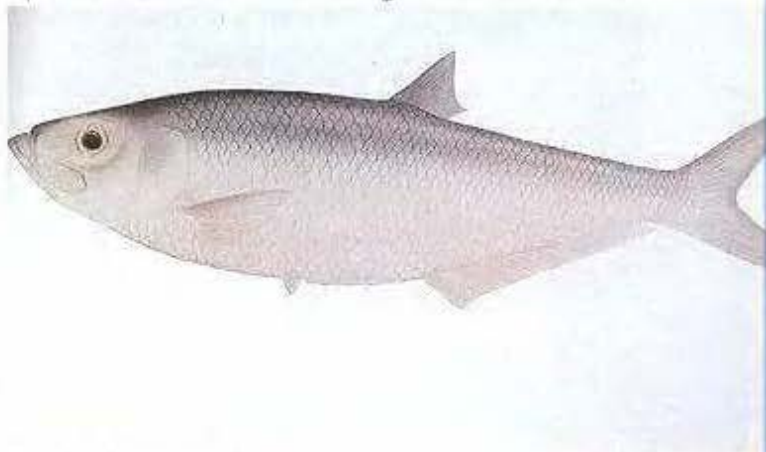
*Opisthonema libertate* 69  
3 ~ ♀ ♥ 📏 📏 26°C sg: 1.022 23 cm 200L



*Opisthopecterus tartar* 69  
3, 6-9 ~ ♀ ♥ 📏 📏 26°C sg: 1.022 23 cm 250L



*Harengula koningsbergeri* 69  
7 ~ ♀ ♥ 📏 📏 26°C sg: 1.022 13 cm 150L



*Ilisha elongata* 69  
7, 9 ~ ♀ ♥ 📏 📏 26°C sg: 1.022 30 cm 300L



*Engraulis mordax* 70  
4 ~ ♀ ♥ 📏 📏 22°C sg: 1.024 13 cm 150L



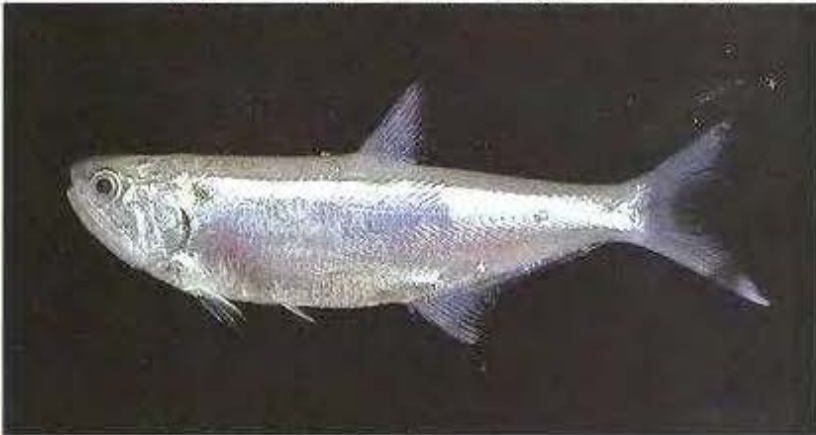
*Anchoviella* sp. 70  
15 ~ ♀ ♥ 📏 📏 26°C sg: 1.024 8 cm 80L



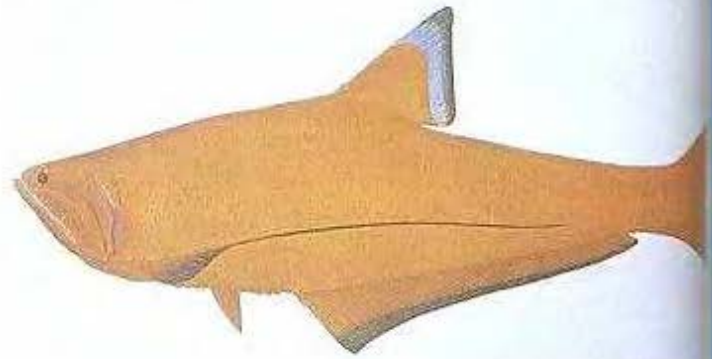
*Engraulis japonicus* 70  
5, 7, 9 ~ ♀ ♥ 📏 📏 26°C sg: 1.022 13 cm 150L



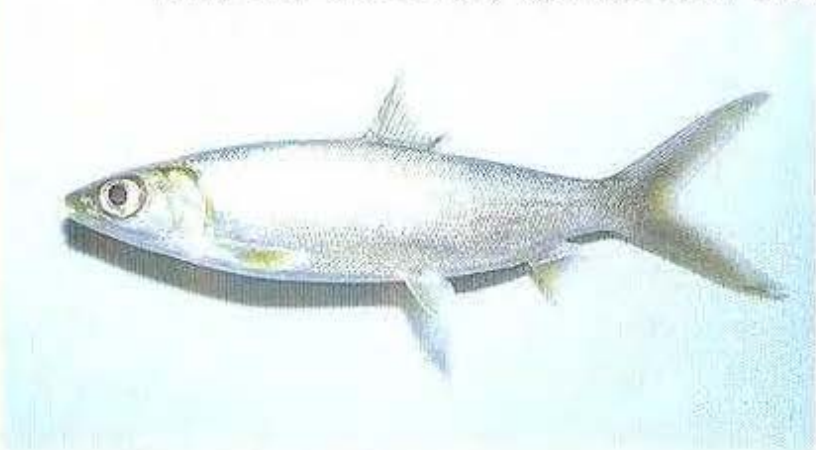
*Anchovia commersoniana* 70  
7, 9 ~ ♀ ♥ 📏 📏 26°C sg: 1.022 13 cm 150L



*Thyssa hamiltoni* 70  
7-9, 12 ~ ♀ ♥ 📏 📏 25°C sg: 1.022 25 cm 250L



*Setipinna breviceps* 70  
5, 7, 9 ~ ♀ ♥ 📏 📏 25°C sg: 1.022 15 cm 150L



*Chanos chanos* 72  
5-10 ~ ♀ ♥ 📏 📏 26°C sg: 1.022 180 cm 2000L



*Chirocentrus nudus* 71  
7, 12 ~ ♀ ♥ 📏 📏 26°C sg: 1.022 45 cm 500L

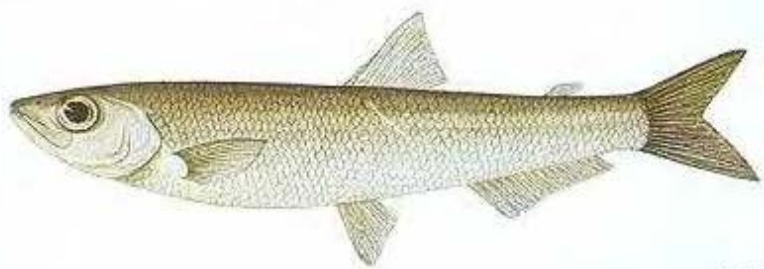
#32A



*Engraulis mordax* 70  
4 ♀ ♂ ♥ 📏 🌡️ 22°C sg: 1.024 13 cm 150L

*Opisthonema oglinum* 69  
2 ♀ ♂ ♥ 📏 🌡️ 26°C sg: 1.022 30 cm 300L

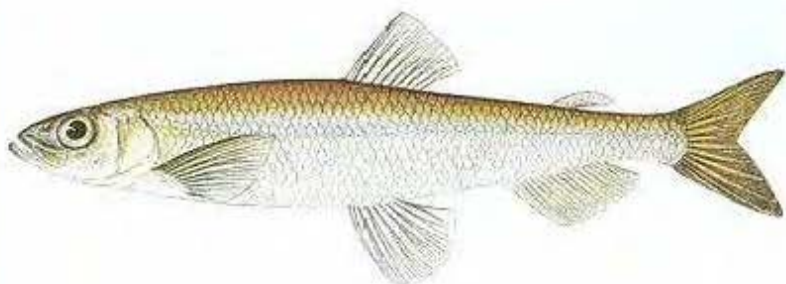




*Hypomesus olidus* 137  
4, 5 ~ ♀ ♥ ☞ ☞ 23°C sg: 1.024 7 cm 80L



*Hypomesus pretiosus japonicus* 137  
5 ~ ♀ ♥ ☞ ☞ 24°C sg: 1.023 5 cm 50L



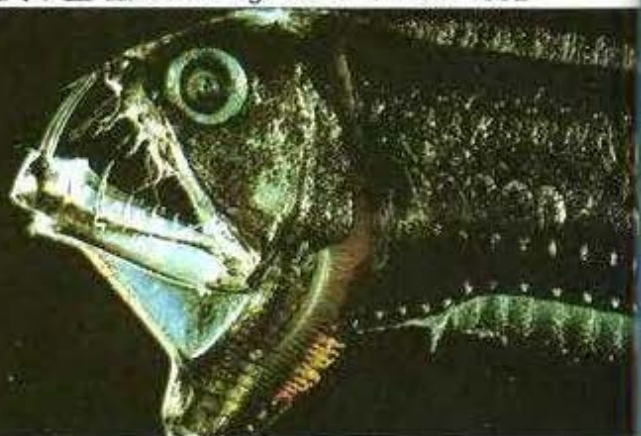
*Spirinchus lanceolatus* 137  
5 ~ ♀ ♥ ☞ ☞ 23°C sg: 1.024 10 cm 100L



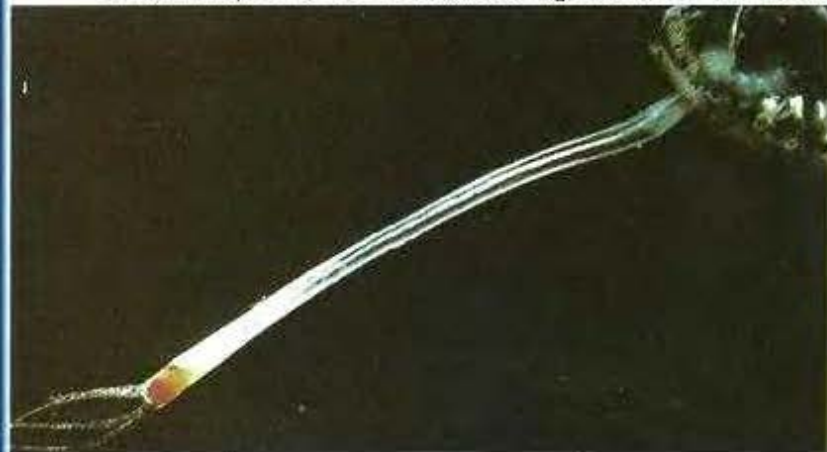
*Salangichthys microdon* 139  
5 ~ ♀ ✂ ☞ ☞ 24°C sg: 1.023 10 cm 100L



*Gonostoma elongatum* 144  
Circumtrop. ~ ♀ ✂ ☞ ☞ 20°C sg: 1.024 27 cm 300L



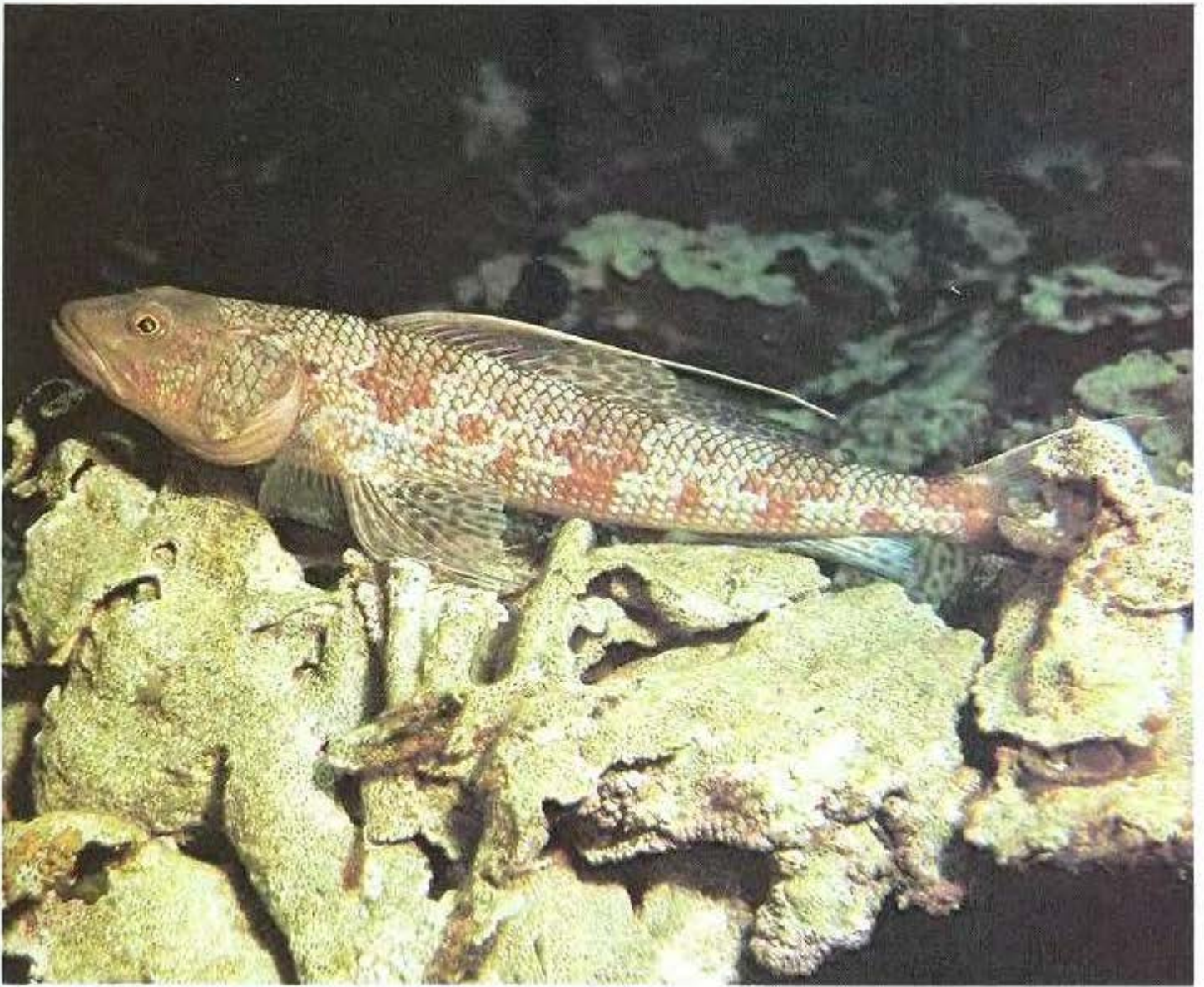
*Chauliodus sloani* 147  
Circumtemp. ~ ♀ ✂ ☞ ☞ 20°C sg: 1.024 30 cm 300L



? *Stomias* sp. 148  
6 ~ ♀ ✂ ☞ ☞ 20°C sg: 1.024 18 cm 200L



? *Melanostomias* sp. 150  
Circumtemp. ~ ♀ ✂ ☞ ☞ 20°C sg: 1.024 26 cm 300L



*Aulopus purpurissatus* 153  
 7-8, 12 ~ ♀ ♂ ♀ ♂ ♀ ♂ 26°C sg: 1.022 60 cm 600L

*Synodus* sp. 157  
 2 ~ ♀ ♂ ♀ ♂ ♀ ♂ 26°C sg: 1.022 30 cm 300L



*Cociella crocodila* 269

5, 7-10 ~ ~ ~ ~ ~ 26°C sg: 1.022 25 cm 300L

*Platycephalus haackei* 269

7-8 ~ ~ ~ ~ ~ 26°C sg: 1.022 40 cm 400L

*Aulopus purpurissatus* 153

7-8, 12 ~ ~ ~ ~ ~ 26°C sg: 1.022 60 cm 600L

*Aulopus purpurissatus* 153

7-8, 12 ~ ~ ~ ~ ~ 26°C sg: 1.022 60 cm 600L

*Saurida gracilis* 157

7-10 ~ ~ ~ ~ ~ 26°C sg: 1.023 20 cm 200L

*Synodus jaculum* 157

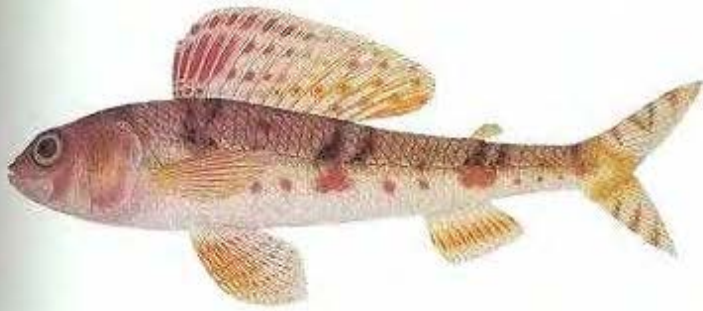
7, 9 ~ ~ ~ ~ ~ 26°C sg: 1.022 15 cm 150L

*Synodus variegatus* 157

6-7 ~ ~ ~ ~ ~ 26°C sg: 1.022 22 cm 200L

*Synodus variegatus* 157

6-7 ~ ~ ~ ~ ~ 26°C sg: 1.022 22 cm 200L



*Aulopus japonicus* 153  
5 ~ ~ ~ ~ ~ 24°C sg: 1.023 20 cm 200L



*Trachinocephalus myops* 157  
Circumtrop. ~ ~ ~ ~ ~ 26°C sg: 1.022 30 cm 300L



*Saurida dermatogenys* 157  
6 ~ ~ ~ ~ ~ 26°C sg: 1.022 30 cm 300L



*Saurida undosquamis* 157  
7-10 ~ ~ ~ ~ ~ 26°C sg: 1.022 30 cm 300L



*Harpadon microchir* 157  
5 ~ ~ ~ ~ ~ 24°C sg: 1.023 50 cm 500L



*Harpadon translucens* 157  
7, 9 ~ ~ ~ ~ ~ 26°C sg: 1.022 60 cm 600L



*Synodus synodus* 157  
2, 13 ~ ~ ~ ~ ~ 26°C sg: 1.022 30 cm 300L

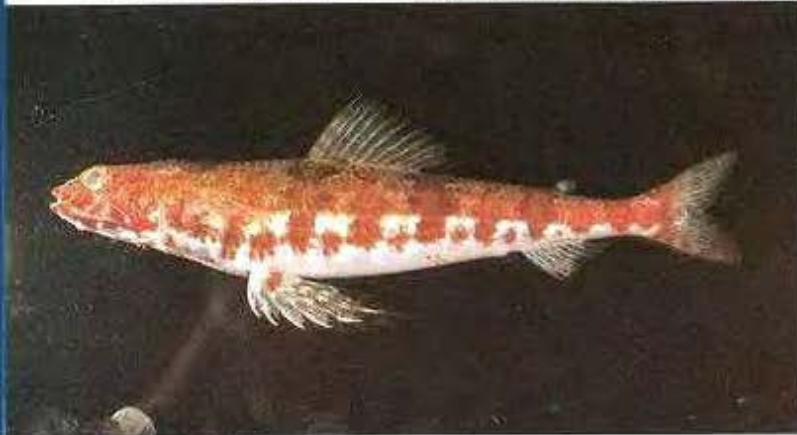


*Synodus intermedius* 157  
1-2 ~ ~ ~ ~ ~ 24°C sg: 1.023 45 cm 500L





*Synodus rubromarmoratus* 157  
5, 7-8 ~ ~ ~ ~ ~ 26°C sg: 1.022 7.5 cm 100L



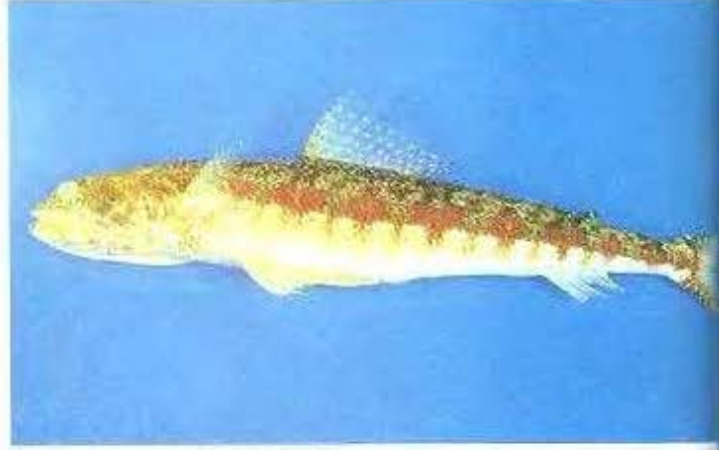
*Synodus ulae* 157  
5-7 ~ ~ ~ ~ ~ 26°C sg: 1.022 25 cm 300L



*Synodus foetens* 157  
2 ~ ~ ~ ~ ~ 26°C sg: 1.022 40 cm 400L



*Synodus synodus* 157  
2, 13 ~ ~ ~ ~ ~ 26°C sg: 1.022 30 cm 300L



*Synodus engelmani* 157  
6-9 ~ ~ ~ ~ ~ 26°C sg: 1.022 20 cm 200L



*Saurida normani* 157  
1-2 ~ ~ ~ ~ ~ 26°C sg: 1.022 25 cm 300L



*Synodus poeyi* 157  
1-2 ~ ~ ~ ~ ~ 24°C sg: 1.023 30 cm 300L



*Synodus intermedius* 157  
1-2 ~ ~ ~ ~ ~ 24°C sg: 1.023 45 cm 500L



*Synodus synodus* 157  
2, 13 ~ ♀ ♂ ♀ ♂ ♀ ♂ 26°C sg: 1.022 30 cm 300L



*Synodus* sp. 157  
8 ~ ♀ ♂ ♀ ♂ ♀ ♂ 26°C sg: 1.022 15 cm 150L



*Synodus lacertinus* 157  
3 ~ ♀ ♂ ♀ ♂ ♀ ♂ 26°C sg: 1.022 10 cm 100L



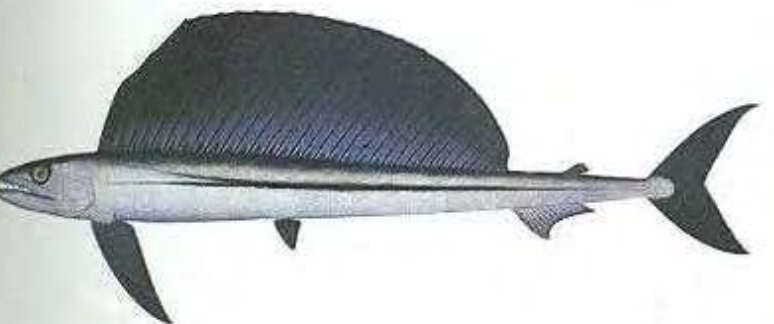
*Saurida gracilis* 157  
7-10 ~ ♀ ♂ ♀ ♂ ♀ ♂ 26°C sg: 1.022 20 cm 200L



*Synodus* sp. 157  
8 ~ ♀ ♂ ♀ ♂ ♀ ♂ 26°C sg: 1.022 15 cm 150L



*Synodus* sp. 157  
8 ~ ♀ ♂ ♀ ♂ ♀ ♂ 26°C sg: 1.022 15 cm 150L



*Alepisaurus borealis* 163  
3, 6-7 ~ ♀ ♂ ♀ ♂ ♀ ♂ 20°C sg: 1.024 300 cm 3000L



Myctophid 166  
All Oceans ~ ♀ ♂ ♀ ♂ ♀ ♂ 22°C sg: 1.023 10 cm 100L



? *Lotella* sp. 171

12 ~ ♀ ♂ ♀ ♀ 23°C sg: 1.024 50 cm 500L

*Lotella fuliginosa* 171

12 ~ ♀ ♂ ♀ ♀ 24°C sg: 1.024 10 cm 100L

*Lotella rhacinus* 171

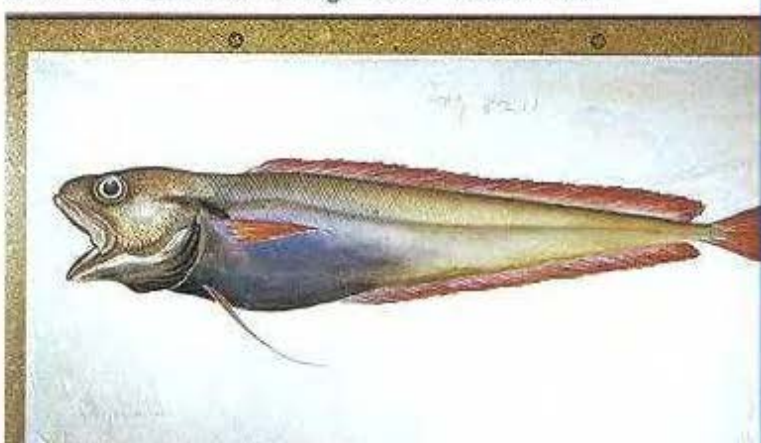
11 ~ ♀ ♂ ♀ ♀ 22°C sg: 1.024 45 cm 500L

*Physiculus maximowiczi* 171

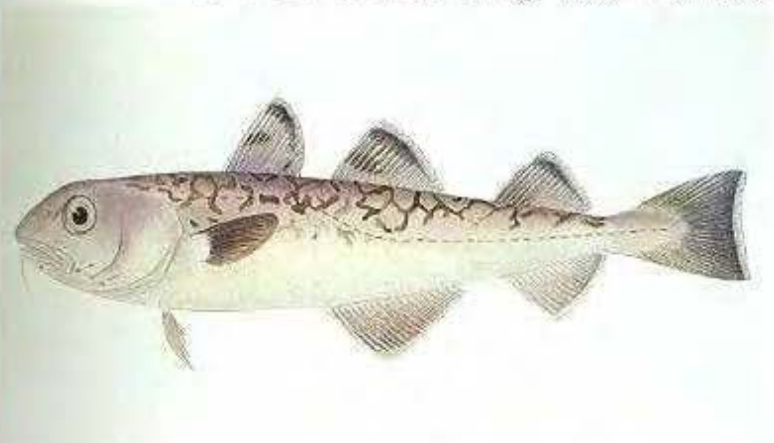
5 ~ ♀ ♂ ♀ ♀ 23°C sg: 1.024 10 cm 100L

*Pseudophysiculus brevisculus* 171

12 ~ ♀ ♂ ♀ ♀ 24°C sg: 1.024 7 cm 80L

*Physiculus* sp. 171

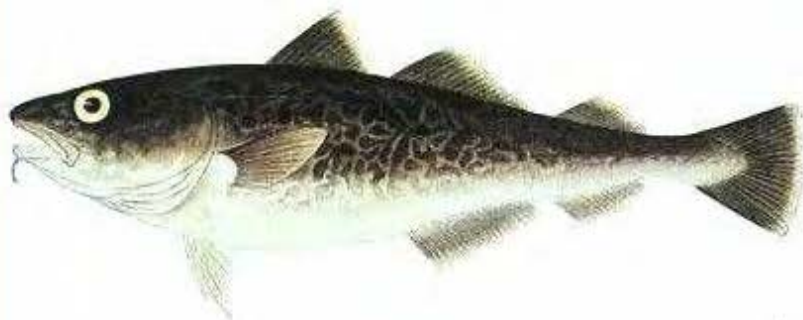
27 ~ ♀ ♂ ♀ ♀ 26°C sg: 1.022 25 cm 250L

*Eleginus gracilis* 174

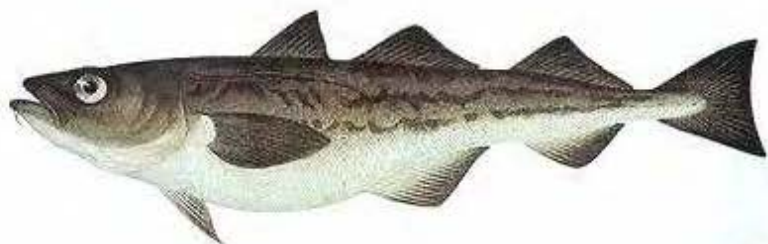
5 ~ ♀ ♂ ♀ ♀ 22°C sg: 1.024 10 cm 100L

*Pollachius pollachius* 174

14 ~ ♀ ♂ ♀ ♀ 20°C sg: 1.024 52 cm 500L



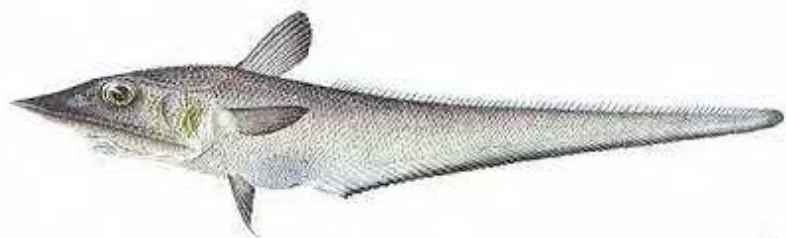
*Gadus macrocephalus* 174  
1, 4-5 ~ ~ ~ ~ ~ 23°C sg: 1.024 100 cm 1000L



*Theragra chalcogramma* 174  
5 ~ ~ ~ ~ ~ 26°C sg: 1.024 10 cm 100L



*Gaidropsarus ensis* 174  
1-2 ~ ~ ~ ~ ~ 26°C sg: 1.022 30 cm 300L



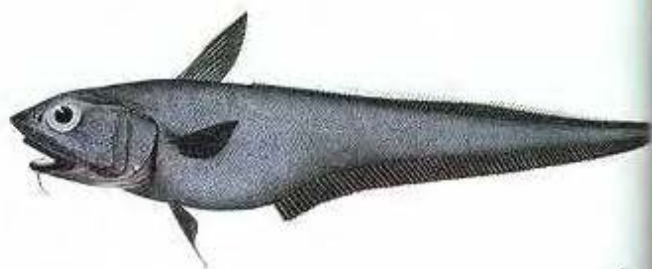
*Coelorhynchus tokiensis* 176  
5 ~ ~ ~ ~ ~ 24°C sg: 1.023 10 cm 100L



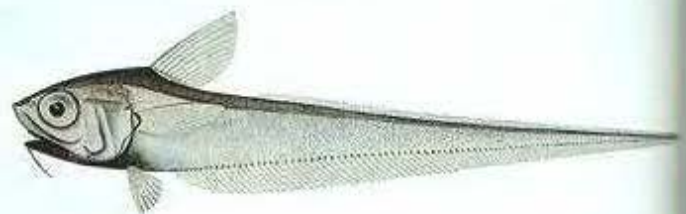
*Gadus morhua* 174  
1, 14 ~ ~ ~ ~ ~ 22°C sg: 1.024 150 cm 1500L



*Urophycis chuss* 174  
1 ~ ~ ~ ~ ~ 22°C sg: 1.024 52 cm 500L

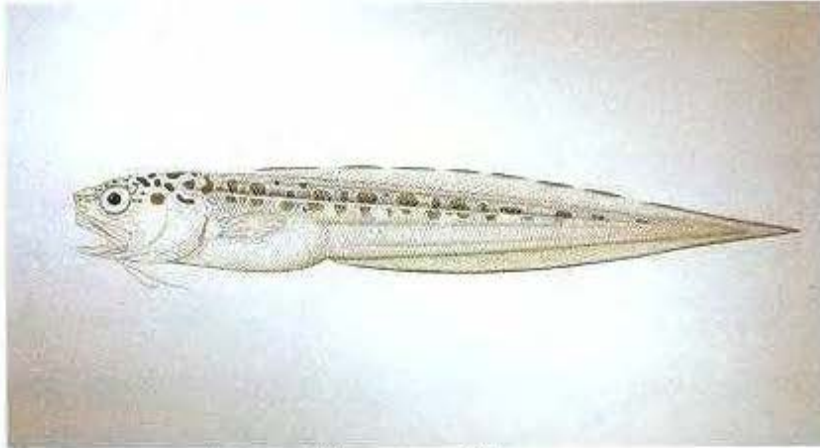


*Coryphaenoides asper* 176  
5 ~ ~ ~ ~ ~ 23°C sg: 1.024 10 cm 100L



*Hymenocephalus gracilis* 176  
5 ~ ~ ~ ~ ~ 24°C sg: 1.024 20 cm 200L

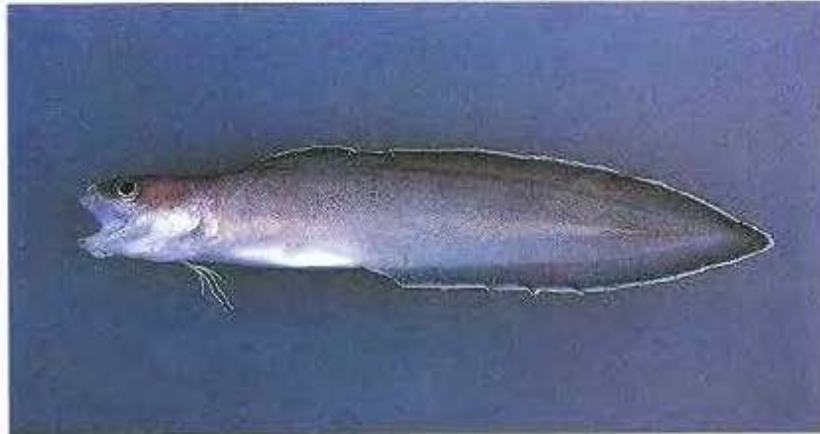




*Lepopodium* sp. 177  
3 ♀ ♂ ✕ ☐ 26°C sg: 1.022 25 cm 300L



*Lepopodium prorates* 177  
3 ♀ ♂ ✕ ☐ 26°C sg: 1.022 27 cm 300L



*Brotula barbata* 177  
6-10 ♀ ♂ ✕ ☐ 26°C sg: 1.022 100 cm 1000L



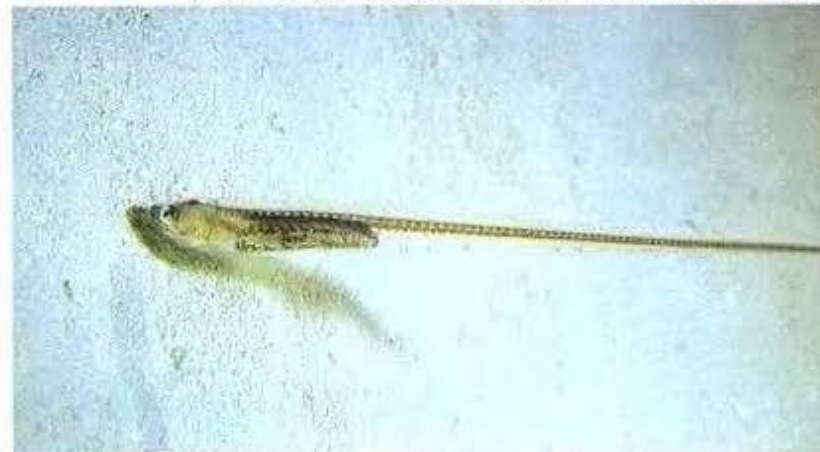
*Brotula multibarbata* 177  
6-10 ♀ ♂ ✕ ☐ 26°C sg: 1.022 100 cm 1000L



*Chilara taylori* 177  
3 ♀ ♂ ✕ ☐ 26°C sg: 1.022 36 cm 400L



*Onuxodon margaritiferae* 178  
7, 9 ♀ ♂ ♥ ☐ 26°C sg: 1.022 9 cm 100L



*Carapus bermudensis* 178  
2 ♀ ♂ ♥ ☐ 26°C sg: 1.022 20 cm 200L



*Carapus homei* 178  
8 ♀ ♂ ♥ ☐ 26°C sg: 1.022 17 cm 200L







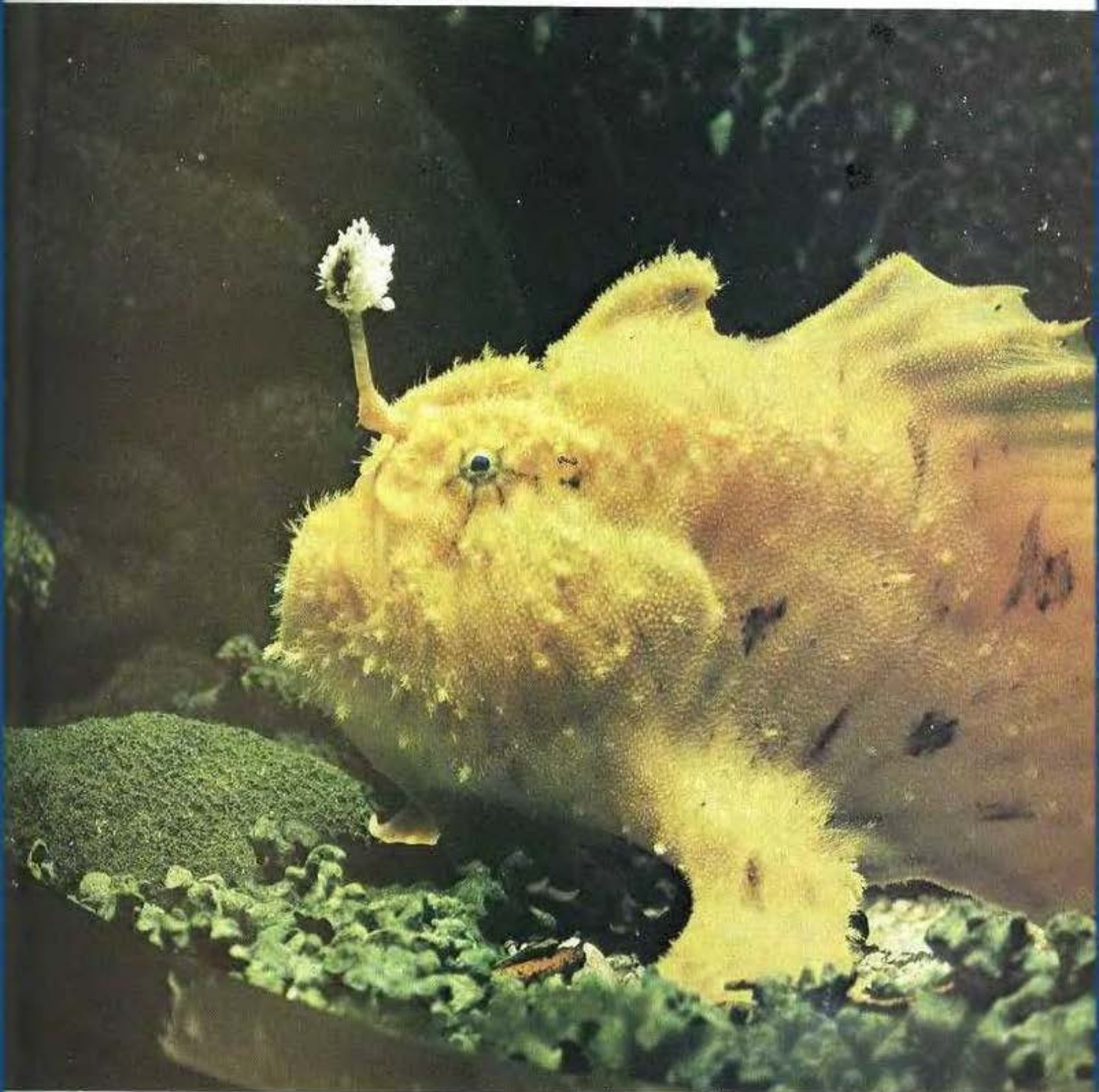
*Antennarius striatus* 183

1, 2, 6-13 ✎ ○ ✖ 📏 26°C sg: 1.022 15.5 cm 200L

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*Antennarius hispidus* 183

7.9 ~ 0 ✕ 🏠 26°C sg: 1.022 15 cm 200L





*Halophryne diemensis* 181  
7-9 ~ ~ ~ ~ ~ 26°C sg: 1.022 30 cm 300L



*Halophryne diemensis* 181  
7-9 ~ ~ ~ ~ ~ 26°C sg: 1.022 30 cm 300L



*Sanopus splendidus* 181  
2 ~ ~ ~ ~ ~ 26°C sg: 1.022 20 cm 200L



*Sanopus splendidus* 181  
2 ~ ~ ~ ~ ~ 26°C sg: 1.022 20 cm 200L



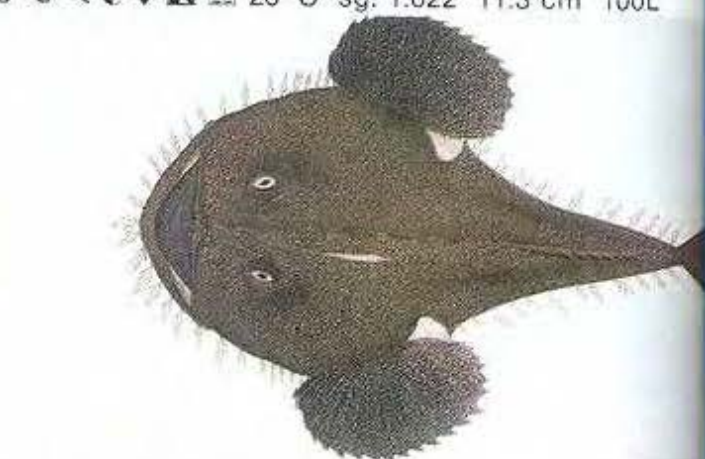
*Porichthys notatus* 181  
3-4 ~ ~ ~ ~ ~ 26°C sg: 1.022 38 cm 400L



*Porichthys margaritatus* 181  
3 ~ ~ ~ ~ ~ 26°C sg: 1.022 11.3 cm 100L

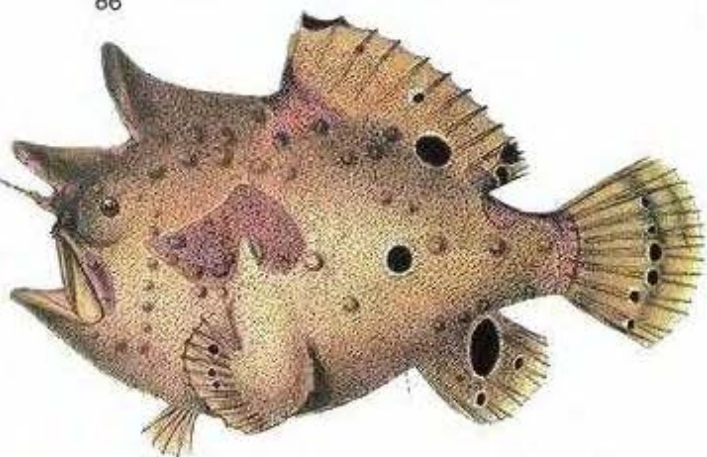


*Batrachomoeus trispinosus* 181  
7, 9 ~ ~ ~ ~ ~ 26°C sg: 1.022 20 cm 200L



*Lophiomus setigerus* 182  
7 ~ ~ ~ ~ ~ 26°C sg: 1.022 35 cm 400L

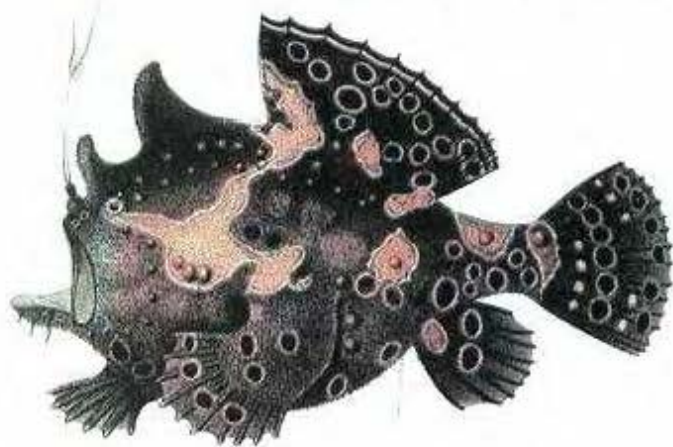




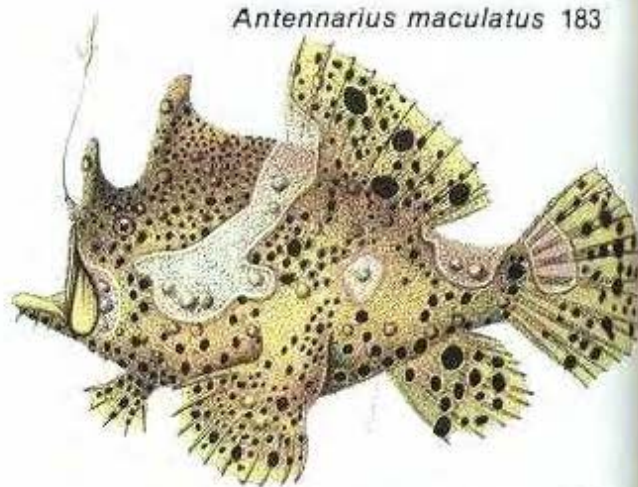
*Antennarius maculatus* 183



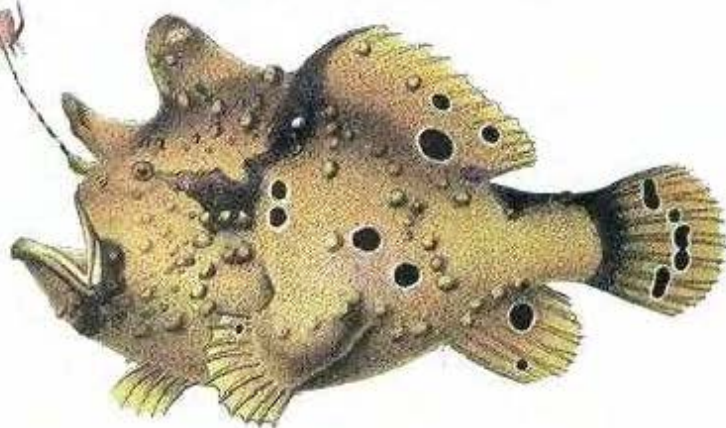
*Antennarius maculatus* 183



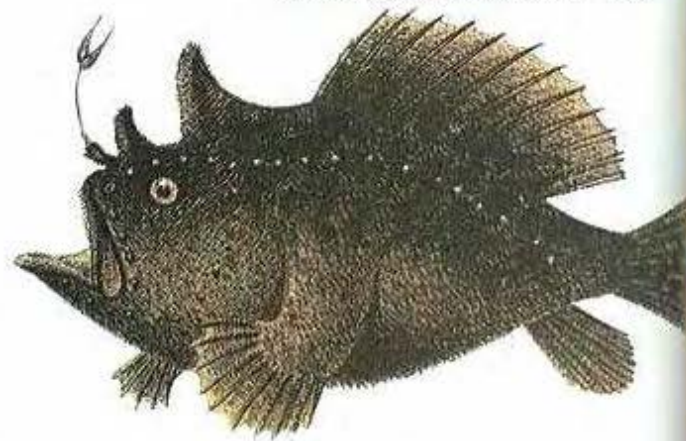
*Antennarius maculatus* 183



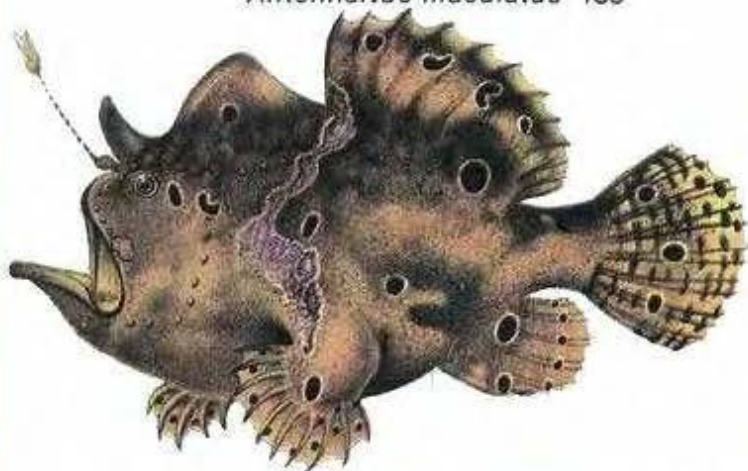
*Antennarius maculatus* 183



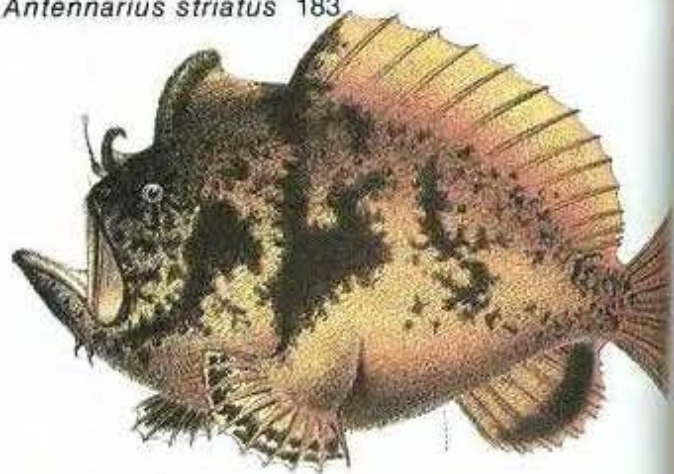
*Antennarius maculatus* 183



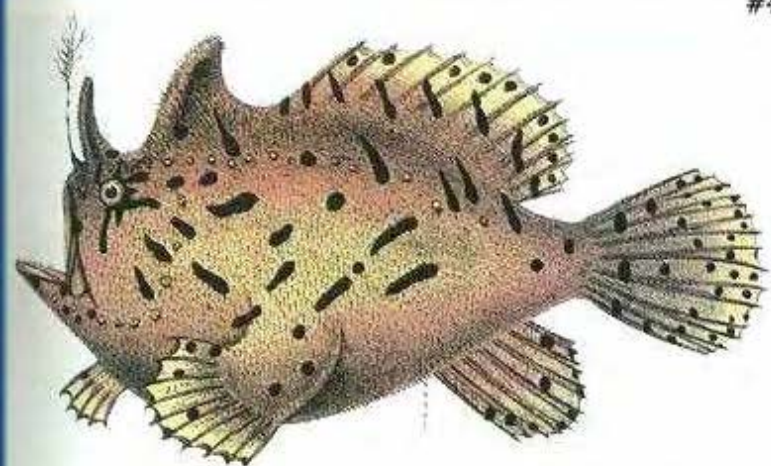
*Antennarius striatus* 183



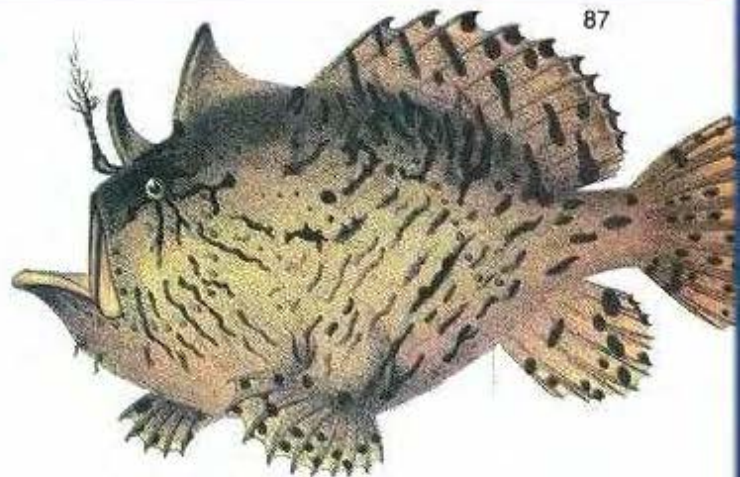
*Antennarius maculatus* 183



*Antennarius coccineus* 183



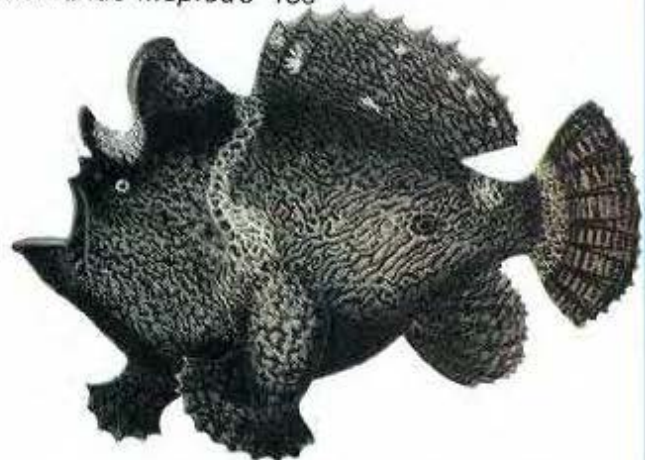
*Antennarius hispidus* 183



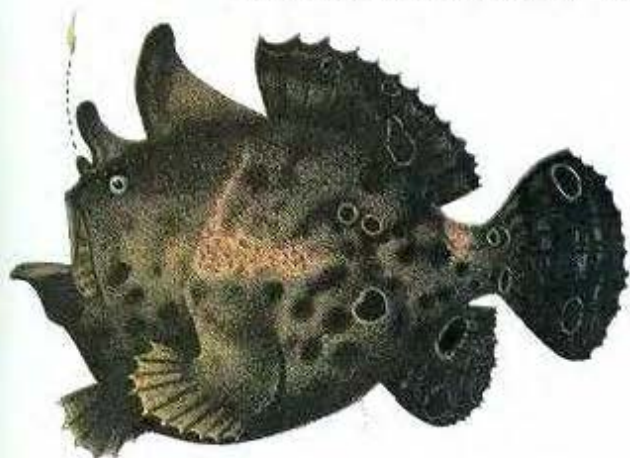
*Antennarius hispidus* 183



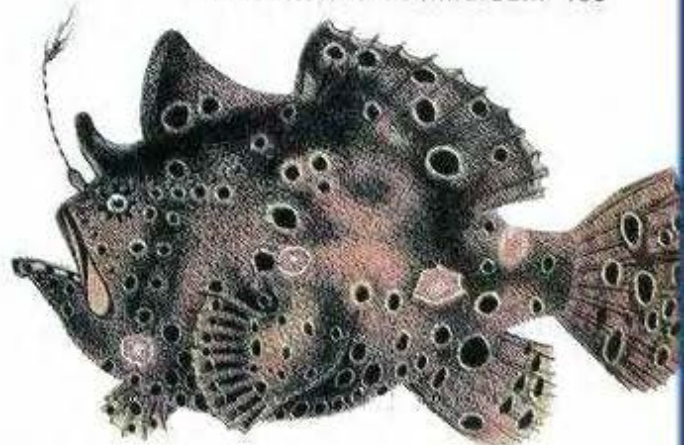
*Antennarius commersoni* 183



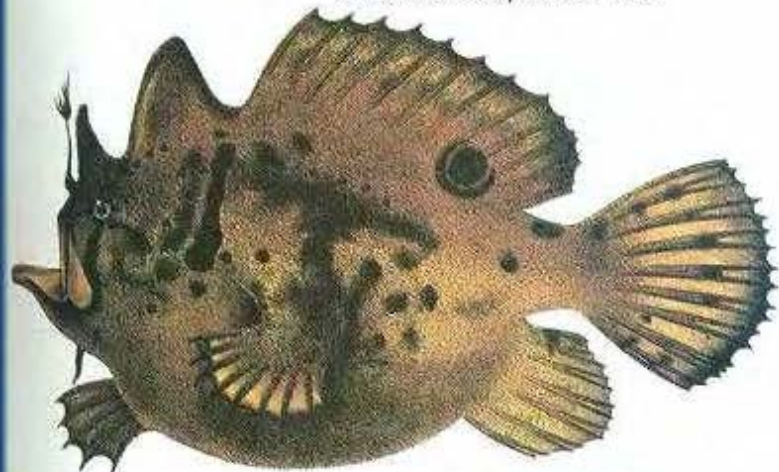
*Antennarius commersoni* 183



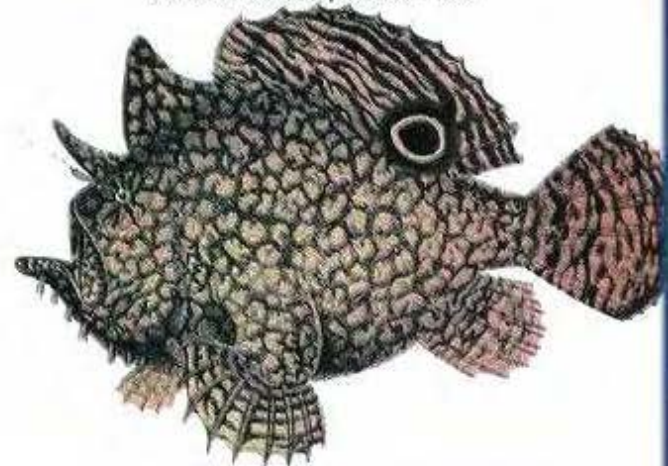
*Antennarius pictus* 183



*Antennarius pictus* 183



*Antennarius biocellatus* 183



*Antennarius biocellatus* 183

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*Antennarius pardalis* 183  
13 ~ 0 ✖ ☞ 26°C sg: 1.022 10 cm 100L

#46



*Antennarius sanguineus* 183  
3 ~ 0 ✖ ☞ 26°C sg: 1.022 8 cm 100L



*Antennarius strigatus* 183  
3 ~ 0 ✖ ☞ 26°C sg: 1.022 8 cm 100L



*Antennarius avalonis* 183  
3 ~ 0 ✖ ☞ 26°C sg: 1.022 33 cm 300L



*Antennarius multiocellatus* 183  
2, 13 ~ 0 ✖ ☞ 26°C sg: 1.022 11 cm 100L



*Antennarius pauciradiatus* 183  
2 ~ 0 ✖ ☞ 26°C sg: 1.022 4 cm 50L



*Antennarius ocellatus* 183  
2 ~ 0 ✖ ☞ 26°C sg: 1.022 32 cm 300L



*Antennarius tuberosus* 183  
6-10 ~ 0 ✖ ☞ 26°C sg: 1.022 7 cm 100L



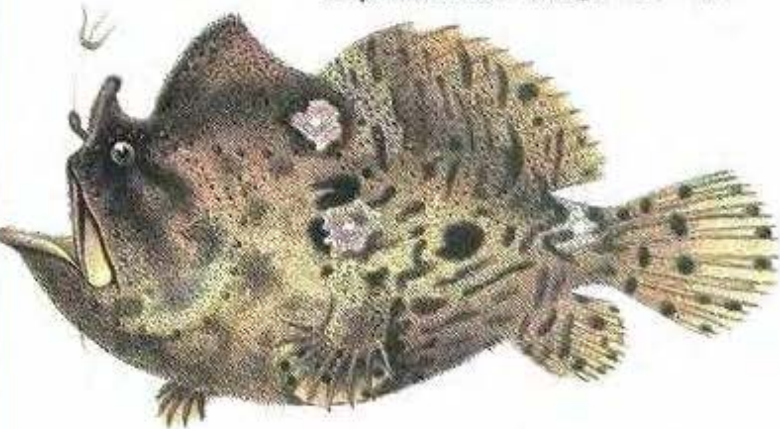
*Antennarius maculatus* 183

7,9 ✎ ☉ ✕ 🌿 ☑ 26°C sg: 1.022 8.5 cm 100L

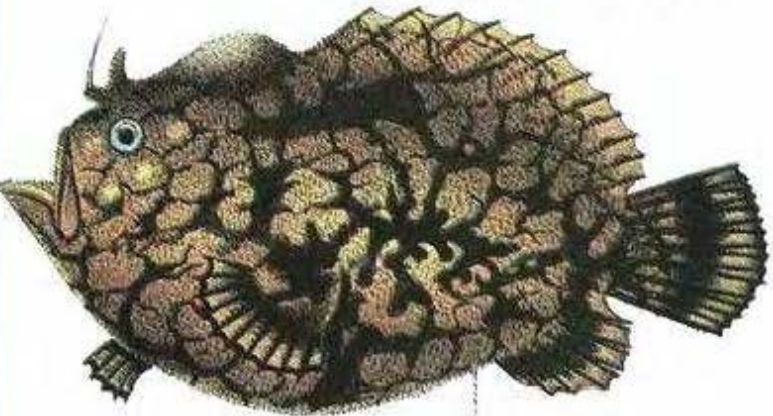




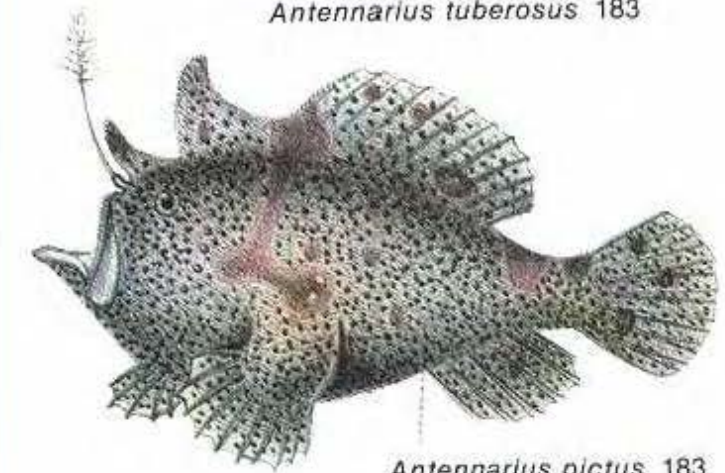
*Lophiocharon trisignatus* 183



*Antennarius striatus* 183



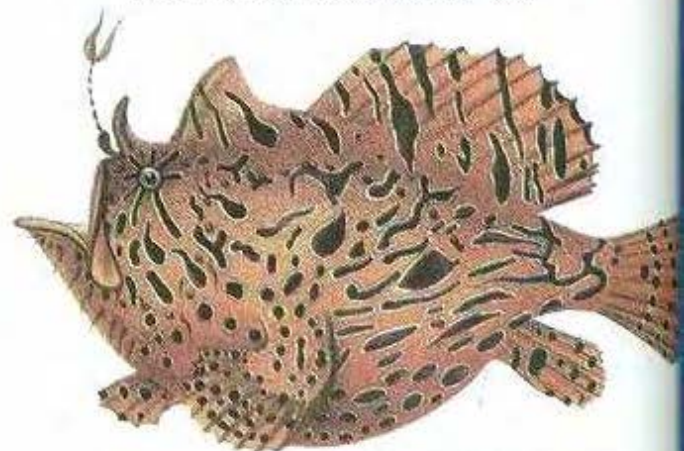
*Antennarius tuberosus* 183



*Antennarius pictus* 183



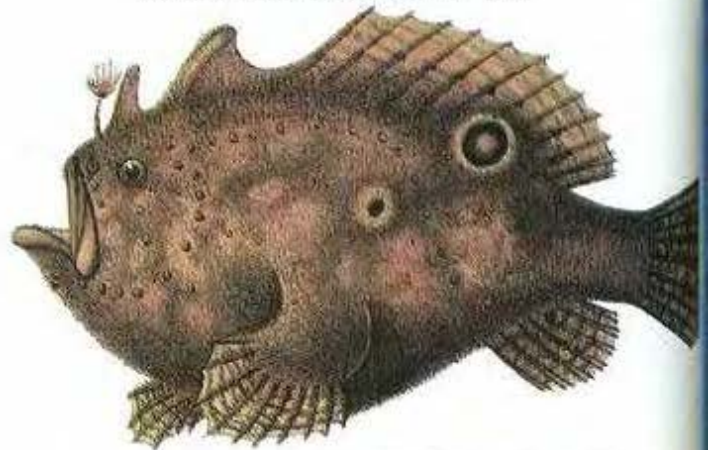
*Antennarius commersoni* 183



*Antennarius striatus* 183



*Antennarius biocellatus* 183



*Antennarius nummifer* 183



*Antennarius hispidus* 183  
7-9 \ ◉ ✖ 🚫 26°C sg: 1.022 15 cm 200L



*Antennarius striatus* 183  
1-2, 6-13 \ ◉ ✖ 🚫 26°C sg: 1.022 15.5 cm 200L



*Antennarius commersoni* 183  
3, 6-10 \ ◉ ✖ 🚫 26°C sg: 1.022 29 cm 300L



*Antennarius coccineus* 183  
6-10 \ ◉ ✖ 🚫 26°C sg: 1.022 9 cm 100L



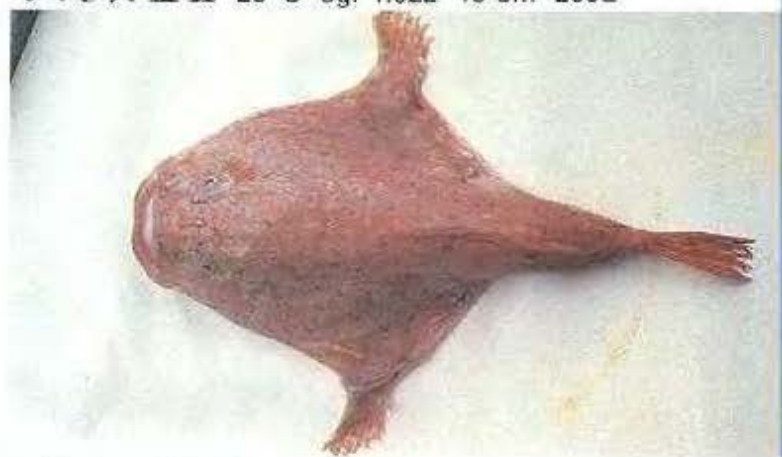
*Antennarius nummifer* 183  
3, 6-10 \ ◉ ✖ 🚫 26°C sg: 1.022 29 cm 300L



*Antennarius indicus* 183  
9 \ ◉ ✖ 🚫 26°C sg: 1.022 19 cm 200L



*Antennarius commersoni* 183  
3, 6-10 \ ◉ ✖ 🚫 26°C sg: 1.022 29 cm 300L



*Chaunax abei* 185  
5-7 \ ◉ ✖ 🚫 24°C sg: 1.022 30 cm 300L



*Antennarius analis* 183  
6-8, 12 ~ ♀ ♂ ♀ ♀ 26°C sg: 1.022 8 cm 100L



*Antennarius commersoni* 183  
3, 6-10 ~ ♀ ♂ ♀ ♀ 26°C sg: 1.022 29 cm 300L



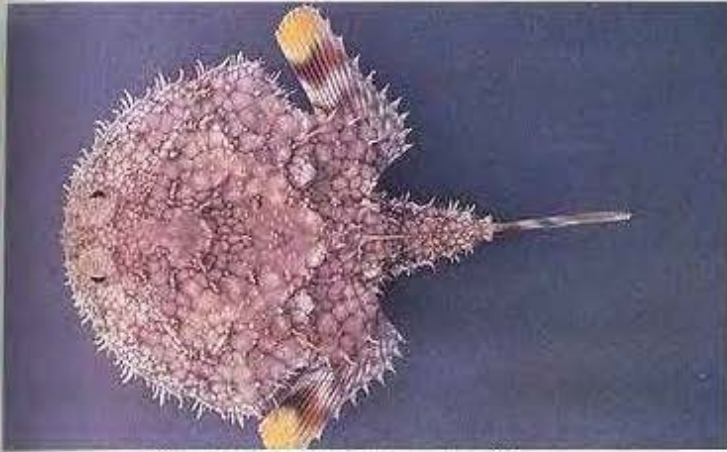
*Antennarius maculatus* 183  
7, 9 ~ ♀ ♂ ♀ ♀ 26°C sg: 1.022 8.5 cm 100L



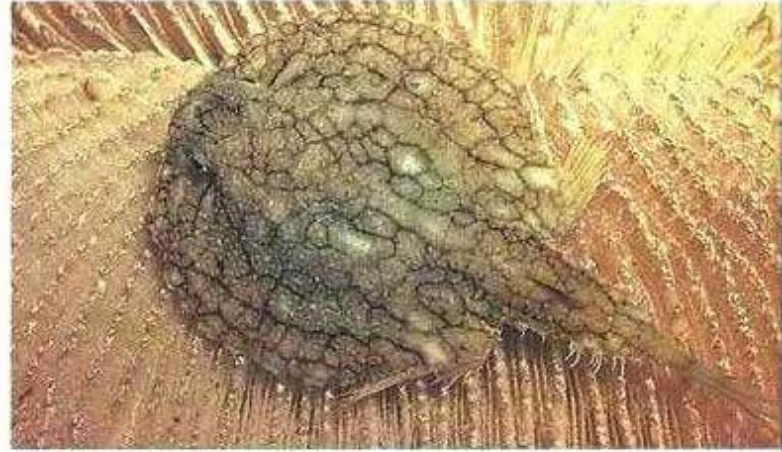
*Monocentris japonicus* 253  
7-10 ~ ♀ ♀ ♀ ♀ 26°C sg: 1.022 16 cm 200L



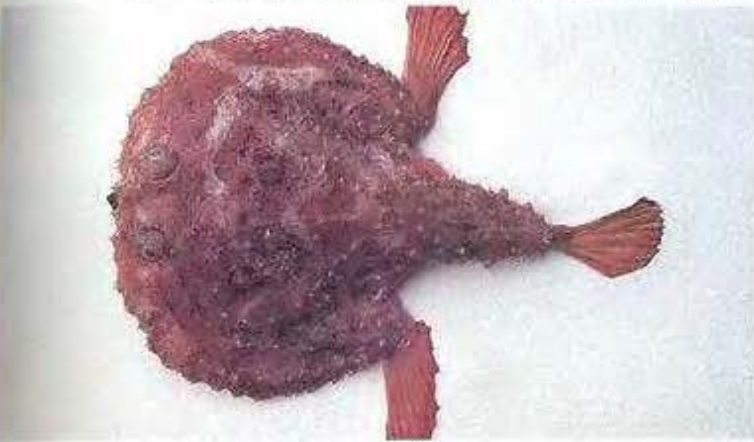
*Eurypegasmus draconis* 229  
7-9 ~ ♀ ♀ ♀ ♀ 26°C sg: 1.022 10 cm 100L



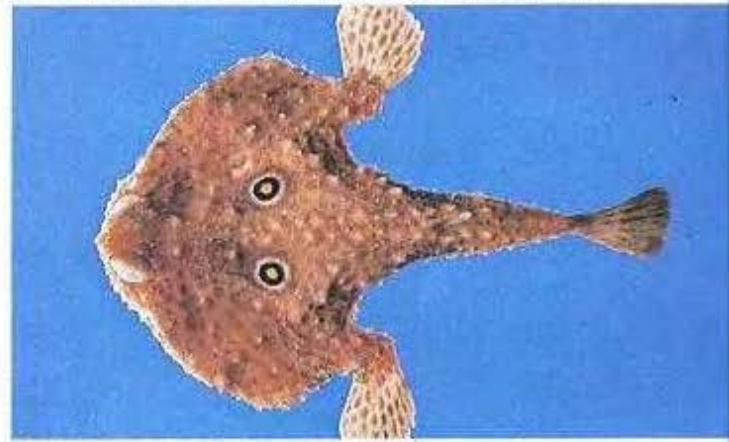
*Halieutichthys aculeatus* 186  
2 ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 10 cm 100L



*Halieutaea retifera* 186  
6 (H) ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 10 cm 100L



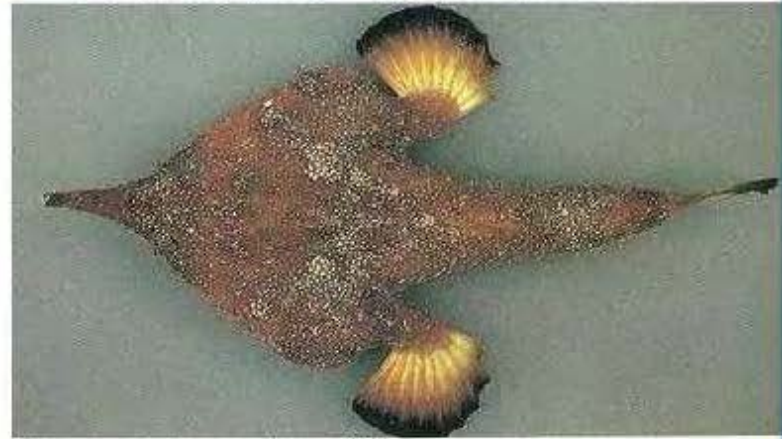
*Halieutaea stellata* 186  
7, 9 ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 30 cm 300L



*Zalieutes elator* 186  
3 ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 15 cm 200L



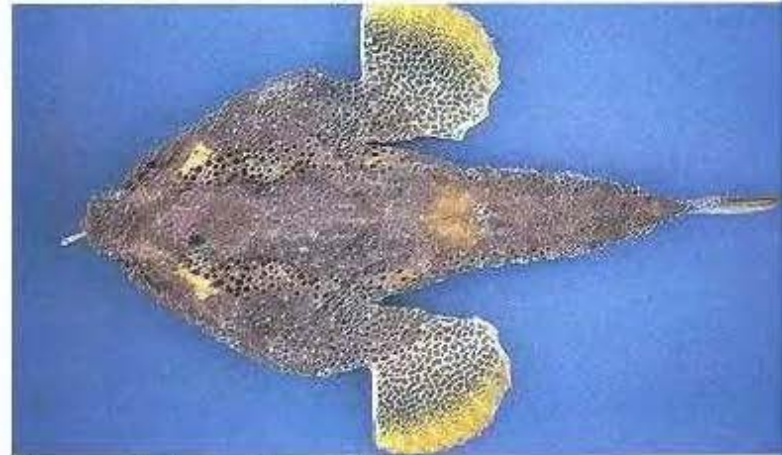
*Ogcocephalus nasutus* 186  
2 ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 38 cm 400L



*Ogcocephalus corniger* 186  
2 ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 23 cm 200L



*Ogcocephalus radiatus* 186  
2 ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 38 cm 400L



*Ogcocephalus radiatus* 186  
2 ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 38 cm 400L

#52



*Discotrema crinophila* 198  
6-9 ~ ♀ ♀ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 5 cm 50L

*Discotrema* sp. 198  
6-9 ~ ♀ ♀ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 5 cm 50L





*Diademichthys lineatus* 198  
7-9 ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 5 cm 50L



*Discotrema crinophila* 198  
6-9 ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 5 cm 50L



*Lepadichthys lineatus* 198  
9-10 ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 31 cm 300L

96



Undescribed Gobiesocid 198  
12 ~ ♀ ♥ 📷 📏 24°C sg: 1.023 2.5 cm 50L

#53



Undescribed Clingfish? 198  
12 ~ ♀ ♥ 📷 📏 24°C sg: 1.023 2.5 cm 50L



*Cochleocephalus spatula* 198  
12 ~ ♀ ♥ 📷 📏 24°C sg: 1.023 2.5 cm 50L



*Aspasmogaster tasmaniensis* 198  
12 ~ ♀ ♥ 📷 📏 24°C sg: 1.023 1.5 cm 50L



*Sicyases sanguineus* 198  
3 ~ ♀ ♥ 📷 📏 26°C sg: 1.022 22 cm 200L



*Sicyases sanguineus* 198  
3 ~ ♀ ♥ 📷 📏 26°C sg: 1.022 22 cm 200L



*Arcos roiginosus* 198  
2 ~ ♀ ♥ 📷 📏 26°C sg: 1.022 3.5 cm 50L



*Aspasmichthys ciconiae* 198  
5, 7 ~ ♀ ♥ 📷 📏 26°C sg: 1.022 8 cm 100L



*Lepadogaster candollei* 198  
13, 15 ~ ♀♥♣☞☛ 26°C sg: 1.024 12 cm 120L



*Lepadogaster lepadogaster* 198  
15 ~ ♀♥♣☞☛ 26°C sg: 1.024 10 cm 100L



*Discotrema crinophila* 198  
6-9 ~ ♀♥♣☞☛ 26°C sg: 1.022 5 cm 50L



*Lepadichthys frenatus* 198  
5 ~ ♀♥♣☞☛ 24°C sg: 1.023 3 cm 50L



*Tomicodon humeralis* 198  
3 ~ ♀♥♣☞☛ 26°C sg: 1.022 8.3 cm 100L



*Gobiesox maeandricus* 198  
3-4 ~ ♀♥♣☞☛ 24°C sg: 1.023 16 cm 200L



*Gobiesox adustus* 198  
3 ~ ♀♥♣☞☛ 26°C sg: 1.022 5 cm 50L



*Alabes parvulus* 199  
12 ~ ♀♥♣☞☛ 24°C sg: 1.023 3.2 cm 50L



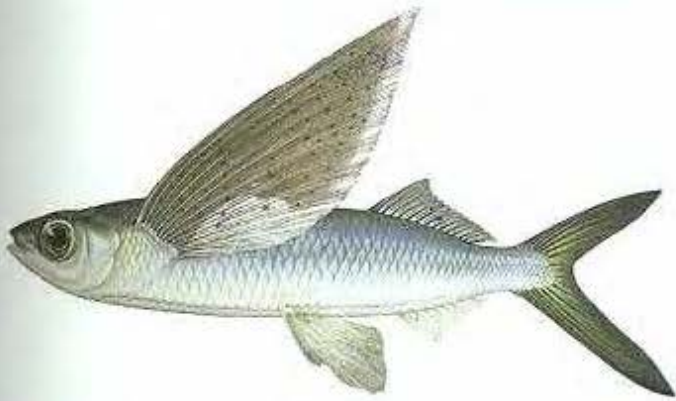
#55



Exocoetidae 200  
6-9 ~ ~ ○ ♥ □ 26°C sg: 1.022 27 cm 300L

Exocoetidae 200  
6-9 ~ ~ ○ ♥ □ 26°C sg: 1.022 27 cm 300L





*Cheilopogon atrisignis* 200  
7, 9 ~ ~ ~ O ♥ □ 26°C sg: 1.022 25 cm 300L



*Hirundichthys* sp. 200  
6-7 ~ ~ ~ O ♥ □ 26°C sg: 1.022 26 cm 300L



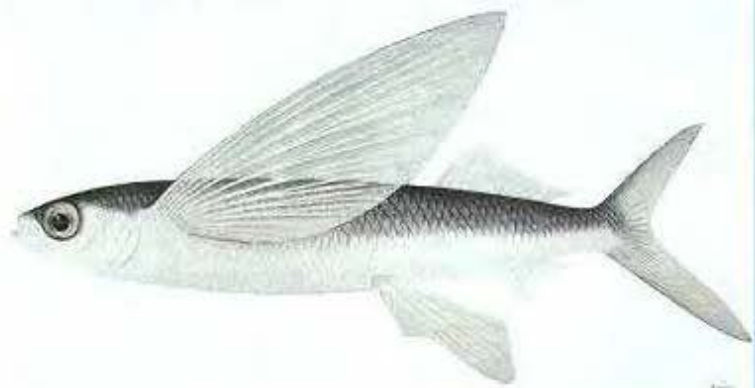
*Cypselurus poecilopterus* 200  
6, 7 ~ ~ ~ O ♥ □ 26°C sg: 1.022 30 cm 300L



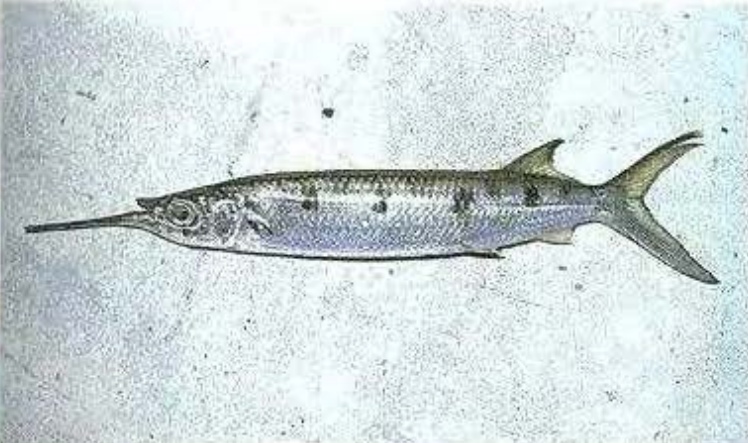
*Cheilopogon pinnatibarbatu japonicus* 200  
7 ~ ~ ~ O ♥ □ 26°C sg: 1.022 30 cm 300L



*Cheilopogon suttoni* 200  
7, 9 ~ ~ ~ O ♥ □ 26°C sg: 1.022 25 cm 300L



*Cypselurus hirali* 200  
7 ~ ~ ~ O ♥ □ 26°C sg: 1.022 30 cm 300L



*Hemiramphus far* 201  
7, 9 ~ ~ ~ O ✱ □ 26°C sg: 1.022 65 cm 800L



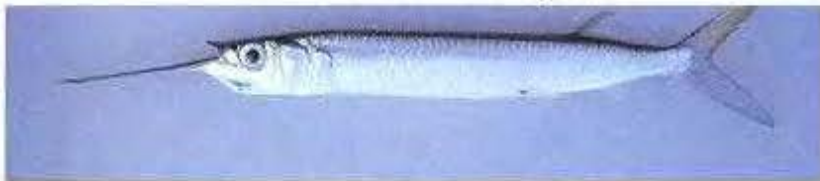
*Hemiramphus far* 201  
7, 9 ~ ~ ~ O ✱ □ 26°C sg: 1.022 65 cm 800L



*Hyporhamphus dussumieri* 201  
6-9 \ ○ ✖ ☐ 26°C sg: 1.022 40 cm 400L



*Hyporhamphus melanochir* 201  
12 \ ○ ✖ ☐ 23°C sg: 1.024 25 cm 300L



*Hemiramphus brasiliensis* 201  
1-2, 13 \ ○ ✖ ☐ 26°C sg: 1.022 40 cm 400L



*Strongylura timucu* 202  
1 \ ○ ✖ ☐ 23°C sg: 1.024 100 cm 1000L



*Tylosurus crocodilus* 202  
Circumtrop. \ ○ ✖ ☐ 26°C sg: 1.022 100 cm 1000L



*Platybelone argalus* 202  
6, 7 \ ○ ✖ ☐ 26°C sg: 1.022 50 cm 500L



*Tylosurus crocodilus* 202  
Circumtrop. \ ○ ✖ ☐ 26°C sg: 1.022 100 cm 1000L



*Hyporhamphus sajori* 201  
7 \ ○ ✖ ☐ 26°C sg: 1.022 45 cm 500L



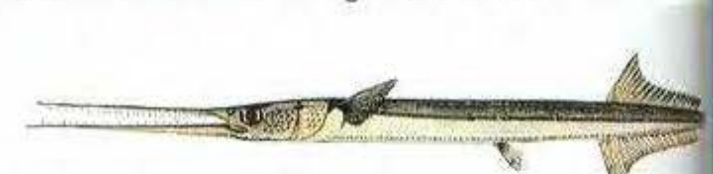
*Cololabias saira* 203  
3-5 \ ○ ✖ ☐ 26°C sg: 1.022 40 cm 400L



*Tylosurus crocodilus* 202  
Circumtrop. \ ○ ✖ ☐ 26°C sg: 1.022 100 cm 1000L



*Strongylura anastomella* 202  
5, 7 \ ○ ✖ ☐ 26°C sg: 1.022 100 cm 1000L



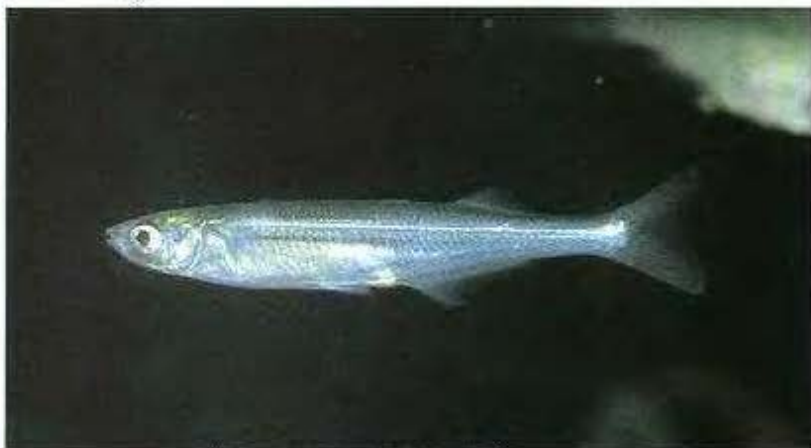
*Tylosurus leiurus* 202  
7 \ ○ ✖ ☐ 26°C sg: 1.022 100 cm 1000L



*Ablennes hians* 202  
Circumtrop. \ ○ ✖ ☐ 26°C sg: 1.022 120 cm 1500L



*Cleidopus gloriamaris* 229  
12 ♀ ● ♥ ♀ 23°C sg: 1.024 28 cm 300L



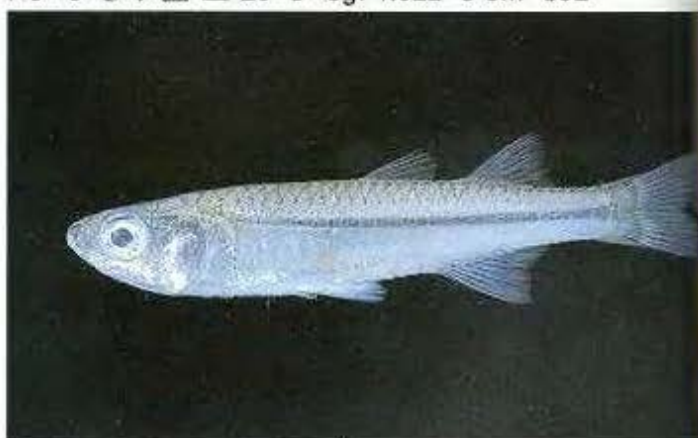
*Atherinops affinis* 213  
3 ~ ♀ ♥ 📧 📧 26°C sg: 1.022 38 cm 400L



*Atherinosoma elongata* 213  
7-8 ~ ♀ ♥ 📧 📧 26°C sg: 1.022 8 cm 80L



*Atherina boyeri* 213  
15 ~ ♀ ♥ 📧 📧 26°C sg: 1.024 10 cm 100L



*Craterocephalus pauciradiatus* 213  
7 ~ ♀ ♥ 📧 📧 26°C sg: 1.022 7 cm 80L



*Atherinomorus ogilbyi* 213  
7-8 ~ ♀ ♥ 📧 📧 26°C sg: 1.022 17 cm 200L



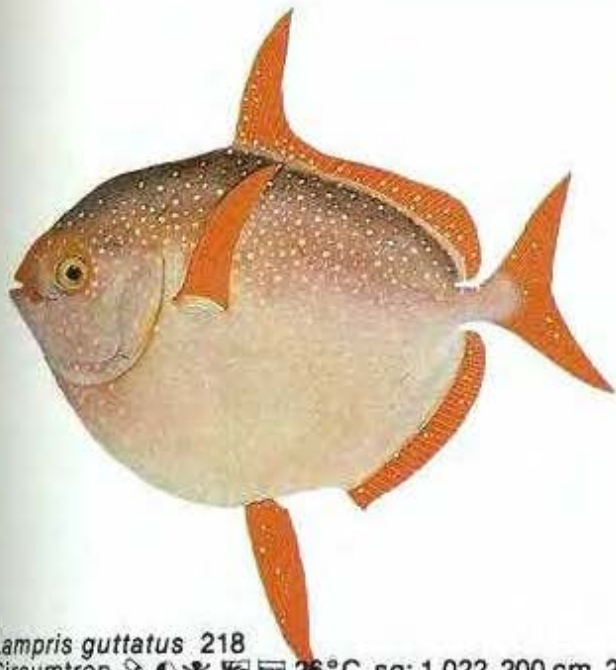
*Atherinomorus lacunosus* 213  
7-8 ~ ♀ ♥ 📧 📧 26°C sg: 1.022 12.5 cm 150L



*Atherinomorus endrachtensis* 213  
7-8, 12 ~ ♀ ♥ 📧 📧 26°C sg: 1.022 10 cm 100L



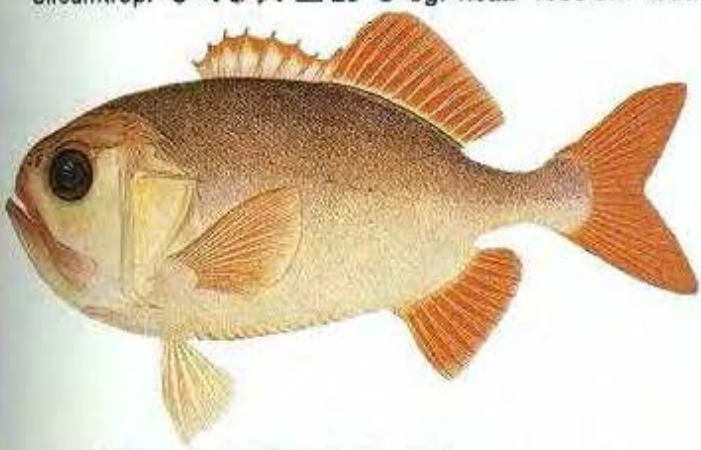
*Iso rhotophilus* 214  
12 ~ ♀ ♥ 📧 📧 24°C sg: 1.023 3 cm 50L



*Lampris guttatus* 218  
Circumtrop. ♀ ♂ ✖ 📏 26°C sg: 1.022 200 cm 2500L



*Regalecus glesne* 223  
Circumtrop. ♀ ♂ ✖ 📏 25°C sg: 1.022 1000 cm 5000L



*Gephyroberyx japonicus* 230  
5 ♀ ♂ ✖ 📏 24°C sg: 1.023 100 cm 1000L



*Sorosichthys ananassa* 230  
12 ♀ ♂ ♥ 📏 23°C sg: 1.024 3 cm 50L



*Monocentrus japonicus* 229  
7, 9 ♀ ♂ ♥ 📏 25°C sg: 1.022 16 cm 200L



*Cleidopus gloriamaris* 229  
12 ♀ ♂ ♥ 📏 23°C sg: 1.024 28 cm 300L

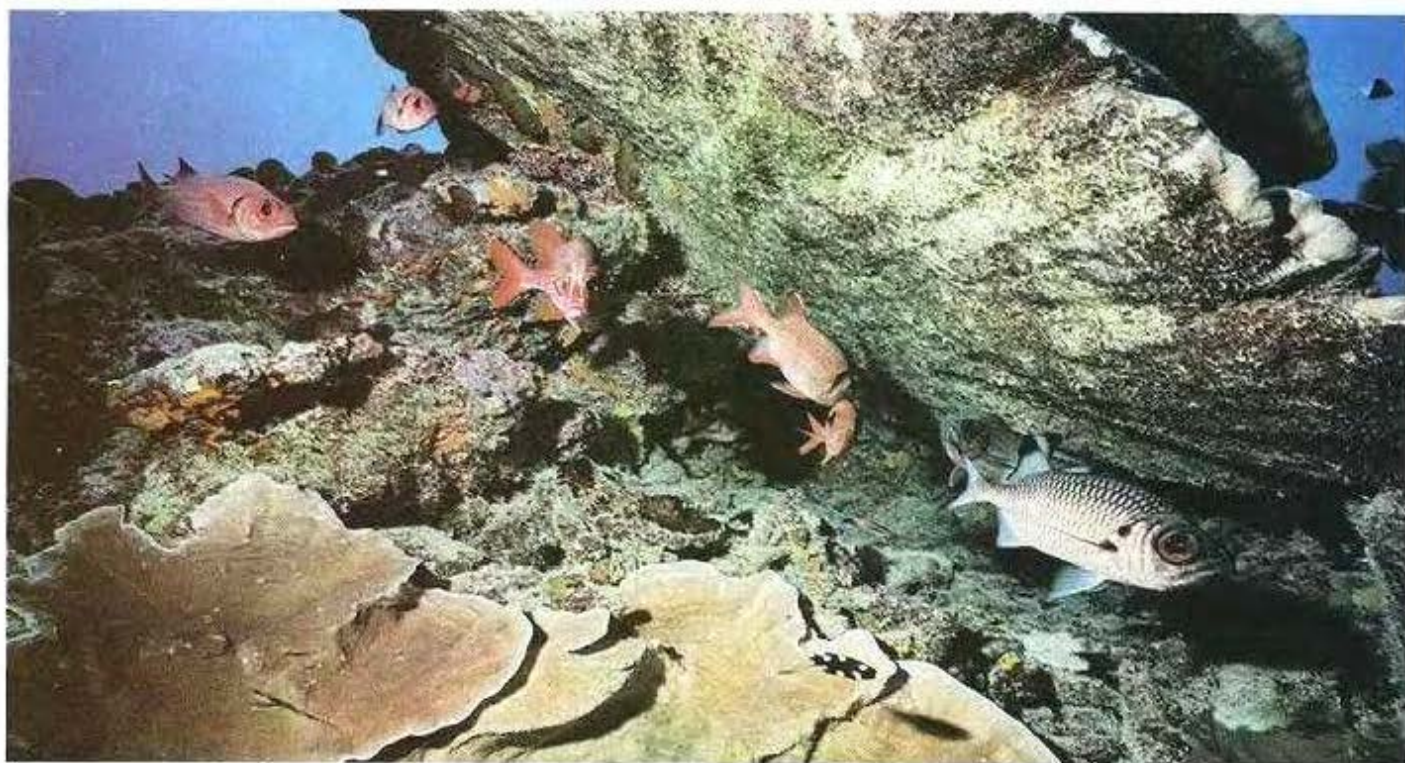


*Hoplostethus elongatus* 230  
11 ♀ ♂ ♥ 📏 22°C sg: 1.024 12 cm 150L



*Trachichthys australis* 230  
12 ♀ ♂ ♥ 📏 22°C sg: 1.024 12 cm 150L

#58A

*Myripristis* sp. 235

6-10 ~ ~ ● ✂ 📷 ☑ 26°C sg: 1.022 15 cm 200L

*Sargocentron spiniferum* 235

6-9 ~ ~ ● ✂ 📷 ☑ 26°C sg: 1.022 45 cm 500L



#58B

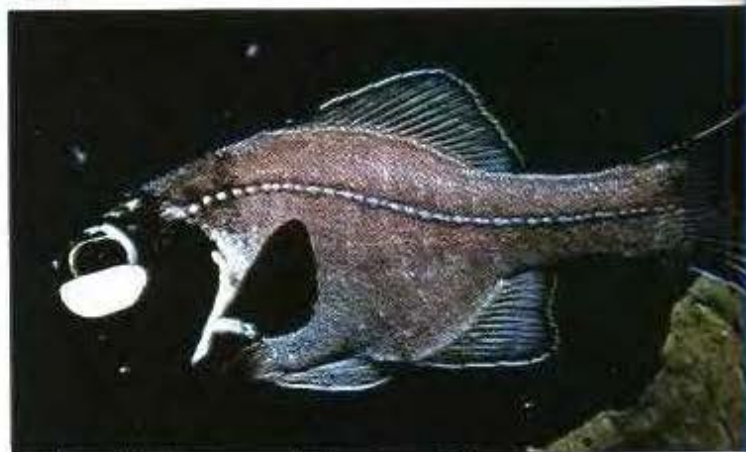
*Sargocentron violaceum* 235  
7,9 ♀ ~ ♀ ♂ ♀ ♂ ♀ ♂ 26°C sg: 1.022 25 cm 300L







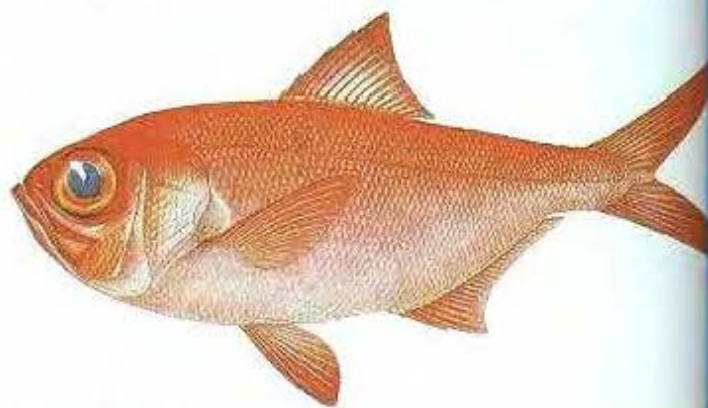
*Anomalops katoptron* 231  
7 ~ ~ ● ✕ ☒ 26°C sg: 1.022 30 cm 300L



*Photoblepharon palpebratus* 231  
7, 9-10 ♀ ~ ~ ● ♥ ☒ 26°C sg: 1.022 11 cm 100L



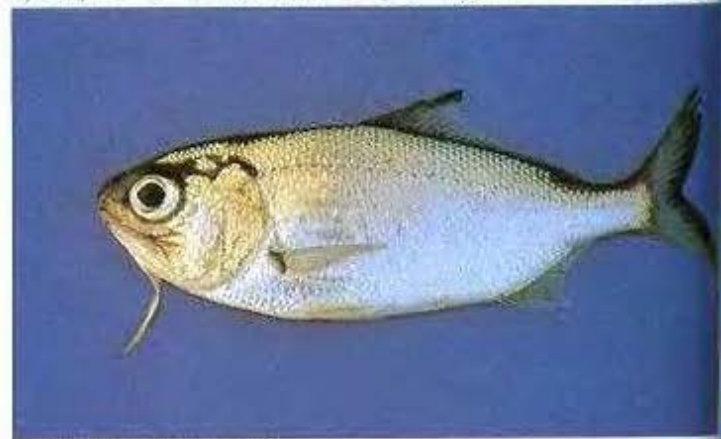
*Beryx decadactylus* 234  
Cosmopol. ~ ~ ● ✕ ☒ 26°C sg: 1.022 60 cm 600L



*Beryx splendens* 234  
2, 6-9, 13 ~ ~ ● ✕ ☒ 26°C sg: 1.022 50 cm 500L



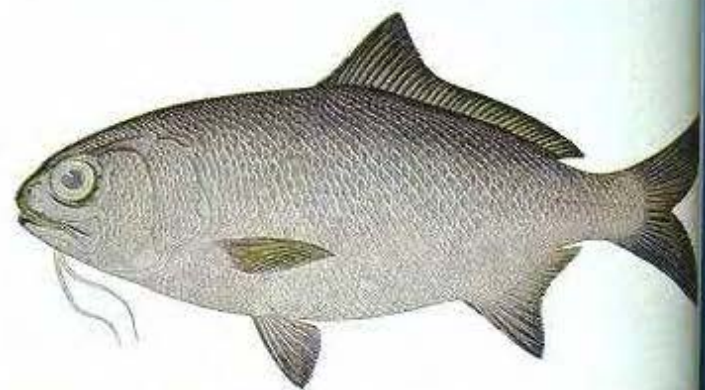
*Trachichthodes affinis* 230  
8, 11-12 ~ ~ ● ✕ ☒ 24°C sg: 1.023 45 cm 500L



*Polymixia lowei* 236  
1-2 ♀ ~ ~ ● ♥ ☒ 26°C sg: 1.022 20 cm 200L



*Corniger spinosus* 238  
2 ~ ~ ● ♥ ☒ 26°C sg: 1.022 20 cm 200L



*Polymixia berndti* 236  
6-7, 9 ♀ ~ ~ ● ♥ ☒ 26°C sg: 1.022 15 cm 150L



*Sargocentron diadema* 235  
6-9 ♀ ~ ~ ~ ● ✖ ☑ ☑ 26°C sg: 1.022 23 cm 300L



*Sargocentron ittodai* 235  
7 ♀ ~ ~ ~ ● ✖ ☑ ☑ 26°C sg: 1.022 20 cm 200L



*Sargocentron xantherythrus* 235  
6 ♀ ~ ~ ~ ● ✖ ☑ ☑ 26°C sg: 1.022 18 cm 200L



*Sargocentron tieroides* 235  
6-7 ♀ ~ ~ ~ ● ✖ ☑ ☑ 26°C sg: 1.022 30 cm 300L



*Sargocentron violaceum* 235  
7, 9 ♀ ~ ~ ~ ● ✖ ☑ ☑ 26°C sg: 1.022 25 cm 300L



*Sargocentron bullisi* 235  
1-2 ♀ ~ ~ ~ ● ✖ ☑ ☑ 25°C sg: 1.022 13 cm 150L



*Sargocentron coruscum* 235  
2 ♀ ~ ~ ~ ● ✖ ☑ ☑ 26°C sg: 1.022 10 cm 100L



*Sargocentron vexillarium* 235  
2 ♀ ~ ~ ~ ● ✖ ☑ ☑ 26°C sg: 1.022 12.6 cm 150L



*Sargocentron diadema* 235  
6-9 ♀ ~ ~ ~ ~ ~ 26°C sg: 1.022 23 cm 300L



*Sargocentron microstoma* 235  
6 ♀ ~ ~ ~ ~ ~ 26°C sg: 1.022 18 cm 200L



*Sargocentron seychellensis* 235  
9 ♀ ~ ~ ~ ~ ~ 26°C sg: 1.022 18 cm 200L



*Neoniphon sammara* 235  
6-10 ♀ ~ ~ ~ ~ ~ 26°C sg: 1.022 30 cm 300L



*Sargocentron caudimaculatum* 235  
7, 9-10 ♀ ~ ~ ~ ~ ~ 26°C sg: 1.022 25 cm 300L



*Sargocentron spiniferum* 235  
6-9 ♀ ~ ~ ~ ~ ~ 26°C sg: 1.022 45 cm 500L



*Sargocentron tierre* 235  
6, 7 ♀ ~ ~ ~ ~ ~ 26°C sg: 1.022 30 cm 300L



*Neoniphon opercularis* 235  
6-9 ♀ ~ ~ ~ ~ ~ 26°C sg: 1.022 35 cm 400L



*Holocentrus hastatus* 235  
13 ♀ ~ ~ ~ ~ ~ 26°C sg: 1.022 10 cm 100L



*Holocentrus rufus* 235  
2 ♀ ~ ~ ~ ~ ~ 26°C sg: 1.022 26 cm 300L



*Sargocentron rubrum* 235  
6-10 ♀ ~ ~ ~ ~ ~ 26°C sg: 1.022 36 cm 400L



*Sargocentron lepros* 235  
7 ♀ ~ ~ ~ ~ ~ 26°C sg: 1.022 12 cm 150L



*Holocentrus ascensionis* 235  
1-2 ♀ ~ ~ ~ ~ ~ 26°C sg: 1.022 30 cm 300L



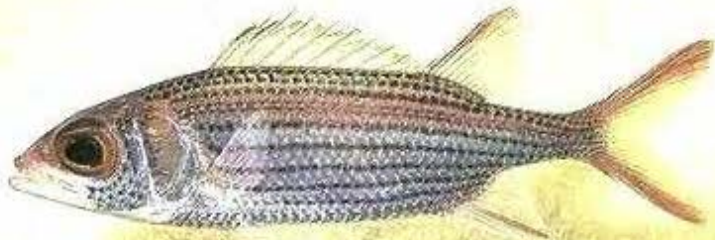
*Sargocentron caudimaculatum* 235  
7-10 ♀ ~ ~ ~ ~ ~ 26°C sg: 1.022 25 cm 300L



*Sargocentron suborbitalis* 235  
3 ♀ ~ ~ ~ ~ ~ 26°C sg: 1.022 25 cm 300L



*Sargocentron punctatissimum* 235  
6-9 ♀ ~ ~ ~ ~ ~ 26°C sg: 1.022 16 cm 200L



*Neoniphon argenteus* 235  
7, 9 ♀ ~ ~ ~ ~ ~ 26°C sg: 1.022 24 cm 300L



*Neoniphon opercularis* 235  
6-9 ♀ ~ ~ ~ ~ ~ 26°C sg: 1.022 35 cm 400L



*Sargocentron ensifer* 235  
6 ♀ ~ ~ ~ ~ ~ 26°C sg: 1.022 22.5 cm 300L



*Sargocentron melanospilos* 235  
6, 7 ♀ ~ ~ ~ ~ ~ 26°C sg: 1.022 27 cm 300L



*Neoniphon marianus* 235  
2 ♀ ~ ~ ~ ~ ~ 26°C sg: 1.022 17 cm 200L



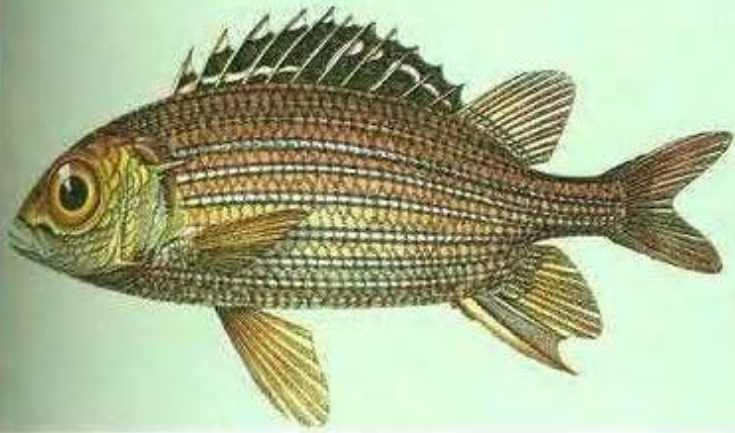
*Neoniphon sammara* 235  
6-10 ♀ ~ ~ ~ ~ ~ 26°C sg: 1.022 30 cm 300L



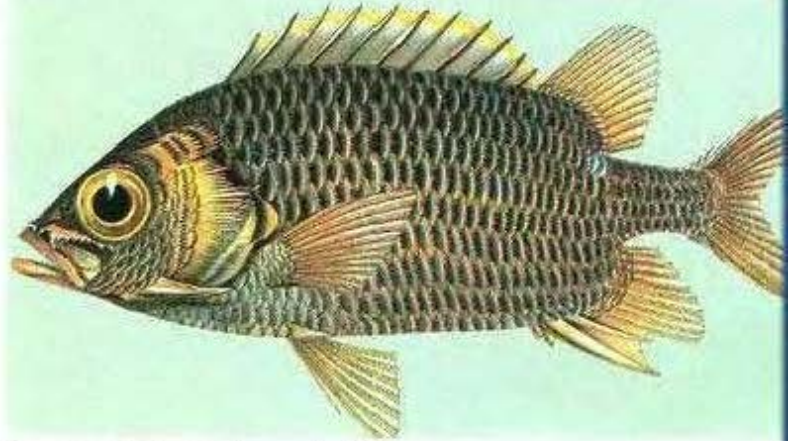
*Neoniphon scythrops* 235  
6 ♀ ~ ~ ~ ~ ~ 26°C sg: 1.022 25 cm 300L



*Neoniphon aurolineatus* 235  
6-7 ♀ ~ ~ ~ ~ ~ 26°C sg: 1.022 22 cm 200L



*Sargocentron diadema* 235  
6-10 ~ ~ ~ \* ☐ 26°C sg: 1.022 18 cm 200L



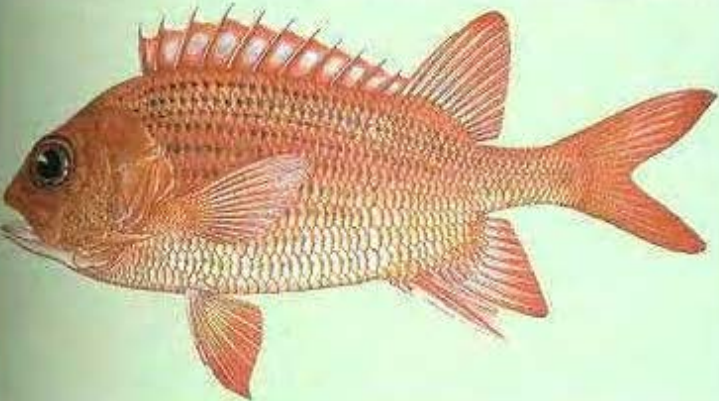
*Sargocentron violaceum* 235  
6-7, 9 ~ ~ ~ \* ☐ 26°C sg: 1.022 20 cm 200L



*Sargocentron caudimaculatum* 235  
7-10 ~ ~ ~ \* ☐ 26°C sg: 1.022 25 cm 300L



*Neoniphon laeve* 235  
9 ~ ~ ~ \* ☐ 26°C sg: 1.022 30 cm 300L



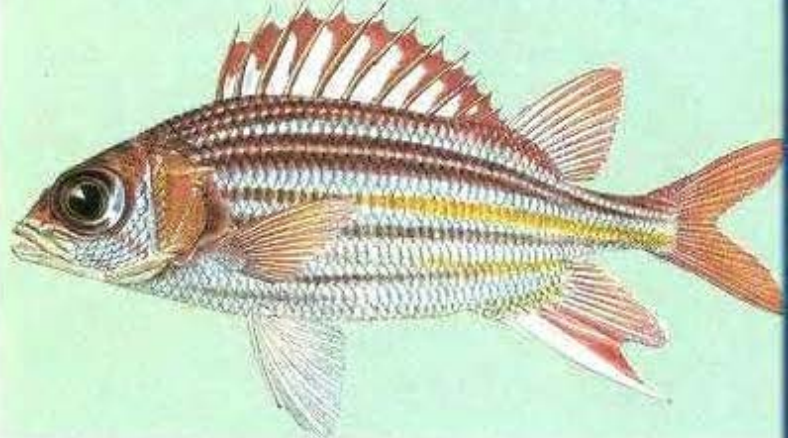
*Sargocentron tieri* 235  
6, 7 ~ ~ ~ \* ☐ 26°C sg: 1.022 30 cm 300L



*Sargocentron melanospilos* 235  
6, 7 ~ ~ ~ \* ☐ 26°C sg: 1.022 27 cm 300L



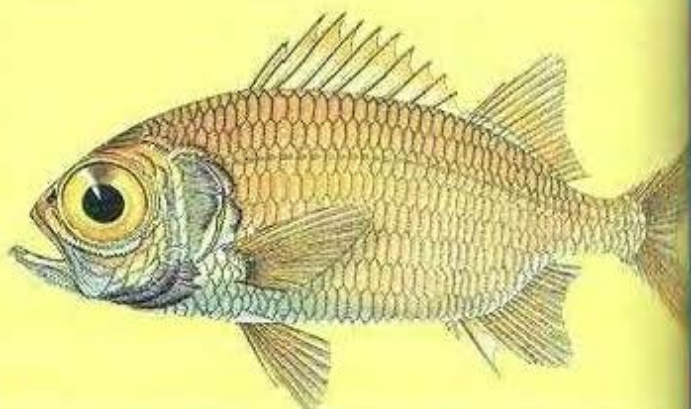
*Neoniphon sammara?* 235  
5-10 ~ ~ ~ \* ☐ 26°C sg: 1.022 30 cm 300L



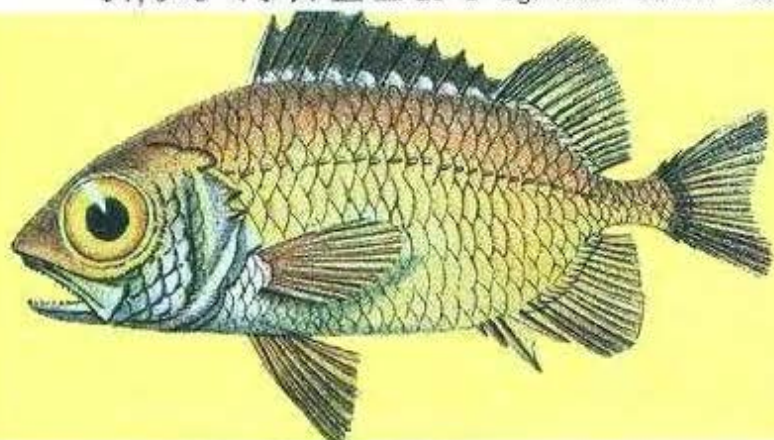
*Sargocentron lacteoguttatus* 235  
6-7, 9 ~ ~ ~ \* ☐ 26°C sg: 1.022 15 cm 150L



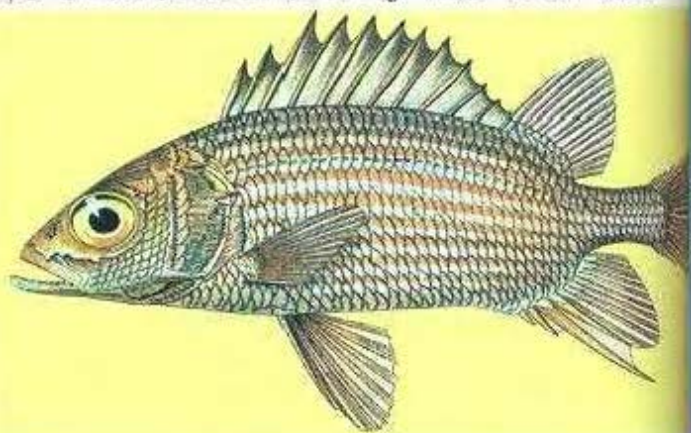
*Myripristis violacea* 235  
6-7, 9 ~ ~ ● ✱ ☐ 26°C sg: 1.022 20 cm 200L



*Myripristis prallius* 235  
7, 9 ~ ~ ● ✱ ☐ 26°C sg: 1.022 20 cm 200L



*Myripristis* sp. (juv.) 235  
6-9 ~ ~ ● ✱ ☐ 26°C sg: 1.022 20 cm 200L



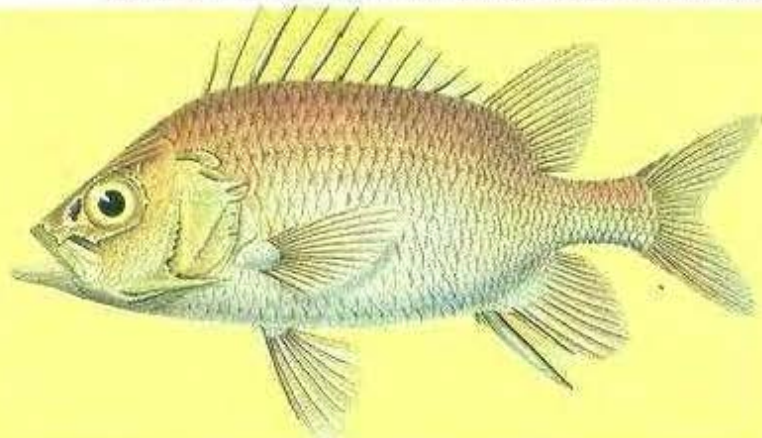
*Neoniphon argenteus* 235  
7, 9 ~ ~ ● ✱ ☐ 26°C sg: 1.022 24 cm 250L



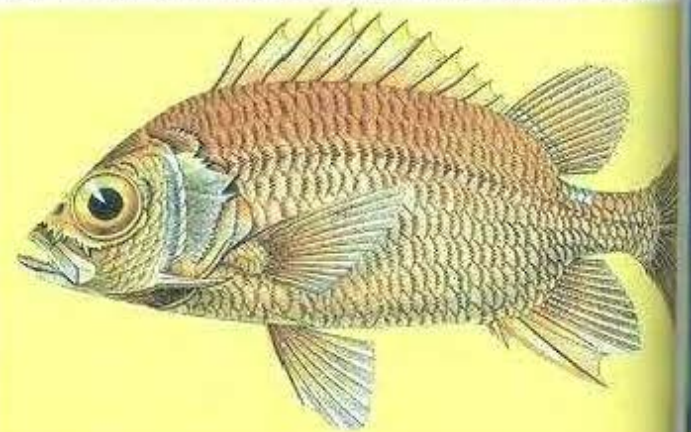
*Neoniphon sammara* 235  
6-10 ~ ~ ● ✱ ☐ 26°C sg: 1.022 30 cm 300L



*Neoniphon opercularis* 235  
7, 9 ~ ~ ● ✱ ☐ 26°C sg: 1.022 35 cm 400L



*Sargocentron spiniferum* 235  
7, 9-10 ~ ~ ● ✱ ☐ 26°C sg: 1.022 45 cm 500L



*Sargocentron caudimaculatum* 235  
7-10 ~ ~ ● ✱ ☐ 26°C sg: 1.022 25 cm 250L



*Plectrypops retrospinis* 235  
2 ~ ♀ ♂ ♀ ♂ ♀ ♂ 26°C sg: 1.022 10 cm 100L



*Plectrypops lima* 235  
6 ~ ♀ ♂ ♀ ♂ ♀ ♂ 26°C sg: 1.022 17.5 cm 200L



*Pristilepis oligolepis* 235  
6-9 ~ ♀ ♂ ♀ ♂ ♀ ♂ 26°C sg: 1.022 30 cm 300L



*Ostichthys japonicus* 235  
6-7, 9 ~ ♀ ♂ ♀ ♂ ♀ ♂ 26°C sg: 1.022 45 cm 500L



*Myripristis leiognathus* 235  
3 ~ ♀ ♂ ♀ ♂ ♀ ♂ 26°C sg: 1.022 17.5 cm 200L



*Myripristis jacobus* 235  
1-2, 13 ~ ♀ ♂ ♀ ♂ ♀ ♂ 26°C sg: 1.022 20 cm 200L



*Myripristis adustus* 235  
6-7, 9 ~ ♀ ♂ ♀ ♂ ♀ ♂ 26°C sg: 1.022 32 cm 300L



*Myripristis* sp. 235  
6 ~ ♀ ♂ ♀ ♂ ♀ ♂ 26°C sg: 1.022 17 cm 200L





*Myripristis adustus* 235  
6-7, 9 ~ ~ ● ✱ ☐ 26°C sg: 1.022 32 cm 300L



*Myripristis kuntee* 235  
6-10 ~ ~ ● ✱ ☐ 26°C sg: 1.022 15 cm 200L



*Myripristis murdjan* 235  
7-10 ~ ~ ● ✱ ☐ 26°C sg: 1.022 24 cm 250L



*Myripristis vittatus* 235  
7, 9 ~ ~ ● ✱ ☐ 26°C sg: 1.022 20 cm 200L



*Myripristis hexagonatus* 235  
6-7, 9 ~ ~ ● ✱ ☐ 26°C sg: 1.022 20 cm 200L



*Myripristis melanostictus* 235  
7, 9 ~ ~ ● ✱ ☐ 26°C sg: 1.022 30 cm 300L



*Myripristis violacea* 235  
6-7, 9 ~ ~ ● ✱ ☐ 26°C sg: 1.022 20 cm 200L



*Myripristis adustus* and *Myripristis vittata* 235  
7, 9 ~ ~ ● ✱ ☐ 26°C sg: 1.022 32 cm 250L



*Myripristis axillaris* 235  
7-10 ~ ♀ ♂ ✖ ☑ 26°C sg: 1.022 27 cm 300L



*Myripristis violacea* 235  
6-7, 9 ~ ♀ ♂ ✖ ☑ 26°C sg: 1.022 20 cm 200L



*Myripristis xanthacrus* 235  
10 ~ ♀ ♂ ✖ ☑ 26°C sg: 1.022 17 cm 200L



*Myripristis berndti* 235  
7, 9 ~ ♀ ♂ ✖ ☑ 26°C sg: 1.022 30 cm 300L



*Myripristis pralinia* 235  
7, 9 ~ ♀ ♂ ✖ ☑ 26°C sg: 1.022 20 cm 200L



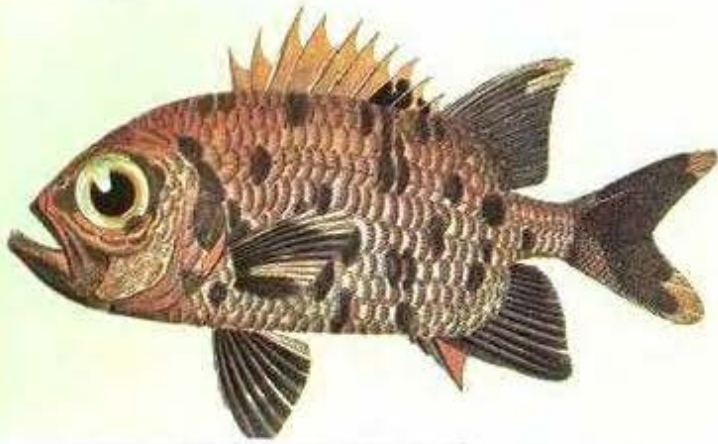
*Myripristis berndti* 235  
7, 9 ~ ♀ ♂ ✖ ☑ 26°C sg: 1.022 30 cm 300L



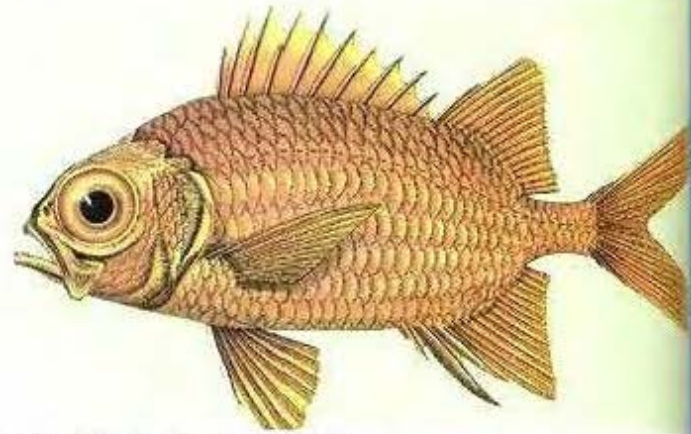
*Myripristis kuntee* 235  
6-10 ~ ♀ ♂ ✖ ☑ 26°C sg: 1.022 15 cm 200L



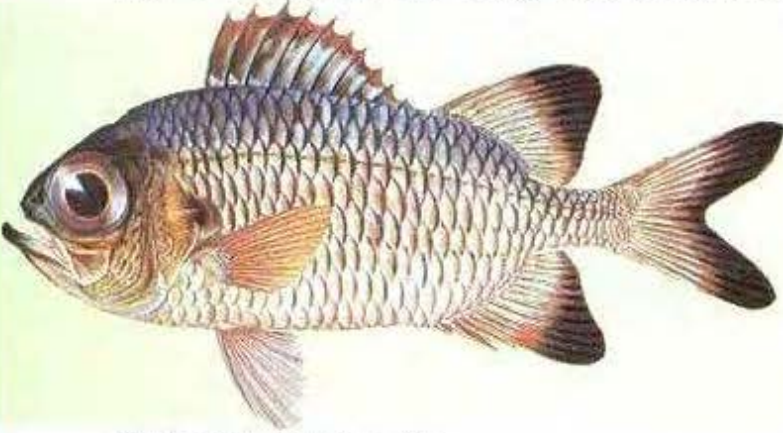
*Myripristis amaenus* 235  
6 ~ ♀ ♂ ✖ ☑ 26°C sg: 1.022 30 cm 300L



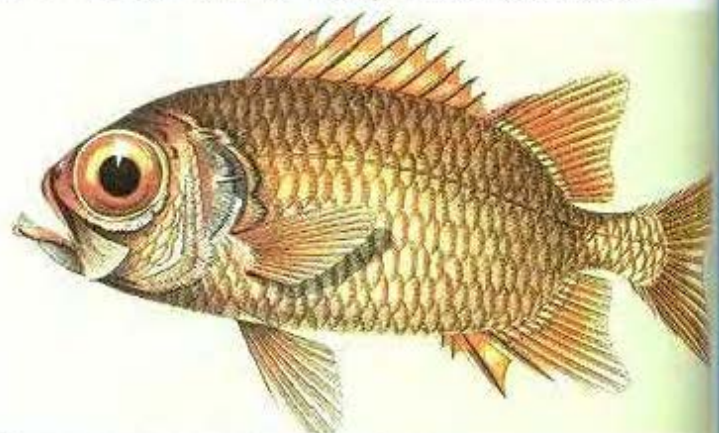
*Myripristis melanostictus* 235  
7, 9 ~ ♀ ♂ ✕ ☐ 26°C sg: 1.022 30 cm 300L



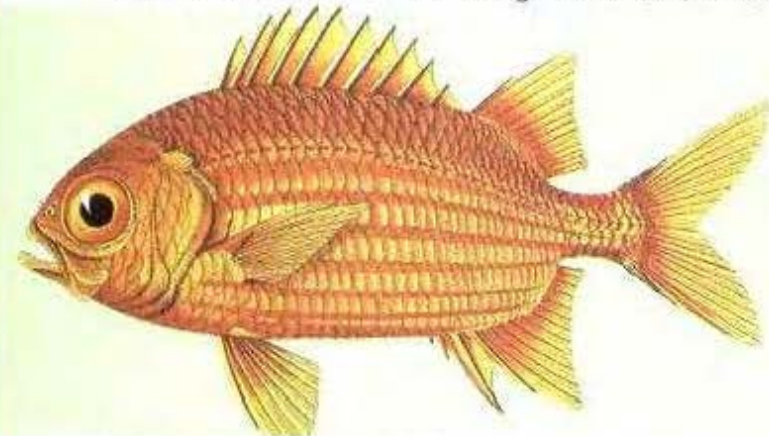
*Myripristis trachyacron* 235  
7 ~ ♀ ♂ ✕ ☐ 26°C sg: 1.022 16 cm 200L



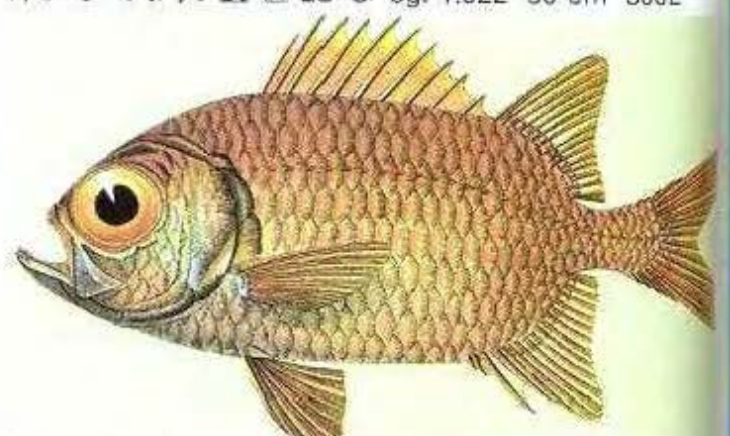
*Myripristis adustus* 235  
7, 9 ~ ♀ ♂ ✕ ☐ 26°C sg: 1.022 32 cm 300L



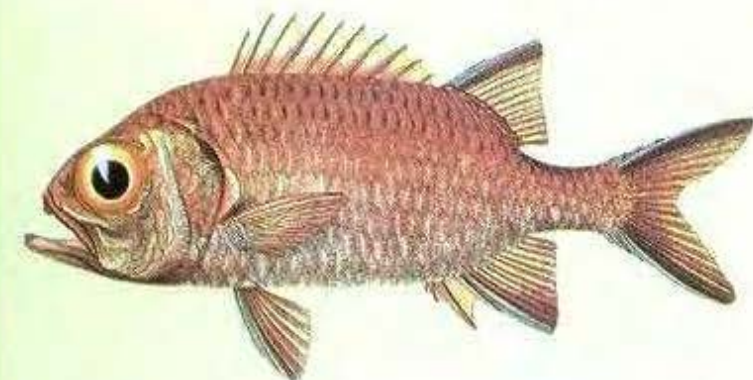
*Myripristis melanostictus* 235  
7, 9 ~ ♀ ♂ ✕ ☐ 26°C sg: 1.022 30 cm 300L



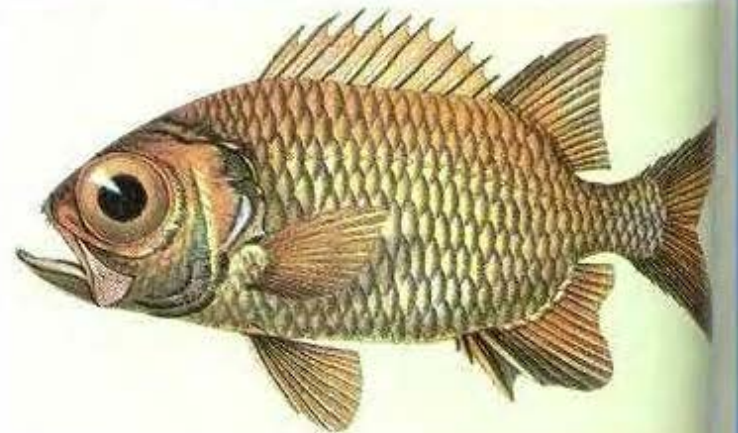
*Myripristis hexagonus* 235  
6-7, 9 ~ ♀ ♂ ✕ ☐ 26°C sg: 1.022 20 cm 200L



*Myripristis murdjan* 235  
7-10 ~ ♀ ♂ ✕ ☐ 26°C sg: 1.022 24 cm 250L



*Myripristis murdjan* 235  
7-10 ~ ♀ ♂ ✕ ☐ 26°C sg: 1.022 24 cm 250L



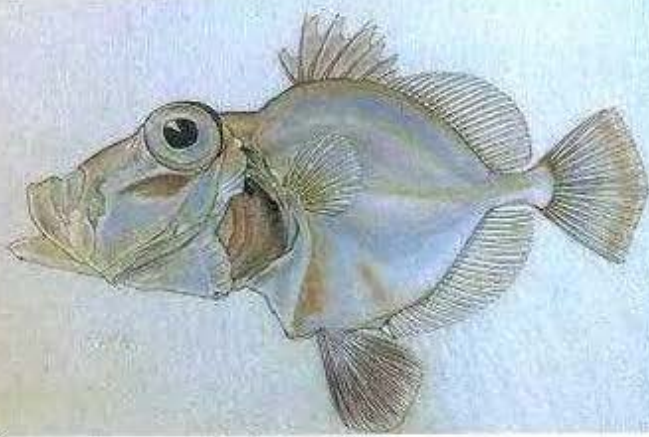
*Myripristis murdjan* 235  
7-10 ~ ♀ ♂ ✕ ☐ 26°C sg: 1.022 24 cm 250L

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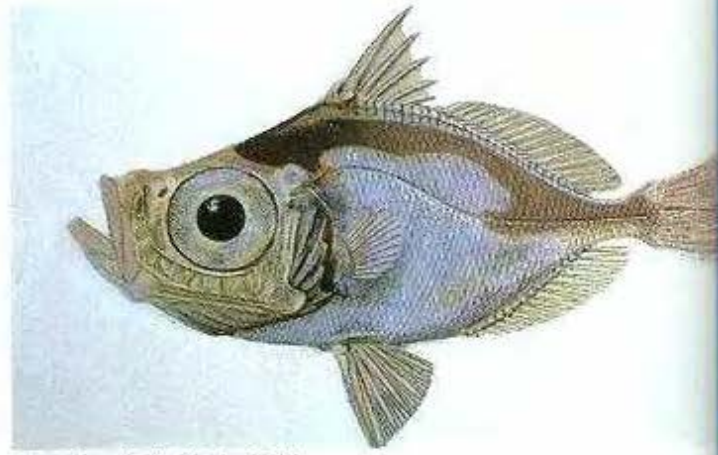


*Aulostomus chinensis* 254  
7, 9 ♀ ~ ♀ ♂ ♂ 26°C sg: 1.022 100 cm 1000L





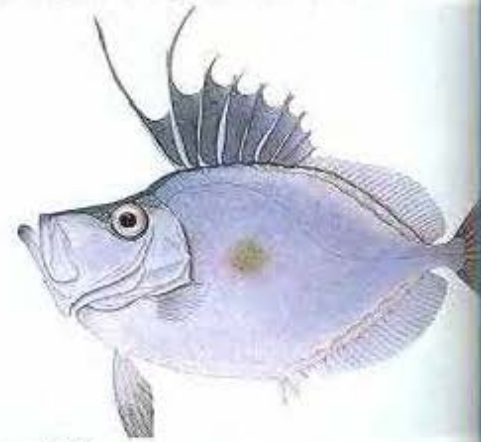
*Cyttopsis rosea(?)* 245  
Circumtrop. 5~9 ♀ ♂ ♀ ♂ 26°C sg: 1.022 22 cm 200L



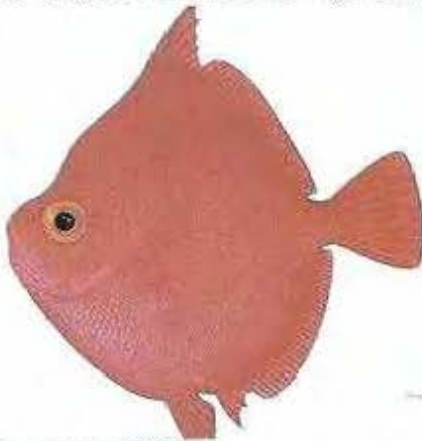
*Zenion hololepis* 244  
7, 9 ♀ ♂ ♀ ♂ 26°C sg: 1.022 10 cm 100L



*Zeus japonicus* 245  
5-9 ♀ ♂ ♀ ♂ 26°C sg: 1.022 50 cm 500L



*Zenopsis nebulosa* 245  
5-7 ♀ ♂ ♀ ♂ 26°C sg: 1.022 50 cm 500L



*Antigonia capros* 248  
1-2, 6-9, 13 ♀ ♂ ♀ ♂ 26°C sg: 1.022 25 cm 300L



*Aulichthys japonicus* 250  
5 ♀ ♂ ♀ ♂ 24°C sg: 1.023 15 cm 150L



*Aulorhynchus flavidus* 250  
3 ♀ ♂ ♀ ♂ 26°C sg: 1.022 18 cm 200L



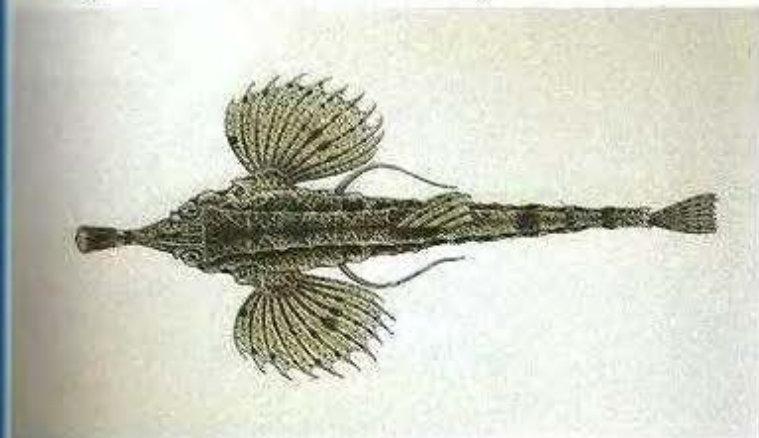
*Spinachia spinachia* 251  
14 ♀ ♂ ♀ ♂ 22°C sg: 1.024 19 cm 200L



*Parapegagus natans* 253  
5, 7-8, 12 ~ ♀ ♀ ♀ ♀ 25°C sg: 1.022 18 cm 200L



*Pegasus volitans* 253  
5, 7, 9 ~ ♀ ♀ ♀ ♀ 26°C sg: 1.022 17.5 cm 200L



*Parapegagus* sp.? 253  
7, 9 ~ ♀ ♀ ♀ ♀ 26°C sg: 1.022 12 cm 120L



*Aulostomus maculatus* 254  
2 ~ ♀ ♀ ♀ ♀ 26°C sg: 1.022 91 cm 1000L



*Aulostomus chinensis* 254  
7, 9 ~ ♀ ♀ ♀ ♀ 26°C sg: 1.022 100 cm 1000L



*Aulostomus chinensis* 254  
7, 9 ~ ♀ ♀ ♀ ♀ 26°C sg: 1.022 100 cm 1000L



*Fistularia commersonii* 255  
Circumtrop. ~ ♀ ♀ ♀ ♀ 26°C sg: 1.022 160 cm



*Fistularia tabacaria* 255  
1-2 ~ ♀ ♀ ♀ ♀ 24°C sg: 1.023 180 cm 2000L



*Phyllopteryx taeniolatus* 259  
12 ~ ♀ ♀ ♀ ♀ ♀ 24°C sg: 1.023 23 cm 250L

*Solenostomus paradoxus* 258  
5, 7, 9 ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 16.5 cm 200L



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*Phycodorus eques* 259

12 ♀ ♀ ♀ ♀ ♀ ♀ ♀ ♀ ♀ ♀ 24°C sg: 1.023 35 cm 400L



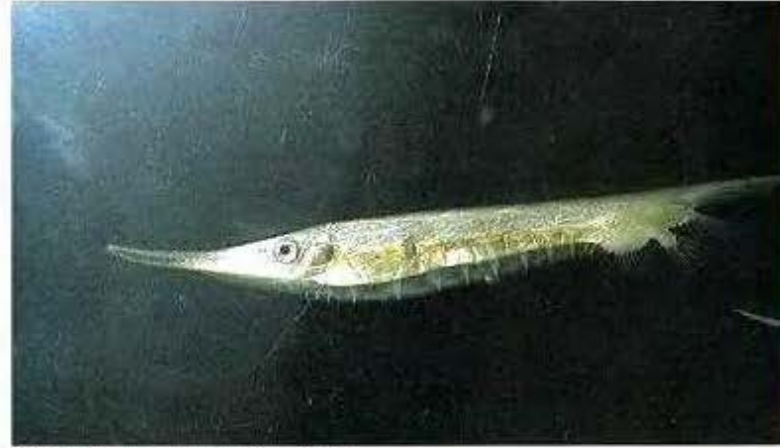




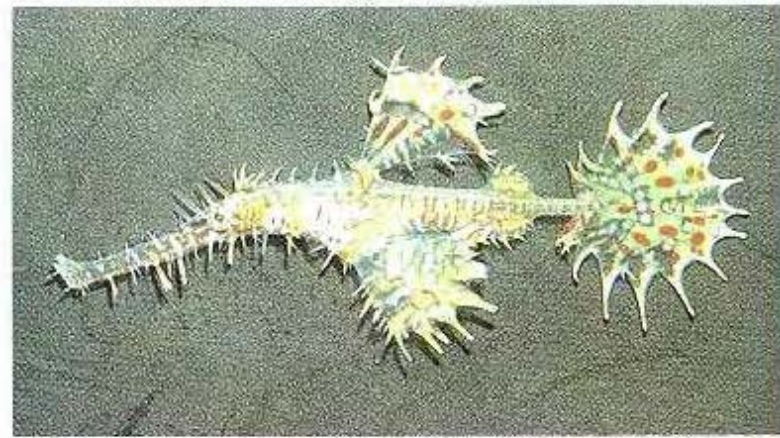
*Aeoliscus strigatus* and *A. punctulatus* 257  
7-10 ♀ ♂ ♀ ♀ ♀ ♀ 26°C sg: 1.022 15 cm 150L



*Macrorhamphosus scolopax* 256  
Circumtrop. ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 20 cm 200L



*Centriscus scutatus* 257  
7-9 ~ ♀ ♀ ♀ ♀ ♀ 24°C sg: 1.023 15 cm 200L



*Solenostomus cyanopterus* 258  
5, 7, 9 ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 17 cm 200L



*Solenostomus paegnius* 258  
5, 7, 9 ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 10 cm 100L



*Solenostomus paradoxus* 258  
5, 7, 9 ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 16.5 cm 200L



*Solenostomus paradoxus* 258  
5, 7, 9 ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 16.5 cm 200L



*Solenostomus paradoxus* 258  
5, 7, 9 ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 16.5 cm 200L





*Bryx dunckeri* 259  
2 ♀♂ ♀ ♀ ♀ 26°C sg: 1.022 7.5 cm 100L



*Syngnathus louisianae* 259  
2 ♀♂ ♀ ♀ ♀ 26°C sg: 1.022 38 cm 400L



*Micrognathus ensenadae* 259  
2 ♀♂ ♀ ♀ ♀ 26°C sg: 1.022 12.5 cm 100L



*Microphis brachyurus* 259  
6,9 ♀♂ ♀ ♀ ♀ 26°C sg: 1.022 20 cm 200L



*Stigmatopora nigra* 259  
8, 11 ♀♂ ♀ ♀ ♀ 26°C sg: 1.022 17.3 cm 200L



*Stigmatopora argus* 259  
12 ♀♂ ♀ ♀ ♀ 26°C sg: 1.022 27 cm 300L



*Syngnathoides biaculeatus* 259  
7-10 ♀♂ ♀ ♀ ♀ 26°C sg: 1.022 30 cm 300L

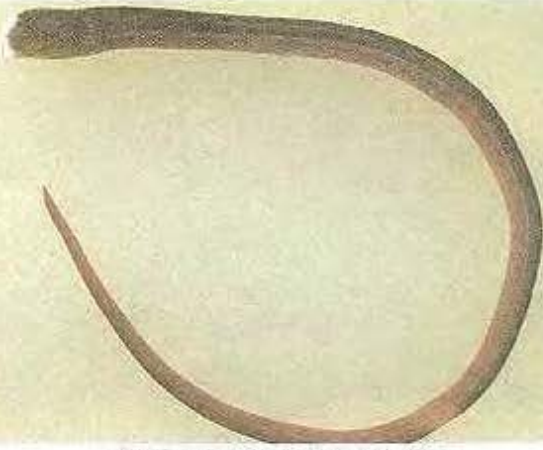


*Cosmocampus arctus* 259  
3 ♀♂ ♀ ♀ ♀ 26°C sg: 1.022 9 cm 100L



*Syngnathus* sp. 259  
7-10 ♀♂ ♀ ♀ ♀ 26°C sg: 1.022 25 cm 150L

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*Bulbonaricus brauni* 259  
7 ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 5.5 cm 50L

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*Histlogamphelus cristatus* 259  
12 ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 14 cm 150L



*Lissocampus caudalis* 259  
12 ~ ♀ ♀ ♀ ♀ ♀ 24°C sg: 1.022 13 cm 100L



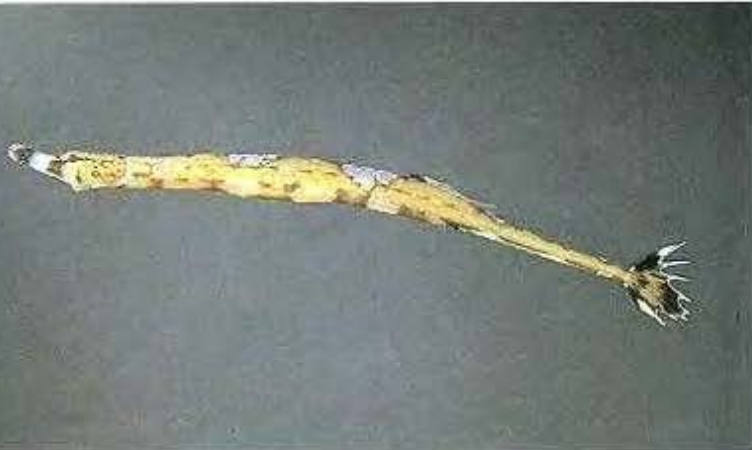
*Hippichthys penicillus* 259  
7, 9 ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 8.0 cm 100L



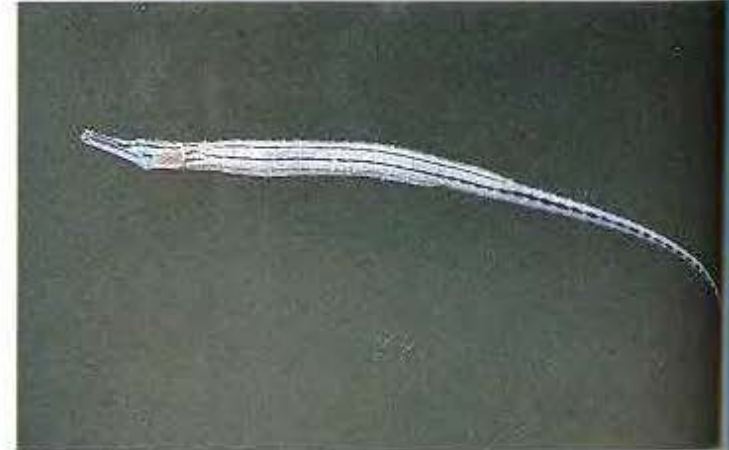
*Entelurus aequoreus* 259  
13 ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 150L



*Halicampus grayi* 259  
7-9 ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 20 cm 200L



*Heraldia nocturna* 259  
12 ~ ♀ ♀ ♀ ♀ ♀ 24°C sg: 1.022 9 cm 100L



*Maroubra perserrata* 259  
12 ~ ♀ ♀ ♀ ♀ ♀ 24°C sg: 1.022 7 cm 100L



*Doryrhamphus dactyliophorus* 259  
6-7, 9-10 ~ ♀ ♀ ♀ ♀ 26°C sg: 1.022 18 cm 200L



*Doryrhamphus janssi* 259  
7, 8 ~ ♀ ♀ ♀ ♀ 26°C sg: 1.022 13 cm 100L



*Doryrhamphus japonicus* 259  
5 ~ ♀ ♀ ♀ ♀ 26°C sg: 1.022 8 cm 100L



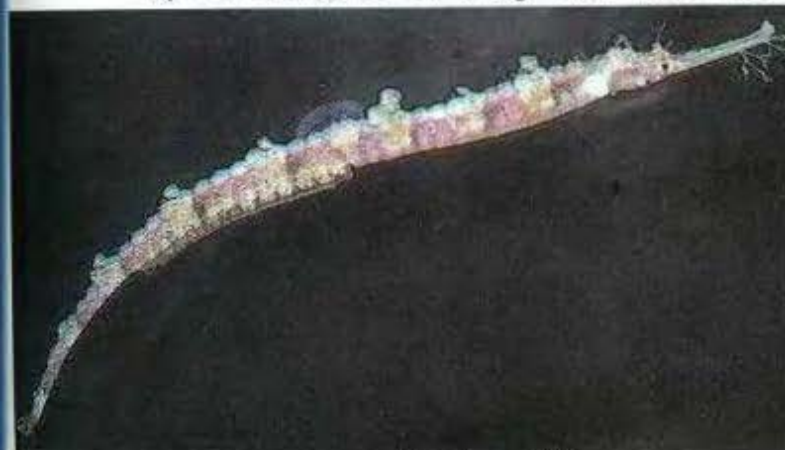
*Doryrhamphus e. excisus* 259  
3, 6-9 ~ ♀ ♀ ♀ ♀ 26°C sg: 1.022 7 cm 100L



*Corythoichthys intestinalis* 259  
6, 7 ~ ♀ ♀ ♀ ♀ 26°C sg: 1.022 16 cm 200L



*Corythoichthys paxtoni* 259  
8 ~ ♀ ♀ ♀ ♀ 26°C sg: 1.022 14 cm 100L



*Halicampus macrorhynchus* 259  
7-10 ~ ♀ ♀ ♀ ♀ 26°C sg: 1.022 13.5 cm 150L



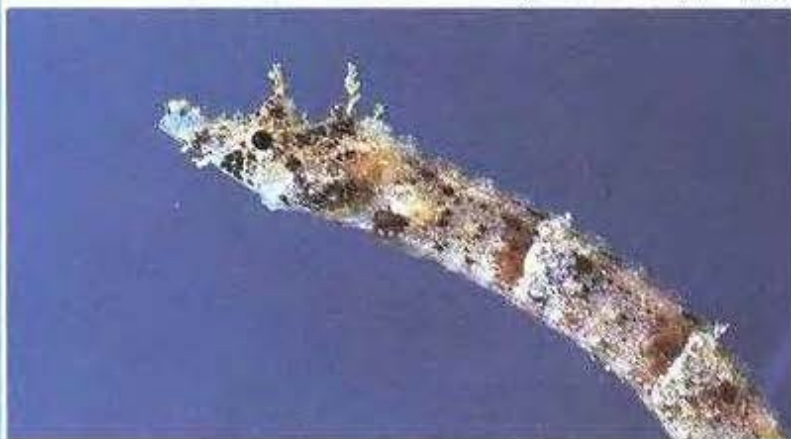
*Corythoichthys amplexus* 259  
6-9 ~ ♀ ♀ ♀ ♀ 26°C sg: 1.022 9 cm 100L



*Corythoichthys amplexus* 259  
6-9 ~ ♀ ♥ ♀ ☐ 26°C sg: 1.022 9 cm 100L



*Corythoichthys schultzi* 259  
6-10 ~ ♀ ♥ ♀ ☐ 26°C sg: 1.022 15 cm 150L



*Halicampus spinirostris* 259  
7-9 ~ ♀ ♥ ♀ ☐ 26°C sg: 1.022 12 cm 100L



*Hippocampus kuda* 259  
7 ~ ♀ ♥ ♀ ☐ 26°C sg: 1.022 18 cm 200L



*Corythoichthys haematopterus* 259  
6-9 ~ ♀ ♥ ♀ ☐ 26°C sg: 1.022 20 cm 200L



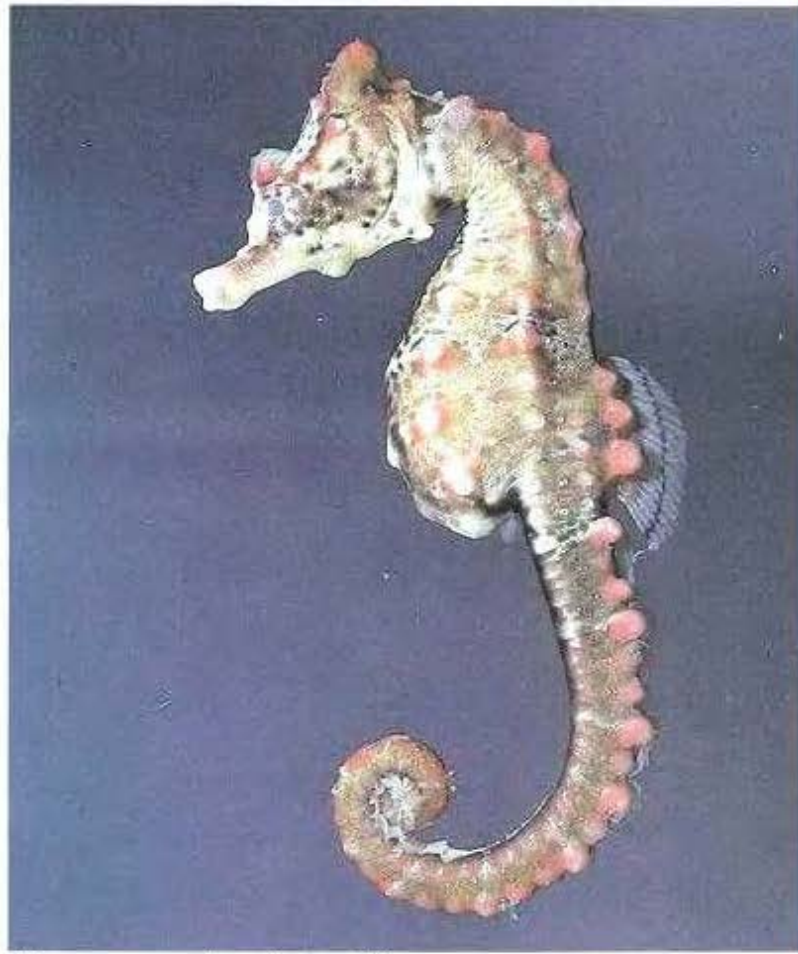
*Doryrhamphus multiannulatus* 259  
9-10 ~ ♀ ♥ ♀ ☐ 26°C sg: 1.022 18 cm 200L



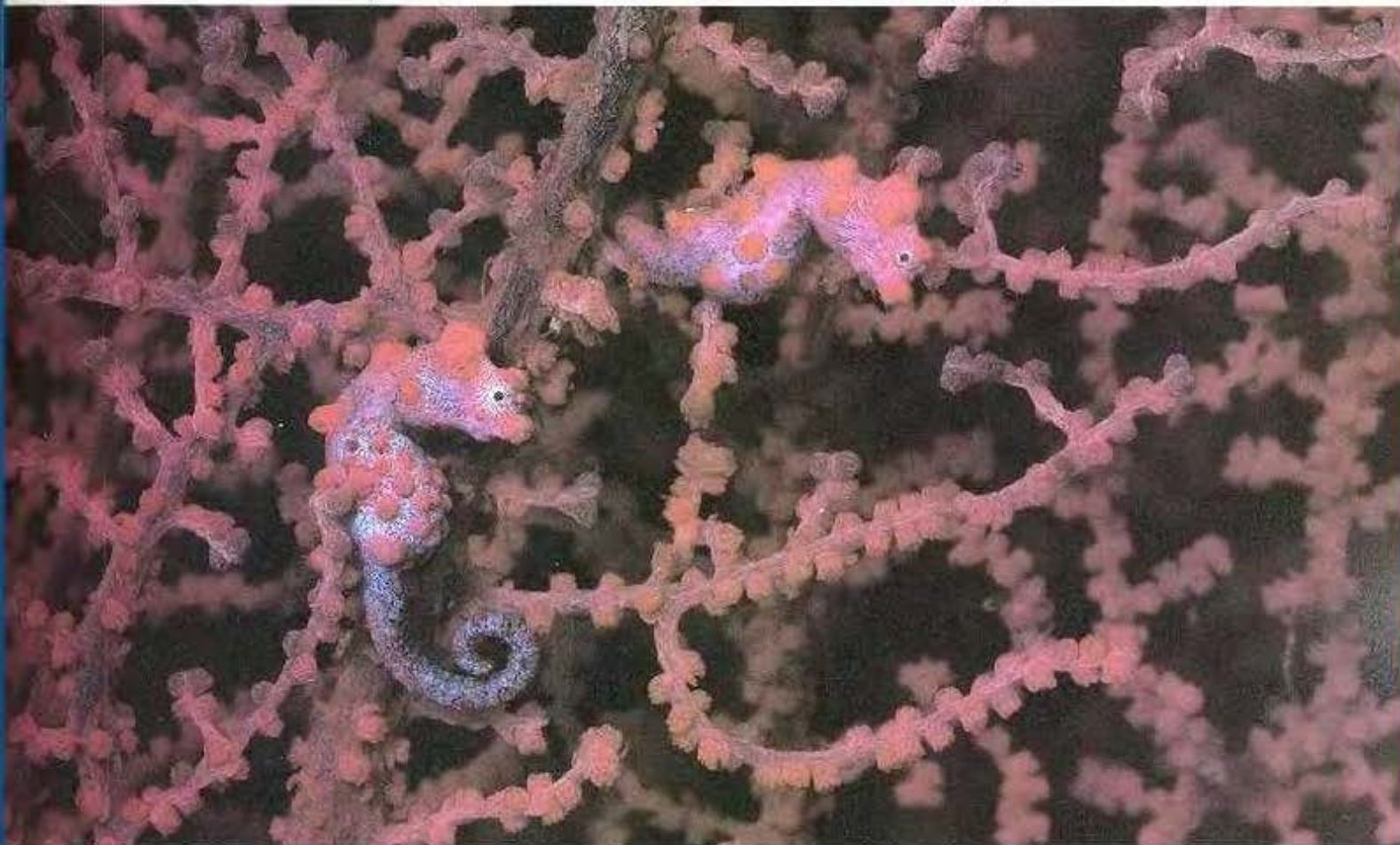
*Hippocampus angustus* 259  
12 ~ ♀ ♥ ♀ ☐ 24°C sg: 1.023 10 cm 100L



*Hippocampus abdominalis* 259  
 12 ~ ♀ ♀ ♀ ♀ ♀ 24°C sg: 1.023 10 cm 100L



*Hippocampus breviceps* 259  
 12 ~ ♀ ♀ ♀ ♀ ♀ 24°C sg: 1.022 6.5 cm 60L



*Hippocampus bargibanti* 259  
 6 ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 5 cm 50L





*Hippocampus* sp. 259  
14 ~ ♀ ♀ ♀ ♀ 22°C sg: 1.024



*Hippocampus japonicus* 259  
5, 7 ~ ♀ ♀ ♀ ♀ 26°C sg: 1.022



*Hippocampus kuda* 259  
5, 7, 9 ~ ♀ ♀ ♀ ♀ 26°C sg: 1.022



*Hippocampus ramulosus* 259  
13, 15 ~ ♀ ♀ ♀ ♀ 26°C sg: 1.024



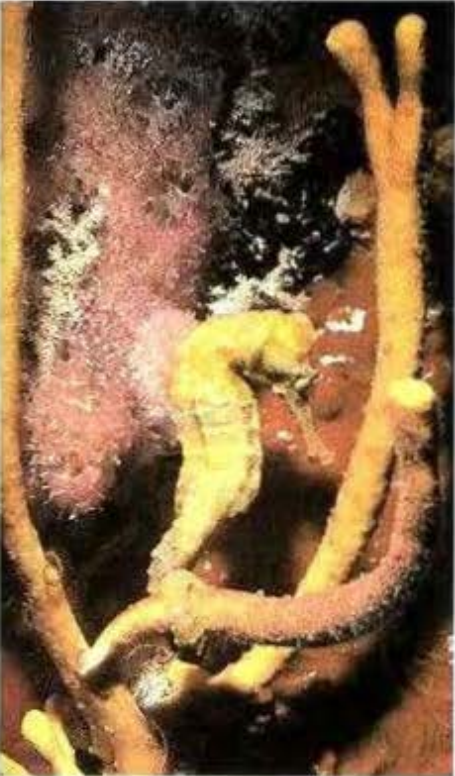
*Hippocampus ingens* 259  
3 ~ ♀ ♀ ♀ ♀ 26°C sg: 1.022



*Hippocampus hippocampus* 259  
14, 15 ~ ♀ ♀ ♀ ♀ 26°C sg: 1.022



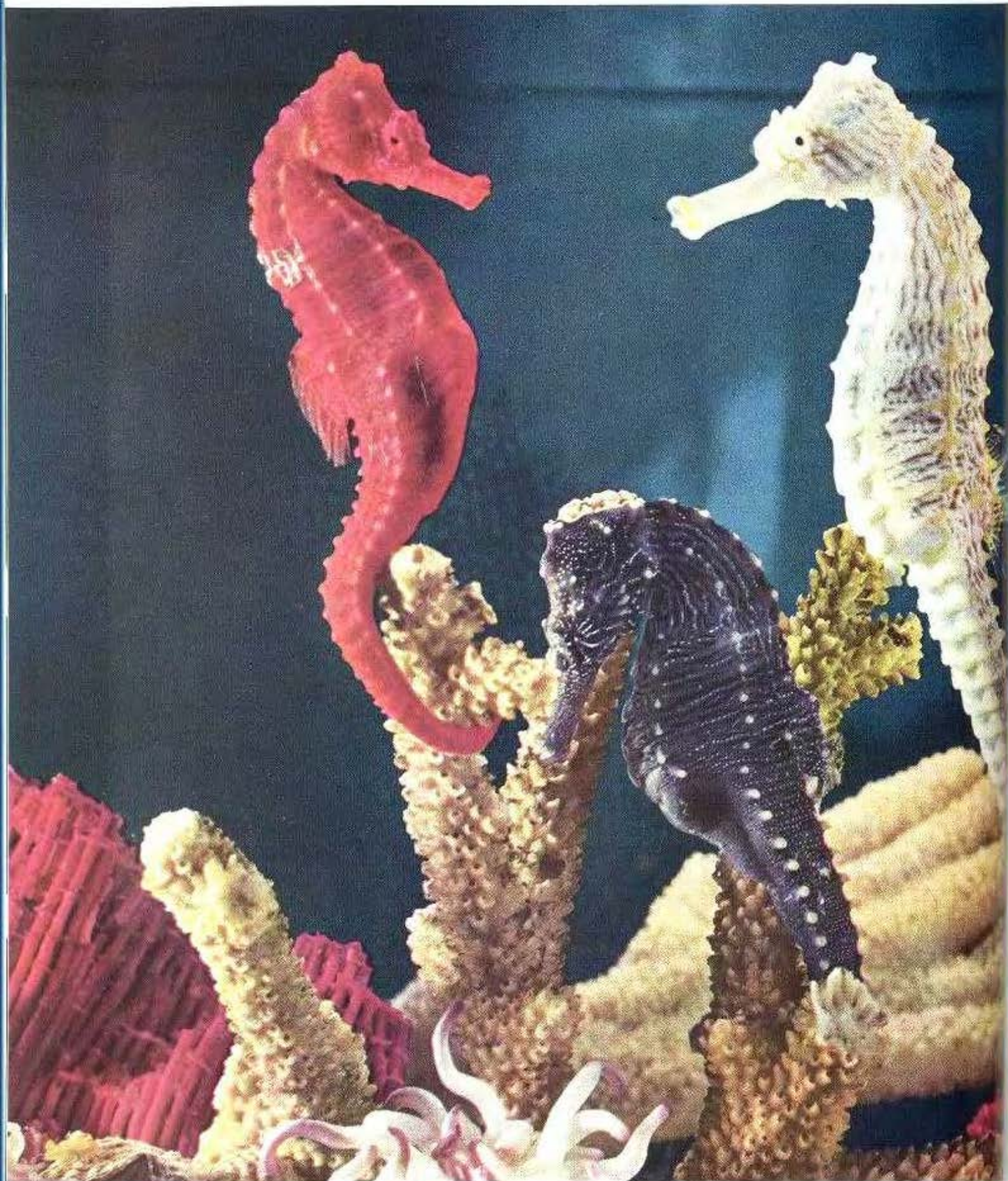
*Hippocampus coronatus* 259  
5, 7 ~ ♀ ♥ ♀ ☒ 24°C sg: 1.023



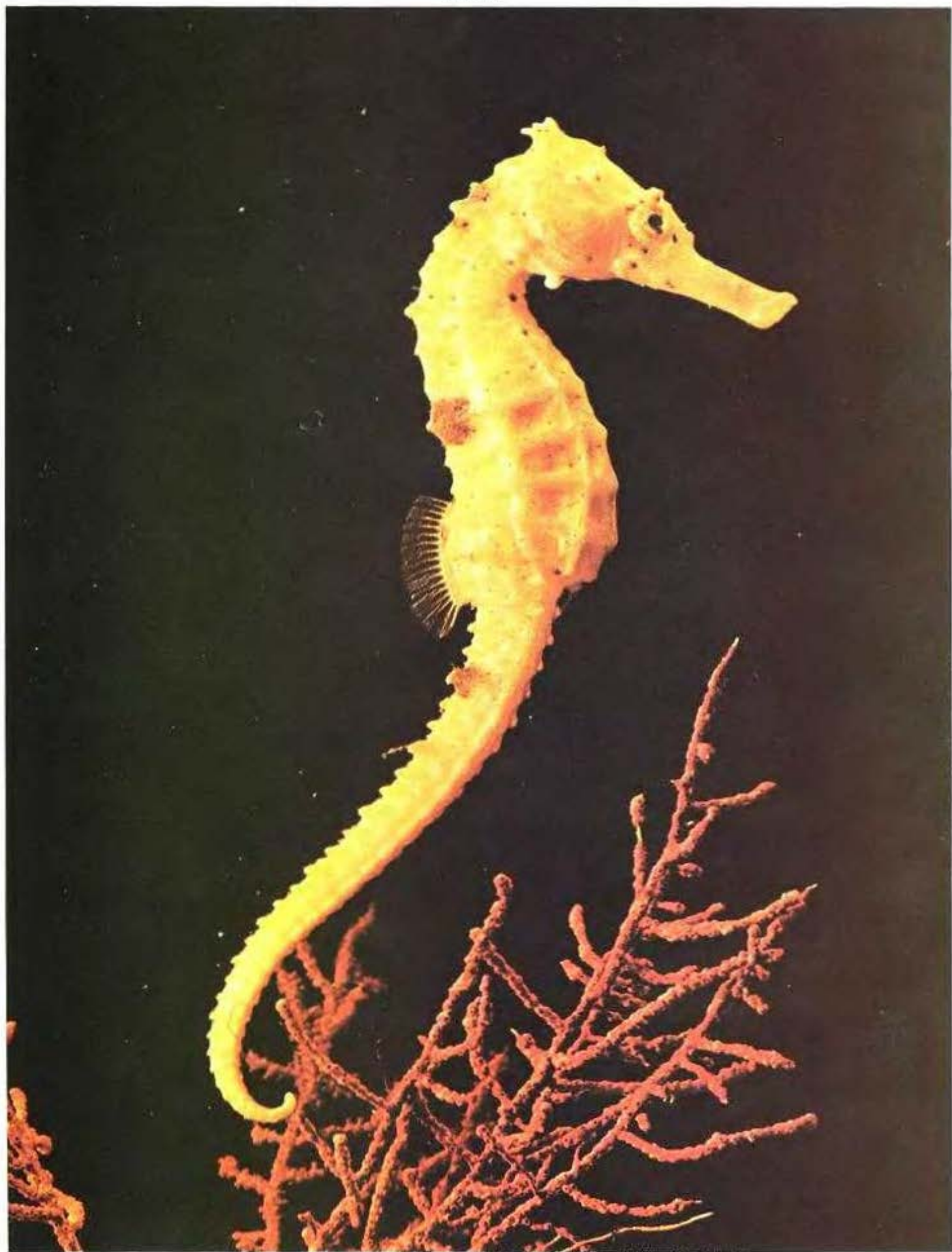
*Hippocampus reidi* 259  
1-2 ~ ♀ ♥ ♀ ☒ 24°C sg: 1.023



*Hippocampus erectus* 259  
1-2 ~ ♀ ♥ ♀ ☒ 23°C sg: 1.024 15 cm 200L



*Hippocampus erectus*, family Syngnathidae (259).



*Hippocampus kuda* 259  
7 ~ ♀ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 18 cm 200L

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*Pterois volitans* 262

7-8 ~ ♀ ♂ ♀ ♂ ♀ ♂ 26°C sg: 1.022 35 cm 400L



*Inimicus filamentosus* 263

9-10 ~ ~ ~ \* ☐ 26°C sg: 1.022 18 cm 200L

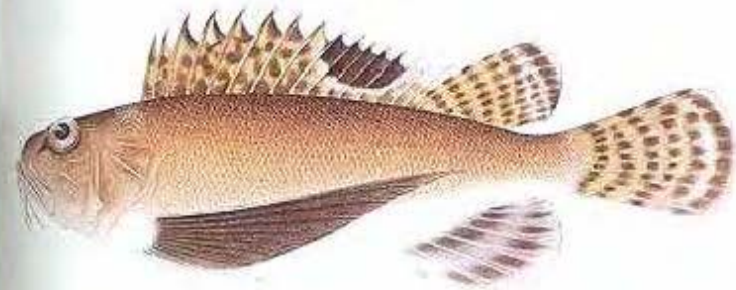


*Dactylopterus volitans* 260

1-2, 13-14 ~ ~ ~ ~ ~ 26°C sg: 1.022 45 cm 500L

*Dactyloptena peterseni* 260

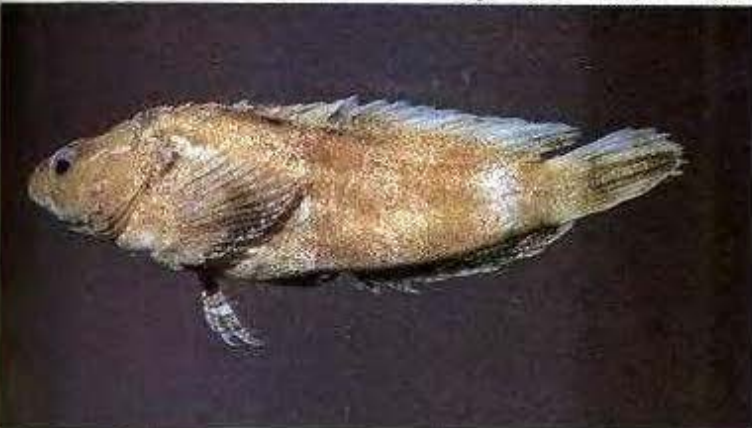
7, 9 ~ ~ ~ ~ ~ 26°C sg: 1.022 30 cm 300L

*Apistus carinatus* 262

6-9 ~ ~ ~ ~ ~ 26°C sg: 1.022 15 cm 150L

*Ablabys taenianotus* 262

7, 9 ~ ~ ~ ~ ~ 26°C sg: 1.022 9 cm 100L

*Peristrominopus dolosus* 265

7, 12 ~ ~ ~ ~ ~ 26°C sg: 1.022 8 cm 80L

*Neosebastes pandus* 262

12 ~ ~ ~ ~ ~ 24°C sg: 1.023 30 cm 300L

*Centropogon australis* 262

12 ~ ~ ~ ~ ~ 23°C sg: 1.024 10 cm 100L

*Pontinus nematophthalmus* 262

2 ~ ~ ~ ~ ~ 25°C sg: 1.022 14 cm 150L





*Helicolenus hilgendorfi* 262  
5 ~ ♀ ♂ ♀ ♀ 23°C sg: 1.024 20 cm 200L



*Helicolenus papillosus* 262  
11 ~ ♀ ♂ ♀ ♀ 24°C sg: 1.023 30 cm 300L



*Sebastolobus macrochir* 262  
5 ~ ♀ ♂ ♀ ♀ 24°C sg: 1.023 30 cm 300L



*Sebastolobus alascanus* 262  
4 ~ ♀ ♂ ♀ ♀ 23°C sg: 1.024 75 cm 750L



*Sebasticus albofasciatus* 262  
5 ~ ♀ ♂ ♀ ♀ 24°C sg: 1.023 25 cm 250L



*Sebasticus marmoratus* 262  
5, 7 ~ ♀ ♂ ♀ ♀ 24°C sg: 1.023 34 cm 350L



*Scorpaenopsis oxycephala* 262  
6-10 ~ ♀ ♂ ♀ ♀ 26°C sg: 1.022 30 cm 300L



*Scorpaena cardinalis* 262  
8 ~ ♀ ♂ ♀ ♀ 26°C sg: 1.022 45 cm 500L



*Rhinopias frondosa* 262  
6-9 ~ ~ ~ ~ ~ 26°C sg: 1.022 25 cm 300L



*Rhinopias eschmeyeri* 262  
9 ~ ~ ~ ~ ~ 26°C sg: 1.022 19 cm 200L



*Rhinopias argoliba* 262  
5 ~ ~ ~ ~ ~ 24°C sg: 1.023 17 cm 200L



*Rhinopias aphanes* 262  
6 ~ ~ ~ ~ ~ 26°C sg: 1.022 23.5 cm 300L



*Parapterois heterurus* 262  
5, 7, 9 ~ ♀ ♂ ♀ ♂ 26°C sg: 1.022 15 cm 150L



*Dendochirus barberi* 262  
6 ~ ♀ ♂ ♀ ♂ 26°C sg: 1.022 10.8 cm 100L



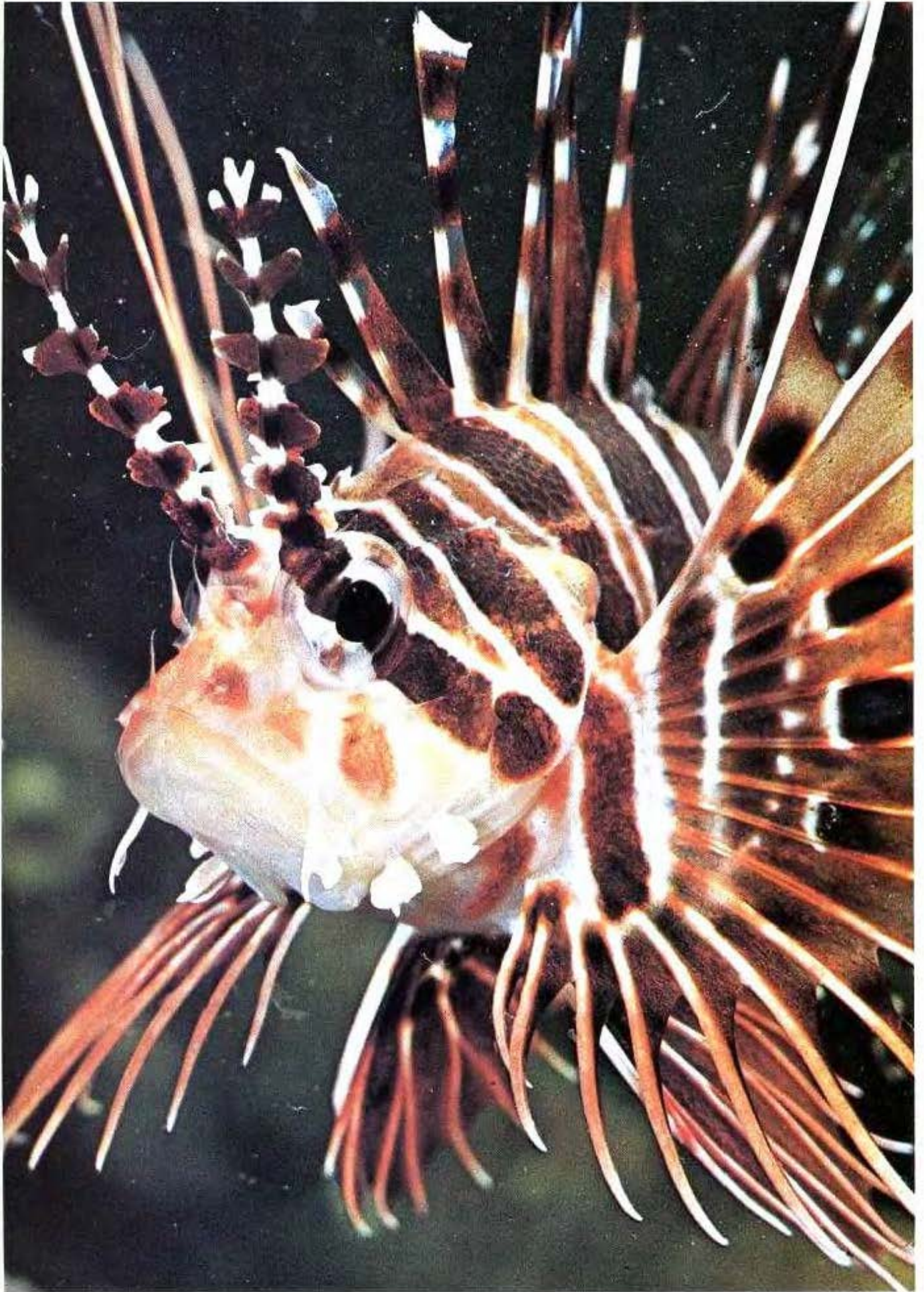
*Pterois volitans* 262  
7-8 ~ ♀ ♂ ♀ ♂ 26°C sg: 1.022 35 cm 400L



*Pterois sphex* 262  
6 ~ ♀ ♂ ♀ ♂ 26°C sg: 1.022 25 cm 300L



*Dendrochirus zebra* 262  
7-10 ~ ♀ ♂ ♀ ♂ 26°C sg: 1.022 30 cm 300L



*Pterois antennata* 262  
6-9 ~ (天) ~ 26°C sg: 1.022 20 cm 200L



*Pterois antennata* 262  
7-9 ~ ~ ~ ~ ~ 26°C sg: 1.022 30 cm 300L



*Pterois antennata* 262  
7-9 ~ ~ ~ ~ ~ 26°C sg: 1.022 30 cm 300L



*Pterois volitans* 262  
7-8 ~ ~ ~ ~ ~ 26°C sg: 1.022 35 cm 400L



*Pterois miles* 262  
9, 10 ~ ~ ~ ~ ~ 26°C sg: 1.022 31 cm 300L



*Pterois radiata* 262  
6-10 ~ ~ ~ ~ ~ 26°C sg: 1.022 20 cm 200L



*Scorpaena notata* 262  
13-15 ~ ~ ~ ~ ~ 26°C sg: 1.024 30 cm 300L



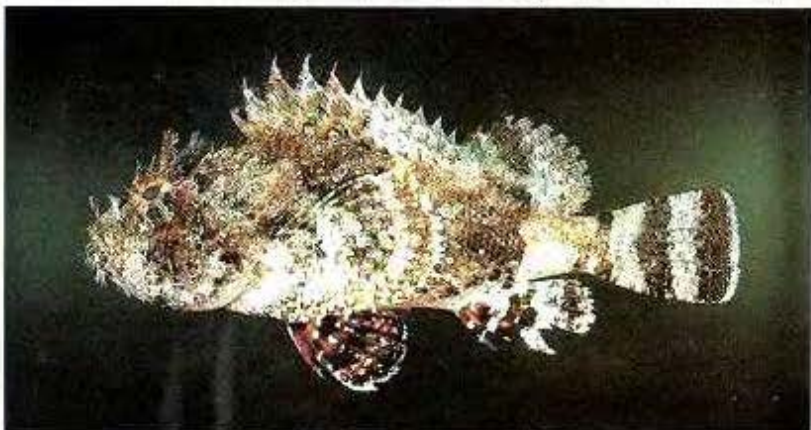
*Scorpaena scrofa* 262  
13-15 ~ ~ ~ ~ ~ 26°C sg: 1.024 30 cm 300L



*Scorpaena grandicornis* 262  
2 ~ ~ ~ ~ ~ 26°C sg: 1.022 25 cm 300L



*Scorpaena porcus*  
13-15 ~ ~ ~ ~ ~ 26°C sg: 1.024 30 cm 300L



*Scorpaena plumieri plumieri* 262  
1-2, 13 ~ ~ ~ ~ ~ 26°C sg: 1.023 30 cm 300L



*Scorpaena plumieri mystes* 262  
3 ~ ~ ~ ~ ~ 26°C sg: 1.023 30 cm 300L



*Scorpaena plumieri* (juv.) 262  
1-3, 13 ~ ~ ~ ~ ~ 26°C sg: 1.023 30 cm 300L



*Scorpaena plumieri* 262  
1-3, 13 ~ ~ ~ ~ ~ 26°C sg: 1.022 30 cm 300L



*Scorpaena sonorae* 262  
 3 ~ ~ ~ ~ ~ 26°C sg: 1.022 12 cm 120L



*Scorpaena guttata* 262  
 4 ~ ~ ~ ~ ~ 22°C sg: 1.024 43 cm 400L



*Scorpaena inermis* 262  
 2 ~ ~ ~ ~ ~ 26°C sg: 1.022 11 cm 100L



*Scorpaena elachys* 262  
 2 ~ ~ ~ ~ ~ 26°C sg: 1.022 64 cm 700L



*Scorpaena albifimbria* 262  
 2 ~ ~ ~ ~ ~ 26°C sg: 1.022 75 cm 800L



*Scorpaenodes tredecimspinosus* 262  
 2 ~ ~ ~ ~ ~ 26°C sg: 1.022 10 cm 100L



*Scorpaena* 262  
 2 ~ ~ ~ ~ ~ 26°C sg: 1.024 23 cm 250L



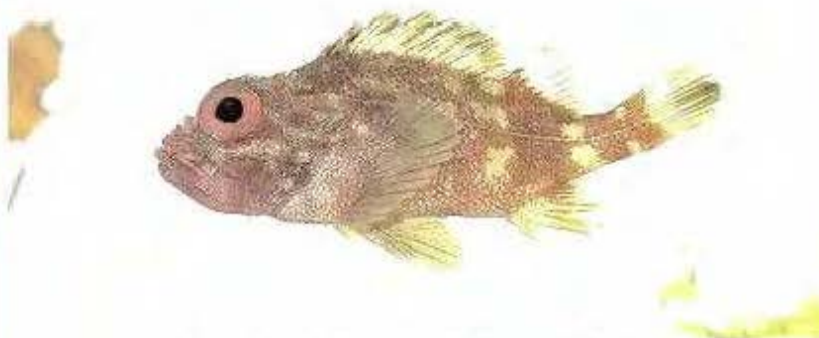
*Scorpaena bergi* 262  
 1-2 ~ ~ ~ ~ ~ 24°C sg: 1.023 75 cm 800L



*Scorpaena conlorta* 262  
6 ~ ~ ~ ~ ~ 26°C sg: 1.022 7.5 cm 80L



*Scorpaenopsis* sp. 262  
11-12 ~ ~ ~ ~ ~ 26°C sg: 1.022 10 cm 100L



*Sebastapistes cyanostigma* 262  
6-10 ~ ~ ~ ~ ~ 26°C sg: 1.022 8 cm 80L



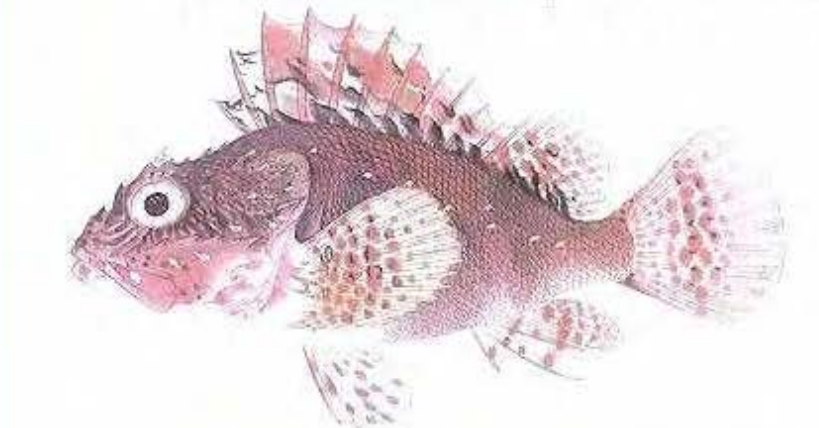
*Scorpaenopsis oxycephala* 262  
6-10 ~ ~ ~ ~ ~ 26°C sg: 1.022 30 cm 300L



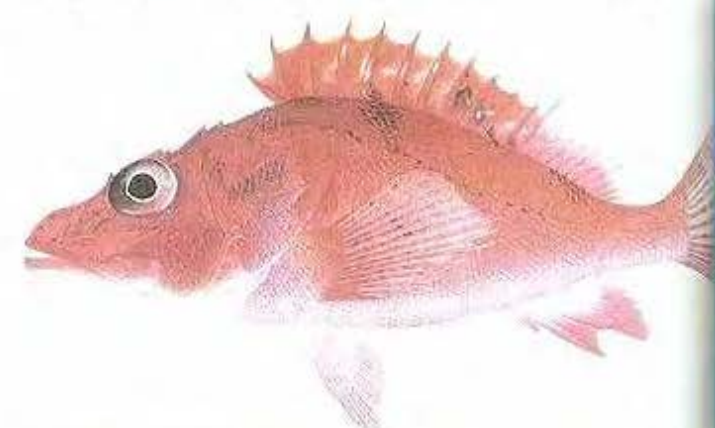
*Scorpaena* sp. 262  
12 ~ ~ ~ ~ ~ 24°C sg: 1.022 10 cm 100L



*Scorpaena sumptuosa* 262  
12 ~ ~ ~ ~ ~ 24°C sg: 1.023 30 cm 300L



*Scorpaena neglecta* 262  
5, 7 ~ ~ ~ ~ ~ 26°C sg: 1.022 30 cm 300L



*Pontinus macrocephalus* 262  
6-7 ~ ~ ~ ~ ~ 26°C sg: 1.022 13 cm 150L





*Scorpaenopsis brevifrons* 262  
6-7, 9 ~ ~ ~ ~ ~ 26°C sg: 1.022 10.5 cm 100L



*Scorpaenopsis gibbosa* 262  
9-10 ~ ~ ~ ~ ~ 26°C sg: 1.022 10 cm 100L



*Scorpaenopsis oxycephala* 262  
6-10 ~ ~ ~ ~ ~ 26°C sg: 1.022 30 cm 300L



*Scorpaenopsis oxycephala* 262  
6-10 ~ ~ ~ ~ ~ 26°C sg: 1.022 30 cm 300L



*Scorpaenopsis diabolus* 262  
6-10 ~ ~ ~ ~ ~ 26°C sg: 1.022 30 cm 300L



*Scorpaenopsis barbatus* 262  
9-10 ~ ~ ~ ~ ~ 26°C sg: 1.022 22 cm 200L



*Sebastapistes strongia* 262  
7-9 ~ ~ ~ ~ ~ 26°C sg: 1.022 10 cm 100L



*Sebastapistes* sp. 262  
7 ~ ~ ~ ~ ~ 26°C sg: 1.022 10 cm 100L





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*Sebastes mystinus* 262  
4 ~ ♀ ♂ ✖ ☐ 22°C sg: 1.024 53 cm 500L

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*Sebastes melanops* 262  
4 ~ ♀ ♂ ✖ ☐ 22°C sg: 1.024 60 cm 600L



*Sebastes nigrocinctus* 262  
4 ~ ♀ ♂ ✖ ☐ 22°C sg: 1.024 61 cm 600L



*Sebastes nebulosus* 262  
4 ~ ♀ ♂ ✖ ☐ 22°C sg: 1.024 43 cm 400L



*Sebastes paucispinis* 262  
3, 4 ~ ♀ ♂ ✖ ☐ 22°C sg: 1.024 90 cm 1000L



*Sebastes pinniger* 262  
4 ~ ♀ ♂ ✖ ☐ 22°C sg: 1.024 76 cm 800L



*Sebastes rosaceus* 262  
3, 4 ~ ♀ ♂ ✖ ☐ 22°C sg: 1.024 36 cm 400L



*Sebastes ruberrimus* 262  
4 ~ ♀ ♂ ✖ ☐ 21°C sg: 1.024 91 cm 1000L



*Sebastes serriceps* 262  
4 ~ ~ ~ ~ ~ 23°C sg: 1.024 41 cm 400L



*Sebastes rubrivinctus* 262  
4 ~ ~ ~ ~ ~ 22°C sg: 1.024 51 cm 500L



*Sebastes miniatus* 262  
4 ~ ~ ~ ~ ~ 23°C sg: 1.024 76 cm 800L



*Sebastes umbrus* 262  
4 ~ ~ ~ ~ ~ 22°C sg: 1.024 27 cm 300L



*Sebastes serranoides* 262  
4 ~ ~ ~ ~ ~ 23°C sg: 1.024 61 cm 600L



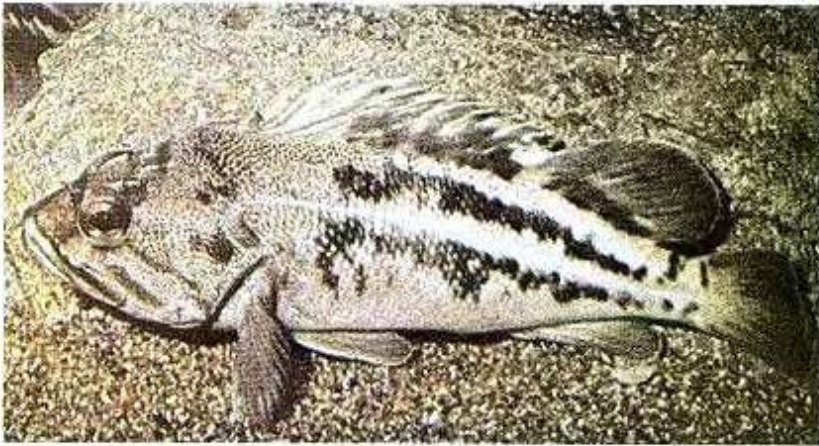
*Sebastes marinus* 262  
1, 14 ~ ~ ~ ~ ~ 22°C sg: 1.024 51 cm 500L



*Sebastes flavidus* 262  
4 ~ ~ ~ ~ ~ 23°C sg: 1.024 20 cm 200L



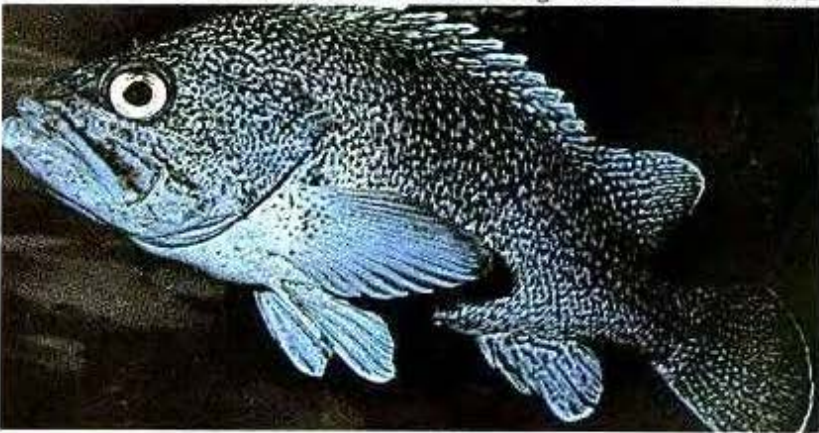
*Sebastes* sp. 262  
4 ~ ~ ~ ~ ~ 22°C sg: 1.024 50 cm 500L



*Sebastes trivittatus* 262  
5 ~ ~ ~ ~ ~ 23°C sg: 1.024 40 cm 400L



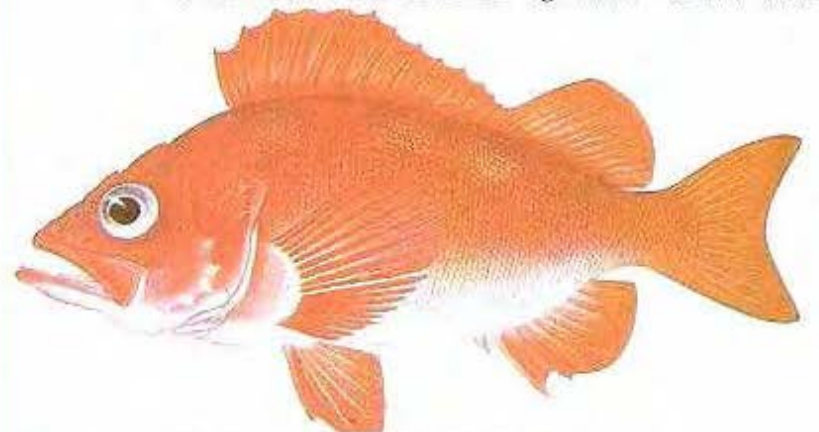
*Sebastes joyneri* 262  
5 ~ ~ ~ ~ ~ 23°C sg: 1.024 20 cm 200L



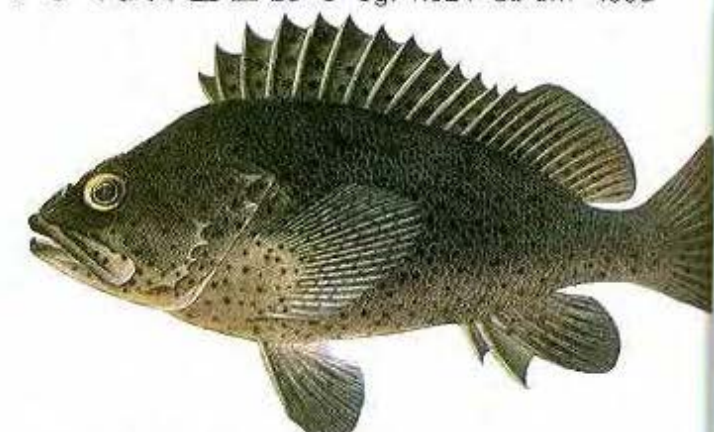
*Sebastes nivosus* 262  
5 ~ ~ ~ ~ ~ 23°C sg: 1.024 40 cm 400L



*Sebastes inermis* 262  
5 ~ ~ ~ ~ ~ 23°C sg: 1.024 35 cm 400L



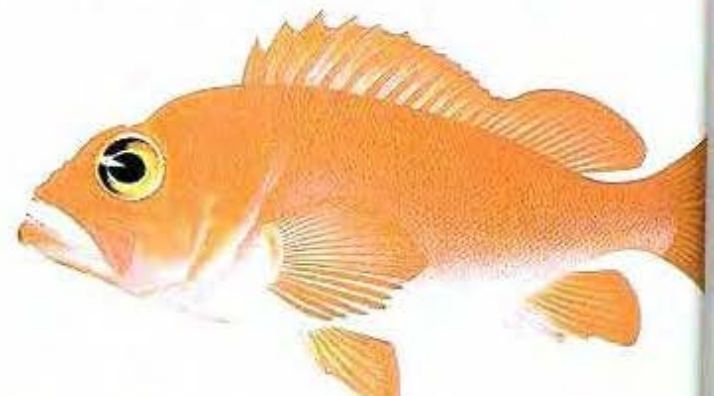
*Sebastes baramenue* 262  
5 ~ ~ ~ ~ ~ 23°C sg: 1.024 45 cm 500L



*Sebastes pachycephalus* 262  
5 ~ ~ ~ ~ ~ 23°C sg: 1.024 40 cm 400L



*Sebastes oblongus* 262  
5 ~ ~ ~ ~ ~ 23°C sg: 1.024 40 cm 400L



*Sebastes matsubarae* 262  
5 ~ ~ ~ ~ ~ 23°C sg: 1.024 70 cm 700L



*Scorpaenodes scaber* 262  
6-8, 12 ~ ~ ~ ~ ~ 25°C sg: 1.022 63 cm 600L



*Scorpaenodes varipinnis* 262  
7-8, 12 ~ ~ ~ ~ ~ 25°C sg: 1.022 5 cm 50L



*Scorpaenodes* sp. 262  
7-8, 12 ~ ~ ~ ~ ~ 25°C sg: 1.022 12 cm 150L



*Scorpaenodes* sp. 262  
7-8, 12 ~ ~ ~ ~ ~ 25°C sg: 1.022 8 cm 100L



*Scorpaenodes carribbaeus* 262  
2 ~ ~ ~ ~ ~ 26°C sg: 1.023 10 cm 100L



*Scorpaenodes insularis* 262  
13 ~ ~ ~ ~ ~ 26°C sg: 1.022 6.5 cm 80L



*Scorpaenodes xyris* 262  
3, 4 ~ ~ ~ ~ ~ 26°C sg: 1.023 15 cm 200L



*Scorpaenopsis* sp. 262  
8 ~ ~ ~ ~ ~ 26°C sg: 1.022 15 cm 200L



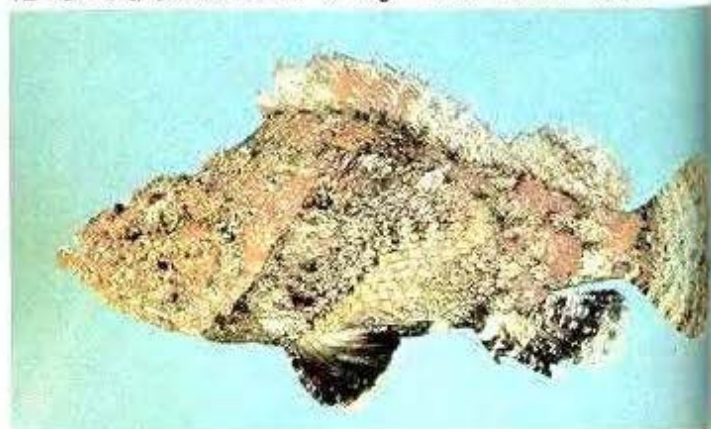
*Scorpaenopsis diabolus* 262  
6-10 ~ ~ ~ ~ ~ 26°C sg: 1.022 30 cm 300L



*Scorpaena cooki* 262  
12 ~ ~ ~ ~ ~ 24°C sg: 1.023 26 cm 300L



*Scorpaena ballieui* 262  
6 ~ ~ ~ ~ ~ 26°C sg: 1.022 10 cm 100L



*Scorpaenopsis diabolus* 262  
6-10 ~ ~ ~ ~ ~ 24°C sg: 1.023 30 cm 300L



Scorpionfish 262  
3? ~ ~ ~ ~ ~ 26°C sg: 1.022 15 cm 200L



*Scorpaenodes* sp. 262  
7 ~ ~ ~ ~ ~ 26°C sg: 1.022 10 cm 100L



*Scorpaenodes kelloggi* 262  
6-7, 9 ~ ~ ~ ~ ~ 26°C sg: 1.022 5 cm 60L



*Scorpaenodes littoralis* 262  
7 ~ ~ ~ ~ ~ 26°C sg: 1.022 15 cm 200L





*Dampierosa daruma* 263  
12 ~ ♀ ♂ ♀ ♂ ♀ ♂ 24°C sg: 1.023 16 cm 200L



*Erosa erosa* 263  
8 ~ ♀ ♂ ♀ ♂ ♀ ♂ 26°C sg: 1.022 15 cm 200L



*Inimicus filamentosus* 263  
9-10 ~ ♀ ♂ ♀ ♂ ♀ ♂ 26°C sg: 1.022 18 cm 200L



*Inimicus filamentosus* 263  
9-10 ~ ♀ ♂ ♀ ♂ ♀ ♂ 26°C sg: 1.022 18 cm 200L



*Inimicus caledonicus* 263  
7-9 ~ ♀ ♂ ♀ ♂ ♀ ♂ 26°C sg: 1.022 12 cm 150L



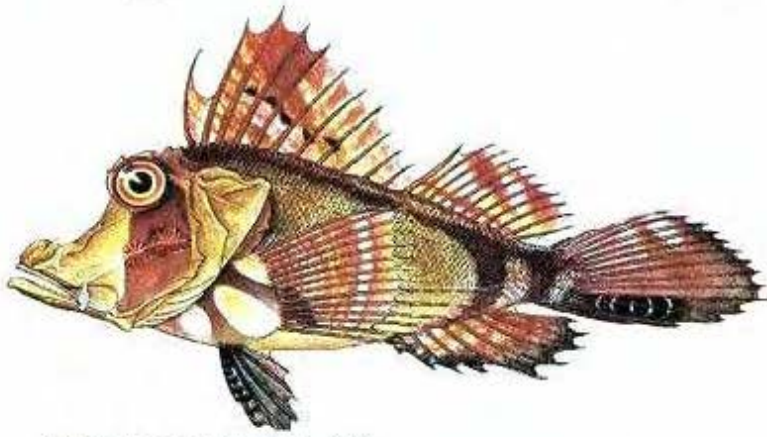
*Inimicus* sp. 263  
8 ~ ♀ ♂ ♀ ♂ ♀ ♂ 26°C sg: 1.022 15 cm 200L



*Minous versicolor* 263  
12 ~ ♀ ♂ ♀ ♂ ♀ ♂ 26°C sg: 1.022 8 cm 100L



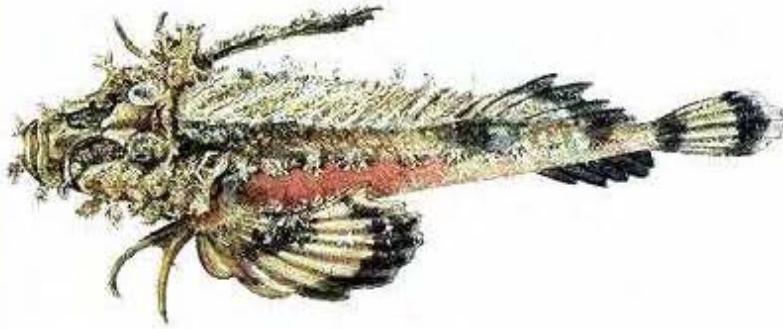
*Minous quincarinatus* 263  
7 ~ ♀ ♂ ♀ ♂ ♀ ♂ 26°C sg: 1.022 15 cm 200L



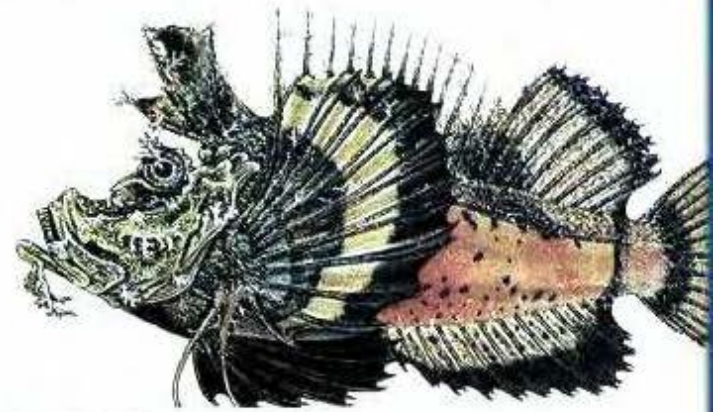
*Hipposcorpaena* sp. 262  
5, 7, 9 ~ ~ ~ ~ ~ 26°C sg: 1.022 23 cm 300L



*Hipposcorpaena* sp. 262  
5, 7, 9 ~ ~ ~ ~ ~ 26°C sg: 1.022 23 cm 300L



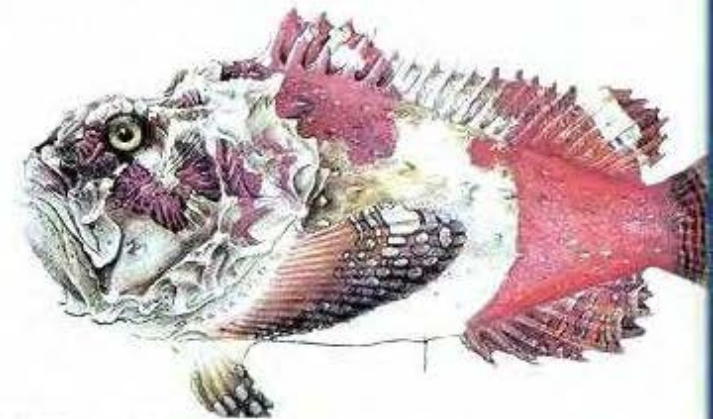
*Inimicus didactylus* 263  
6-8 ~ ~ ~ ~ ~ 26°C sg: 1.022 20 cm 200L



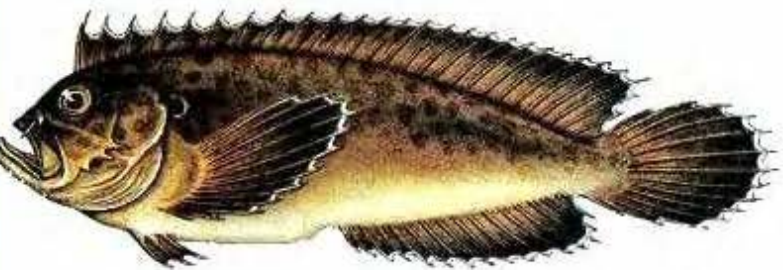
*Inimicus didactylus* 263  
6-8 ~ ~ ~ ~ ~ 26°C sg: 1.022 20 cm 200L



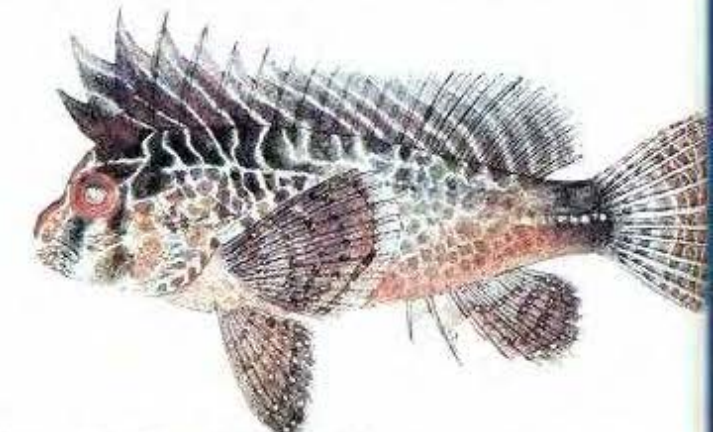
*Aploactis aspera* 265  
5 ~ ~ ~ ~ ~ 24°C sg: 1.023 10 cm 100L



*Erosa erosa* 263  
8 ~ ~ ~ ~ ~ 26°C sg: 1.022 15 cm 150L



*Cocotropus dermacanthus* 265  
7 ~ ~ ~ ~ ~ 26°C sg: 1.022 4 cm 50L



*Hypodytes longispinis* 262  
7-9 ~ ~ ~ ~ ~ 26°C sg: 1.022 10 cm 100L



*Synanceia verrucosa*  
6-10 ~ ~ ~ ~ ~ 26°C sg: 1.022 35 cm 400L



*Synanceia alula* 263  
7 ~ ~ ~ ~ ~ 26°C sg: 1.022 85 cm 1000L



*Synanceia verrucosa* 263  
7, 9-10 ~ ~ ~ ~ ~ 26°C sg: 1.022 35 cm 400L



*Inimicus sinensis* 263  
7-9, 12 ~ ~ ~ ~ ~ 26°C sg: 1.022 25 cm 300L



*Glyptauchen panduratus* 262  
12 ~ ~ ~ ~ ~ 26°C sg: 1.022 10 cm 100L



*Perryena leucometopon* 267  
12 ~ ~ ~ ~ ~ 24°C sg: 1.024 16 cm 200L



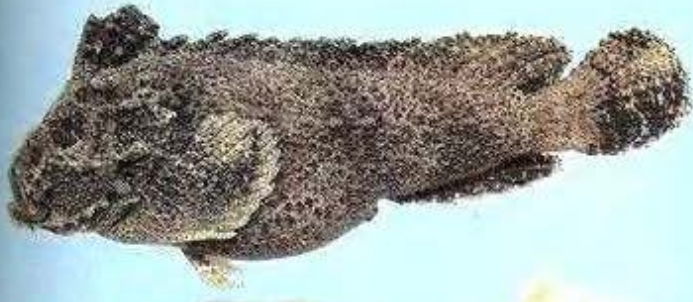
*Amblyapistus taenionotus* 267  
7 ~ ~ ~ ~ ~ 26°C sg: 1.022 12 cm 150L



*Caracanthus maculatus* 264  
6-7 ~ ~ ~ ~ ~ 26°C sg: 1.022 5.5 cm 600L



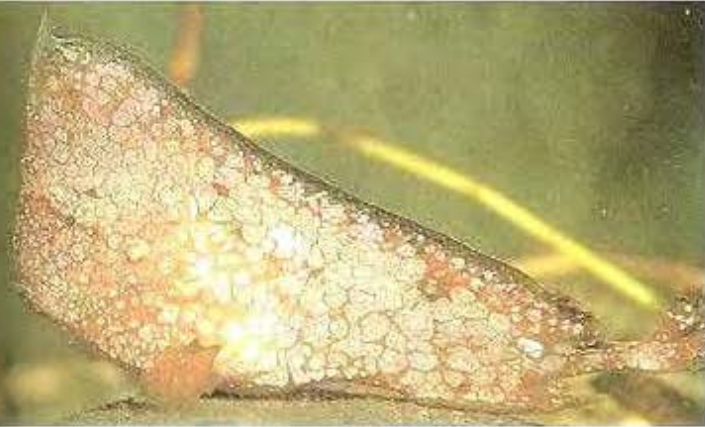
*Caracanthus madagascariensis* 264  
9 ~ ~ ~ ~ ~ 26°C sg: 1.022 5 cm 50L



*Paraploactis obbesi?* 265  
7 ~ ♀ ♂ ♀ ♀ ♀ 26°C sg: 1.022 5 cm 50L



*Pataecus fronto* 266  
12 ~ ♀ ♂ ♀ ♀ ♀ 24°C sg: 1.023 12 cm 150L



*Neopataecus waterhausi* 266  
12 ~ ♀ ♂ ♀ ♀ ♀ 26°C sg: 1.022 6.0 cm 60L



*Neopataecus waterhausi* 266  
12 ~ ♀ ♂ ♀ ♀ ♀ 24°C sg: 1.023 6.0 cm 60L



*Hypodytes rubripinnis* 262  
7 ~ ♀ ♂ ♀ ♀ ♀ 26°C sg: 1.022 11 cm 100L



*Hypodytes* sp. 262  
7, 9 ~ ♀ ♂ ♀ ♀ ♀ 26°C sg: 1.022 5 cm 50L



*Paracentropogon vespa* 262  
7-8 ~ ♀ ♂ ♀ ♀ ♀ 26°C sg: 1.022 9 cm 100L



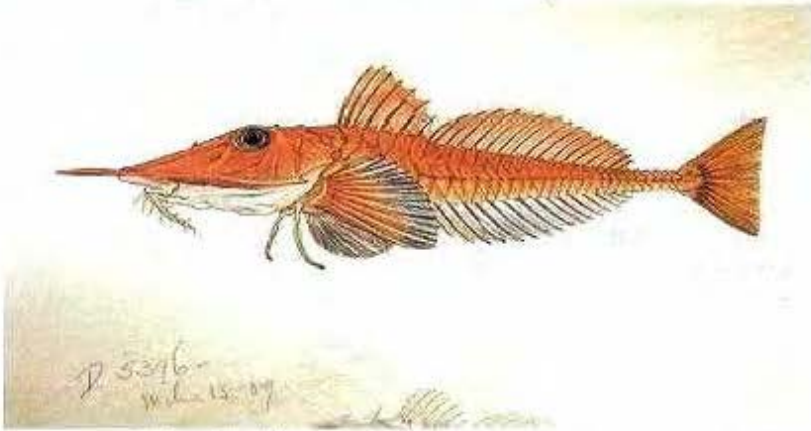
*Hypodytes leucogaster* 262  
7-9 ~ ♀ ♂ ♀ ♀ ♀ 26°C sg: 1.022 5 cm 50L



*Bellator gymnostethus* 268  
3 ♀ ~ ~ ~ ~ ~ 26°C sg: 1.022 9 cm 100L



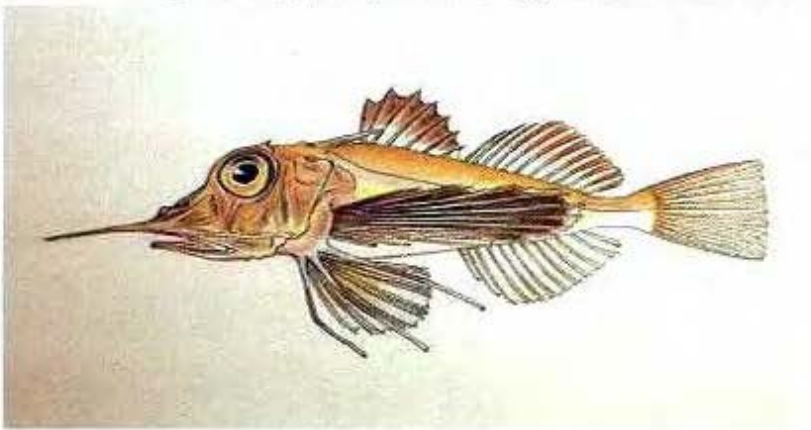
*Chelidonichthys spinosus* 268  
7 ♀ ~ ~ ~ ~ ~ 26°C sg: 1.022 40 cm 400L



? *Peristedion* sp. 268  
7 ♀ ~ ~ ~ ~ ~ 26°C sg: 1.022 15 cm 200L



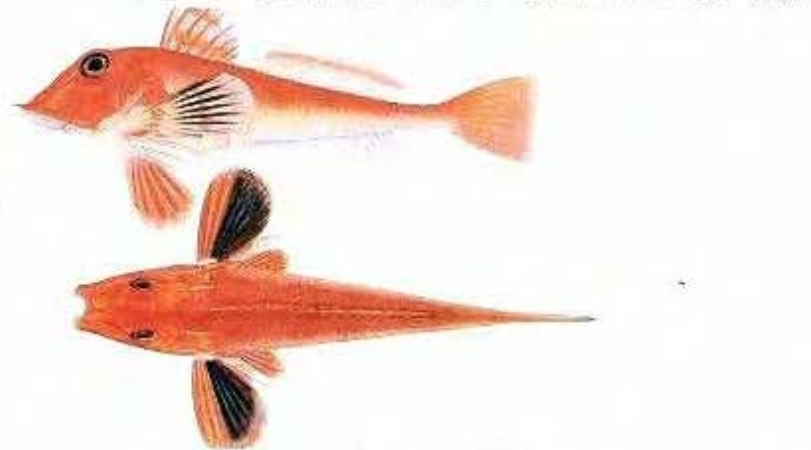
*Satyrichthys laticephalus* 268  
5 ♀ ~ ~ ~ ~ ~ 24°C sg: 1.023 30 cm 300L



*Dixipichthys hoplites* 268  
7 ♀ ~ ~ ~ ~ ~ 26°C sg: 1.022 20 cm 200L



*Pterygotrigla multiocellatus* 268  
5, 7 ♀ ~ ~ ~ ~ ~ 26°C sg: 1.022 35 cm 300L



*Lepidotrigla microptera* 268  
7 ♀ ~ ~ ~ ~ ~ 24°C sg: 1.022 30 cm 300L



*Paratrigla vanessa* 268  
7-9, 11-12 ♀ ~ ~ ~ ~ ~ 26°C sg: 1.022 50 cm 500L



*Prionotus ophryas* 268  
2 ♀ ~ ~ ~ ~ ~ ☼ ☐ 26°C sg: 1.022 23 cm 300L



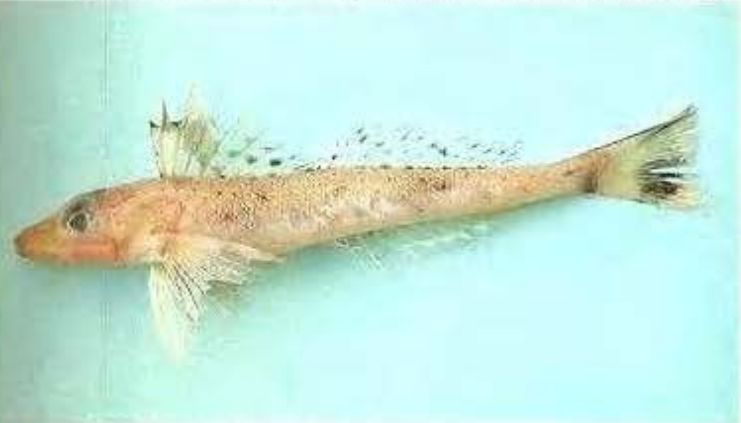
*Prionotus scitulus* 268  
1-2 ♀ ~ ~ ~ ~ ~ ☼ ☐ 24°C sg: 1.023 25 cm 300L



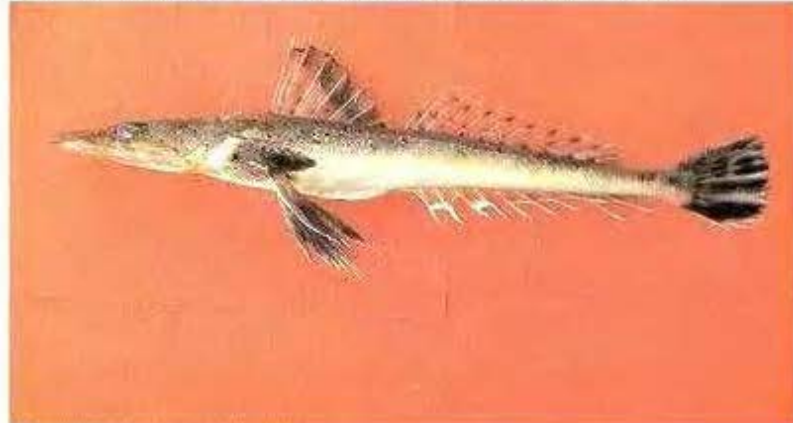
*Prionotus carolinus* 268  
1 ♀ ~ ~ ~ ~ ~ ☼ ☐ 24°C sg: 1.023 38 cm 400L



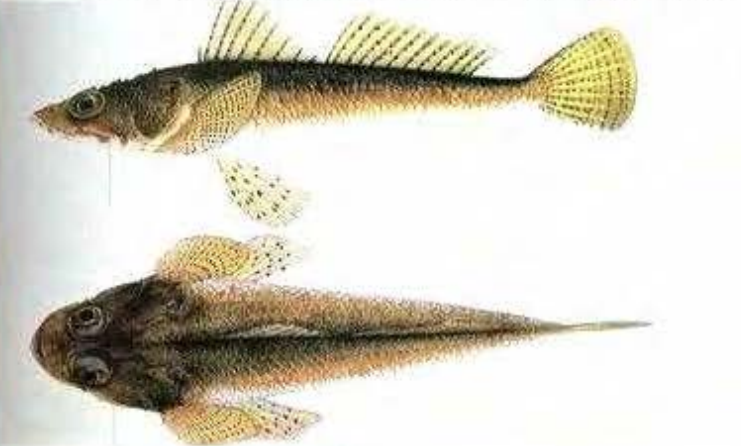
*Prionotus rubio* 268  
2 ♀ ~ ~ ~ ~ ~ ☼ ☐ 26°C sg: 1.022 23 cm 300L



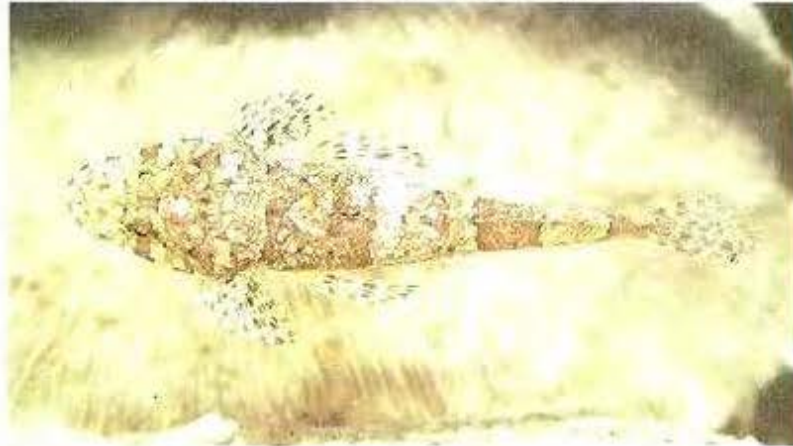
*Bembras japonicus* 269  
7 ♀ ~ ~ ~ ~ ~ ☼ ☐ 24°C sg: 1.022 30 cm 150L



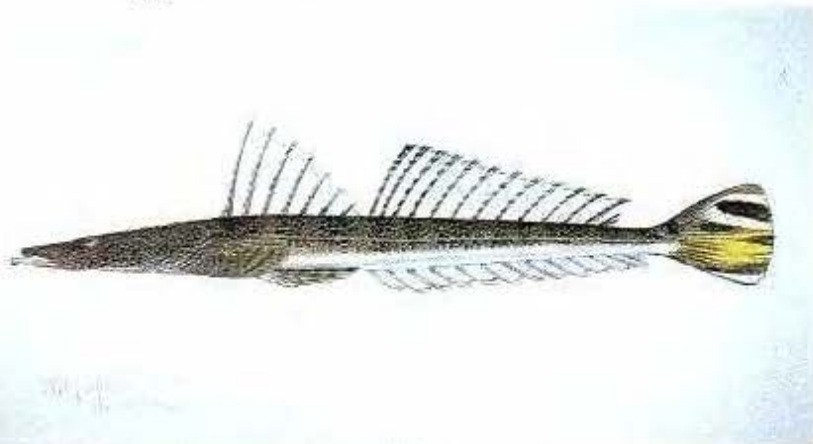
*Cociella crocodilla* 269  
7, 9-10 ♀ ~ ~ ~ ~ ~ ☼ ☐ 26°C sg: 1.022 50 cm 500L



*Onigocia spinosa* 269  
5 ♀ ~ ~ ~ ~ ~ ☼ ☐ 24°C sg: 1.022 10 cm 100L



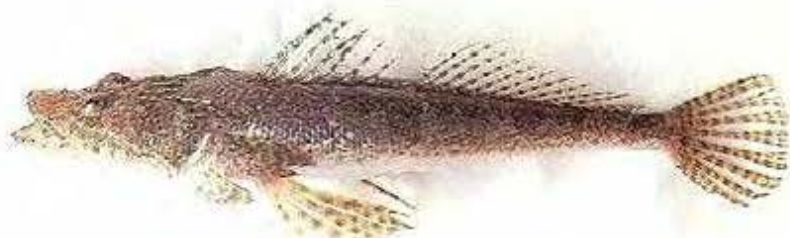
*Thysanophrys otaitensis* 269  
6-9 ♀ ~ ~ ~ ~ ~ ☼ ☐ 26°C sg: 1.022 25 cm 300L



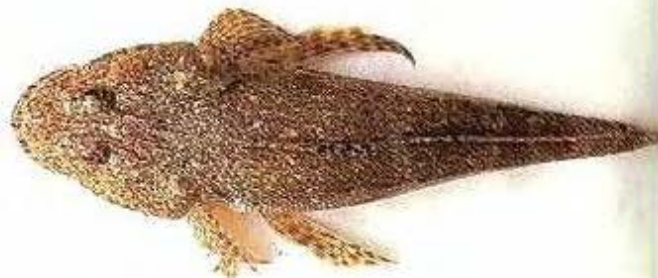
*Platycephalus indicus* 269  
7-10, 15 ~ ♀ ♂ ♀ ♀ 26°C sg: 1.022 100 cm 1000L



*Inegocia guttata* 269  
5, 7 ~ ♀ ♂ ♀ ♀ 25°C sg: 1.022 50 cm 500L



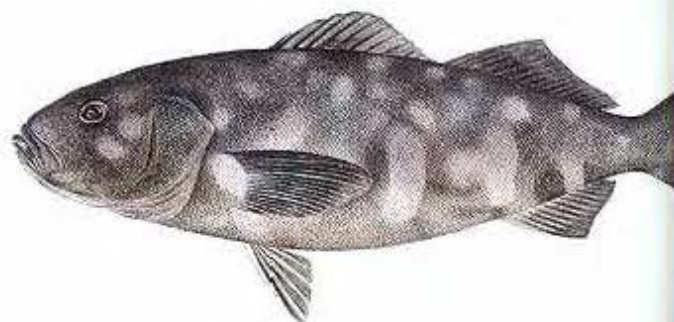
*Onigocia macrolepis* 269  
5, 7 ~ ♀ ♂ ♀ ♀ 25°C sg: 1.022 12 cm 150L



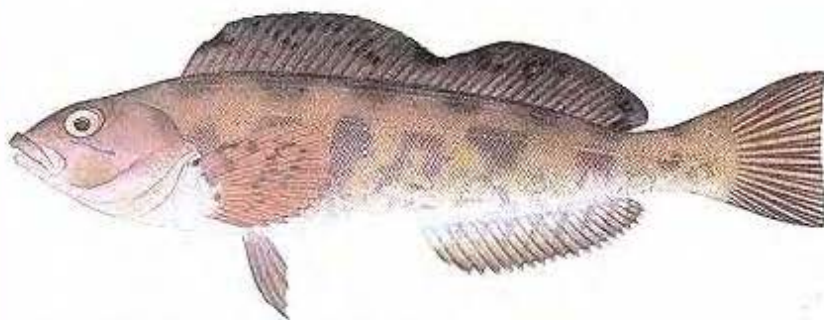
*Onigocia macrolepis* 269  
5, 7 ~ ♀ ♂ ♀ ♀ 25°C sg: 1.022 12 cm 150L



*Anoplopoma fimbria* 271  
3-5 ~ ♀ ♂ ♀ ♀ 23°C sg: 1.024 76 cm 800L



*Erilepis zonifer* 271  
4, 5 ~ ♀ ♂ ♀ ♀ 25°C sg: 1.022 183 cm 2000L



*Hexagrammos otaki* 272  
5 ~ ♀ ♂ ♀ ♀ 24°C sg: 1.023 40 cm 400L



*Hexagrammos* sp. 272  
4 ~ ♀ ♂ ♀ ♀ 24°C sg: 1.023 40 cm 400L





*Hexagrammos decagrammus* 272  
4 ~ ♀ ♂ ♀ ♂ 23°C sg: 1.023 50 cm 500L



*Hexagrammos decagrammus* 272  
4 ~ ♀ ♂ ♀ ♂ 23°C sg: 1.023 50 cm 500L



*Oxylebias pictus* 272 ♀  
4 ~ ♀ ♂ ♀ ♂ 24°C sg: 1.023 15 cm 200L



*Oxylebias pictus* 272  
4 ~ ♀ ♂ ♀ ♂ 24°C sg: 1.023 15 cm 200L



*Ophiodon elongatus* 272  
4 ~ ♀ ♂ ♀ ♂ 23°C sg: 1.024 152 cm 1500L



*Pleurogrammus azonus* 272  
5 ~ ♀ ♂ ♀ ♂ 24°C sg: 1.023 70 cm 800L

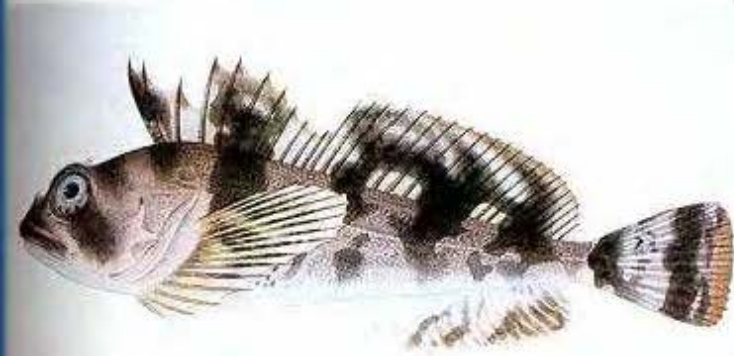


*Zaniolepis frenata* 273  
4 ~ ♀ ♂ ♀ ♂ 24°C sg: 1.023 10 cm 100L

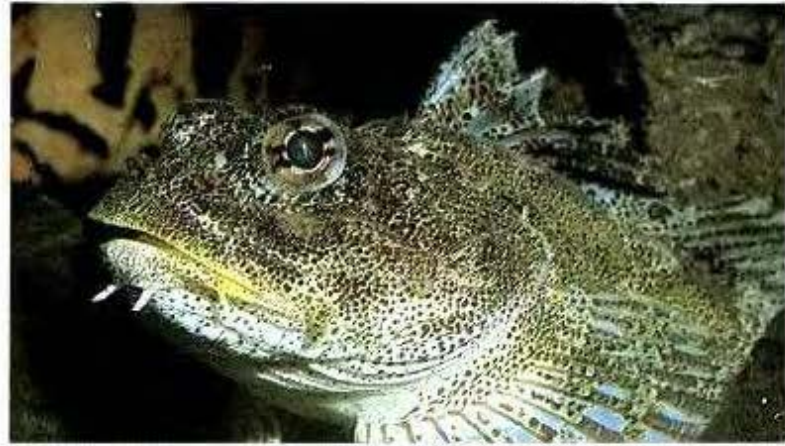


*Zaniolepis latipinnis* 273  
4 ~ ♀ ♂ ♀ ♂ 24°C sg: 1.023 30 cm 300L



*Hemilepidotus gilberti* 276

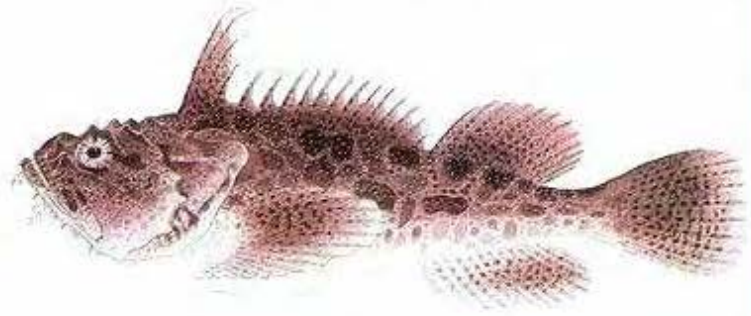
5 ♀ ~ ~ ~ ~ ~ 24°C sg: 1.023 36 cm 400L

*Hemilepidotus hemilepidotus* 276

4 ♀ ~ ~ ~ ~ ~ 22°C sg: 1.024 50 cm 500L

*Hemitripteris americanus* 276

1 ♀ ~ ~ ~ ~ ~ 22°C sg: 1.024 40 cm 400L

*Hemitripteris villosus* 276

5 ♀ ~ ~ ~ ~ ~ 22°C sg: 1.024 40 cm 400L

*Jordania zonope* 276

4 ♀ ~ ~ ~ ~ ~ 23°C sg: 1.024 15 cm 150L

*Leiocottus hirundo* 276

3 ♀ ~ ~ ~ ~ ~ 26°C sg: 1.022 25 cm 300L

*Myoxocephalus aeneus* 276

4 ♀ ~ ~ ~ ~ ~ 16°C sg: 1.024 60 cm 600L

*Myoxocephalus scorpius* 276

Circumpolar ♀ ~ ~ ~ ~ ~ 16°C sg: 1.024 60 cm 600L



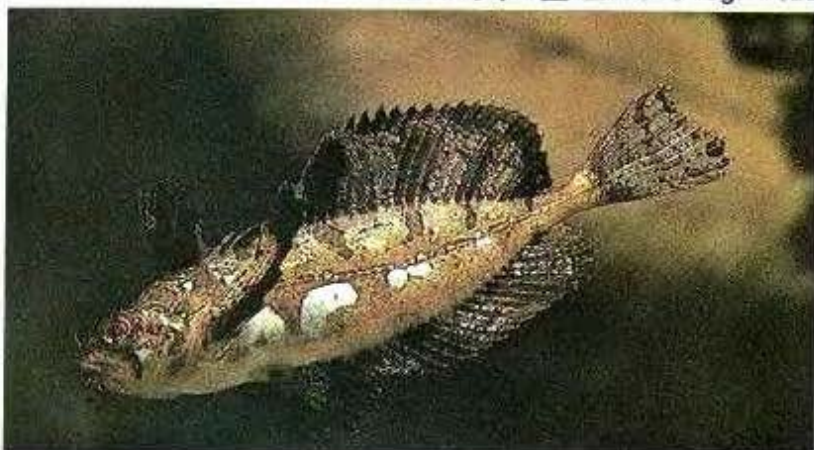
*Rhamphocottus richardsoni* 276  
4-5 ♀ ~ ♀ ♀ ♀ ♀ ♀ 23°C sg: 1.024 8 cm 80L



*Platycephalus* sp. 269  
~ ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022



*Argyrocottus zanderi* 276  
5 ~ ♀ ♀ ♀ ♀ ♀ 23°C sg: 1.024 9 cm 100L



*Blepsias* sp. 276  
~ ♀ ♀ ♀ ♀ ♀ 23°C sg: 1.024



*Porocottus allisi* 276  
5 ~ ♀ ♀ ♀ ♀ ♀ 23°C sg: 1.024 7 cm 70L



*Scorpaenichthys marmoratus* 276  
4 ♀ ~ ~ ~ ♀ ♂ ♀ 23°C sg: 1.024 30 cm 300L



*Scorpaenichthys marmoratus* 276  
4 ♀ ~ ~ ~ ♀ ♂ ♀ 23°C sg: 1.024 30 cm 300L



*Pseudoblennius percoides* 276  
5 ♀ ~ ~ ~ ♀ ♂ ♀ 23°C sg: 1.024 20 cm 200L



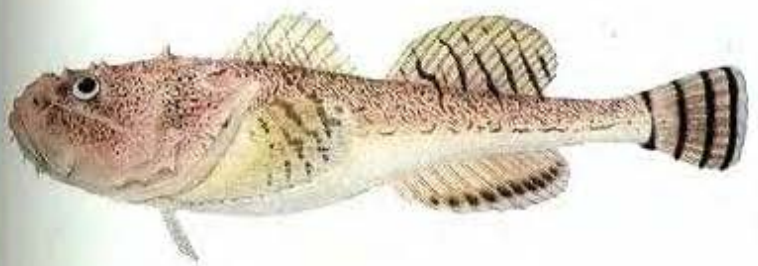
*Pseudoblennius cottoides* 276  
5 ♀ ~ ~ ~ ♀ ♂ ♀ 23°C sg: 1.024 7 cm 80L



*Nautichthys oculafasciatus* 276  
4 ♀ ~ ~ ~ ♀ ♂ ♀ 23°C sg: 1.024 20 cm 200L



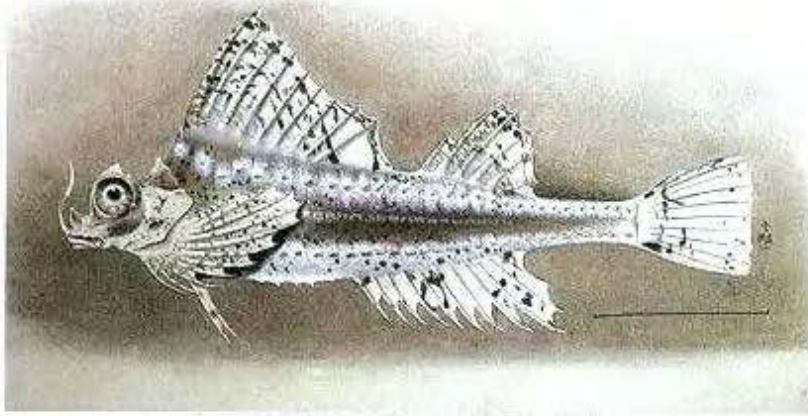
*Taurulus bubalis* 276  
14-15 ♀ ~ ~ ~ ♀ ♂ ♀ 20°C sg: 1.024 17 cm 200L



*Dasycottus japonicus* 279  
5 ♀ ~ ~ ~ ♀ ♂ ♀ 23°C sg: 1.024 10 cm 100L



*Psychrolutes paradoxus* 279  
4-5 ♀ ~ ~ ~ ♀ ♂ ♀ 24°C sg: 1.023 6.4 cm 80L



*Agonomalus proboscoidalis* 280  
5 ~ ♀ ♂ ♀ ♂ 24°C sg: 1.023 20 cm 200L



*Agonomalus proboscoidalis* 280  
5 ~ ♀ ♂ ♀ ♂ 24°C sg: 1.023 20 cm 200L



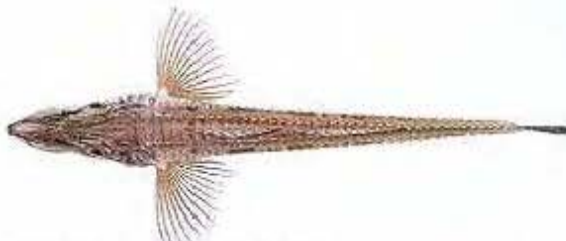
*Agonus acipenserinus* 280  
4 ~ ♀ ♂ ♀ ♂ 24°C sg: 1.023 30 cm 300L



*Occella verrucosa* 280  
4 ~ ♀ ♂ ♀ ♂ 24°C sg: 1.023 30 cm 300L



*Podotheucus sachi* 280  
5 ~ ♀ ♂ ♀ ♂ 24°C sg: 1.023 50 cm 500L



*Cyclopterus lumpus* 281  
14 ~ ♀ ♂ ♀ ♂ 24°C sg: 1.023 56 cm 600L

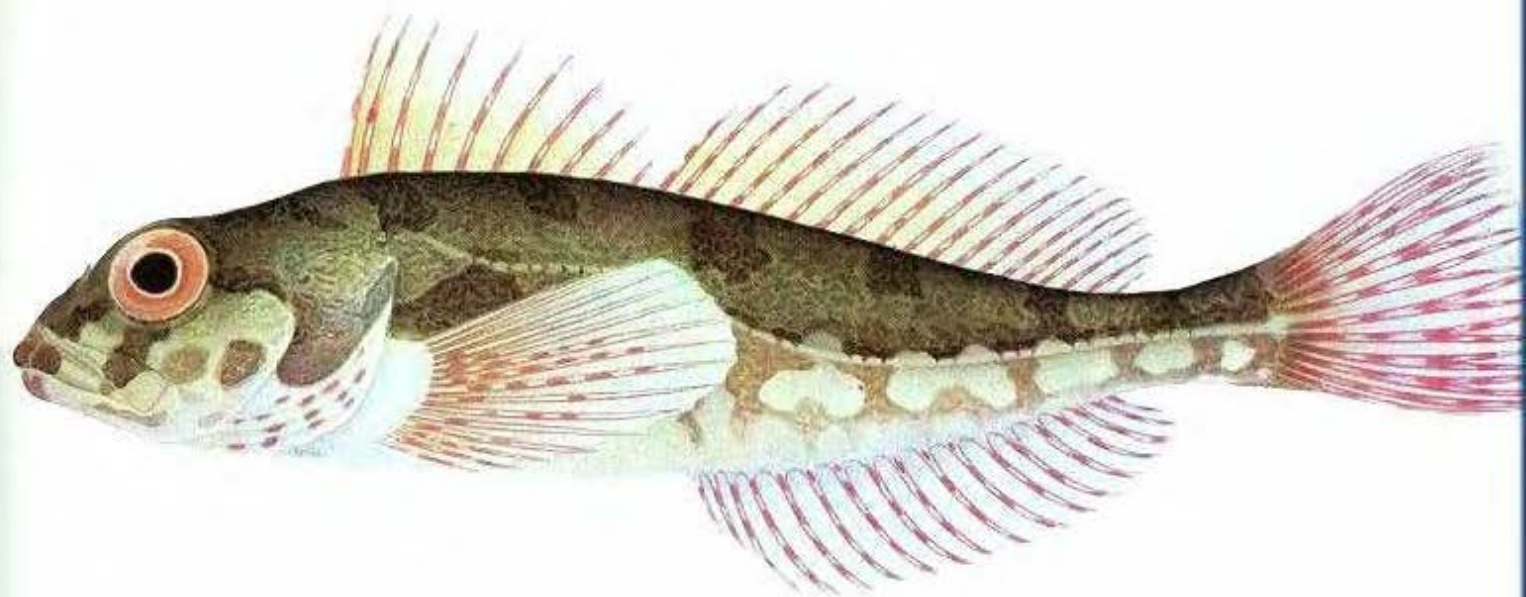


*Liparis pulchellus* 281  
4-5 ~ ♀ ♂ ♀ ♂ 24°C sg: 1.023 30 cm 300L

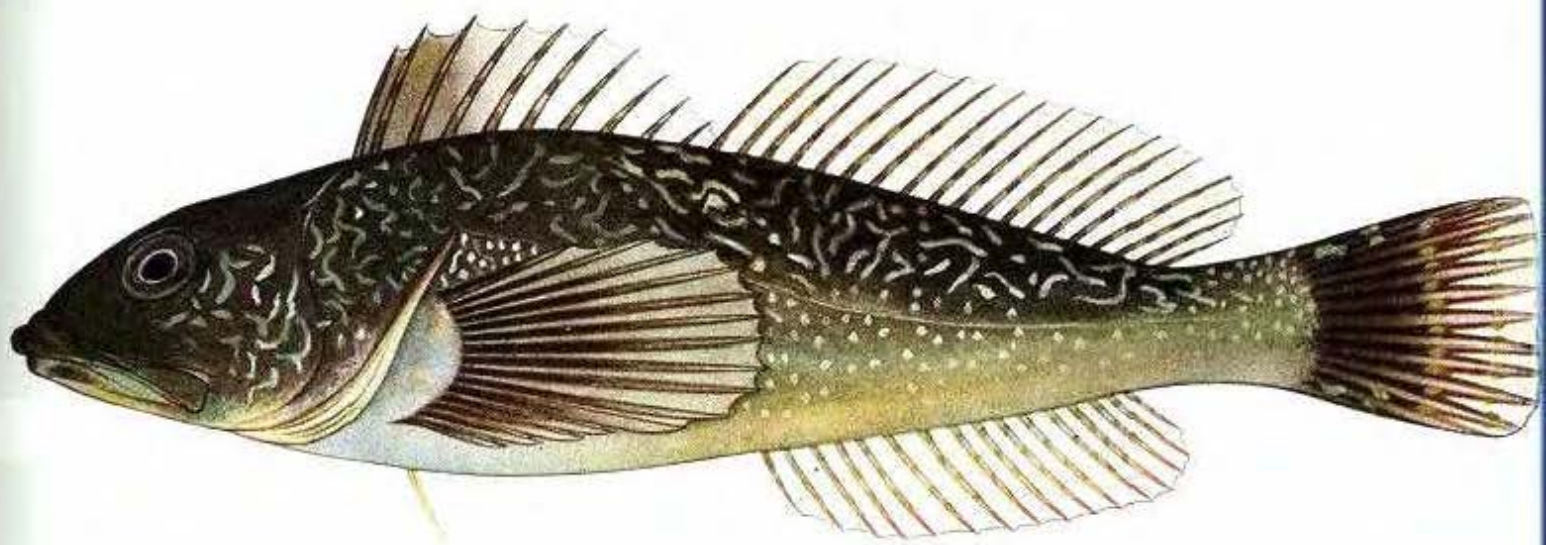


*Liparis ochotenis* 281  
5 ~ ♀ ♂ ♀ ♂ 24°C sg: 1.023 40 cm 400L

#114A



*Pseudoblennius cottoides* 276  
 5 ♀ ~ ♀ ♀ ♀ ♀ ♀ 23°C sg: 1.024 7 cm 80L



*Pseudoblennius percoides* 276  
 5 ♀ ~ ♀ ♀ ♀ ♀ ♀ 23°C sg: 1.024 20 cm 200L

170



*Centropomus undecimalis* 282  
1-2 ♀ ~ ♀ ○ ✕ ☒ ☐ 26°C sg: 1.022 110 cm 1200L

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*Centropomus nigrescens* 282  
3 ~ ♀ ○ ✕ ☒ ☐ 26°C sg: 1.022 100 cm 1000L



*Psammoperca walgiensis* 282  
7, 9 ♀ ~ ♀ ○ ✕ ☒ ☐ 26°C sg: 1.022 35 cm 400L



*Lates calcarifer* 282  
7-9 ~ ♀ ○ ✕ ☒ ☐ 26°C sg: 1.022 150 cm 2000L



*Ambassis macracanthus* 282  
9 ♀ ~ ♀ ○ ✕ ☒ ☐ 26°C sg: 1.022 15 cm 200L



*Chanda ranga* 282  
9 ~ ♀ ○ ♥ ☒ ☐ 26°C sg: 1.022 8 cm 80L



*Ambassis interruptus* 282  
7, 9 ♀ ~ ♀ ○ ♥ ☒ ☐ 26°C sg: 1.022 8 cm 80L



*Dicentrarchus labrax* 283  
14-15 ~ ♀ ○ ✕ ☒ ☐ 21°C sg: 1.024 100 cm 1000L







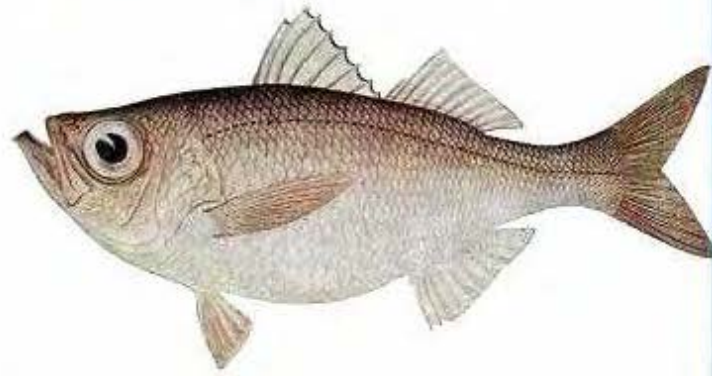
*Stereolepis gigas* 283  
4-5 ~ ♀ ♂ ♀ ♂ ♀ ♂ 25°C sg: 1.022 220 cm 2500L

*Coreoperca kawamebari* 283  
5 ~ ♀ ♀ ♀ ♀ ♀ ♀ ♀ ♀ ♀ ♀ 21°C sg: 1.016 11 cm 150L

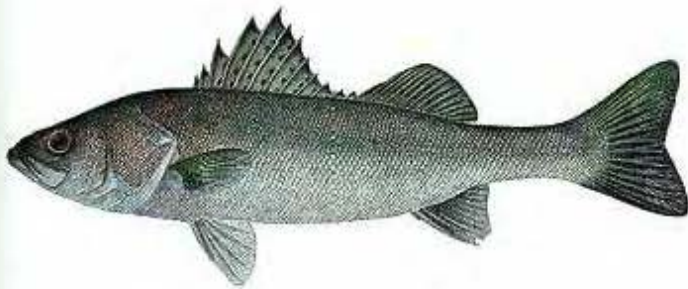




*Doederleinia berycoides* 283  
5 ~ ~ ~ ~ ~ 24°C sg: 1.023 40 cm 400L



*Malakichthys wakiyai* 283  
5 ~ ~ ~ ~ ~ 26°C sg: 1.022 48 cm 500L



*Lateolabrax japonicus* 283  
5 ~ ~ ~ ~ ~ 24°C sg: 1.023 150 cm 1500L



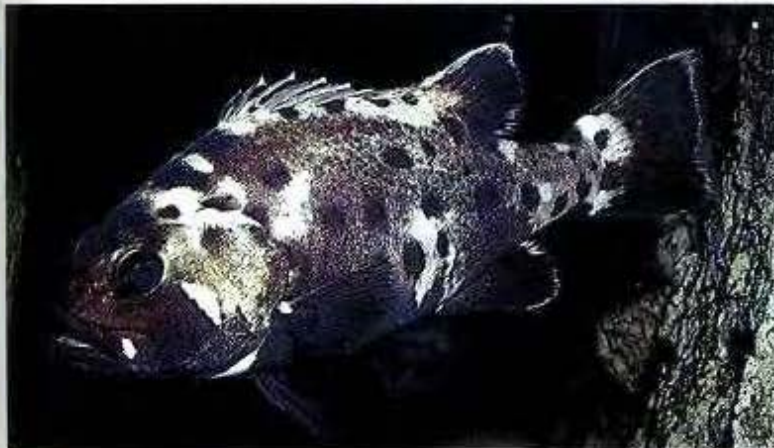
*Morone saxatilis* 283  
1, 4 ~ ~ ~ ~ ~ 24°C sg: 1.023 183 cm 2000L



*Nippon spinosus* 283  
7 ~ ~ ~ ~ ~ 26°C sg: 1.022 100 cm 1000L



*Polyprion oxygeneiosus* 283  
11 ~ ~ ~ ~ ~ 22°C sg: 1.024 220 cm 2500L



*Stereolepis gigas* 283  
4-5 ~ ~ ~ ~ ~ 25°C sg: 1.022 220 cm 2500L



*Stereolepis ischinagi* 283  
5 ~ ~ ~ ~ ~ 24°C sg: 1.023 200 cm 2000L















*Mirolabrichthys smithvanizi* 284  
7, 9 ~ ♀ ♂ ♡ 📏 📏 26°C sg: 1.022 6 cm 60L



*Mirolabrichthys dispar* 284  
6-7 ~ ♀ ♂ ♡ 📏 📏 26°C sg: 1.022 10 cm 100L



*Pseudanthias squamipinnis* 284  
6-10 ~ ♀ ♂ ♡ 📏 📏 26°C sg: 1.022 10.5 cm 100L



*Pseudanthias squamipinnis* 284  
6-10 ~ ♀ ♂ ♡ 📏 📏 26°C sg: 1.022 10.5 cm 100L



*Acanthistius pardalotus* 284  
12 ~ ♀ ♂ ♡ 📏 📏 26°C sg: 1.022 20 cm 200L



*Aethaloperca rogae* 284  
7, 9-10 ~ ♀ ♂ ♡ 📏 📏 26°C sg: 1.022 60 cm 600L



*Anyperodon leucogrammicus* 284  
7, 9-10 ~ ♀ ♂ ♡ 📏 📏 26°C sg: 1.022 50 cm 500L



*Anyperodon leucogrammicus* 284  
7, 9-10 ~ ♀ ♂ ♡ 📏 📏 26°C sg: 1.022 50 cm 500L

180

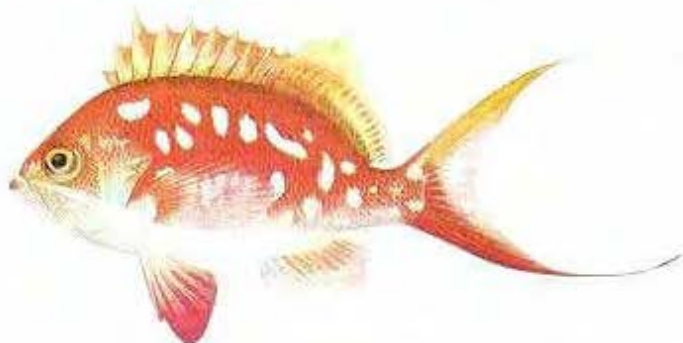
*Sacura parva* 284

7, 12 ♀ ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 7 cm 80L

#123

*Serranocirrhites latus* 284

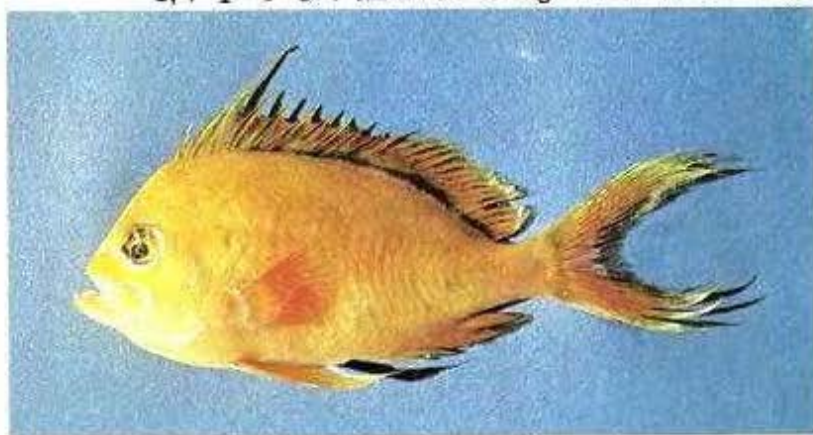
7 ♀ ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 8 cm 80L

*Sacura margaritacea* 284

5, 7 ♀ ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 13 cm 150L

*Sacura margaritacea* 284

5, 7 ♀ ~ ♀ ♀ ♀ ♀ ♀ 24°C sg: 1.023 13 cm 150L

*Odontanthias fuscipinnis* 284

6 ♀ ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 19 cm 200L

*Odontanthias elizabethae* 284

6 ♀ ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 17 cm 150L

*Holanthias martinicensis* 284

2 ♀ ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 20 cm 200L

*Holanthias borbonius* 284

7, 9, 12 ♀ ~ ♀ ♀ ♀ ♀ ♀ 23°C sg: 1.024 10 cm 100L





*Gracila albomarginata* 284  
7, 9 ♀ ~ ~ ~ ~ ~ 26°C sg: 1.022 50 cm 500L



*Cephalopholis argus* 284  
6-10 ♀ ~ ~ ~ ~ ~ 26°C sg: 1.022 50 cm 500L



*Cephalopholis pachycentron* 284  
7, 9 ♀ ~ ~ ~ ~ ~ 26°C sg: 1.022 30 cm 300L



*Cephalopholis aurantia* 284  
9 ♀ ~ ~ ~ ~ ~ 26°C sg: 1.022 60 cm 600L



*Cephalopholis polleni* 284  
7, 9 ♀ ~ ~ ~ ~ ~ 26°C sg: 1.022 35 cm 400L



*Cephalopholis boenack* 284  
6-9 ♀ ~ ~ ~ ~ ~ 26°C sg: 1.022 35 cm 400L



*Cephalopholis leopardus* 284  
7, 9 ♀ ~ ~ ~ ~ ~ 26°C sg: 1.022 20 cm 200L



*Cephalopholis nigripinnis* 284  
9 ♀ ~ ~ ~ ~ ~ 26°C sg: 1.022 25 cm 300L



*Cephalopholis miniata* 284  
7, 9-10 ♀ ~ ~ ~ ~ ~ 26°C sg: 1.022 45 cm 500L



*Cephalopholis miniata* 284  
7, 9-10 ♀ ~ ~ ~ ~ ~ 26°C sg: 1.022 45 cm 500L



*Cephalopholis sexmaculata* 284  
6-10 ♀ ~ ~ ~ ~ ~ 26°C sg: 1.022 50 cm 500L



*Cephalopholis sonnerati* 284  
6-7, 9 ♀ ~ ~ ~ ~ ~ 26°C sg: 1.022 57 cm 600L



*Cephalopholis sonnerati* 284  
6-7, 9 ♀ ~ ~ ~ ~ ~ 26°C sg: 1.022 57 cm 600L



*Cephalopholis urodelus* 284  
7, 9 ♀ ~ ~ ~ ~ ~ 26°C sg: 1.022 25 cm 300L



*Cephalopholis urodelus* 284  
7, 9 ♀ ~ ~ ~ ~ ~ 26°C sg: 1.022 25 cm 300L



*Cephalopholis panamensis* 284  
 3 ♀ ~ ~ ~ ~ ~ 26°C sg: 1.022 30 cm 300L



*Cephalopholis cruentatus* 284  
 2 ♀ ~ ~ ~ ~ ~ 26°C sg: 1.022 30 cm 300L



*Cephalopholis fulva* 284  
 2 ♀ ~ ~ ~ ~ ~ 26°C sg: 1.022 30 cm 300L



*Cephalopholis fulva* 284  
 2 ♀ ~ ~ ~ ~ ~ 26°C sg: 1.022 30 cm 300L



*Cephalopholis analis* 284  
 6 ♀ ~ ~ ~ ~ ~ 26°C sg: 1.022 60 cm 600L



*Cephalopholis hemistiktos* 284  
 9-10 ♀ ~ ~ ~ ~ ~ 26°C sg: 1.022 25 cm 300L



*Cephalopholis taeniops* 284  
 13 ♀ ~ ~ ~ ~ ~ 26°C sg: 1.022 30 cm 300L



*Epinephelus fasciatus* 284  
 6-10 ♀ ~ ~ ~ ~ ~ 26°C sg: 1.022 35 cm 350L



*Cephalopholis sexmaculata* 284  
6-10 ♀ ♀ ♂ ♀ ♀ ♀ 26°C sg: 1.022 47 cm 500L



*Epinephelus damelii* 284  
8, 12 ♀ ~ ~ ~ ♀ ♂ ✖ ☑ 25°C sg: 1.022 180 cm 2000L



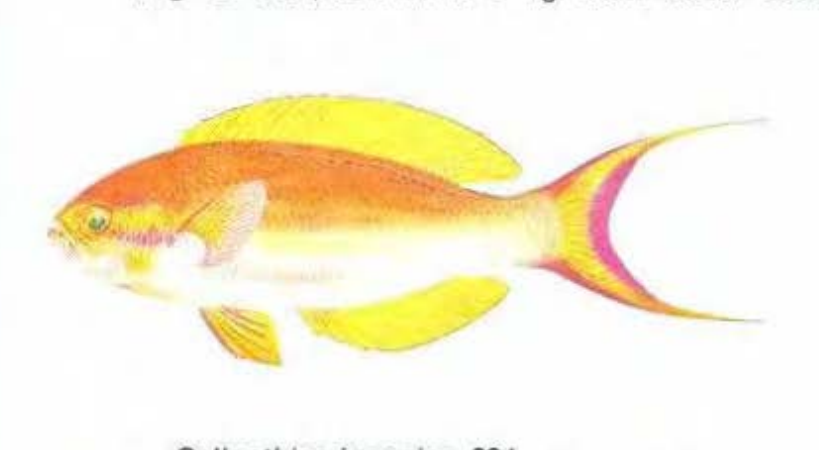
*Epinephelus corallicola* 284  
7, 9 ♀ ~ ~ ~ ♀ ♂ ✖ ☑ 26°C sg: 1.022 45 cm 500L



*Epinephelus awoara* 284  
7 ♀ ~ ~ ~ ♀ ♂ ✖ ☑ 24°C sg: 1.023 45 cm 500L



*Epinephelus merra* 284  
6-9 ♀ ~ ~ ~ ♀ ♂ ✖ ☑ 26°C sg: 1.022 45 cm 500L



*Callanthias japonica* 284  
7 ♀ ~ ~ ~ ♀ ♂ ♥ ☑ 25°C sg: 1.022 20 cm 200L



*Epinephelus merra* 284  
6-9 ♀ ~ ~ ~ ♀ ♂ ✖ ☑ 26°C sg: 1.022 45 cm 500L



*Callanthias allporti* 284  
11 ♀ ~ ~ ~ ♀ ♂ ✖ ☑ 21°C sg: 1.024 20 cm 200L



*Callanthias allporti* 284  
11 ♀ ~ ~ ~ ♀ ♂ ✖ ☑ 21°C sg: 1.024 20 cm 200L



*Epinephelides armatus* 284

12 ♀ ~ ~ ~ ~ ~ 24°C sg: 1.022 30 cm 400L

*Epinephelus caeruleopunctatus* 284

7, 9 ♀ ~ ~ ~ ~ ~ 26°C sg: 1.022 75 cm 800L

*Epinephelus fario* 284

7, 9 ♀ ~ ~ ~ ~ ~ 26°C sg: 1.022 38 cm 400L

*Epinephelus fasciatus* 284

7, 9 ♀ ~ ~ ~ ~ ~ 26°C sg: 1.022 35 cm 400L

*Epinephelus fuscoguttatus* 284

6, 9 ♀ ~ ~ ~ ~ ~ 26°C sg: 1.022 90 cm 1000L

*Epinephelus rivulatus* 284

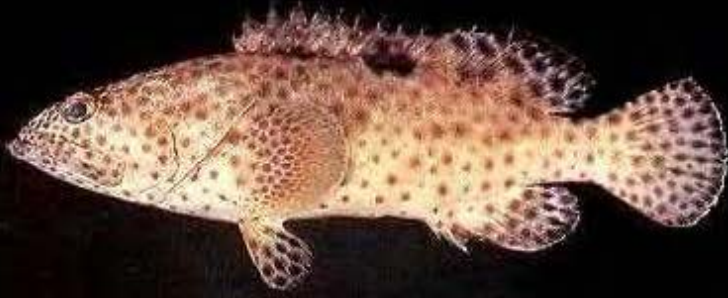
5, 7, 9 ♀ ~ ~ ~ ~ ~ 26°C sg: 1.022 35 cm 400L

*Epinephelus hexagonatus* 284

5, 7, 9 ♀ ~ ~ ~ ~ ~ 26°C sg: 1.022 25 cm 300L

*Epinephelus rivulatus* 284

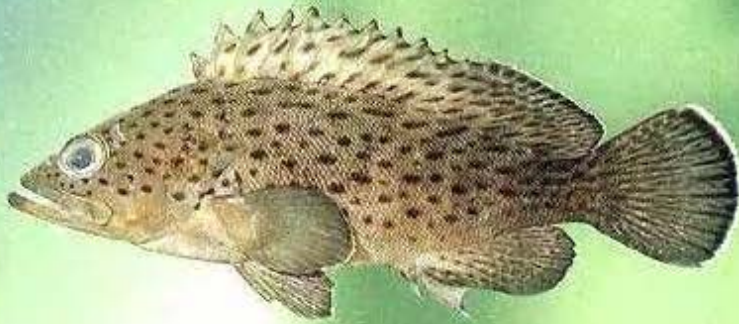
5, 7, 9 ♀ ~ ~ ~ ~ ~ 26°C sg: 1.022 35 cm 400L



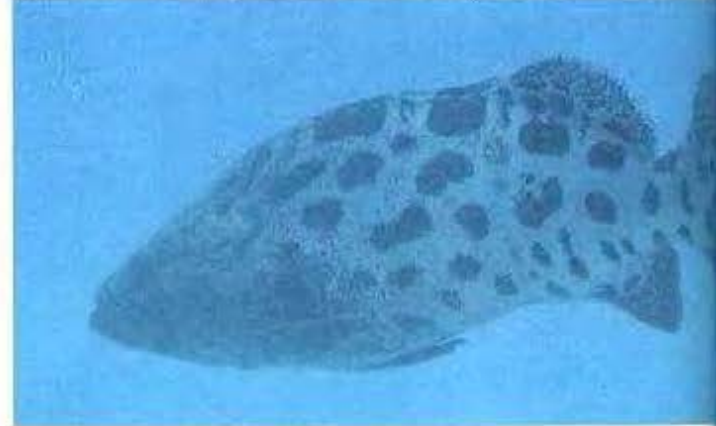
*Epinephelus tauvina* 284  
7, 9-10 ♀ ~ ~ ~ ♂ \* 📏 26°C sg: 1.022 70 cm 800L



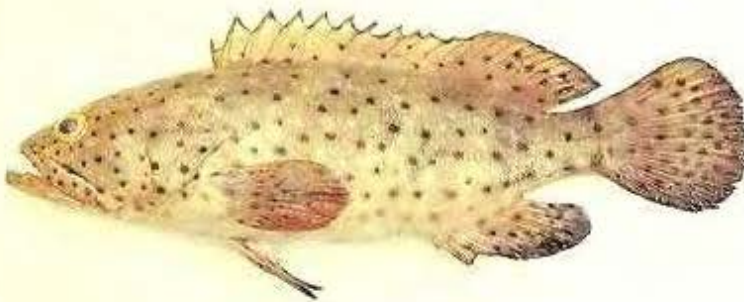
*Epinephelus tauvina* 284  
7, 9-10 ♀ ~ ~ ~ ♂ \* 📏 26°C sg: 1.022 70 cm 800L



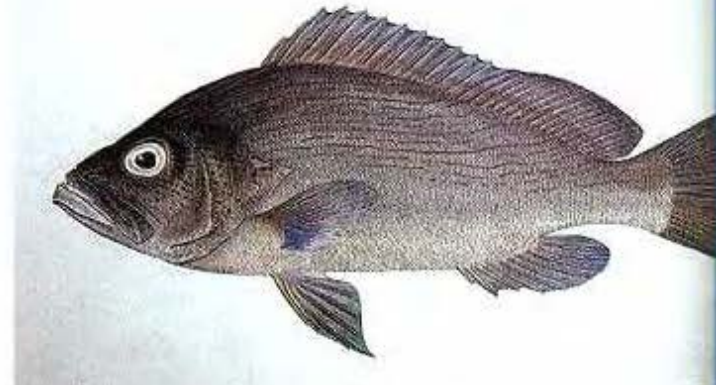
*Epinephelus* sp. 284  
7 ♀ ~ ~ ~ ♂ \* 📏 26°C sg: 1.022 40 cm 400L



*Epinephelus tukula* 284  
7, 9 ♀ ~ ~ ~ ♂ \* 📏 26°C sg: 1.022 200 cm 2000L



*Epinephelus malabaricus* 284  
7, 9-10 ♀ ~ ~ ~ ♂ \* 📏 26°C sg: 1.022 150 cm 1500L



*Epinephelus undulosus* 284  
7, 9 ♀ ~ ~ ~ ♂ \* 📏 26°C sg: 1.022 75 cm 800L



*Epinephelus multinotatus* 284  
9 ♀ ~ ~ ~ ♂ \* 📏 26°C sg: 1.022 100 cm 1000L



*Epinephelus socialis* 284  
6 ♀ ~ ~ ~ ♂ \* 📏 26°C sg: 1.022 22.5 cm 300L



*Epinephelus merra* 284  
7-9 ♀ ~ ~ ~ ♂ \* ☐ 26°C sg: 1.022 45 cm 500L



*Epinephelus truncatus* 284  
5, 7, 9 ♀ ~ ~ ~ ♂ \* ☐ 26°C sg: 1.022 40 cm 400L



*Epinephelus maculatus* 284  
7-8 ♀ ~ ~ ~ ♂ \* ☐ 26°C sg: 1.022 60 cm 600L



*Epinephelus diacanthus* 284  
9 ♀ ~ ~ ~ ♂ \* ☐ 26°C sg: 1.022 55 cm 600L



*Epinephelus septemfasciatus* 284  
5, 7, 9 ♀ ~ ~ ~ ♂ \* ☐ 26°C sg: 1.022 100 cm 1000L



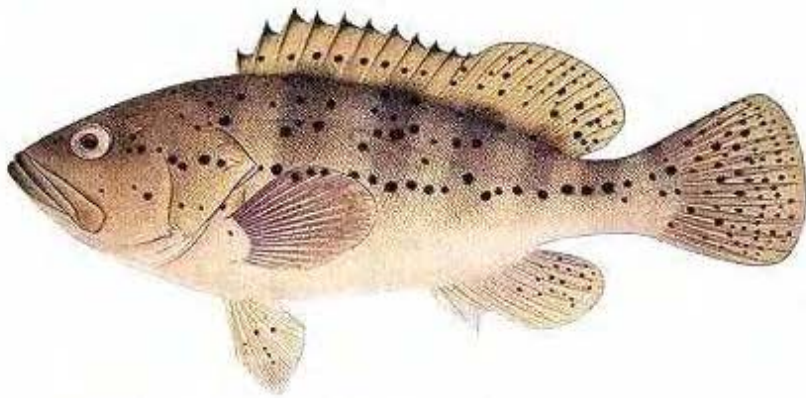
*Epinephelus microdon* 284  
5, 7-10 ♀ ~ ~ ~ ♂ \* ☐ 26°C sg: 1.022 90 cm 1000L



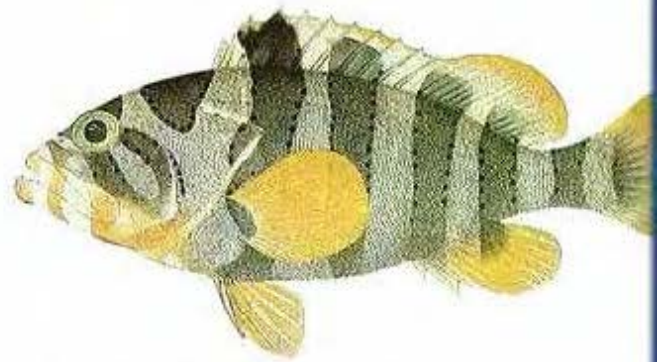
*Epinephelus moara* 284  
5, 7 ♀ ~ ~ ~ ♂ \* ☐ 26°C sg: 1.022 100 cm 1000L



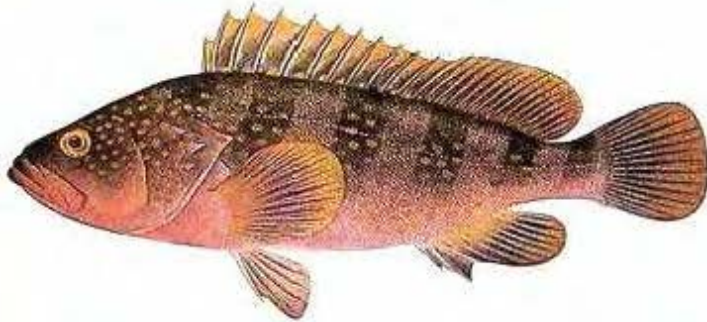
*Epinephelus megachir* 284  
8 ♀ ~ ~ ~ ♂ \* ☐ 26°C sg: 1.022 55 cm 600L



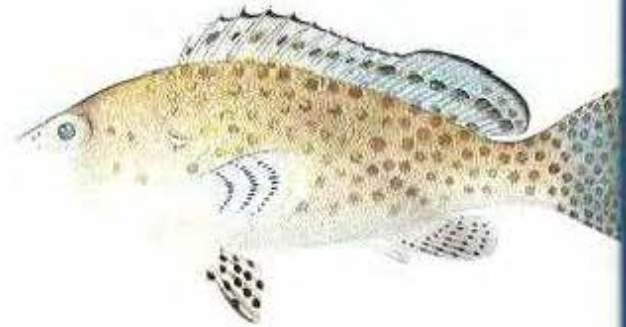
*Epinephelus epistictus* 284  
7 ♀ ~ ~ ~ ~ ~ 26°C sg: 1.022 30 cm 500L



*Epinephelus amblycephalus* 284  
5, 7, 9 ♀ ~ ~ ~ ~ ~ 26°C sg: 1.022 40 cm 500L



*Epinephelus akaara* 284  
5, 7, 9 ♀ ~ ~ ~ ~ ~ 26°C sg: 1.022 40 cm 500L



*Epinephelus areolatus* 284  
7, 9-10 ♀ ~ ~ ~ ~ ~ 26°C sg: 1.022 50 cm 500L



*Epinephelus flavocoeruleus* 284  
7, 9 ♀ ~ ~ ~ ~ ~ 26°C sg: 1.022 70 cm 800L



*Epinephelus latifasciatus* 284  
5, 7, 9 ♀ ~ ~ ~ ~ ~ 26°C sg: 1.022 40 cm 500L



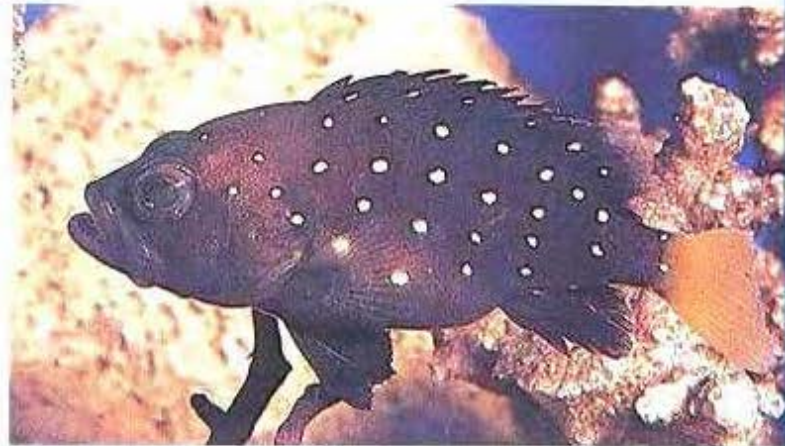
*Epinephelus cyanopodus* 284  
6-9 ♀ ~ ~ ~ ~ ~ 26°C sg: 1.022 80 cm 800L



*Epinephelus cometae* 284  
5, 7-9 ♀ ~ ~ ~ ~ ~ 26°C sg: 1.022 80 cm 800L



*Epinephelus labriformis* 284  
3 ♀ ~ ~ ~ ♂ \* ☐ 26°C sg: 1.022 51 cm 500L



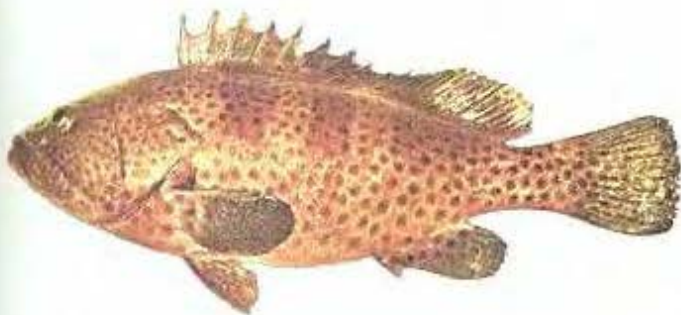
*Epinephelus niveatus* 284  
1-3 ♀ ~ ~ ~ ♂ \* ☐ 26°C sg: 1.022 90 cm 1000L



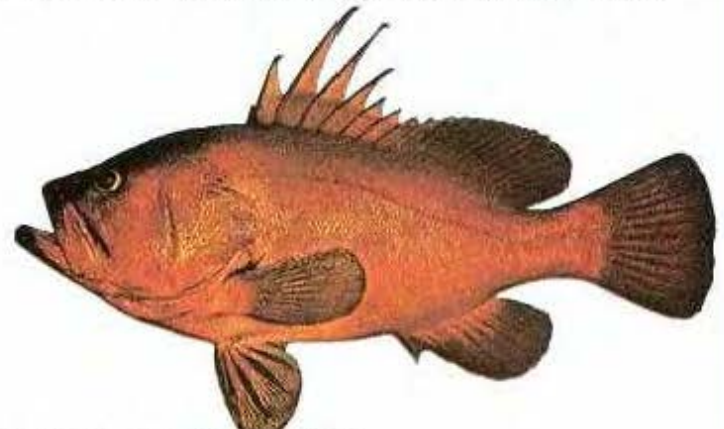
*Epinephelus dermatolepis* 284  
3 ♀ ~ ~ ~ ♂ \* ☐ 26°C sg: 1.022 110 cm 1200L



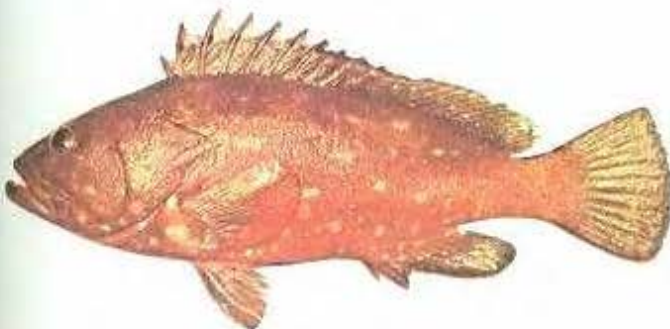
*Epinephelus dermatolepis* 284  
3 ♀ ~ ~ ~ ♂ \* ☐ 26°C sg: 1.022 110 cm 1200L



*Epinephelus analogus* 284  
3 ♀ ~ ~ ~ ♂ \* ☐ 26°C sg: 1.022 80 cm 800L



*Epinephelus acanthistius* 284  
3 ♀ ~ ~ ~ ♂ \* ☐ 26°C sg: 1.022 71 cm 800L



*Epinephelus labriformis* 284  
3 ♀ ~ ~ ~ ♂ \* ☐ 26°C sg: 1.022 51 cm 500L



*Epinephelus itajara* 284  
3 ♀ ~ ~ ~ ♂ \* ☐ 26°C sg: 1.022 240 cm 2500L





*Mycteroperca bonaci* 284  
2 ♀ ~ ~ ~ ~ ~ 24°C sg: 1.023 130 cm 1500L



*Mycteroperca prionura* 284  
3 ♀ ~ ~ ~ ~ ~ 26°C sg: 1.022 80 cm 1000L



*Mycteroperca interstitialis* 284 (juv.)  
1-2 ♀ ~ ~ ~ ~ ~ 24°C sg: 1.022 76 cm 800L



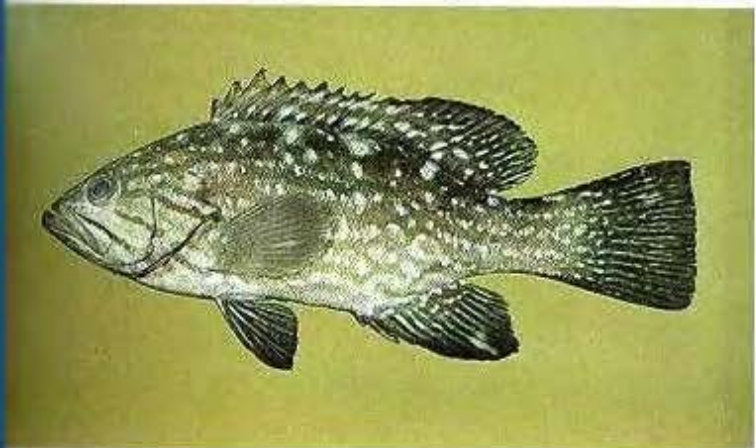
*Mycteroperca interstitialis* 284  
1-2 ♀ ~ ~ ~ ~ ~ 26°C sg: 1.022 68 cm 800L



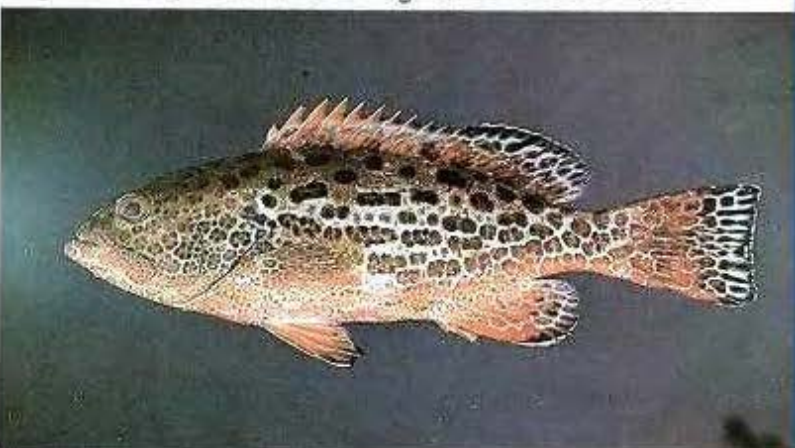
*Mycteroperca rosacea* (rare golden form) 284  
3 ♀ ~ ~ ~ ~ ~ 26°C sg: 1.022 100 cm 1000L



*Mycteroperca rosacea* 284  
3 ♀ ~ ~ ~ ~ ~ 26°C sg: 1.022 100 cm 1000L



*Mycteroperca rubra* 284  
2 ♀ ~ ~ ~ ~ ~ 26°C sg: 1.022 68 cm 800L



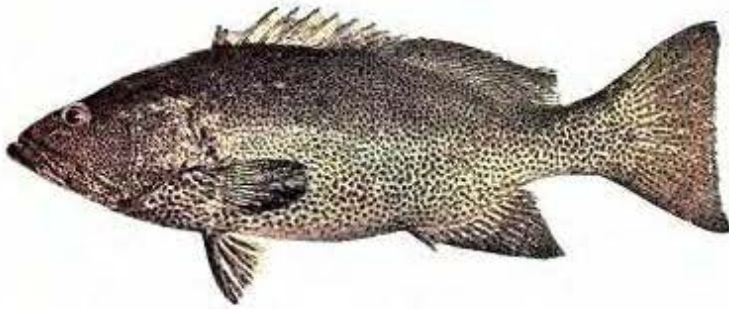
*Mycteroperca venenosa* 284  
1-2 ♀ ~ ~ ~ ~ ~ 26°C sg: 1.022 90 cm 1000L



*Mycteroperca tigris* 284  
1-2 ♀ ~ ~ ~ ~ ~ 26°C sg: 1.022 100 cm 1000L



*Mycteroperca tigris* (juv.) 284  
1-2 ♀ ~ ~ ~ ~ ~ 26°C sg: 1.022 100 cm 1000L



*Mycteroperca rosacea* 284  
3 ♀ ~ ~ ~ ~ ~ 26°C sg: 1.022 100 cm 1000L



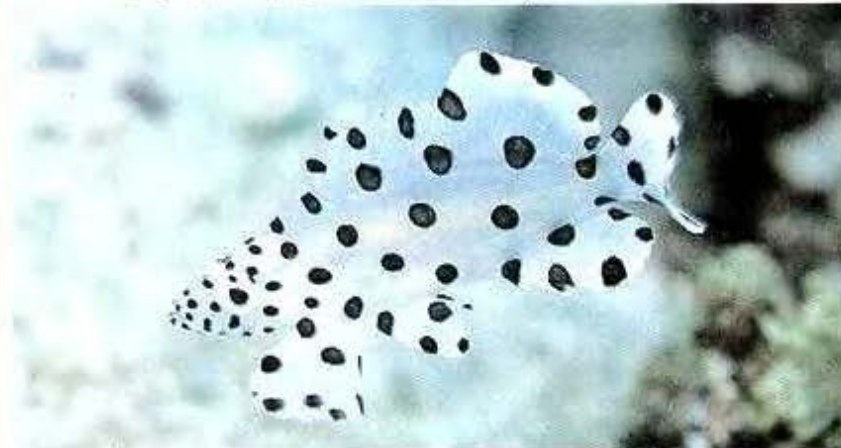
*Mycteroperca microlepis* 284  
1-2 ♀ ~ ~ ~ ~ ~ 24°C sg: 1.023 60 cm 600L



*Mycteroperca rosacea* (golden phase) 284  
3 ♀ ~ ~ ~ ~ ~ 26°C sg: 1.022 100 cm 1000L



*Epinephelus lanceolatus* 284  
7, 9 ♀ ~ ~ ~ ~ ~ 26°C sg: 1.022 270 cm 3000L



*Cromileptes altivelis* 284  
7-9 ♀ ~ ~ ~ ~ ~ 26°C sg: 1.022 65 cm 800L



*Cephalopholis pachycentron* 284  
7, 9 ♀ ~ ~ ~ ~ ~ 26°C sg: 1.022 25 cm 300L



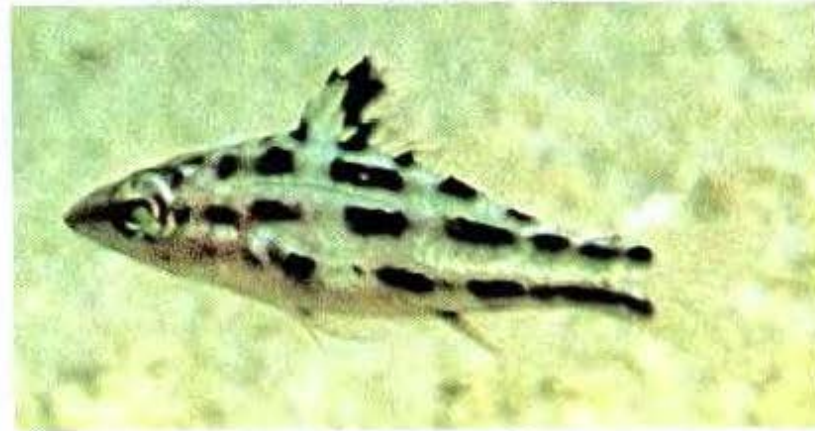


*Cromileptes altivelis* 284

7.9 ♀ ~ ~ ~ ~ ~ 26°C sg: 1.022 70 cm 700L



*Serranus phoebe* 284  
1-2 ♀ ~ ~ ~ ♀ 26°C sg: 1.022 15 cm 150L



*Serranus luciopercanus* 284  
2 ♀ ~ ~ ~ ♀ 26°C sg: 1.022 12 cm 150L



*Serranus hepatus* 284  
13-15 ♀ ~ ~ ~ ♀ 26°C sg: 1.022 13 cm 150L



*Serraniculus pumilio* 284  
1-2 ♀ ~ ~ ~ ♀ 26°C sg: 1.022 7.5 cm 80L



*Serranus tortugarum* 284  
2 ♀ ~ ~ ~ ♀ 26°C sg: 1.022 80 cm 800L



*Serranus cabrilla* 284  
10, 14-15 ♀ ~ ~ ~ ♀ 26°C sg: 1.022 25 cm 300L



*Serranus scriba* 284  
14-15 ♀ ~ ~ ~ ♀ 26°C sg: 1.022 25 cm 300L



*Serranus heterurus* 284  
13 ♀ ~ ~ ~ ♀ 26°C sg: 1.022 22 cm 200L











*Hypoplectrus indigo* 284  
2 ♀ ~ ~ ~ ~ ~ 26°C sg: 1.022 15 cm 200L



*Hypoplectrus gummigutta* 284  
2 ♀ ~ ~ ~ ~ ~ 26°C sg: 1.022 13 cm 150L



*Hypoplectrus nigricans* 284  
2 ♀ ~ ~ ~ ~ ~ 26°C sg: 1.022 15 cm 200L



*Hypoplectrus unicolor* 284  
2 ♀ ~ ~ ~ ~ ~ 26°C sg: 1.022 10 cm 100L



*Hypoplectrus chlorurus* 284  
2 ♀ ~ ~ ~ ~ ~ 26°C sg: 1.022 12.5 cm 150L



*Hypoplectrus guttavarius* 284  
2 ♀ ~ ~ ~ ~ ~ 26°C sg: 1.022 11.3 cm 100L



*Hypoplectrus gemma* 284  
2 ♀ ~ ~ ~ ~ ~ 26°C sg: 1.022 11 cm 100L



*Hypoplectrus puella* 284  
2 ♀ ~ ~ ~ ~ ~ 26°C sg: 1.022 11.5 cm 100L



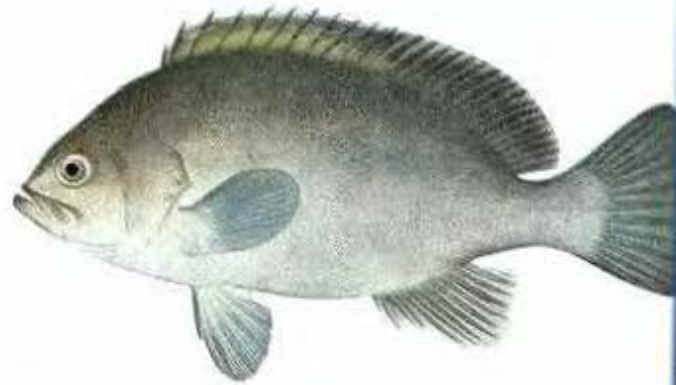
*Acanthistius serratus* 284  
8, 12 ~ ~ ~ ~ ~ 25°C sg: 1.023 45 cm 500L



*Acanthistius cinctus* 284  
9, 11-12 ~ ~ ~ ~ ~ 24°C sg: 1.023 50 cm 500L



*Trachypoma macracantha* 284  
11 ~ ~ ~ ~ ~ 22°C sg: 1.023 22 cm 200L



*Trisotropis dermopterus* 284  
5 ~ ~ ~ ~ ~ 26°C sg: 1.022 45 cm 500L



*Paralabrax clathratus* 284  
3 ~ ~ ~ ~ ~ 26°C sg: 1.022 45 cm 500L



*Paralabrax nebulifer* 284  
3 ~ ~ ~ ~ ~ 26°C sg: 1.022 50 cm 500L



*Paralabrax auroguttatus* 284  
3 ~ ~ ~ ~ ~ 26°C sg: 1.022 30 cm 300L



*Paralabrax maculatofasciatus* 284  
3 ~ ~ ~ ~ ~ 26°C sg: 1.022 56 cm 600L





*Alphestes afer* 284  
2 ♀ ~ ~ ~ ♂ ✖ ☑ 26°C sg: 1.022 27 cm 300L



*Alphestes multiguttatus* 284  
3 ♀ ~ ~ ~ ♂ ✖ ☑ 26°C sg: 1.022 20 cm 200L



*Variola albomarginata* 284  
7, 9 ♀ ~ ~ ~ ♂ ✖ ☑ 26°C sg: 1.022 65 cm 600L



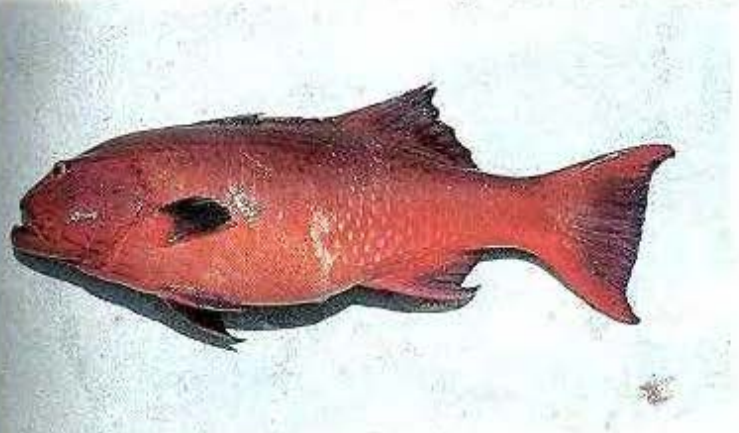
*Variola louti* 284  
7-10 ♀ ~ ~ ~ ♂ ✖ ☑ 26°C sg: 1.022 80 cm 800L



*Plectropomus maculatus* 284  
8, 12 ♀ ~ ~ ~ ♂ ✖ ☑ 24°C sg: 1.022 60 cm 600L



*Plectropomus leopardus* 284  
7-9 ♀ ~ ~ ~ ♂ ✖ ☑ 26°C sg: 1.022 65 cm 800L



*Plectropomus oligacanthus* 284  
8 ♀ ~ ~ ~ ♂ ✖ ☑ 26°C sg: 1.022 55 cm 600L



*Plectropomus areolatus* 284  
5-10 ♀ ~ ~ ~ ♂ ✖ ☑ 26°C sg: 1.022 53 cm 600L



*Variola louti* 284  
7-10 ♀ ~ ~ ~ ~ ~ 26°C sg: 1.022 80 cm 800L



*Plectropomus laevis* 284  
5, 7, 9 ♀ ~ ~ ~ ~ ~ 26°C sg: 1.022 100 cm 1000L



*Plectropomus leopardus* 284  
7-9 ♀ ~ ~ ~ ~ ~ 26°C sg: 1.022 66 cm 800L



*Aulacocephalus temmincki* 285  
5, 7, 9 ♀ ~ ~ ~ ~ ~ 26°C sg: 1.022 25 cm 250L



*Variola louti* 284  
7-10 ♀ ~ ~ ~ ~ ~ 26°C sg: 1.022 80 cm 800L



*Plectropomus laevis* 284  
5, 7, 9 ♀ ~ ~ ~ ~ ~ 26°C sg: 1.022 100 cm 1000L



*Pogonoperca punctata* 285  
6-7, 9 ♀ ~ ~ ~ ~ ~ 26°C sg: 1.022 35 cm 400L



*Grammistes sexlineatus* 285  
7, 9-10 ♀ ~ ~ ~ ~ ~ 26°C sg: 1.022 27 cm 300L





*Diploprion bifasciatus* 285  
5, 7, 9 ♀ ~ ~ ~ ~ ~ 26°C sg: 1.022 25 cm 300L



*Diploprion bifasciatus* (juv.) 285  
5, 7, 9 ♀ ~ ~ ~ ~ ~ 26°C sg: 1.022 25 cm 300L



*Diploprion bifasciatus* (var.) 285  
5, 7, 9 ♀ ~ ~ ~ ~ ~ 26°C sg: 1.022 25 cm 300L



*Diploprion drachi* 285  
9-10 ♀ ~ ~ ~ ~ ~ 26°C sg: 1.022 14 cm 150L



*Grammistes sexlineatus* 285  
7-10 ♀ ~ ~ ~ ~ ~ 26°C sg: 1.022 27 cm 300L



*Grammistops ocellatus* 285  
7, 9 ♀ ~ ~ ~ ~ ~ 26°C sg: 1.022 10 cm 100L



*Pseudogramma polyacantha* 285  
6-9 ♀ ~ ~ ~ ~ ~ 26°C sg: 1.022 7 cm 80L



*Pseudogramma gregoryi* 285  
1-2 ♀ ~ ~ ~ ~ ~ 24°C sg: 1.023 7.5 cm 80L

*Suttonia lineata* 285

6 ♀ ~ ~ ~ ~ ~ ♡ ~ ~ ~ ~ ~ 26°C sg: 1.022 12.5 cm 150L

*Rypticus bistrispinus* 285

2 ♀ ~ ~ ~ ~ ~ ♡ ~ ~ ~ ~ ~ 26°C sg: 1.022 15 cm 150L

*Rypticus subbifrenatus* 285

2, 13 ♀ ~ ~ ~ ~ ~ ♡ ~ ~ ~ ~ ~ 26°C sg: 1.022 18 cm 200L

*Rypticus saponaceus* 285

1-2, 13 ♀ ~ ~ ~ ~ ~ ♡ ~ ~ ~ ~ ~ 26°C sg: 1.022 33 cm 400L

*Rypticus bicolor* (?) 285

3 ♀ ~ ~ ~ ~ ~ ♡ ~ ~ ~ ~ ~ 26°C sg: 1.022 33 cm 400L

*Labracinus cyclophthalmus* 286

7 ♀ ~ ~ ~ ~ ~ ♡ ~ ~ ~ ~ ~ 26°C sg: 1.022 14 cm 150L

*Pseudoplesiops rosae* 286

12 ♀ ~ ~ ~ ~ ~ ♡ ~ ~ ~ ~ ~ 24°C sg: 1.023 5 cm 50L

*Pseudochromis luteus* 285

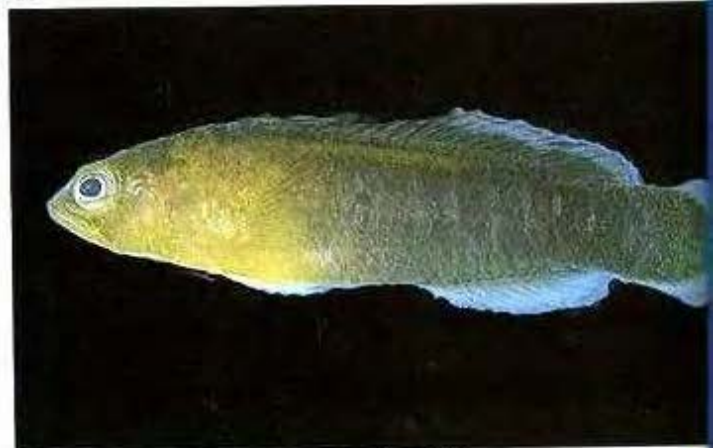
7 ♀ ~ ~ ~ ~ ~ ♡ ~ ~ ~ ~ ~ 26°C sg: 1.022 5 cm 50L

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*Pseudochromis tapeinosoma* 286  
7-8, 12 ♀ ~ ♀ ♂ ♀ ♀ 26°C sg: 1.022 5 cm 50L

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*Pseudochromis cyanotaenia* 286  
7-8, 12 ♀ ~ ♀ ♂ ♀ ♀ 26°C sg: 1.022 5 cm 50L



*Pseudochromis wilsoni* 286  
7-8, 12 ♀ ~ ♀ ♂ ♀ ♀ 26°C sg: 1.022 6 cm 60L



*Pseudochromis xanthochir* 286  
7-8, 12 ♀ ~ ♀ ♂ ♀ ♀ 26°C sg: 1.022 7 cm 80L



*Pseudochromis marshallensis* 286  
7-8, 12 ♀ ~ ♀ ♂ ♀ ♀ 26°C sg: 1.022 7 cm 80L



*Pseudochromis marshallensis* 286  
7-8, 12 ♀ ~ ♀ ♂ ♀ ♀ 26°C sg: 1.022 7 cm 80L



*Pseudochromis veliferus* 286  
8 ♀ ~ ♀ ♂ ♀ ♀ 26°C sg: 1.022 7 cm 80L



*Pseudochromis veliferus* 286  
8 ♀ ~ ♀ ♂ ♀ ♀ 26°C sg: 1.022 7 cm 80L



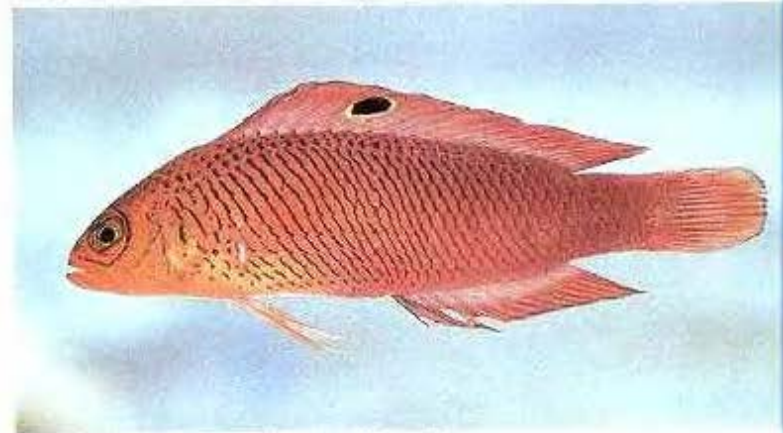
*Pseudochromis bitaeniata* 286  
7-8, 12 ♀ ~ ♀ ♂ ♡ ♣ ♣ 26°C sg: 1.022 6 cm 80L



*Pseudochromis longipinnis* 286  
8 ♀ ~ ♀ ♂ ♡ ♣ ♣ 26°C sg: 1.022 9.6 cm 100L



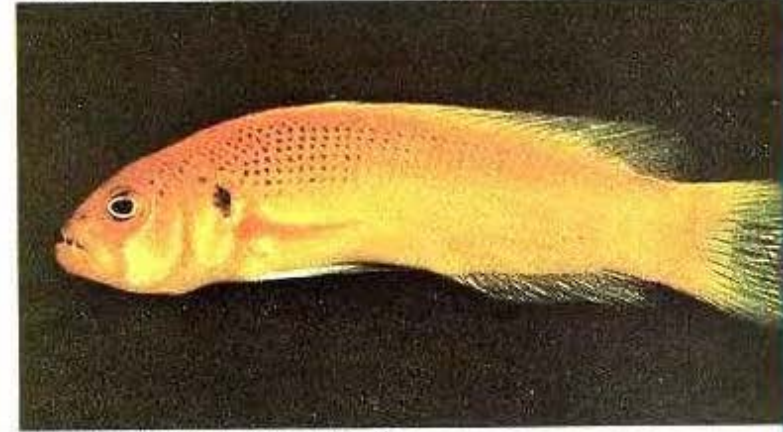
*Pseudochromis novaehollandiae* 286  
7-8, 12 ♀ ~ ♀ ♂ ♡ ♣ ♣ 26°C sg: 1.022 19 cm 200L



*Pseudochromis mccullochi* 286  
7-8, 12 ♀ ~ ♀ ♂ ♡ ♣ ♣ 26°C sg: 1.022 10 cm 100L



*Pseudochromis aureus* 286  
7-8 ♀ ~ ♀ ♂ ♡ ♣ ♣ 26°C sg: 1.022 10 cm 100L



*Pseudochromis moorei* 286  
7 ♀ ~ ♀ ♂ ♡ ♣ ♣ 26°C sg: 1.022 10 cm 100L



*Pseudochromis aureus* 286  
7-8 ♀ ~ ♀ ♂ ♡ ♣ ♣ 26°C sg: 1.022 10 cm 100L



*Pseudochromis fuscus* 286  
9 ♀ ~ ♀ ♂ ♡ ♣ ♣ 26°C sg: 1.022 10 cm 100L











*Lipogramma regia* 287  
 2 ♀ ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 2.5 cm 50L



*Lipogramma klayi* 287  
 2 ♀ ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 4 cm 50L



*Lipogramma trilineata* 287  
 2 ♀ ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 3.5 cm 50L



*Gramma loreto* 287  
 2 ♀ ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 7.5 cm 80L



*Gramma linki* 287  
 1-2 ♀ ~ ♀ ♀ ♀ ♀ ♀ 24°C sg: 1.023 6.5 cm 60L



*Gramma melacara* 287  
 2 ♀ ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 10 cm 100L



*Assessor flavissimus* 288  
 8 ♀ ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 8 cm 80L



*Assessor macneilli* 288  
 8 ♀ ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 8 cm 80L





*Paraplesiops meleagris* 288  
 12 ♀ ~ ~ ~ ♀ ♥ 📺 📺 22°C sg: 1.024 25 cm 300L



*Calloplepsiops altivelis* 288  
 7-10 ♀ ~ ~ ~ ♀ ♥ 📺 📺 26°C sg: 1.022 16 cm 200L



*Trachinops brauni* 288  
 12 ♀ ~ ~ ~ ♀ ♥ 📺 📺 24°C sg: 1.023 6 cm 60L



*Paraplesiops meleagris* 288  
 12 ♀ ~ ~ ~ ♀ ♥ 📺 📺 22°C sg: 1.024 25 cm 300L



*Terapon jarbua* 291  
7, 9 ~ ~ ~ ~ ~ 26°C sg: 1.022 23 cm 400L

*Terapon theraps* 291  
6-10 ~ ~ ~ ~ ~ 26°C sg: 1.022 30 cm 300L

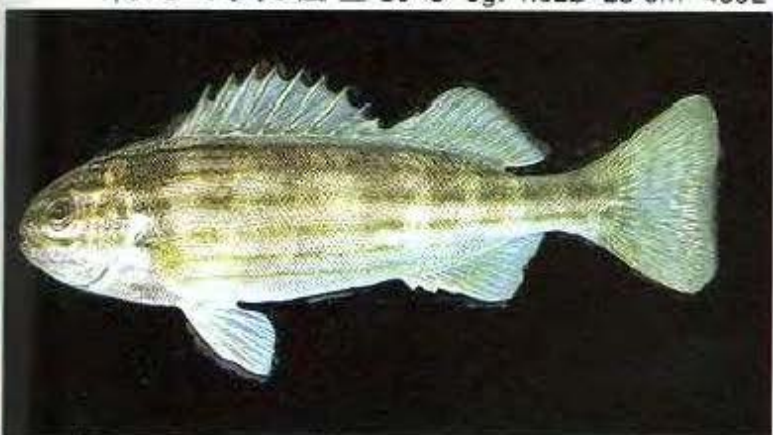




*Terapon jarbua* 291  
7, 9 ~ ♀ ♂ ♀ ♂ ≡ 26°C sg: 1.022 23 cm 400L



*Kuhlia mugil* 293  
3, 6-9 ~ ♀ ♂ ♀ ♂ ≡ 26°C sg: 1.022 20 cm 200L



*Pelates sexlineatus* 291  
7-10 9-10 ~ ♀ ♂ ♀ ♂ ≡ 26°C sg: 1.022 25 cm 300L



*Pelates quadrilineatus* 291  
7, 9 ~ ♀ ♂ ♀ ♂ ≡ 26°C sg: 1.022 24 cm 300L



*Mesopristes argenteus* 291  
7 ~ ♀ ♂ ♀ ♂ ≡ 26°C sg: 1.016 25 cm 300L



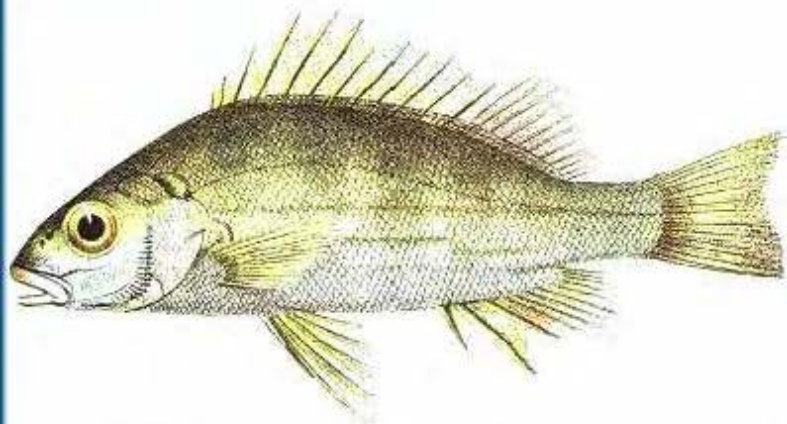
*Amniataba caudavittatus* 291  
12 ~ ♀ ♂ ♀ ♂ ≡ 23°C sg: 1.023 9 cm 100L



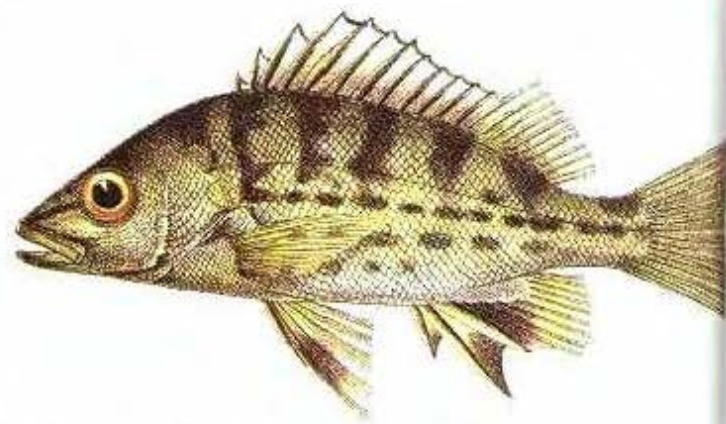
*Terapon theraps* 291  
7-10 ~ ♀ ♂ ♀ ♂ ≡ 26°C sg: 1.022 25 cm 300L



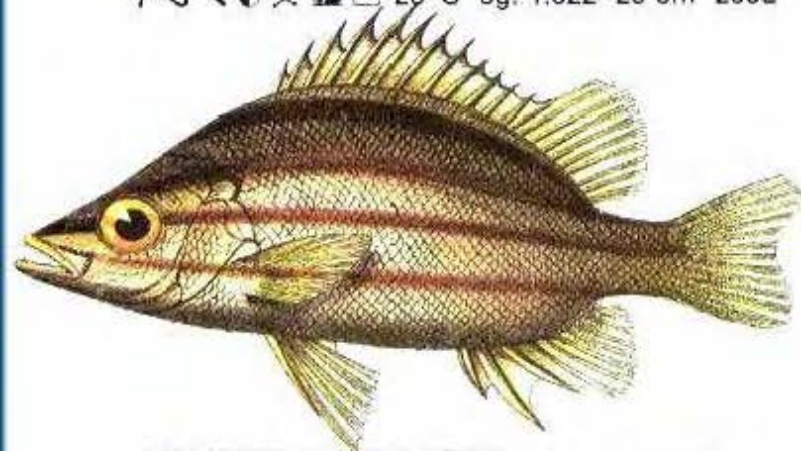
*Rhyncopelates oxyrhynchus* 291  
7, 9 ~ ♀ ♂ ♀ ♂ ≡ 26°C sg: 1.022 30 cm 300L



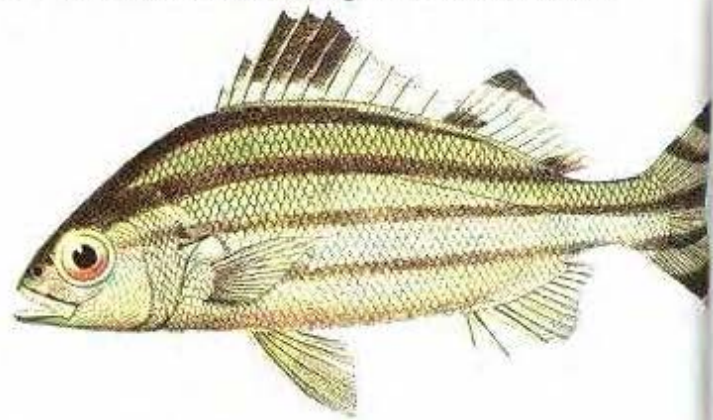
*Mesopristes cancellatus* 291  
7 ~ ~ ~ ~ ~ 26°C sg: 1.022 20 cm 200L



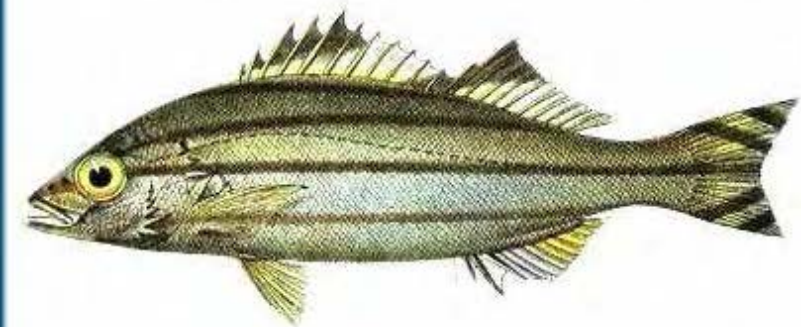
*Mesopristes cancellatus* 291  
7 ~ ~ ~ ~ ~ 26°C sg: 1.022 20 cm 200L



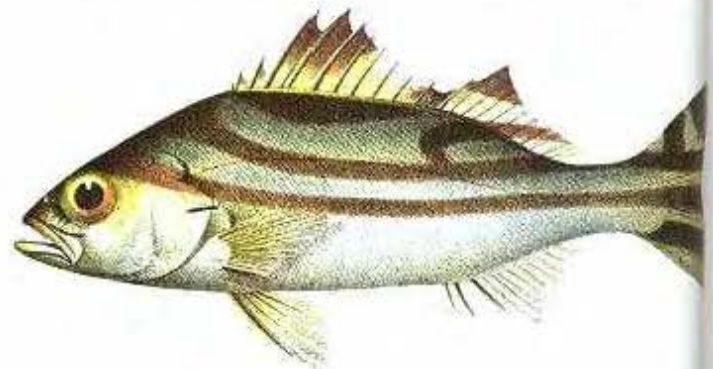
*Mesopristes argenteus* 291  
7 ~ ~ ~ ~ ~ 26°C sg: 1.022 25 cm 300L



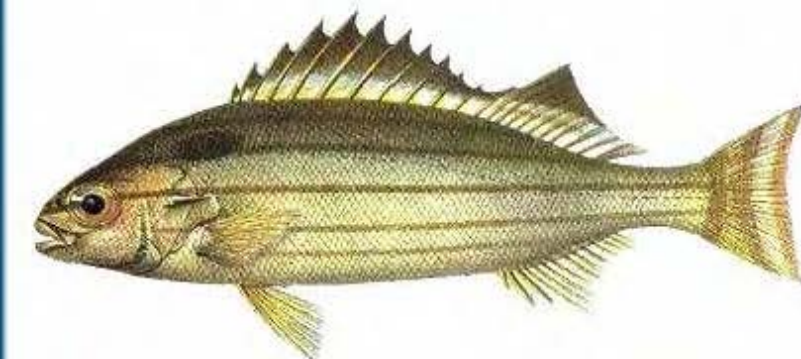
*Terapon theraps* 291  
6-10 ~ ~ ~ ~ ~ 26°C sg: 1.022 30 cm 300L



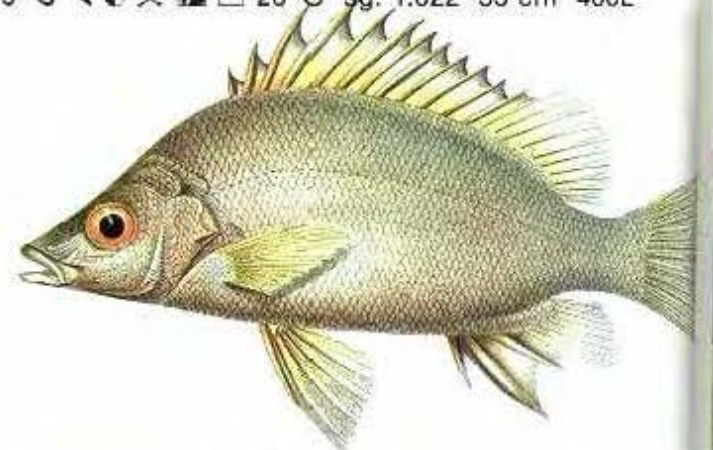
*Terapon theraps* 291  
6-10 ~ ~ ~ ~ ~ 26°C sg: 1.022 30 cm 300L



*Terapon jarbua* 291  
7, 9 ~ ~ ~ ~ ~ 26°C sg: 1.022 33 cm 400L

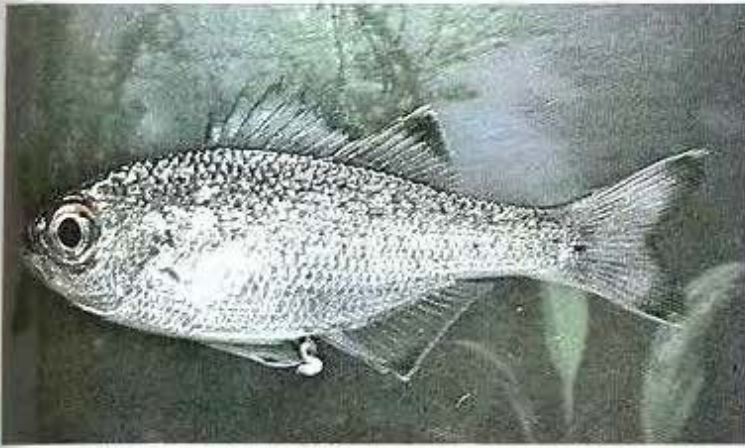


*Pelates sexlineatus* 291  
7 ~ ~ ~ ~ ~ 26°C sg: 1.022 20 cm 200L



*Mesopristes argenteus* 291  
7 ~ ~ ~ ~ ~ 26°C sg: 1.022 25 cm 300L





*Kuhlia marginata* 293  
6-8 ~ ♀ ♂ ✕ 🏠 🌡 26°C sg: 1.022 21.5 cm 250L



*Kuhlia rupestris* 293  
7-9 ~ ♀ ♂ ✕ 🏠 🌡 26°C sg: 1.022 40.5 cm 400L



*Kuhlia mugil* 293  
3, 6-9 ~ ♀ ♂ ✕ 🏠 🌡 26°C sg: 1.022 20 cm 200L



*Kuhlia sandvicensis* 293  
6 ~ ♀ ♂ ✕ 🏠 🌡 26°C sg: 1.022 30 cm 300L



*Pristigenys multifasciata* 296  
5, 7 ~ ♀ ♂ ✕ 🏠 🌡 26°C sg: 1.022 27 cm 300L



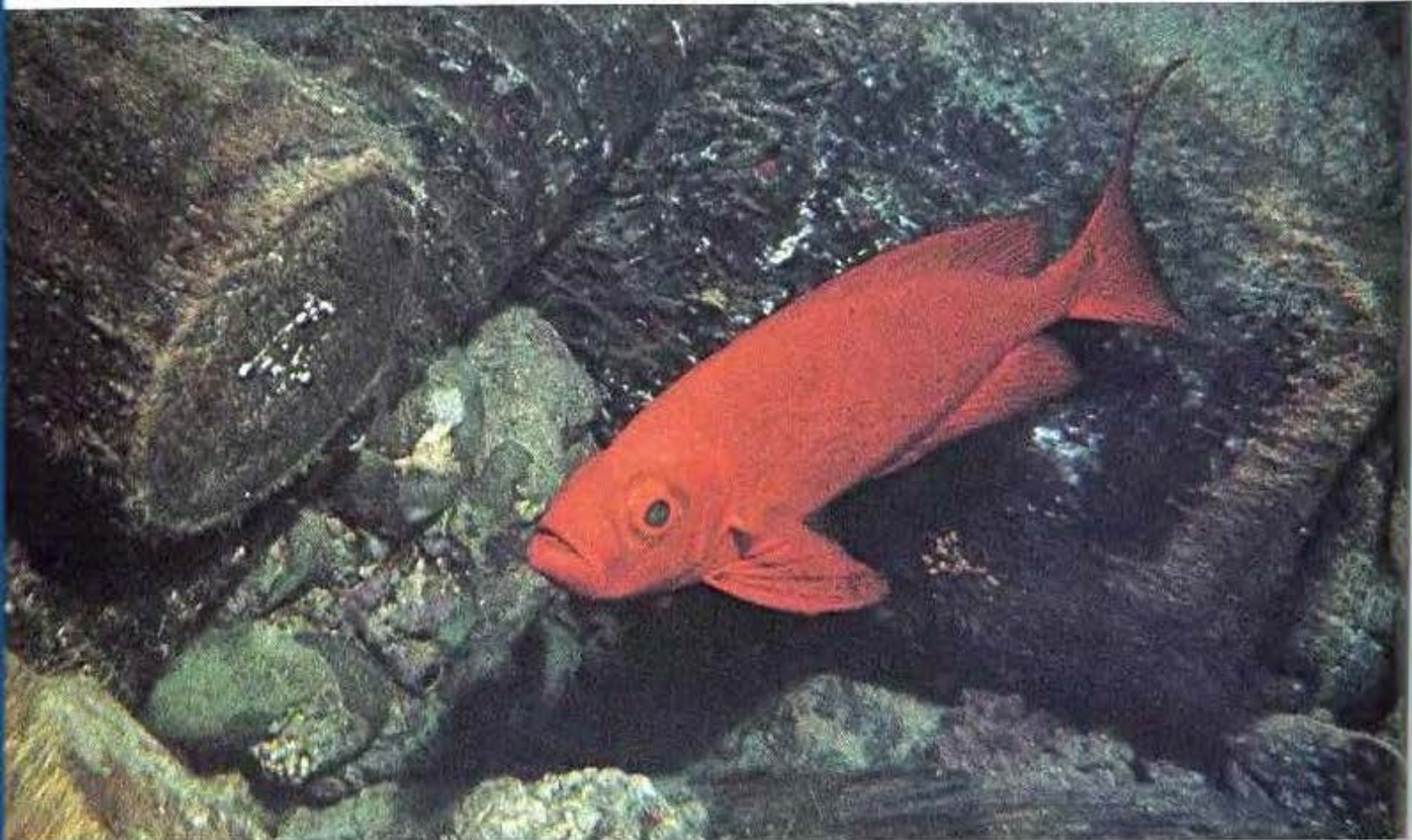
*Pristigenys alta* 296  
1, 2 ~ ♀ ♂ ✕ 🏠 🌡 25°C sg: 1.022 30 cm 300L



*Pristigenys serrula* 296  
3 ~ ♀ ♂ ✕ 🏠 🌡 26°C sg: 1.022 15 cm 200L



*Pristigenys nipponia* 296  
7, 9 ~ ♀ ♂ ✕ 🏠 🌡 26°C sg: 1.022 26 cm 300L



*Priacanthus hamrur* 284

6-10 ♀ ~ ~ ~ ~ ~ 26°C sg: 1.022 45 cm 500L



*Priacanthus macracanthus* 296

7-8 ♀ ~ ~ ~ ~ ~ 26°C sg: 1.022 23 cm 300L



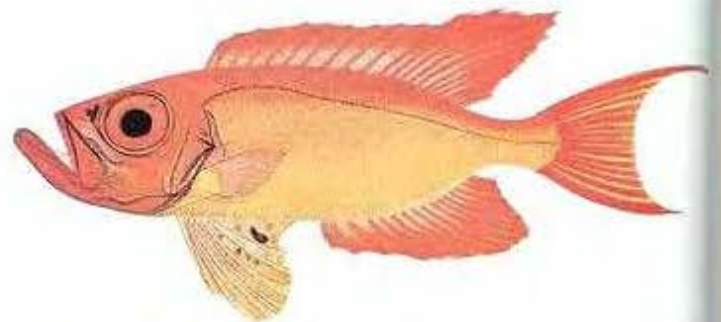
*Priacanthus arenatus* 296

2, 13 ♀ ~ ~ ~ ~ ~ 26°C sg: 1.022 40 cm 400L



*Heteropriacanthus cruentatus* 296

Circumtrop. ♀ ~ ~ ~ ~ ~ 26°C 30.5 cm 300L



*Priacanthus tayenus* 296

7-8 ♀ ~ ~ ~ ~ ~ 26°C sg: 1.022 27.5 cm 300L

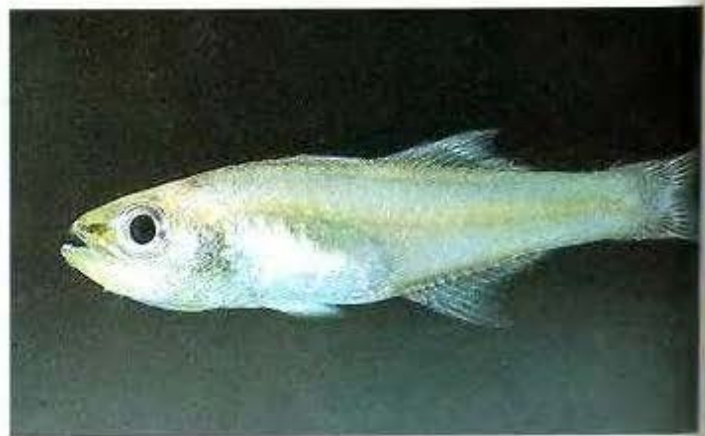




*Apogon cyanosoma* 297  
7-8 ♀ ~ ♀ ♀ ♀ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 7 cm 80L



*Rhabdamia gracilis* 297  
7, 9 ♀ ~ ♀ ♀ ♀ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 6 cm 60L



*Rhabdamia cypselurus* 297  
7-8 ♀ ~ ♀ ♀ ♀ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 5 cm 50L



*Gymnapogon urospilatus* 297  
5, 7 ♀ ~ ♀ ♀ ♀ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 3 cm 50L



*Rhabdamia* sp. 297  
12 ♀ ~ ♀ ♀ ♀ ♀ ♀ ♀ ♀ ♀ 24°C sg: 1.022 4 cm 50L



*Apogon angustatus* 297  
6-10 ♀ ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 8 cm 80L



*Apogon cyanosoma* 297  
7-8 ♀ ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 7 cm 80L



*Apogon robustus* 297  
9 ♀ ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 6 cm 60L



*Apogon robustus* 297  
9 ♀ ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 6 cm 60L



*Apogon cooki* 297  
7-8 ♀ ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 6 cm 60L



*Apogon victoriae* 297  
7-12 ♀ ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 8 cm 80L



*Apogon fraenatus* 297  
7-10 ♀ ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 10 cm 100L



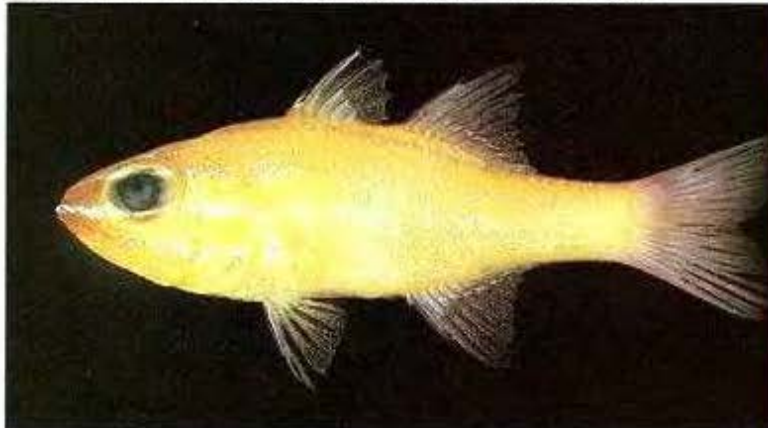
*Apogon nitidus* 297  
9 ♀ ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 8 cm 80L





*Apogon hartzfeldii* 297  
7-8 ♀ ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 11.5 cm 100L

*Apogon chrysotaenia* 297  
7 ♀ ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 12 cm 150L



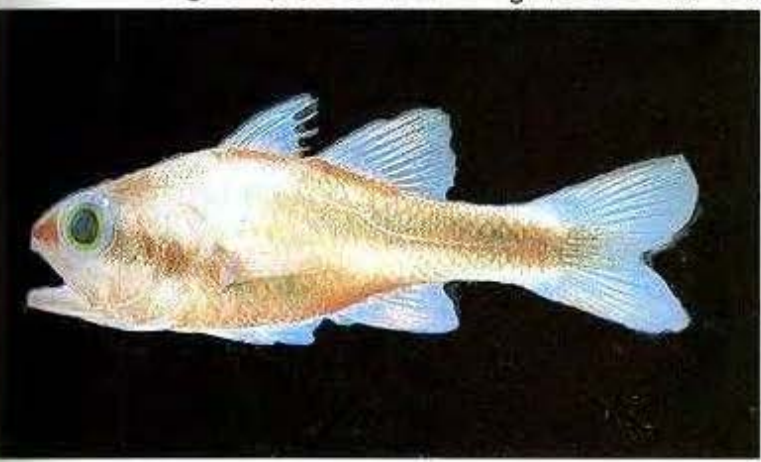
*Apogon* sp. 297  
7 ♀ ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 10 cm 100L

*Apogon novaeguineae* (? = *cyanosoma*) 297  
8 ♀ ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 10 cm 100L



*Apogon* sp. 297  
7 ♀ ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 7 cm 80L

*Apogon* sp. 297  
7-8 ♀ ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 10 cm 100L



*Apogon semiornatus* 297  
7, 9 ♀ ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 7 cm 80L

*Apogon* sp. 297  
6 ♀ ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 8 cm 100L



*Apogon exostigma* 297  
6-7 ♀ ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 10 cm 100L



*Apogon kallopterus* 297  
7-10 ♀ ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 15 cm 150L



*Apogon kallopterus* 297  
7-10 ♀ ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 15 cm 150L



*Apogon kallopterus* 297  
7-10 ♀ ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 15 cm 150L



*Apogon notatus* 297  
7 ♀ ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 10 cm 100L



*Apogon gilberti* 297  
5, 7, 9 ♀ ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 4 cm 50L



*Apogon semilineatus* 297  
5, 7 ♀ ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 8 cm 80L



*Apogon ishigakiensis* 297  
5, 7 ♀ ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 60 cm 60L





*Apogon sangiensis* 297  
7-8 ♀ ~ ♂ ♥ ♣ 26°C sg: 1.022 9 cm 100L



*Apogon* sp. 297  
7-8 ♀ ~ ♂ ♥ ♣ 26°C sg: 1.022 7 cm 100L



*Apogon ceramensis* 297  
7-8 ♀ ~ ♂ ♥ ♣ 26°C sg: 1.022 10 cm 100L



*Apogon thermalis* 297  
7, 9 ♀ ~ ♂ ♥ ♣ 26°C sg: 1.022 8 cm 80L



*Apogon hyalosoma* 297  
7 ♀ ~ ♂ ♥ ♣ 26°C sg: 1.022 17 cm 200L



*Apogon amboinensis* 297  
7-8 ♀ ~ ♂ ♥ ♣ 26°C sg: 1.022 10 cm 100L



*Apogon kiensis* 297  
7-10 ♀ ~ ♂ ♥ ♣ 26°C sg: 1.022 5 cm 50L



*Apogon sealei* 297  
6-8 ♀ ~ ♂ ♥ ♣ 26°C sg: 1.022 10 cm 100L



*Apogon taeniatus* 297  
7-10 ♀ ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 10 cm 100L



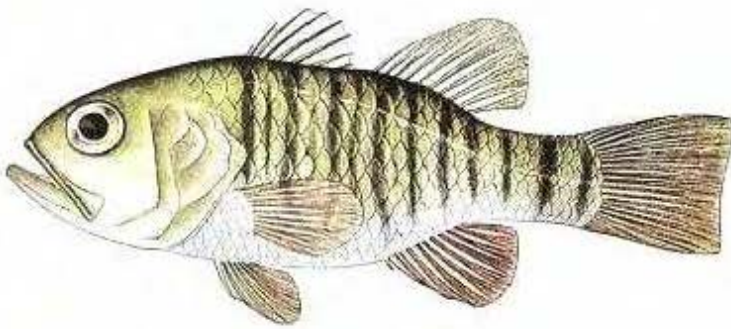
*Apogon trimaculatum* 297  
7 ♀ ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 15 cm 150L



*Apogon niger* 297  
5, 7 ♀ ~ ♀ ♀ ♀ ♀ ♀ 24°C sg: 1.022 15 cm 150L



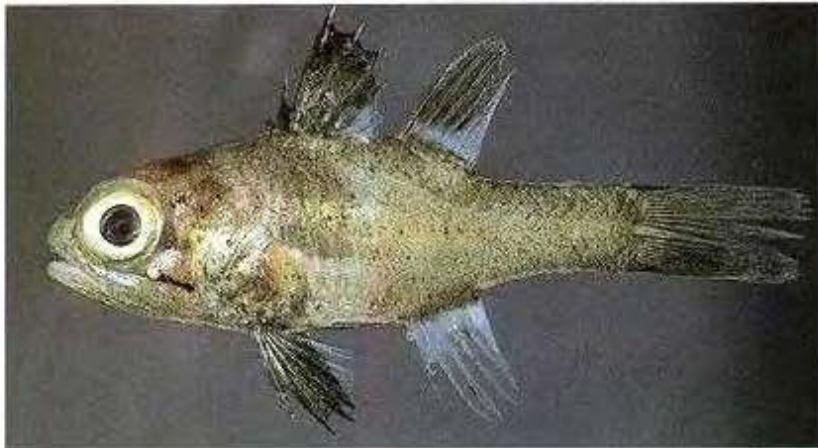
*Apogon leptacanthus* 297  
7, 9 ♀ ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 6 cm 60L



*Apogon lineatus* 297  
5, 7 ♀ ~ ♀ ♀ ♀ ♀ ♀ 24°C sg: 1.023 13 cm 150L



*Apogon dispar* 297  
7 ♀ ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 4.5 cm



*Apogon darnleyensis* 297  
7, 12 ♀ ~ ♀ ♀ ♀ ♀ ♀ 25°C sg: 1.022 5 cm 50L



*Apogon melas* 297  
7 ♀ ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 12 cm 80L



*Apogon taeniopterus* 297  
6 ♀ ~ ♀ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 10 cm 100L



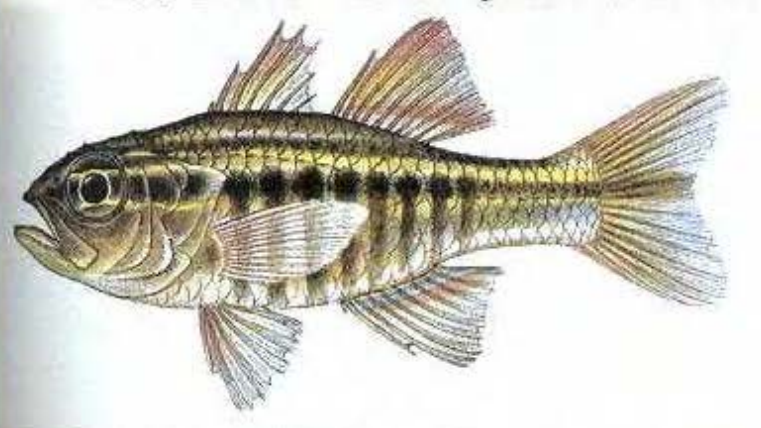
*Apogon menesemus* 297  
6 ♀ ~ ♀ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 10 cm 100L



*Apogon savayensis* 297  
6-10 ♀ ~ ♀ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 10 cm 100L



*Apogon guamensis* 297  
7-10 ♀ ~ ♀ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 10 cm 100L



*Apogon quadrifasciatus* 297  
7-10 ♀ ~ ♀ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 10 cm 100L



*Apogon maculifera* 297  
6 ♀ ~ ♀ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 15 cm 150L



*Apogon ruppelli* 297  
12 ♀ ~ ♀ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 10 cm 100L



*Apogon norfolcensis* 297  
11-12 ♀ ~ ♀ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 15 cm 150L



*Apogon pseudomaculatus* 297  
2 ♀ ~ ♀ ♂ ♥ 🌿 🏠 26°C sg: 1.022 8 cm 80L



*Apogon maculatus* 297  
2 ♀ ~ ♀ ♂ ♥ 🌿 🏠 25°C sg: 1.022 15 cm 150L



*Apogon quadrisquamatus* 297  
2 ♀ ~ ♀ ♂ ♥ 🌿 🏠 26°C sg: 1.022 8 cm 80L



*Apogon aurolineatus* 297  
2 ♀ ~ ♀ ♂ ♥ 🌿 🏠 26°C sg: 1.022 5 cm 50L



*Apogon leptocaulus* 297  
7, 9 ♀ ~ ♀ ♂ ♥ 🌿 🏠 26°C sg: 1.022 6 cm 60L



*Apogon retrosella* 297  
3 ♀ ~ ♀ ♂ ♥ 🌿 🏠 26°C sg: 1.022 10 cm 100L



*Apogon pacifici* 297  
3 ♀ ~ ♀ ♂ ♥ 🌿 🏠 26°C sg: 1.022 8 cm 80L



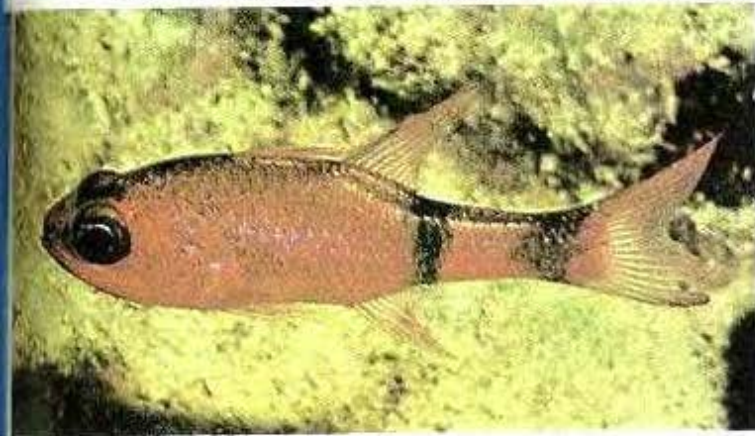
*Apogon dovii* 297  
3 ♀ ~ ♀ ♂ ♥ 🌿 🏠 26°C sg: 1.022 7.5 cm 80L



*Apogon binotatus* 297  
 2 ♀ ~ ♀ ♀ ♀ ♀ ♀ ♀ 24°C sg: 1.022 13 cm 150L



*Apogon planifrons* 297  
 2 ♀ ~ ♀ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 11 cm 100L



*Apogon robinsi* 297  
 2 ♀ ~ ♀ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 13 cm 150L



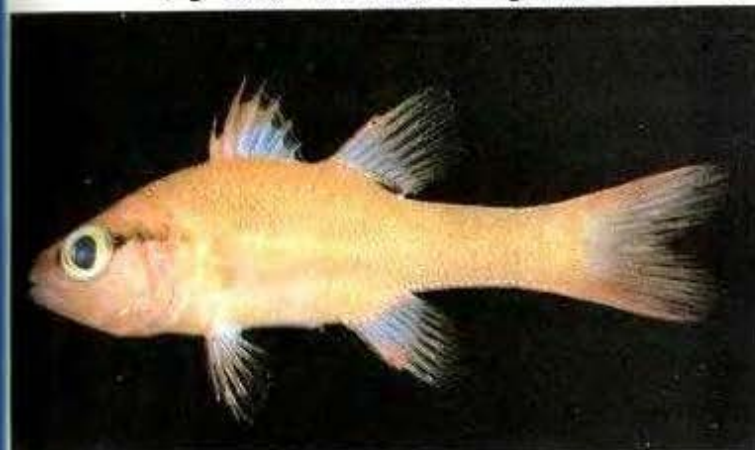
*Apogon townsendi* 297  
 2 ♀ ~ ♀ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 7.5 cm 80L



*Apogon pillionatus* 297  
 2 ♀ ~ ♀ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 7 cm 80L



*Apogon phenax* 297  
 2 ♀ ~ ♀ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 8 cm 80L



*Apogon anisolepis* 297  
 2 ♀ ~ ♀ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 6 cm 60L



*Apogon lachneri* 297  
 2 ♀ ~ ♀ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 11 cm 100L



*Apogon crassiceps* 297  
6-7 ♀ ~ ♀ ♀ ♀ ♀ ♀ 25°C sg: 1.022 10 cm 100L



*Apogon coccineus* 297  
6-10 ♀ ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 5 cm 50L



*Apogon sp.* 297  
7 ♀ ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 8 cm 80L



*Apogon evermanni* 297  
6 ♀ ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 10 cm 100L



*Apogon nigripes* 297  
9-10 ♀ ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 7 cm 80L



*Apogon sp.* 297  
7 ♀ ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 7.5 cm 80L



*Apogon elliotti* 297  
7 ♀ ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 12 cm 150L



*Sphaeramia nematoptera* 297  
7, 9 ♀ ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 10 cm 100L



*Apogon apogonides* 297  
7, 9 ♀ ~ ♀ ♂ ♡ ♣ ♣ 26°C sg: 1.022 10 cm 100L



*Apogon aureus* 297  
7, 9-10 ♀ ~ ♀ ♂ ♡ ♣ ♣ 26°C sg: 1.022 12 cm 150L



*Apogon kallopterus* 297  
6-10 ♀ ~ ♀ ♂ ♡ ♣ ♣ 26°C sg: 1.022 15 cm 150L



*Apogon taeniatus* 297  
9-10 ♀ ~ ♀ ♂ ♡ ♣ ♣ 26°C sg: 1.022 10 cm 100L



*Apogon sp.* 297  
7 ♀ ~ ♀ ♂ ♡ ♣ ♣ 26°C sg: 1.022 6 cm 60L



*Cheilodipterus quinquelineatus* 297  
6-10 ♀ ~ ♀ ♂ ♡ ♣ ♣ 26°C sg: 1.022 12 cm 150L



*Cheilodipterus artus* 297  
9 ♀ ~ ♀ ♂ ♡ ♣ ♣ 26°C sg: 1.022 12 cm 150L



*Cheilodipterus lineatus* 297  
6-10 ♀ ~ ♀ ♂ ♡ ♣ ♣ 26°C sg: 1.022 22 cm 200L



*Cheilodipterus macrodon* 297  
6-10 ♀ ~ ~ ~ ~ ~ 24°C sg: 1.022 24 cm 200L



*Cheilodipterus lachneri* 297  
9-10 ♀ ~ ~ ~ ~ ~ 26°C sg: 1.022 12 cm 150L



*Cheilodipterus* sp. 297  
7 ♀ ~ ~ ~ ~ ~ 26°C sg: 1.022 8 cm 80L



*Cheilodipterus* sp. 297  
6 ♀ ~ ~ ~ ~ ~ 26°C sg: 1.022 12 cm 150L



*Cheilodipterus zonatus* 297  
7, 8 ♀ ~ ~ ~ ~ ~ 26°C sg: 1.022 9 cm 100L



*Apogon affinis* 297  
2 ♀ ~ ~ ~ ~ ~ 26°C sg: 1.022 10 cm 100L



*Foa fo* 297  
6-8 ♀ ~ ~ ~ ~ ~ 24°C sg: 1.023 3 cm 50L



*Fowleria variegata* 297  
6-10 ♀ ~ ~ ~ ~ ~ 26°C sg: 1.022 5 cm 50L

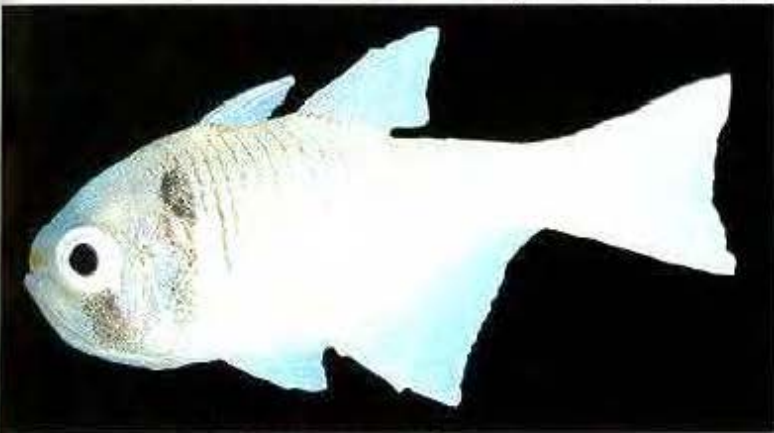




*Archamia leai* 297  
7-8 ♀ ~ ♀ ♀ ♀ ♀ ♀ 25°C sg: 1.022 8 cm 80L



*Archamia zosterophora* 297  
7, 9 ♀ ~ ♀ ♀ ♀ ♀ ♀ 25°C sg: 1.022 6 cm 60L



*Archamia melasma* 297  
7-8 ♀ ~ ♀ ♀ ♀ ♀ ♀ 25°C sg: 1.022 7 cm 80L



*Archamia fucata* 297  
7, 9-10 ♀ ~ ♀ ♀ ♀ ♀ ♀ 25°C sg: 1.022 8 cm 80L



*Archamia lineolata* 297  
7-10 ♀ ~ ♀ ♀ ♀ ♀ ♀ 25°C sg: 1.022 9 cm 100L



*Archamia biguttata* 297  
6-7 ♀ ~ ♀ ♀ ♀ ♀ ♀ 25°C sg: 1.022 7 cm 50L



*Fowleria cf variegata* 297  
6-10 ♀ ~ ♀ ♀ ♀ ♀ ♀ 25°C sg: 1.022 5 cm 50L



*Fowleria aurita* 297  
7, 9-10 ♀ ~ ♀ ♀ ♀ ♀ ♀ 25°C sg: 1.022 9 cm 100L



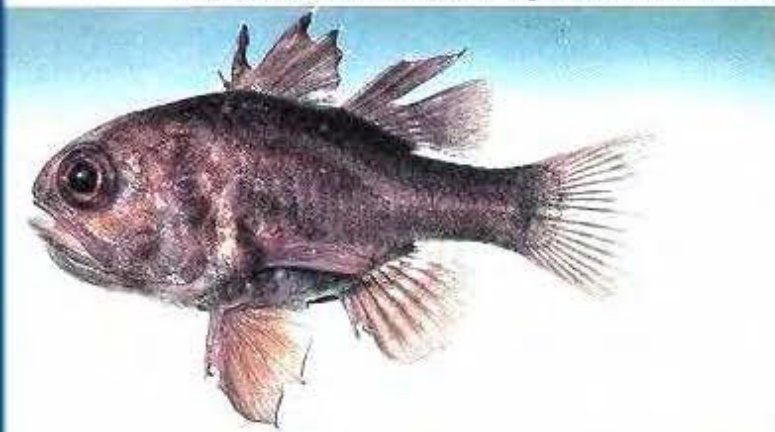
*Astrapogon stellatus* 297  
2 ♀ ~ ♂ ♀ ♀ ♀ ♀ 25°C sg: 1.022 6.5 cm 200L



*Phaeoptyx xenus* 297  
2 ♀ ~ ♂ ♀ ♀ ♀ 26°C sg: 1.022 7.5 cm 75L



*Pterapogon mirifica* 297  
7 ♀ ~ ♂ ♀ ♀ ♀ 25°C sg: 1.022 8 cm 80L



*Vincentia* sp. 297  
7, 12 ♀ ~ ♂ ♀ ♀ ♀ 24°C sg: 1.022 4.5 cm 50L



*Astrapogon punctulatus* 297  
2 ♀ ~ ♂ ♀ ♀ ♀ 25°C sg: 1.022 6.5 cm 80L



*Phaeoptyx pigmentaria* 297  
2 ♀ ~ ♂ ♀ ♀ ♀ 26°C sg: 1.022 6.5 cm 70L



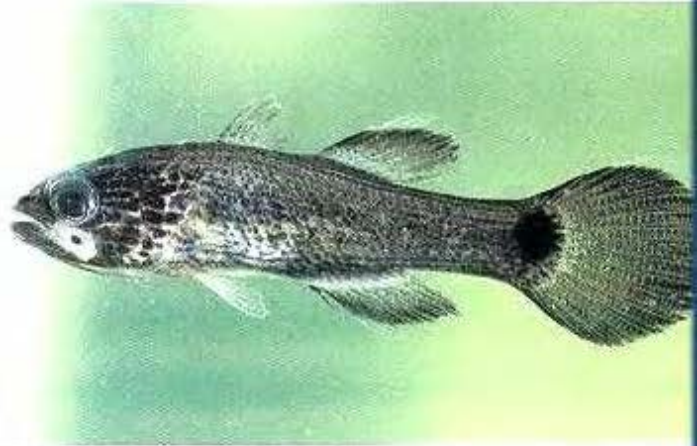
*Phaeoptyx conklini* 297  
2 ♀ ~ ♂ ♀ ♀ ♀ 25°C sg: 1.022 6.5 cm 80L



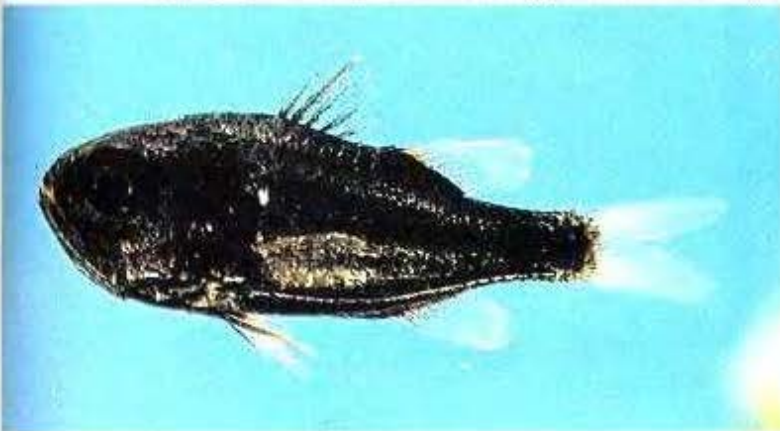
*Vincentia punctatus* 297  
7, 12 ♀ ~ ♂ ♀ ♀ ♀ 25°C sg: 1.022 10 cm 100L



*Pseudamia gelatinosa* 297  
7, 9 ♀ ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 7 cm 80L



*Pseudamia amblyuroptera* 297  
7 ♀ ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 7.5 cm 80L



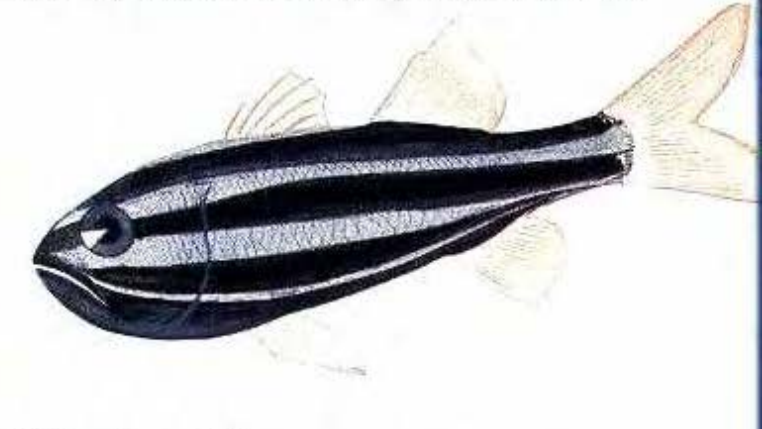
*Siphamia versicolor* 297  
6-10 ♀ ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 4 cm 50L



*Siphamia fuscolineata* 297  
7-8 ♀ ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 4 cm 50L



*Siphamia cephalotes* 297  
7, 12 ♀ ~ ♀ ♀ ♀ ♀ ♀ 25°C sg: 1.022 4 cm 50L



*Siphamia* sp. 297  
7 ♀ ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 4 cm 50L



*Apogonichthys ocellatus* 297  
7, 9 ♀ ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 6 cm 60L



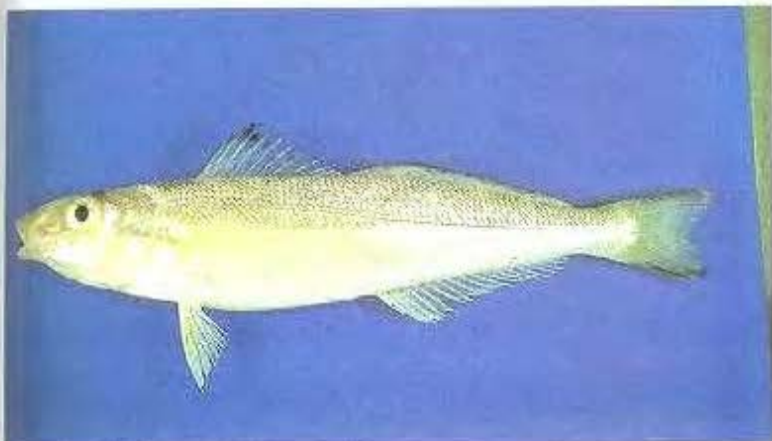
*Siphamia mossambica* (?) 297  
9 ♀ ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 4 cm 50L



*Hoplostethus starcki* 300  
6 ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 11 cm 100L

*Hoplostethus fronticinctus* 300  
7-9 ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 21 cm 200L





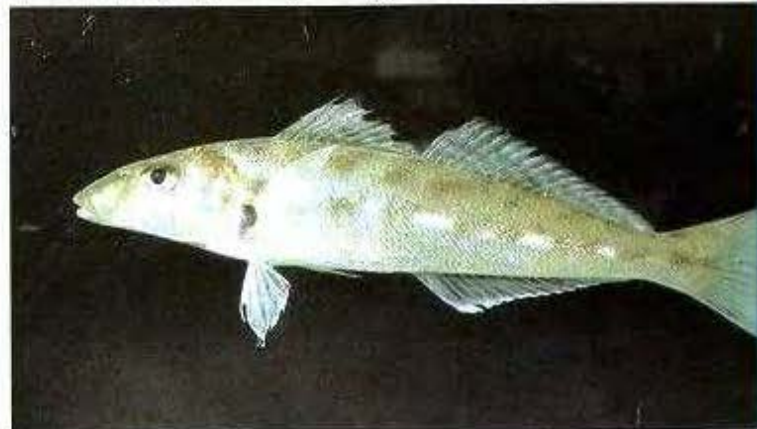
*Sillago sihama* 299  
6-9 ~ ~ ~ ~ ~ 26°C sg: 1.022 30 cm 300L



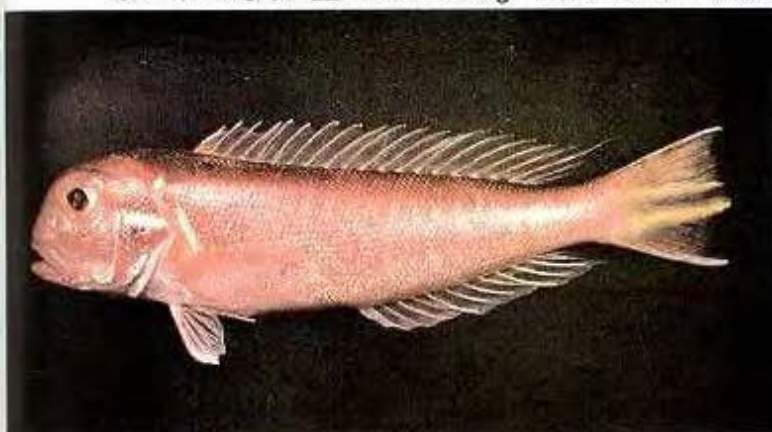
*Sillago macrolepis* 299  
7 ~ ~ ~ ~ ~ 26°C sg: 1.022 20 cm 200L



*Caulolatilus princeps* 300  
3-4 ~ ~ ~ ~ ~ 25°C sg: 1.022 45 cm 500L



*Sillago maculata* 299  
8 ~ ~ ~ ~ ~ 26°C sg: 1.022 30 cm 300L



*Branchiostegus* sp. 300  
7 ~ ~ ~ ~ ~ 26°C sg: 1.022 40 cm 400L



*Lopholatilus chamaeleonticeps* 300  
1-2 ~ ~ ~ ~ ~ 23°C sg: 1.024 42 cm 400L



*Branchiostegus albus* 300  
5, 7 ~ ~ ~ ~ ~ 24°C sg: 1.023 40 cm 400L



*Branchiostegus japonicus* 300  
5, 7 ~ ~ ~ ~ ~ 26°C sg: 1.022 45 cm 500L

240



*Hoplostethus cuniculus* 300  
6 ~ ♀ ♀ ♀ ♀ 26°C sg: 1.022 9 cm 100L

#180



*Hoplostethus marcosi* 300  
7 ~ ♀ ♀ ♀ ♀ 26°C sg: 1.022 20 cm 200L



*Hoplostethus starcki* 300  
6 ~ ♀ ♀ ♀ ♀ 26°C sg: 1.022 11 cm 100L



*Hoplostethus starcki* 300  
6 ~ ♀ ♀ ♀ ♀ 26°C sg: 1.022 11 cm 100L



*Hoplostethus fourmanoiri* 300  
7 ~ ♀ ♀ ♀ ♀ 26°C sg: 1.022 20 cm 200L



*Hoplostethus purpureus* 300  
7 ~ ♀ ♀ ♀ ♀ 26°C sg: 1.022 15 cm 200L

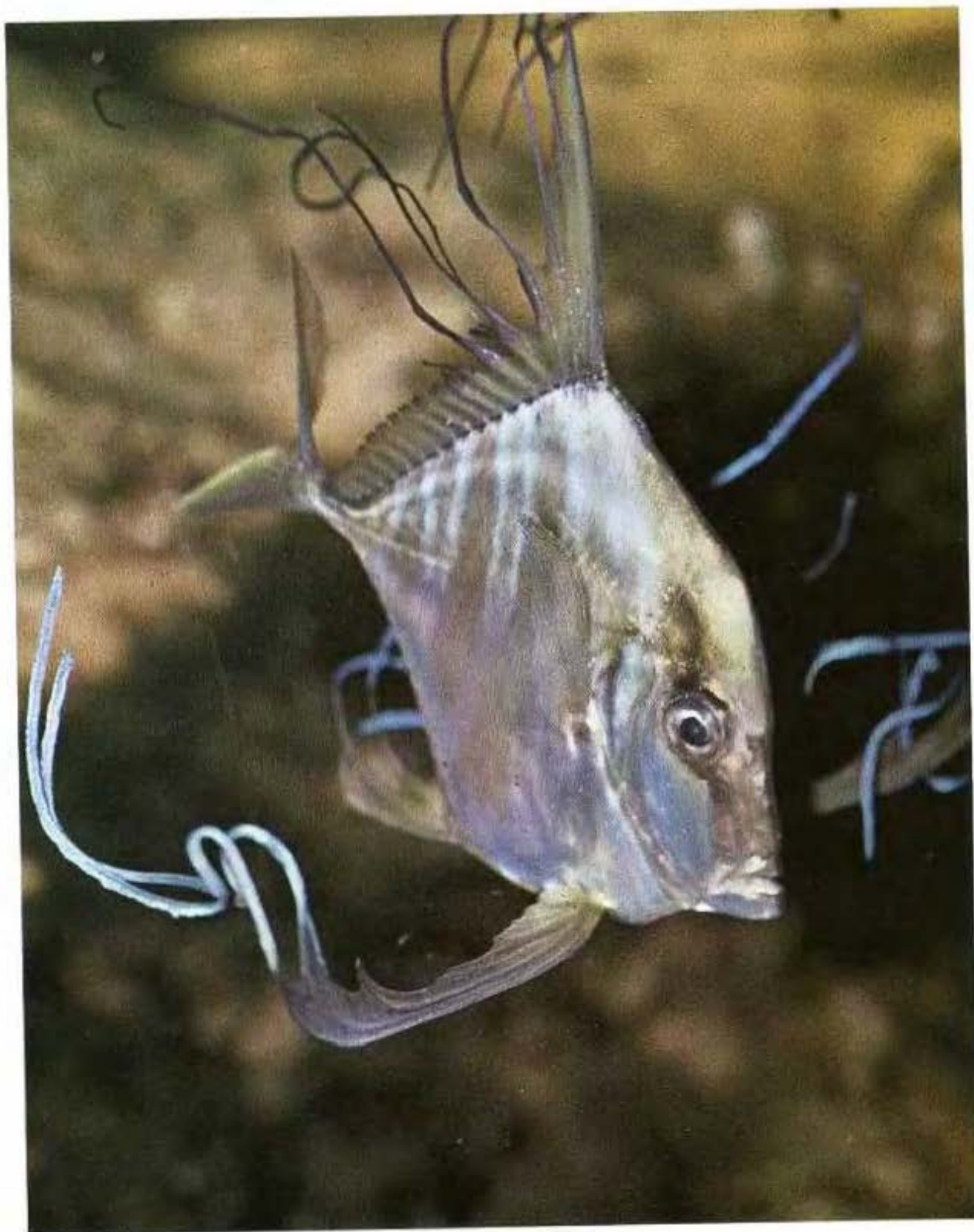


*Hoplostethus chlupatyi* 300  
7 ~ ♀ ♀ ♀ ♀ 26°C sg: 1.022 15 cm 200L



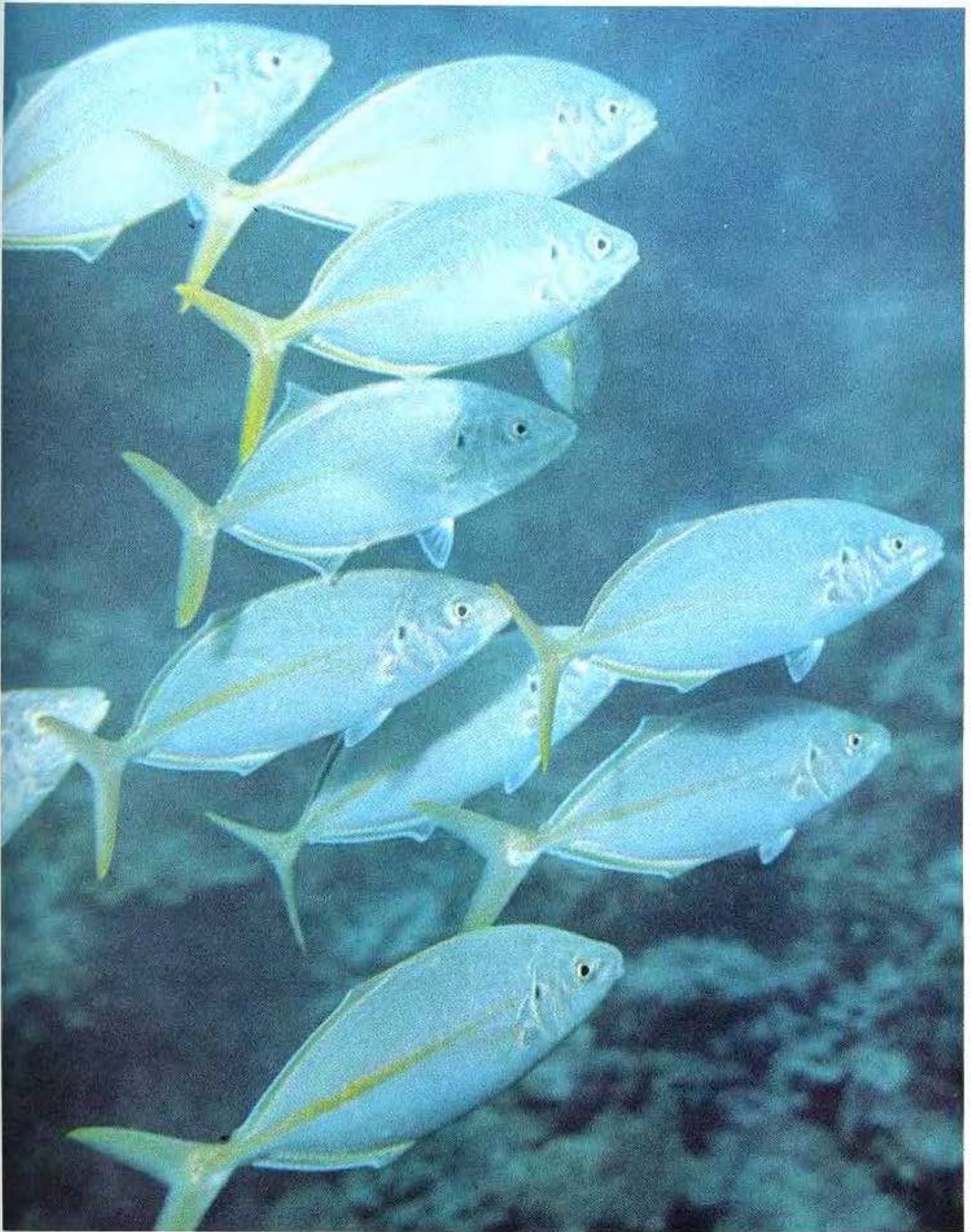
*Hoplostethus chlupatyi* 300  
7 ~ ♀ ♀ ♀ ♀ 26°C sg: 1.022 15 cm 200L



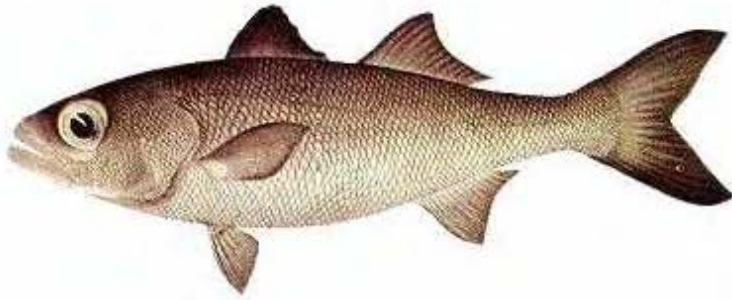


*Alectis indicus* 306  
5, 7 ~ ~ ~ ~ ~ 26°C sg: 1.022 50 cm 500L

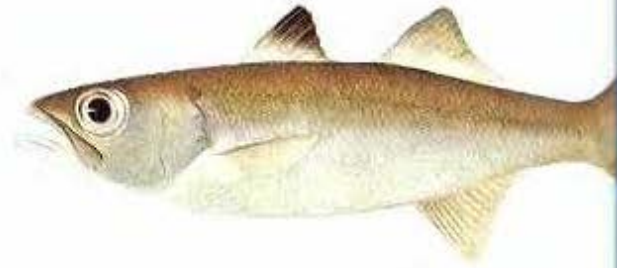




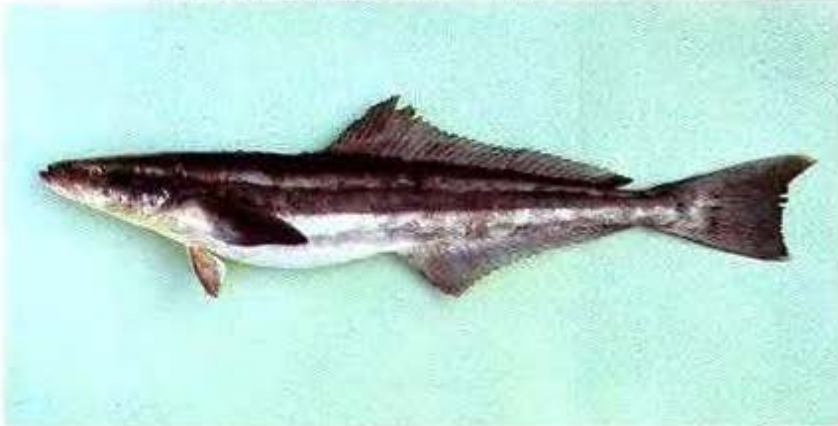
*Pseudocaranx dentex* 306  
5, 7 ~ \* 25°C sg: 1.022 95 cm 1000L



*Scombrops gilberti* 303  
5 ~ ~ ~ ~ ~ 23°C sg: 1.024 100 cm 1000L



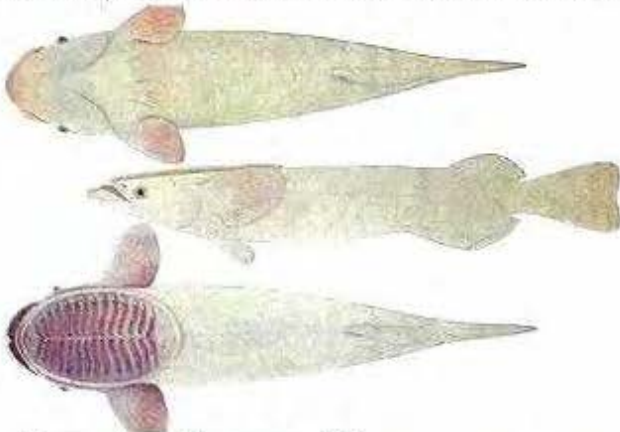
*Scombrops boops* 303  
5 ~ ~ ~ ~ ~ 24°C sg: 1.023 110 cm 1200L



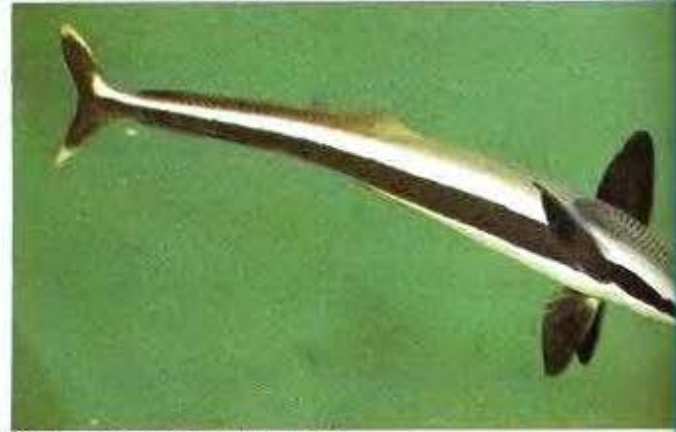
*Rachycentron canadum* 304  
Circumtrop. ~ ~ ~ ~ ~ 26°C sg: 1.022 180 cm 2000L



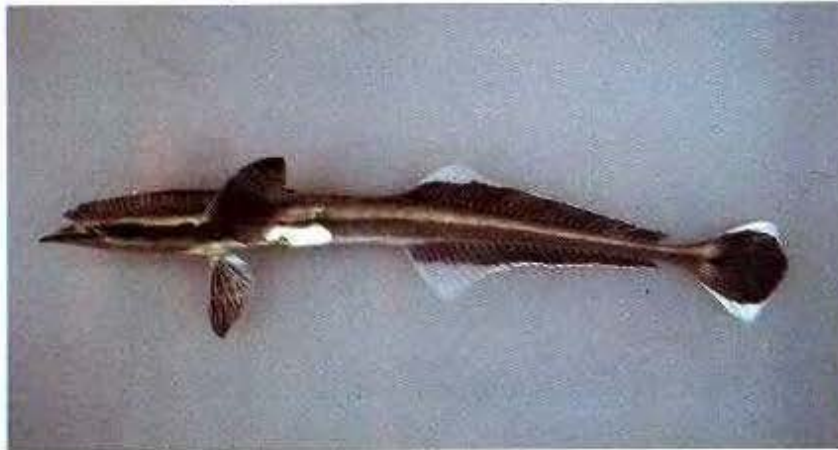
*Rachycentron canadum* 304  
Circumtrop. ~ ~ ~ ~ ~ 26°C sg: 1.022 180 cm 2000L



*Remorina albescens* 305  
1-15 ~ ~ ~ ~ ~ 26°C sg: 1.022 30 cm 300L



*Echeneis naucrates* 305  
Worldwide ~ ~ ~ ~ ~ 26°C sg: 1.022 100 cm 1000L



*Echeneis naucratoides* 305  
Circumtrop. ~ ~ ~ ~ ~ 26°C sg: 1.022 100 cm 1000L



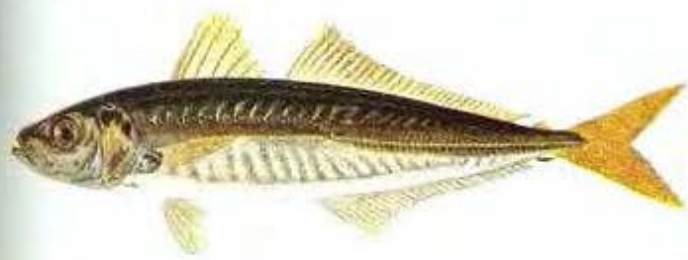
*Echeneis* sp. 305  
Worldwide ~ ~ ~ ~ ~ 26°C sg: 1.022 100 cm 1000L



*Selar crumenophthalmus* 306  
Circumtrop. ~ ● ✖ ☑ ☑ 26°C sg: 1.022 30 cm 300L



*Selar crumenophthalmus* 306  
Circumtrop. ~ ● ✖ ☑ ☑ 26°C sg: 1.022 30 cm 300L



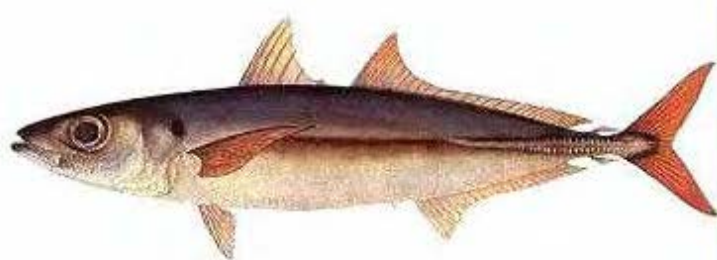
*Decapterus punctatus* 306  
1, 2 ~ ● ✖ ☑ ☑ 25°C sg: 1.022 60 cm 600L



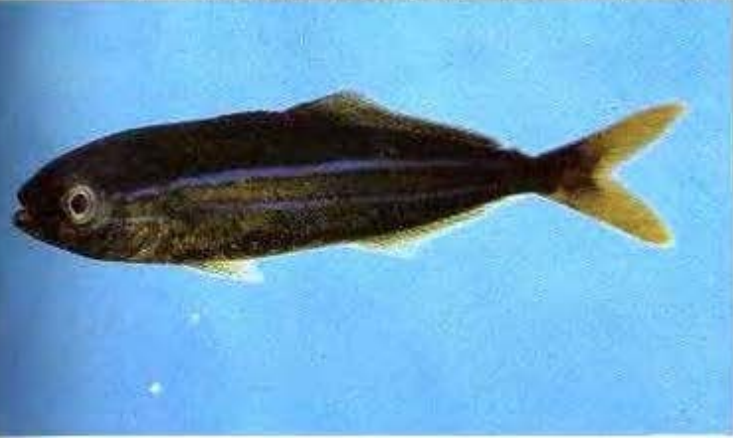
*Trachurus japonicus* 306  
5-7 ~ ● ✖ ☑ ☑ 24°C sg: 1.023 50 cm 500L



*Decapterus muroadsi* 306  
6-7 ~ ● ✖ ☑ ☑ 26°C sg: 1.022 35 cm 400L



*Decapterus tabl* 306  
Circumtrop. ~ ● ✖ ☑ ☑ 26°C sg: 1.022 30 cm 300L



*Elagatis bipinnulata* (juv.) 306  
Circumtrop. ~ ● ✖ ☑ ☑ 26°C sg: 1.022 100 cm 1000L



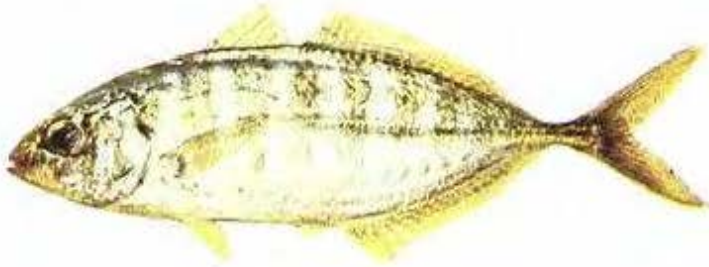
*Elagatis bipinnulata* 306  
Circumtrop. ~ ● ✖ ☑ ☑ 26°C sg: 1.022 100 cm 1000L

*Atule mate* 306

5, 7, 9 ~ ♀ ♂ ✕ 📺 📺 26°C sg: 1.022 30 cm 300L

*Gnathanodon speciosus* 306

5-10 ~ ♀ ♂ ✕ 📺 📺 26°C sg: 1.022 90 cm 1200L

*Carangoides vinctus* 306

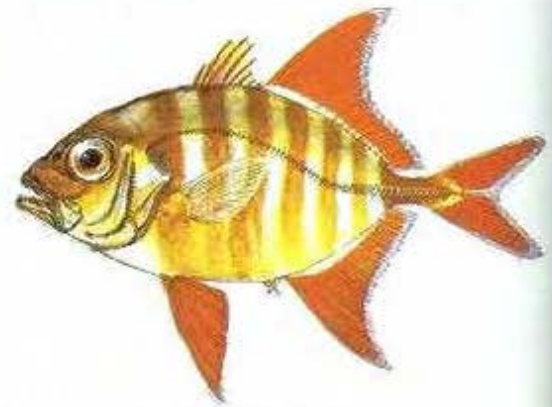
3 ~ ♀ ♂ ✕ 📺 📺 26°C sg: 1.022 30 cm 300L

*Carangoides orthogrammus* 306

5-10 ~ ♀ ♂ ✕ 📺 📺 26°C sg: 1.022 40 cm 400L

*Carangoides equula* 306

5-7 ~ ♀ ♂ ✕ 📺 📺 26°C sg: 1.022 40 cm 400L

*Carangoides dinema* (juv.) 306

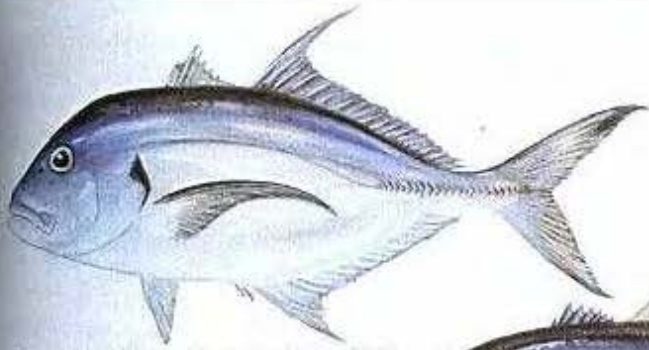
7 ~ ♀ ♂ ✕ 📺 📺 26°C sg: 1.022

*Carangoides* sp. 306

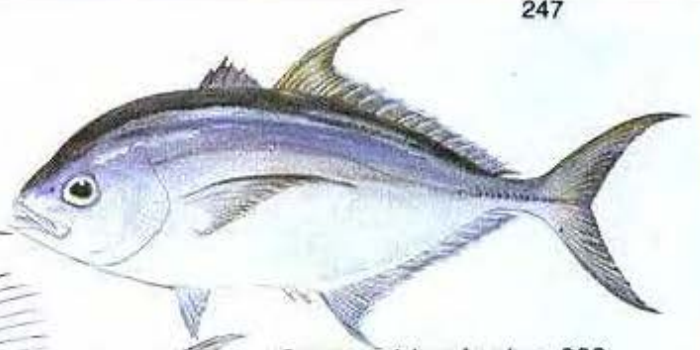
8 ~ ♀ ♂ ✕ 📺 📺 26°C sg: 1.022 65 cm 800L

*Uraspis helvola* 306

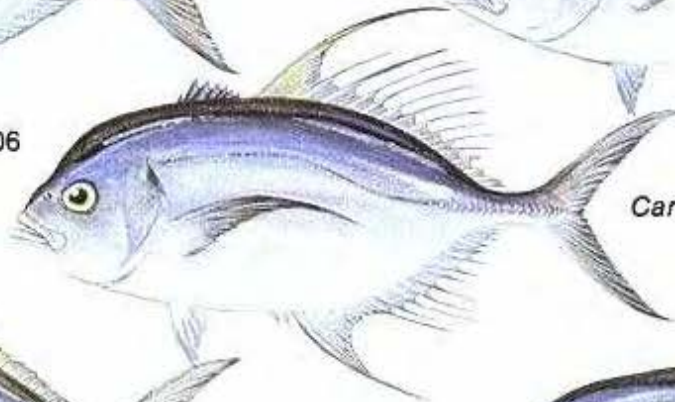
5, 7 ~ ♀ ♂ ✕ 📺 📺 26°C sg: 1.022 75 cm 800L



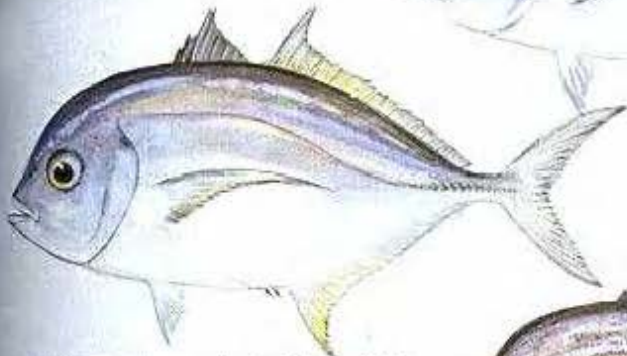
*Carangoides chrysophrys* 306



*Carangoides ferdau* 306



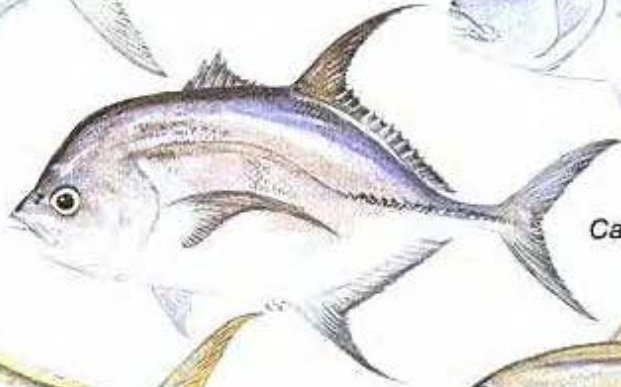
*Carangoides armatus* 306



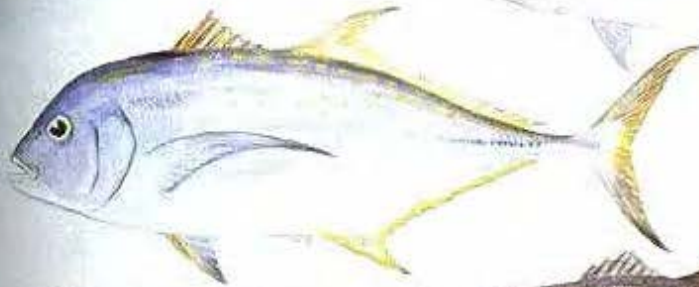
*Carangoides malabaricus* 306



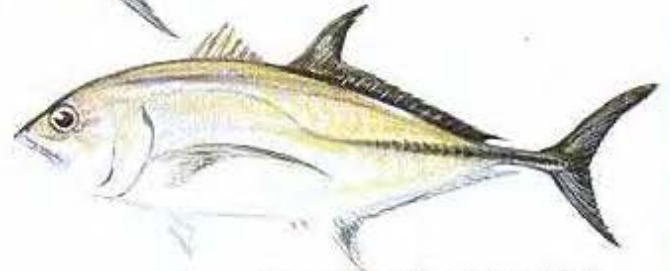
*Caranx ignobilis* 306



*Caranx lugubris* 306



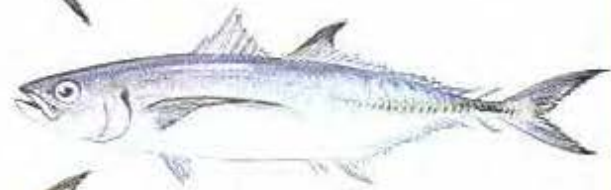
*Carangoides fulvoguttatus* 306



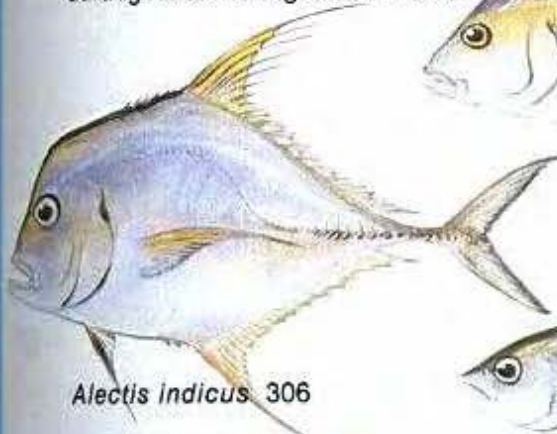
*Caranx sexfasciatus* 306



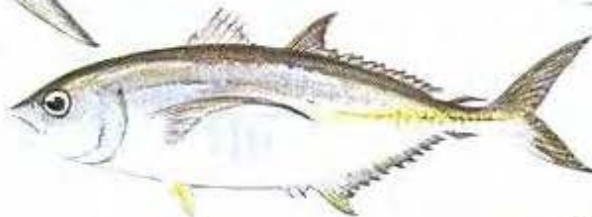
*Caranx melampygus* 306



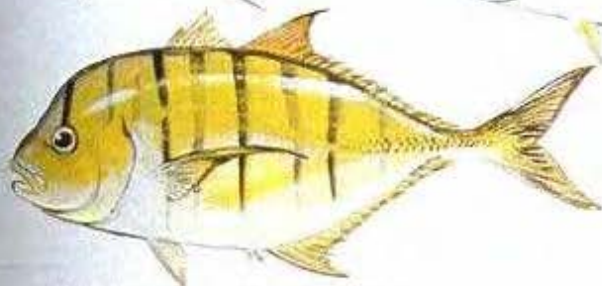
*Decapterus russelli* 306



*Alectis indicus* 306



*Atule mate* 306



*Gnathodon speciosus* 306



*Elagatis bipinnulata* 306



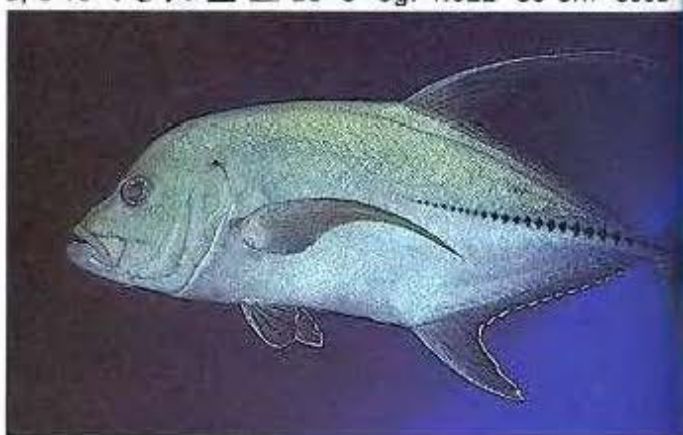
*Caranx melampyus* 306  
3, 6-10 ♀ ♂ ♀ ♀ ♀ 26°C sg: 1.022 80 cm 800L



*Caranx melampyus* 306  
3, 6-10 ♀ ♂ ♀ ♀ ♀ 26°C sg: 1.022 80 cm 800L



*Caranx bucculentus* 306  
7 ♀ ♂ ♀ ♀ ♀ 26°C sg: 1.022 25 cm 300L



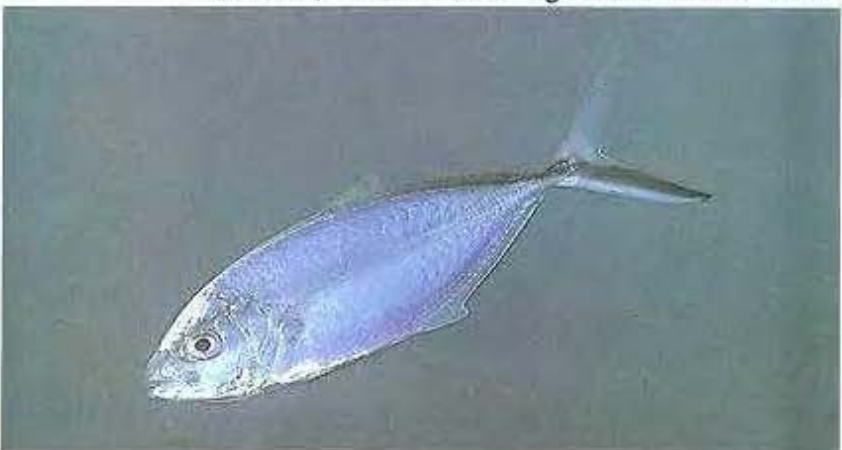
*Caranx lugubris* 306  
Circumtrop. ♀ ♀ ♂ ♀ ♀ 26°C sg: 1.022 93 cm 1000L



*Carangoides* sp. (?armatus) (juv.) 306  
7-9 ♀ ♂ ♀ ♀ ♀ 26°C sg: 1.022 55 cm 300L



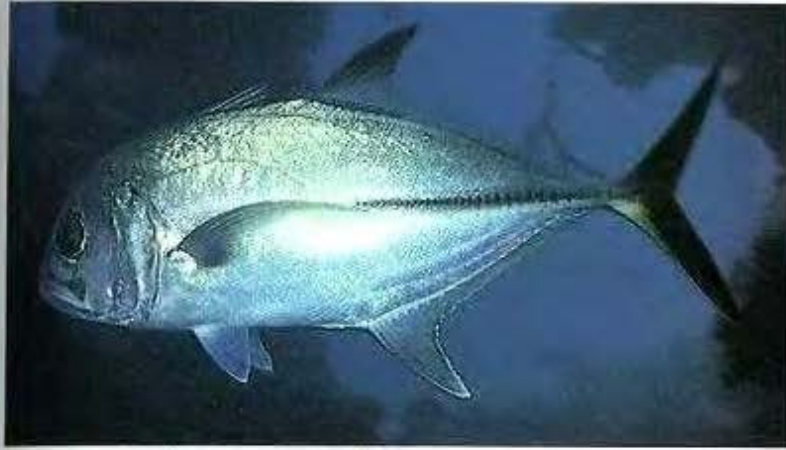
*Caranx crysos* 306  
1-2, 13 ♀ ♂ ♀ ♀ ♀ 25°C sg: 1.023 58 cm 600L



*Carangoides ruber* 306  
1-2 ♀ ♂ ♀ ♀ ♀ 26°C sg: 1.022 28 cm 300L



*Carangoides ferdau* 306  
6-10 ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 60 cm 800L



*Caranx latus* 306  
1-2 ~ ◯ ✕ ◻ 25°C sg: 1.022 75 cm 800L



*Caranx sexfasciatus* 306  
3, 6-10 ~ ◯ ✕ ◻ 26°C sg: 1.022 85 cm 1000L



*Caranx ignobilis* 306  
7-10 ~ ~ ◯ ✕ ◻ 26°C sg: 1.022 100 cm 1000L



*Caranx hippos* and *C. caballus* 306  
Circumtrop. ~ ◯ ✕ ◻ 26°C sg: 1.022 90 cm 1000L



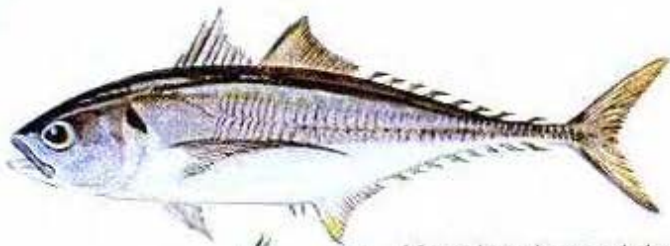
*Carangoides coeruleopinnatus* 306  
7-9 ~ ~ ◯ ✕ ◻ 26°C sg: 1.022 40 cm 400L



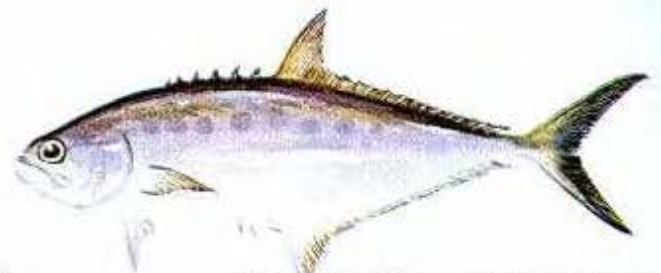
*Carangoides fulvoguttatus* 306  
7-10 ~ ~ ◯ ✕ ◻ 26°C sg: 1.022 100 cm 1000L



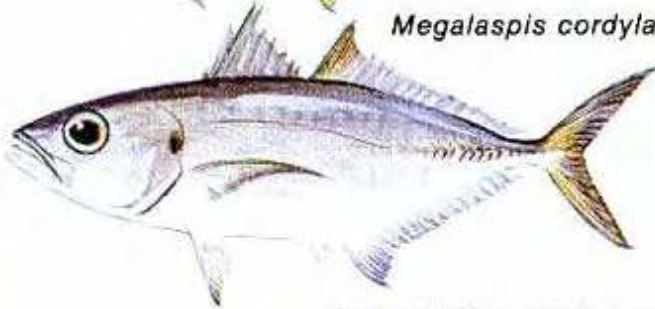
*Carangoides bartholomei* 306  
1-2 ~ ~ ◯ ✕ ◻ 26°C sg: 1.022 100 cm 1000L



*Megalaspis cordyla* 306



*Scomberoides commersonianus* 306



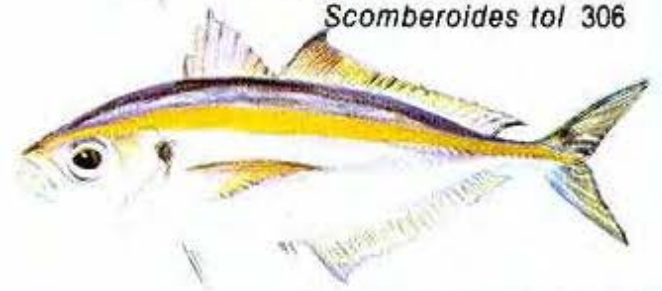
*Selar crumenophthalmus* 306



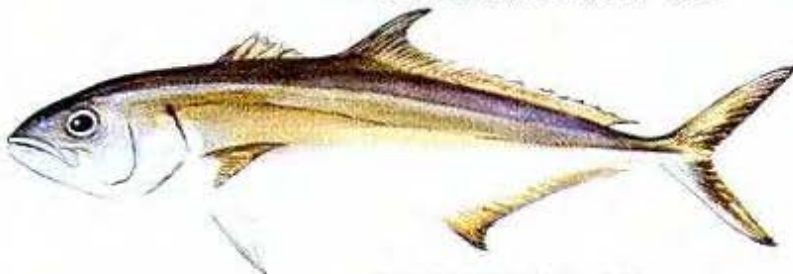
*Scomberoides tol* 306



*Scomberoides lysan* 306



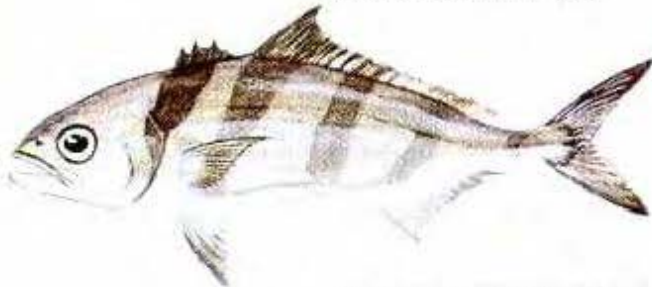
*Selaroides leptolepis* 306



*Seriola dumerill* 306



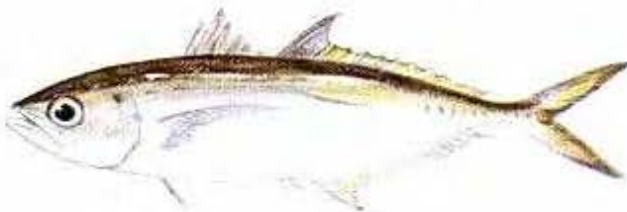
*Seriola rivoliana* 306



*Seriolina nigrofasciata* 306



*Trachinotus baillonii* 306



*Trachurus indicus* 306

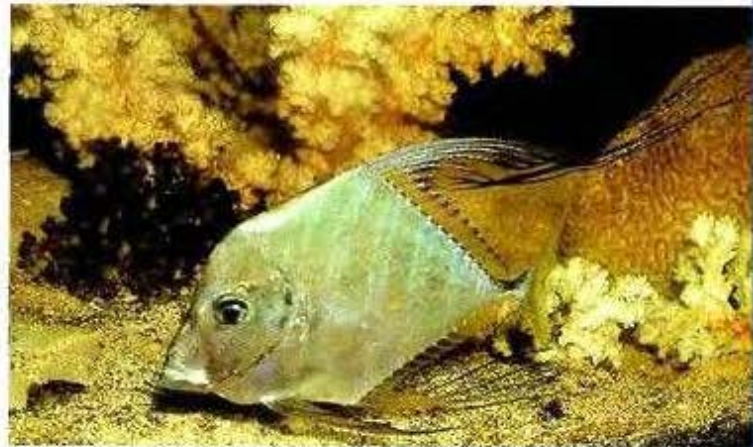


*Uraspis helvola* 306

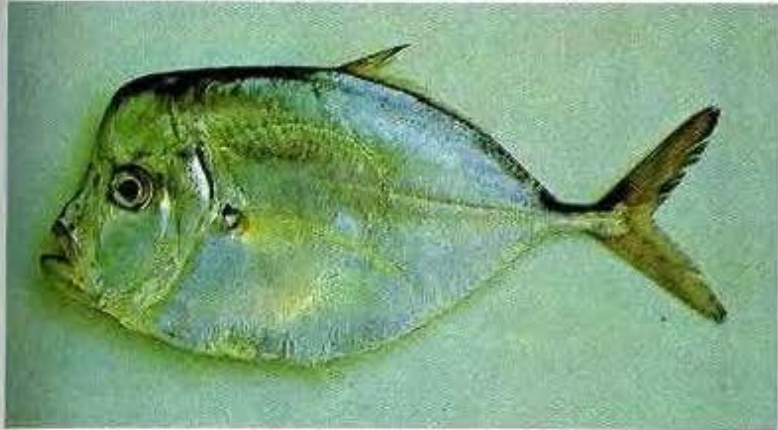




*Alectis ciliaris* 306 1200L  
Circumtrop. ♀ ♂ ♀ ♂ ♀ ♂ ♀ ♂ 26°C sg: 1.022 110 cm



*Alectis indicus* 306 500L  
5, 7 ♀ ♂ ♀ ♂ ♀ ♂ ♀ ♂ 26°C sg: 1.022 50 cm 500L



*Selene setapinnis* 306 300L  
2 ♀ ♂ ♀ ♂ ♀ ♂ ♀ ♂ 26°C sg: 1.022 30 cm 300L



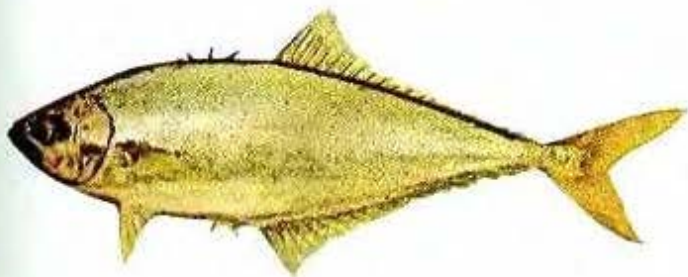
*Selene brevoortii* 306 300L  
3 ♀ ♂ ♀ ♂ ♀ ♂ ♀ ♂ 26°C sg: 1.022 30 cm 300L



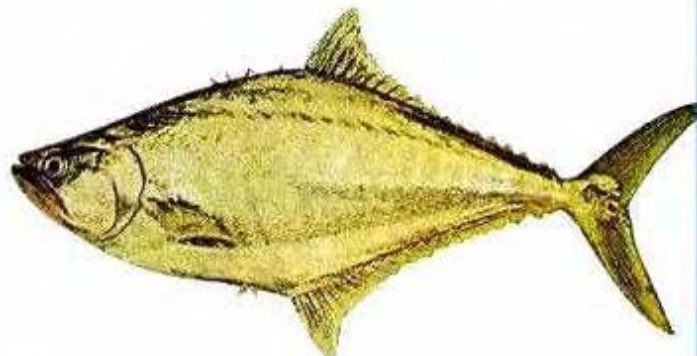
*Scomberoides lysan* 306 600L  
6-9 ♀ ♂ ♀ ♂ ♀ ♂ ♀ ♂ 26°C sg: 1.022 60 cm 600L



*Selene vomer* 306 300L  
1-2, 13-14 ♀ ♂ ♀ ♂ ♀ ♂ ♀ ♂ 26°C sg: 1.022 30 cm 300L



*Oligoplites saurus* 306 300L  
2-3 ♀ ♂ ♀ ♂ ♀ ♂ ♀ ♂ 26°C sg: 1.022 30 cm 300L



*Oligoplites altus* 306 300L  
3 ♀ ♂ ♀ ♂ ♀ ♂ ♀ ♂ 26°C sg: 1.022 31 cm 300L

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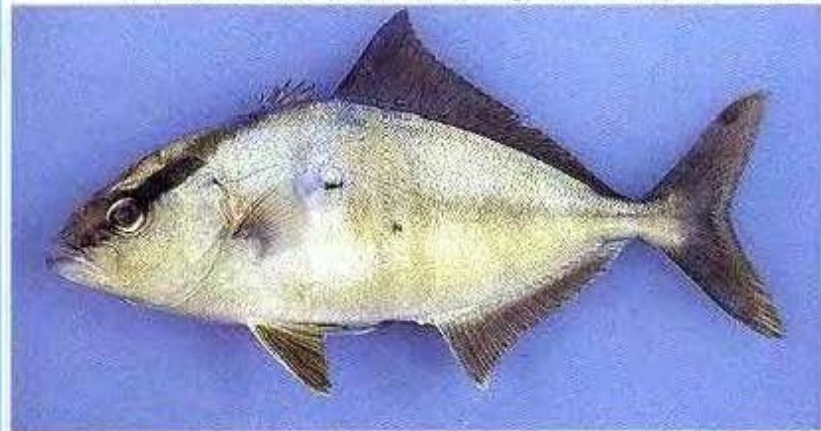
*Seriola hippos* 306

7-8 ~ ~ ~ ~ ~ 26°C sg: 1.022 100 cm 1000L

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*Seriola lalandi dorsalis* 306

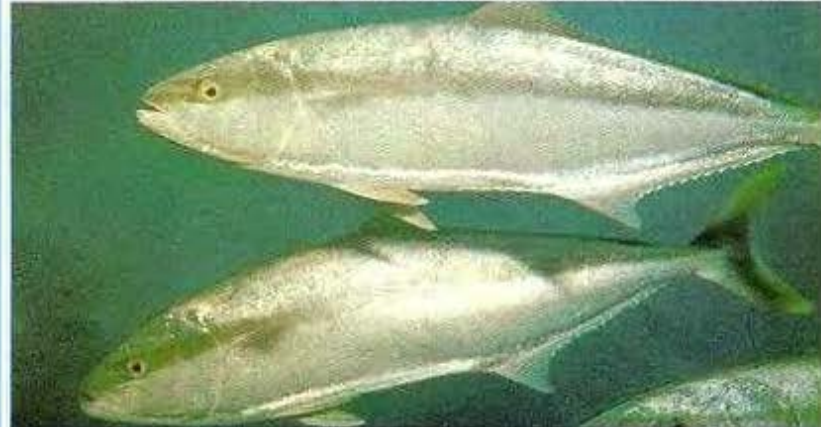
3, 4 ~ ~ ~ ~ ~ 25°C sg: 1.022 90 cm 1000L

*Seriola rivollana* 306

Circumtrop. ~ ~ ~ ~ ~ 26°C sg: 1.022 100 cm 1000L

*Seriola rivollana* 306

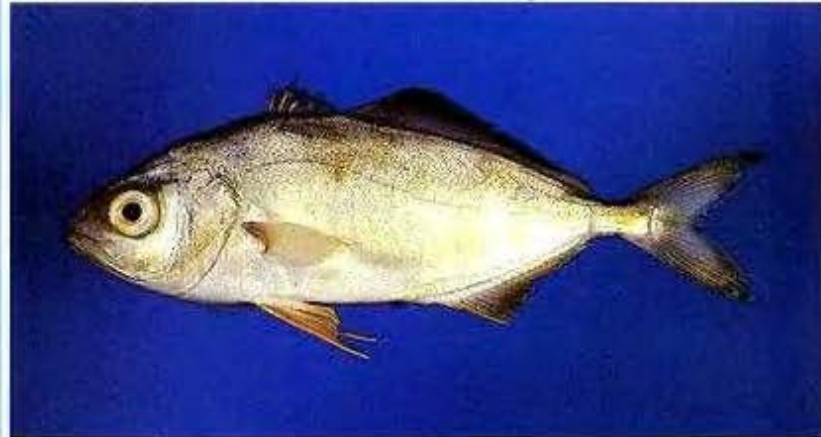
Circumtrop. ~ ~ ~ ~ ~ 26°C sg: 1.022 100 cm 1000L

*Seriola lalandi lalandi* 306

7-8, 11-12 ~ ~ ~ ~ ~ 23°C sg: 1.024 90 cm 1000L

*Seriola quinqueradiata* 306

5 ~ ~ ~ ~ ~ 23°C sg: 1.024 100 cm 1000L

*Seriola dumerilli* (juv.) 306

Circumtrop. ~ ~ ~ ~ ~ 24°C sg: 1.022 180 cm 2000L

*Seriola dumerilli* 306

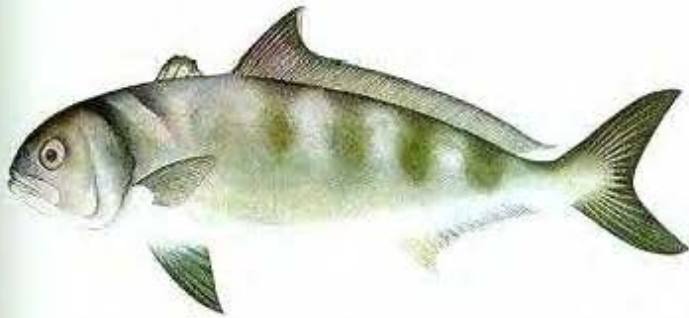
Circumtrop. ~ ~ ~ ~ ~ 24°C sg: 1.022 180 cm 2000L



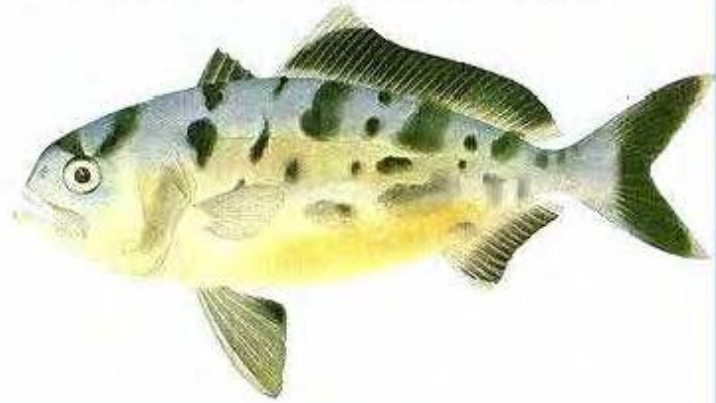
*Naucrates ductor* 306  
Circumtrop. ♀ ♂ ♀ ♂ ♀ ♂ 26°C sg: 1.022 60 cm 600L



*Seriola zonata* 306  
2 ♀ ♂ ♀ ♂ ♀ ♂ 26°C sg: 1.022 80 cm 800L



*Seriolina nigrofasciata* 306  
Circumtrop. ♀ ♂ ♀ ♂ ♀ ♂ 26°C sg: 1.022 90 cm 1000L



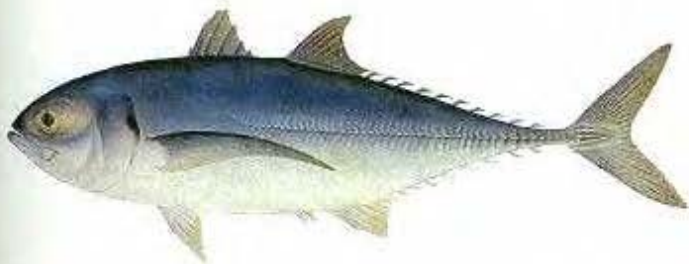
*Seriolina nigrofasciata* (juv.) 306  
Circumtrop. ♀ ♂ ♀ ♂ ♀ ♂ 26°C sg: 1.022 90 cm 1000L



*Chloroscombrus chrysurus* 306  
1-2 ♀ ♂ ♀ ♂ ♀ ♂ 26°C sg: 1.022 30 cm 300L



*Pantolabus radiatus* 306  
8, 12 ♀ ♂ ♀ ♂ ♀ ♂ 26°C sg: 1.022 25 cm 300L



*Megalaspis cordyla* 306  
6-9 ♀ ♂ ♀ ♂ ♀ ♂ 26°C sg: 1.022 95 cm 1000L



*Pseudocaranx dentex* 306  
5, 7 ♀ ♂ ♀ ♂ ♀ ♂ 25°C sg: 1.022 95 cm 1000L



*Trachinotus goodei* 306  
1, 2 ~ ◁ ⊗ ◻ 26°C sg: 1.022 32 cm 300L



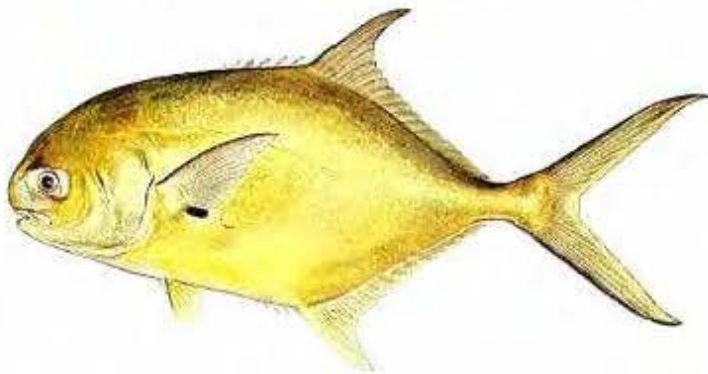
*Trachinotus rhodopus* 306  
3 ~ ◁ ⊗ ◻ 26°C sg: 1.022 60 cm 600L



*Trachinotus baillonii* 306  
7-10 ~ ◁ ⊗ ◻ 26°C sg: 1.022 60 cm 600L



*Trachinotus blochii* 306  
7, 9 ~ ◁ ⊗ ◻ 26°C sg: 1.022 60 cm 600L



*Trachinotus kennedyi* 306  
3 ~ ◁ ⊗ ◻ 26°C sg: 1.022 61 cm 600L



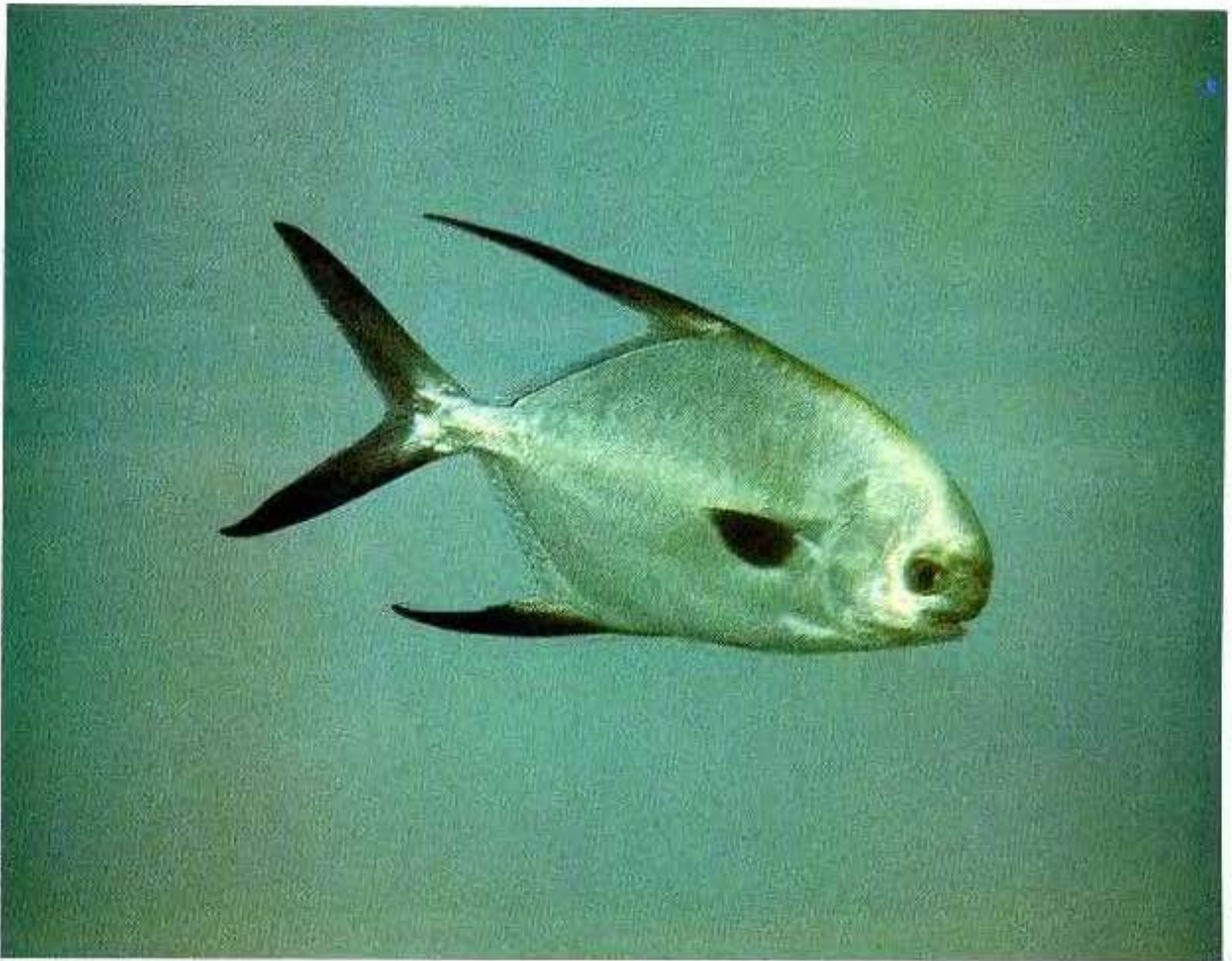
*Trachinotus carolinus* 306  
1, 2 ~ ◁ ⊗ ◻ 26°C sg: 1.022 60 cm 600L



*Trachinotus falcatus* 306  
1-2, 13-14 ~ ◁ ⊗ ◻ 26°C sg: 1.022 1500L 140 cm



*Trachinotus blochii* 306  
7, 9 ~ ◁ ⊗ ◻ 26°C sg: 1.022 60 cm 600L

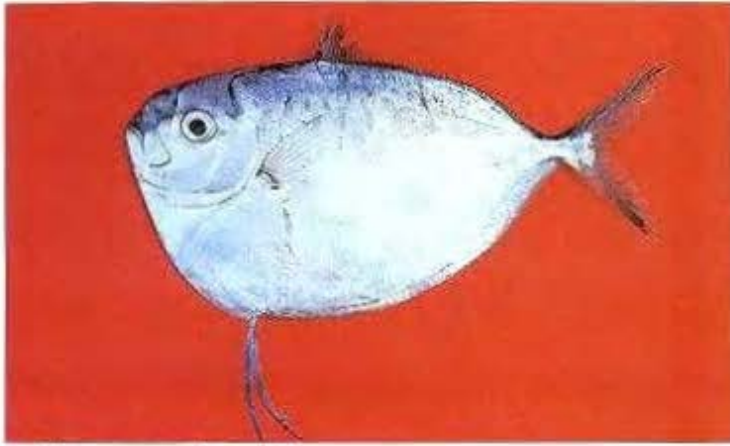


*Trachinotus blochii* 306  
7, 9 ~ ◯ ✕ ◻ 26°C sg: 1.022 60 cm 600L

*Trachinotus goodell* 306  
1, 2 ~ ◯ ✕ ◻ 26°C sg: 1.022 32 cm 300L



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*Mene maculata* 310  
5-7, 9 ~ ♀ ♂ ♀ ♀ ♀ 26°C sg: 1.022 30 cm 300L

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*Secutor ruconius* 311  
7, 9 ~ ♀ ♂ ♀ ♀ ♀ 26°C sg: 1.022 10 cm 100L



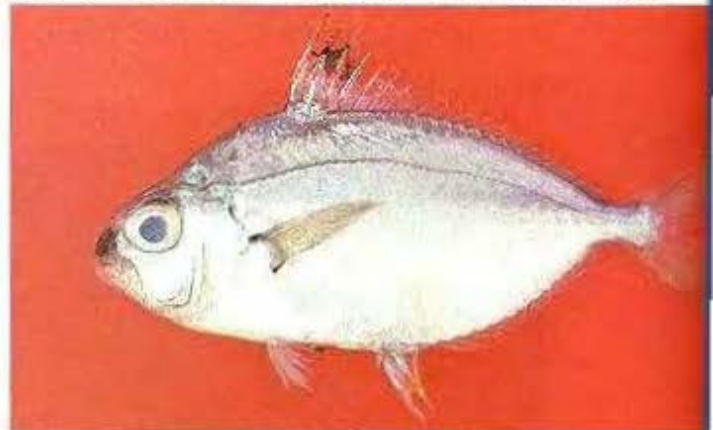
*Gazza minuta* 311  
7, 9 ~ ♀ ♂ ♀ ♀ ♀ 26°C sg: 1.022 15 cm 200L



*Leiognathus fasciata* 311  
7, 9 ~ ♀ ♂ ♀ ♀ ♀ 26°C sg: 1.022 20 cm 200L



*Leiognathus nuchalis* 311  
5, 7 ~ ♀ ♂ ♀ ♀ ♀ 26°C sg: 1.022 17 cm 200L



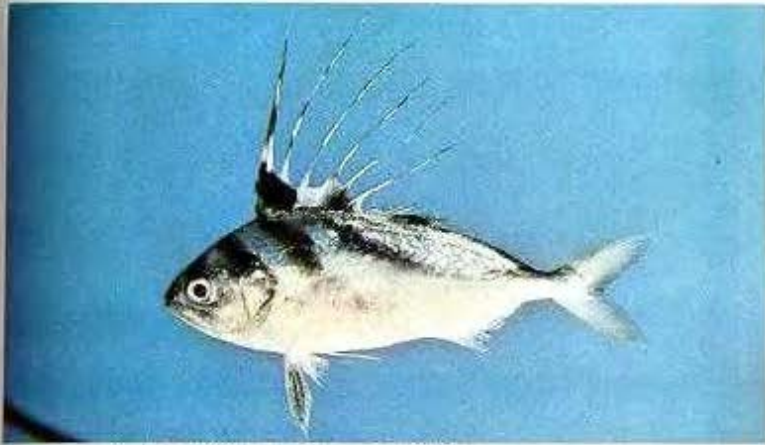
*Leiognathus nuchalis* 311  
5, 7 ~ ♀ ♂ ♀ ♀ ♀ 26°C sg: 1.022 17 cm 200L



*Leiognathus equulus* 311  
7, 9-10 ~ ♀ ♂ ♀ ♀ ♀ 26°C sg: 1.022 30 cm 300L



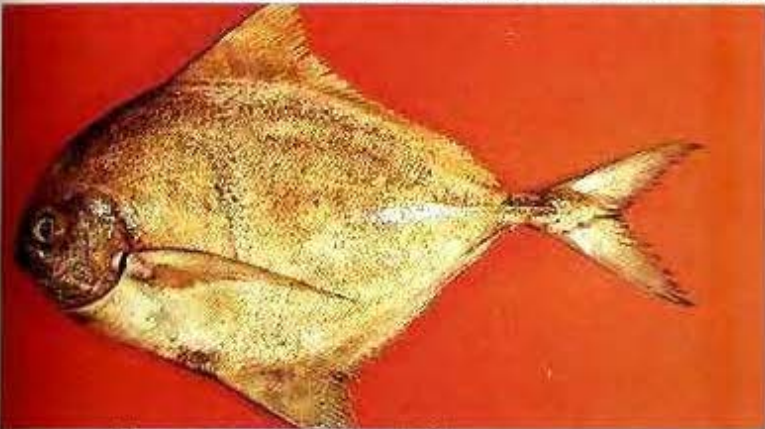
*Leiognathus rivulatus* 311  
5, 7 ~ ♀ ♂ ♀ ♀ ♀ 26°C sg: 1.022 10 cm 100L



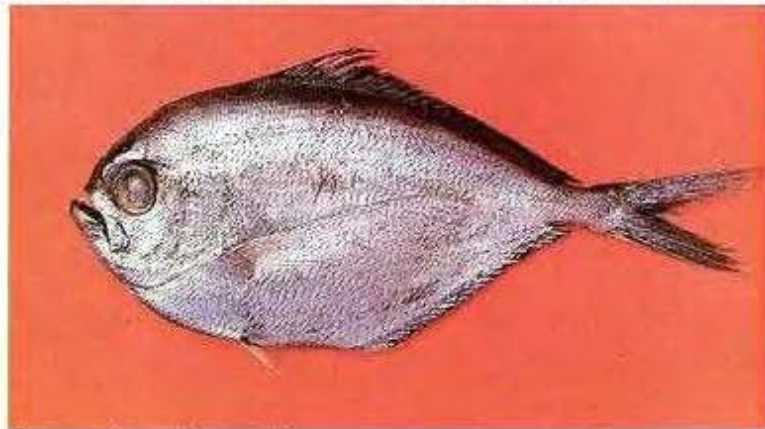
*Nematistius pectoralis* 307  
3 ~ ♀ ♂ ♀ ♂ ♀ ♂ 26°C sg: 1.022 122 cm 1200L



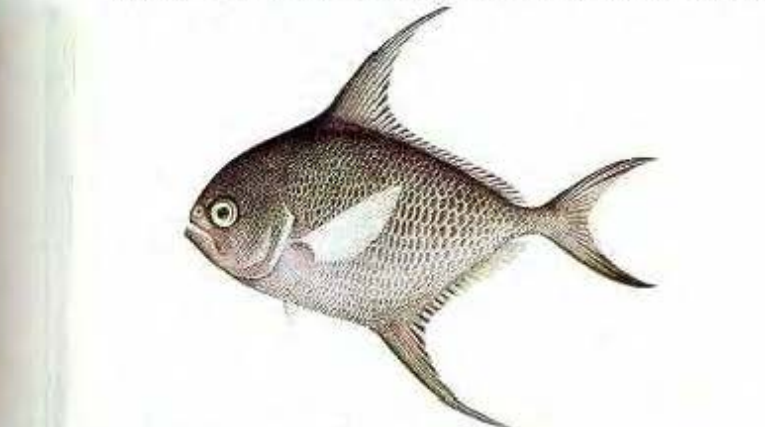
*Coryphaena hippurus* 308  
Circumtrop. ♀ ♂ ♀ ♂ ♀ ♂ 26°C sg: 1.022 150 cm 1500L



*Parastromateus niger* 309  
7-8 ~ ♀ ♂ ♀ ♂ ♀ ♂ 26°C sg: 1.022 55 cm 600L



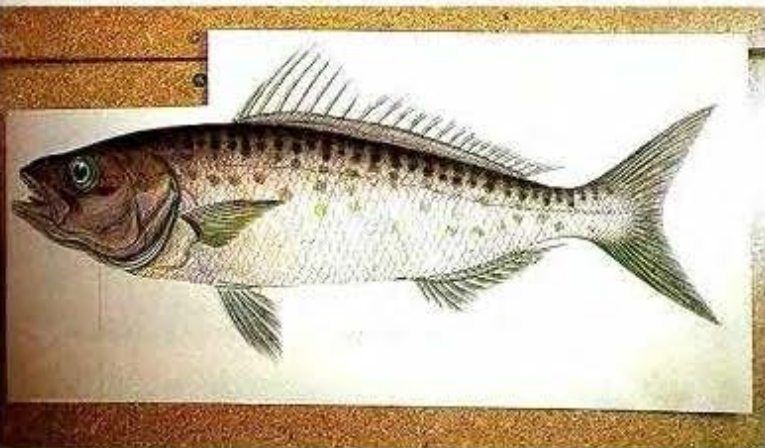
*Brama japonicus* 312  
4-5 ~ ♀ ♂ ♀ ♂ ♀ ♂ 23°C sg: 1.024 122 cm 1200L



*Taractichthys steindachneri* 312  
3, 6-9 ~ ♀ ♂ ♀ ♂ ♀ ♂ 26°C sg: 1.022 60 cm 600L



*Pterycombus petersii* 312  
6-9, 13 ~ ♀ ♂ ♀ ♂ ♀ ♂ 23°C sg: 1.024 31 cm 300L



*Arripes trutta* 314  
11-12 ~ ♀ ♂ ♀ ♂ ♀ ♂ 22°C sg: 1.024 76 cm 800L

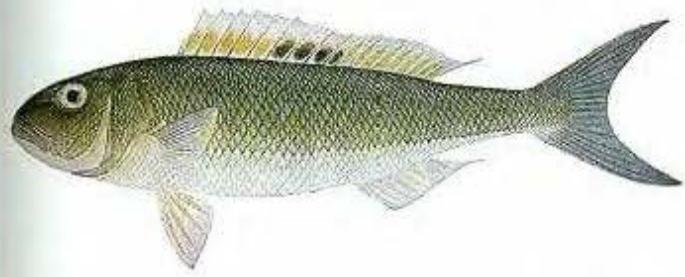


*Arripes georgianus* 314  
12 ~ ♀ ♂ ♀ ♂ ♀ ♂ 23°C sg: 1.024 70 cm 800L



*Lutjanus biguttatus* 316  
6-7 ♀ ~ ~ ~ ♀ ~ ~ ~ 26°C sg: 1.022 28 cm 300L

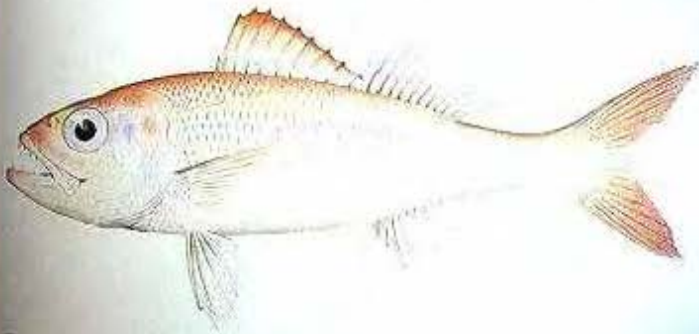




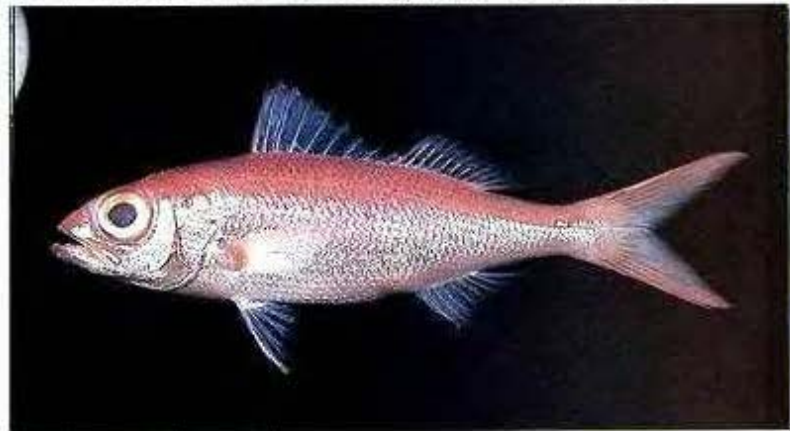
*Aprion virescens* 316  
6-9 ~ ♀ ♂ ♀ ♂ ♀ ♂ 26°C sg: 1.022 100 cm 1000L



*Paracaesio xanthura* 316  
12 ~ ♀ ♂ ♀ ♂ ♀ ♂ 23°C sg: 1.023 38 cm 400L



*Etelis marshi* 316  
6, 7 ~ ♀ ♂ ♀ ♂ ♀ ♂ 26°C sg: 1.022 90 cm 1000L



*Etelis oculatus* 316  
2 ~ ♀ ♂ ♀ ♂ ♀ ♂ 26°C sg: 1.022 91 cm 1000L



*Apsilus dentatus* 316  
2 ~ ♀ ♂ ♀ ♂ ♀ ♂ 26°C sg: 1.022 46 cm 500L



*Rhomboplites aurorubens* 316  
1, 2 ~ ♀ ♂ ♀ ♂ ♀ ♂ 26°C sg: 1.022 60 cm 600L



*Apsilus fuscus* 316  
13 ~ ♀ ♂ ♀ ♂ ♀ ♂ 26°C sg: 1.022 75 cm 800L



*Aphareus furcatus* 316  
7 ♀ ~ ~ ~ ~ ~ 26°C sg: 1.022 40 cm 400L



*Lutjanus bengalensis* 316  
9 ♀ ~ ~ ~ ~ ~ 26°C sg: 1.022 13 cm 150L



*Lutjanus notatus* 316  
9 ♀ ~ ~ ~ ~ ~ 26°C sg: 1.022 22 cm 200L



*Lutjanus argentimaculatus* 316  
6-10 ♀ ~ ~ ~ ~ ~ 26°C sg: 1.022 60 cm 600L



*Lutjanus decussatus* 316  
7 ♀ ~ ~ ~ ~ ~ 26°C sg: 1.022 30 cm 300L



*Lutjanus kasmira* 316  
5-10 ♀ ~ ~ ~ ~ ~ 26°C sg: 1.022 40 cm 400L



*Lutjanus ehrenbergii* 316  
7-10 ♀ ~ ~ ~ ~ ~ 26°C sg: 1.022 30 cm 300L



*Lutjanus fulviflammus* 316  
7-10 ♀ ~ ~ ~ ~ ~ 26°C sg: 1.022 30 cm 300L



*Lutjanus carponotatus* 316  
6-8, 12 ♀ ~ ~ ~ ~ ~ 25°C sg: 1.022 40 cm 400L



*Lutjanus carponotatus* 316  
6-8, 12 ♀ ~ ~ ~ ~ ~ 25°C sg: 1.022 40 cm 400L



*Lutjanus lutjanus* 316  
5-9 ♀ ~ ~ ~ ~ ~ 26°C sg: 1.022 25 cm 300L



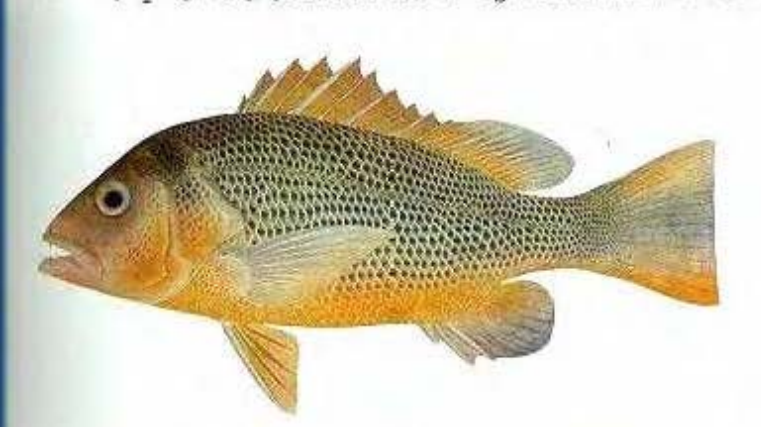
*Lutjanus vitta* 316  
7, 9 ♀ ~ ~ ~ ~ ~ 26°C sg: 1.022 37.5 cm 400L



*Lutjanus rufolineatus* 316  
7 ♀ ~ ~ ~ ~ ~ 26°C sg: 1.022 22 cm 200L



*Lutjanus quinquelineatus* 316  
7, 9 ♀ ~ ~ ~ ~ ~ 26°C sg: 1.022 40 cm 400L



*Lutjanus argentimaculatus* 316  
6-10 ♀ ~ ~ ~ ~ ~ 26°C sg: 1.022 60 cm 600L



*Lutjanus adetii* 316  
6-7 ♀ ~ ~ ~ ~ ~ 26°C sg: 1.022 40 cm 400L

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*Lutjanus bohar* 316  
7-10 ♀ ~ ~ ~ ♂ ~ ~ ~ 26°C sg: 1.022 90 cm 1000L



*Lutjanus monostigma* 316  
7-10 ♀ ~ ~ ~ ♂ ~ ~ ~ 26°C sg: 1.022 60 cm 600L



*Lutjanus madras* 316  
9 ♀ ~ ~ ~ ♂ ~ ~ ~ 26°C sg: 1.022 20 cm 200L



*Lutjanus gibbus* 316  
7-10 ♀ ~ ~ ~ ♂ ~ ~ ~ 26°C sg: 1.022 40 cm 400L

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*Lutjanus fulvus* 316  
6-9 ♀ ~ ~ ~ ♂ ~ ~ ~ 26°C sg: 1.022 60 cm 600L



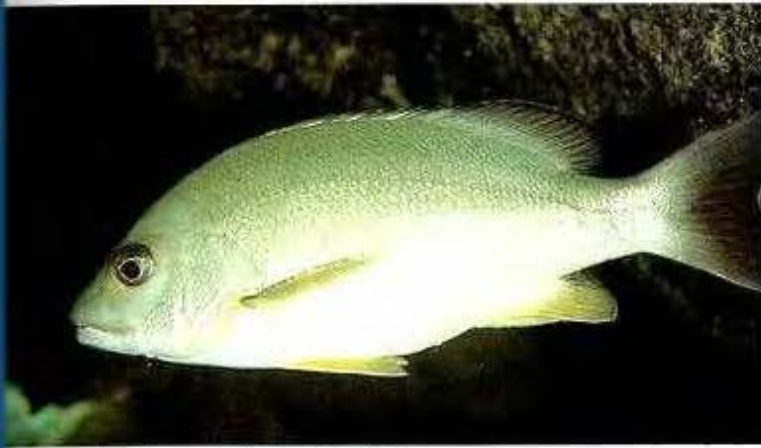
*Lutjanus lunulatus* 316  
8 ♀ ~ ~ ~ ♂ ~ ~ ~ 26°C sg: 1.022 25 cm 300L



*Lutjanus biguttatus* 316  
6-7 ♀ ~ ~ ~ ♂ ~ ~ ~ 26°C sg: 1.022 28 cm 300L



*Lutjanus gibbus* 316  
7-10 ♀ ~ ~ ~ ♂ ~ ~ ~ 26°C sg: 1.022 50 cm 500L



*Lutjanus vaigiensis* 316  
9 ♀ ~ ~ ~ ♂ ✖ ☒ 26°C sg: 1.022 60 cm 600L



*Lutjanus bohar* 316  
7, 9 ♀ ~ ~ ~ ♂ ✖ ☒ 26°C sg: 1.022 90 cm 1000L



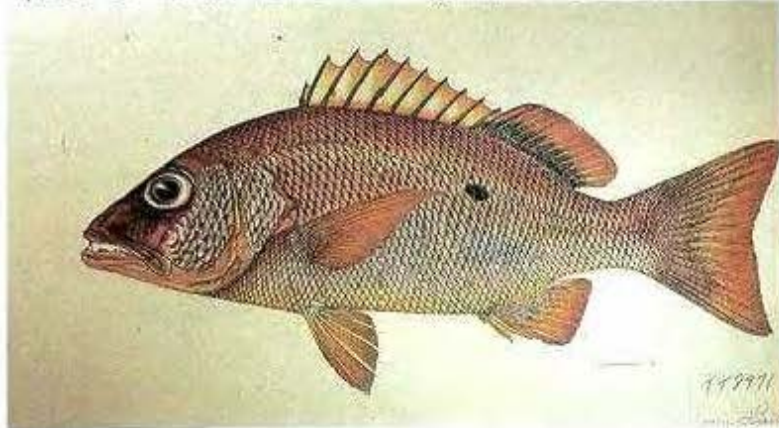
*Lutjanus russelli* 316  
7, 9 ♀ ~ ~ ~ ♂ ✖ ☒ 26°C sg: 1.022 50 cm 500L



*Lutjanus russelli* 316  
7, 9 ♀ ~ ~ ~ ♂ ✖ ☒ 26°C sg: 1.022 50 cm 500L



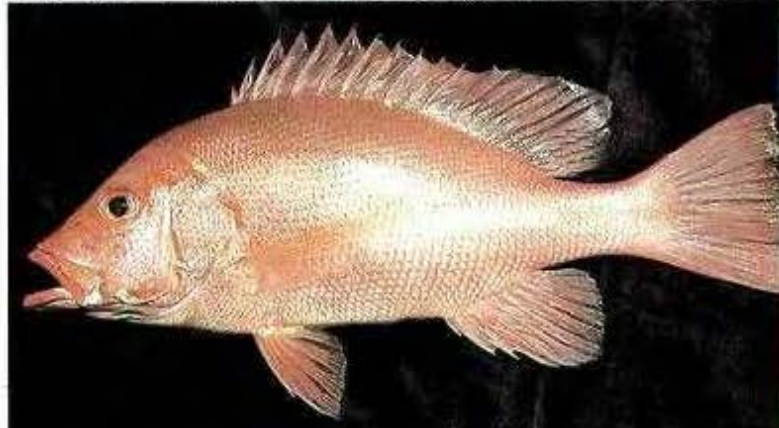
*Lutjanus stellatus* 316  
7 ♀ ~ ~ ~ ♂ ✖ ☒ 26°C sg: 1.022 35 cm 400L



*Lutjanus monostigma* 316  
7, 9, 10 ♀ ~ ~ ~ ♂ ✖ ☒ 26°C sg: 1.022 60 cm 600L

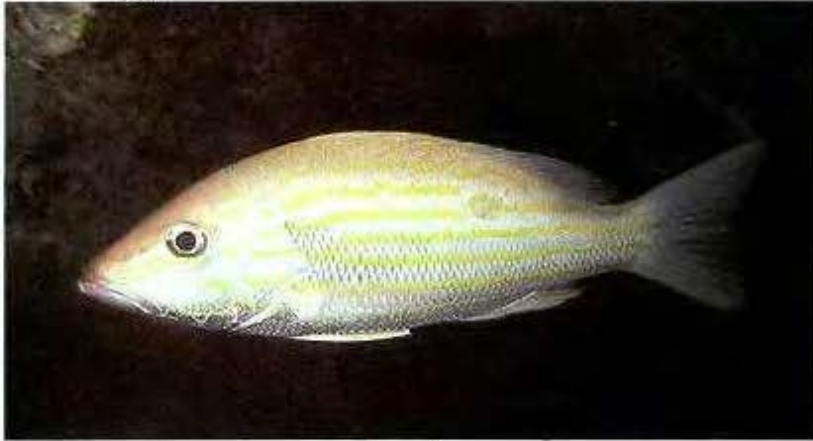


*Lutjanus timorensis* 316  
7 ♀ ~ ~ ~ ♂ ✖ ☒ 26°C sg: 1.022 20 cm 200L



*Lutjanus malabaricus* 316  
9 ♀ ~ ~ ~ ♂ ✖ ☒ 26°C sg: 1.022 47.5 cm 500L

264

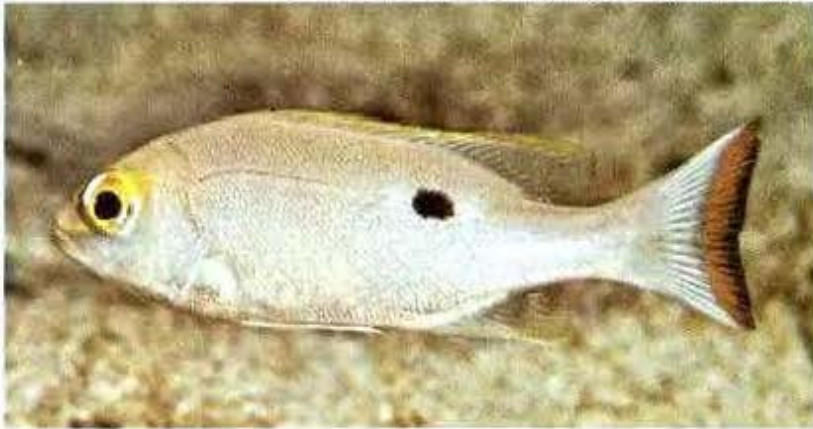


*Lutjanus synagris* 316  
2 ♀ ~ ~ ~ ~ ~ 26°C sg: 1.022 35 cm 400L

#200



*Lutjanus jocu* 316  
1, 2 ♀ ~ ~ ~ ~ ~ 24°C sg: 1.023 100 cm 1000L



*Lutjanus mahogoni* 316  
2 ♀ ~ ~ ~ ~ ~ 26°C sg: 1.022 36 cm 400L



*Lutjanus mahogoni* 316  
2 ♀ ~ ~ ~ ~ ~ 26°C sg: 1.022 36 cm 400L



*Lutjanus vivanus* 316  
2 ♀ ~ ~ ~ ~ ~ 26°C sg: 1.022 90 cm 1000L



*Lutjanus viridis* 316  
3 ♀ ~ ~ ~ ~ ~ 26°C sg: 1.022 30 cm 300L



*Lutjanus guttatus* (juv) 316  
3 ♀ ~ ~ ~ ~ ~ 26°C sg: 1.022 60 cm 600L



*Lutjanus guttatus* 316  
3 ♀ ~ ~ ~ ~ ~ 26°C sg: 1.022 60 cm 600L



*Lutjanus campechanus* 316  
2 ♀ ~ ~ ~ ♂ ~ ~ ~ 26°C sg: 1.022 60 cm 600L



*Lutjanus analis* 316  
1, 2 ♀ ~ ~ ~ ♂ ~ ~ ~ 24°C sg: 1.023 65 cm 800L



*Lutjanus buccanella* 316  
1, 2 ♀ ~ ~ ~ ♂ ~ ~ ~ 26°C sg: 1.022 75 cm 800L



*Lutjanus buccanella* (juv.) 316  
1, 2 ♀ ~ ~ ~ ♂ ~ ~ ~ 26°C sg: 1.022 75 cm 800L



*Lutjanus apodus* 316  
1, 2 ♀ ~ ~ ~ ♂ ~ ~ ~ 24°C sg: 1.023 60 cm 600L



*Lutjanus apodus* 316  
1, 2 ♀ ~ ~ ~ ♂ ~ ~ ~ 24°C sg: 1.023 60 cm 600L



*Lutjanus cyanopterus* 316  
2 ♀ ~ ~ ~ ♂ ~ ~ ~ 26°C sg: 1.022 150 cm 1500L



*Lutjanus griseus* 316  
1, 2 ♀ ~ ~ ~ ♂ ~ ~ ~ 24°C sg: 1.023 60 cm 600L

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*Lutjanus rivulatus* 316  
7 ♀ ~ ~ ~ ♂ \* ♀ 26°C sg: 1.022 70 cm 800L

#202



*Lutjanus argentimaculatus* 316  
7-10 ♀ ~ ~ ~ ♂ \* ♀ 26°C sg: 1.022 60 cm 600L



*Lutjanus erythropterus* 316  
6-10 ♀ ~ ~ ~ ♂ \* ♀ 26°C sg: 1.022 60 cm 600L



*Lutjanus erythropterus* (juv.) 316  
6-10 ♀ ~ ~ ~ ♂ \* ♀ 26°C sg: 1.022 60 cm 600L



*Lutjanus gibbus* 316  
7-10 ♀ ~ ~ ~ ♂ \* ♀ 26°C sg: 1.022 50 cm 500L



*Lutjanus* sp. (*lemniscatus*?) 316  
7, 9 ♀ ~ ~ ~ ♂ \* ♀ 26°C sg: 1.022 45 cm 500L



*Lutjanus semicinctus* 316  
7, 9 ♀ ~ ~ ~ ♂ \* ♀ 26°C sg: 1.022 30 cm 300L



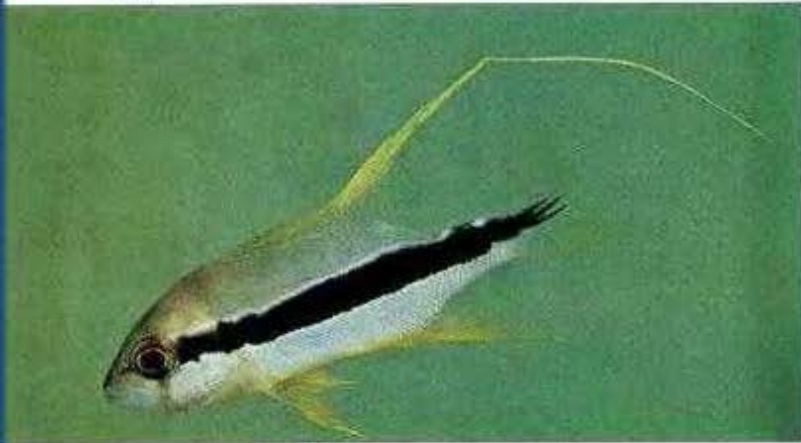
*Lutjanus lemniscatus* 316  
7, 9 ♀ ~ ~ ~ ♂ \* ♀ 26°C sg: 1.022 45 cm 500L





*Symphorichthys spifurus* 316

7 ♀ ~ ~ ~ ~ ~ 26°C sg: 1.022 50 cm 500L



*Symphorichthys spilurus* (juv.) 316  
7 ♀ ~ ~ ~ ~ ~ 26°C sg: 1.022 50 cm 500L



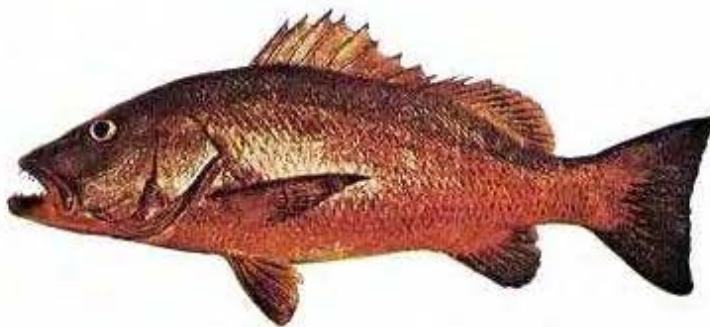
*Symphorichthys spilurus* (adult) 316  
7 ♀ ~ ~ ~ ~ ~ 26°C sg: 1.022 50 cm 500L



*Lutjanus aratus* 316  
3 ♀ ~ ~ ~ ~ ~ 26°C sg: 1.022 75 cm 800L



*Symphorus nematophorus* 316  
7 ♀ ~ ~ ~ ~ ~ 26°C sg: 1.022 80 cm 800L



*Lutjanus novemfasciatus* 316  
3 ♀ ~ ~ ~ ~ ~ 26°C sg: 1.022 120 cm 1200L



*Lutjanus colorado* 316  
3 ♀ ~ ~ ~ ~ ~ 26°C sg: 1.022 75 cm 800L



*Lutjanus peru* 316  
3 ♀ ~ ~ ~ ~ ~ 26°C sg: 1.022 38.5 cm 400L



*Lutjanus peru* 316  
3 ♀ ~ ~ ~ ~ ~ 26°C sg: 1.022 38.5 cm 400L



*Pristipomoides macrophthalmus* 316  
7 ♀ ♂ ✕ ♀ ☐ 26°C sg: 1.022 50 cm 500L



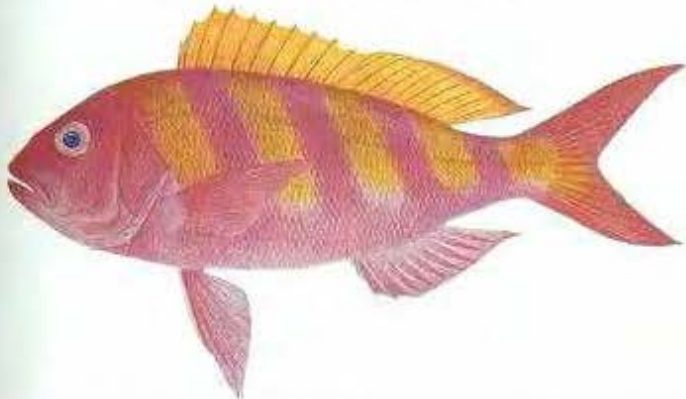
*Ocyurus chrysurus* 316  
1-2 ♀ ♂ ✕ ♀ ☐ 24°C sg: 1.023 60 cm 1000L



*Pristipomoides filamentosus* 316  
7 ♀ ♂ ✕ ♀ ☐ 26°C sg: 1.022 80 cm 800L



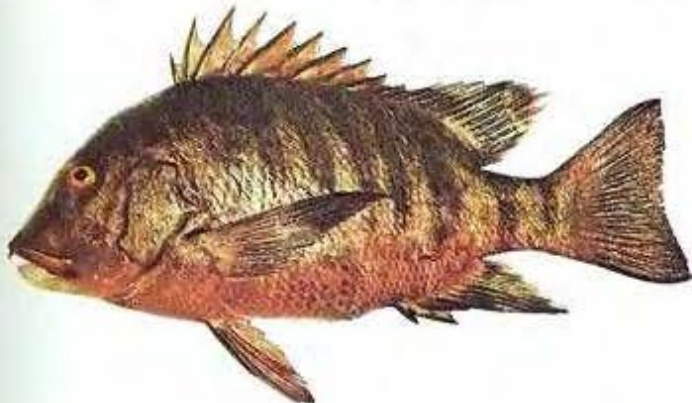
*Pristipomoides multidentis* 316  
7 ♀ ♂ ✕ ♀ ☐ 26°C sg: 1.022 90 cm 1000L



*Tropicidon zonatus* 316  
7 ♀ ♂ ✕ ♀ ☐ 26°C sg: 1.022 30 cm 300L



*Macolor niger* (juv.) 316  
7-10 ♀ ♂ ✕ ♀ ☐ 26°C sg: 1.022 75 cm 800L



*Hoplopagrus guentheri* 316  
3 ♀ ♂ ✕ ♀ ☐ 26°C sg: 1.022 75 cm 800L



*Hoplopagrus guentheri* (juv.) 316  
3 ♀ ♂ ✕ ♀ ☐ 26°C sg: 1.022 75 cm 800L



*Lutjanus sebae* 316  
7, 9 ♀ ~ ~ ~ ~ ~ 26°C sg: 1.022 90 cm 1000L



*Macolor niger* (juv.) 316  
7-10 ♀ ~ ~ ~ ~ ~ 26°C sg: 1.022 75 cm 800L



*Macolor niger* 316  
7-10 ♀ ~ ~ ~ ~ ~ 26°C sg: 1.022 75 cm 800L



*Caesio varilineata* 317  
9 ~ ~ ~ ~ ~ 26°C sg: 1.022 30 cm 300L



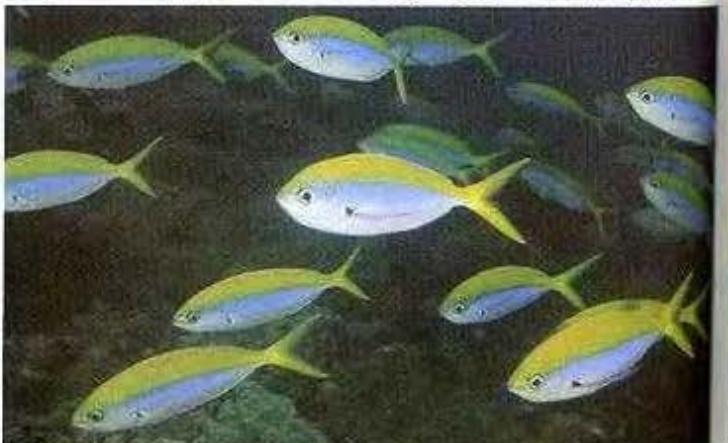
*Lutjanus vitta* 316  
7-8 ♀ ~ ~ ~ ~ ~ 26°C sg: 1.022 37.5 cm 400L



*Macolor niger* (juv.) 316  
7-10 ♀ ~ ~ ~ ~ ~ 26°C sg: 1.022 75 cm 800L

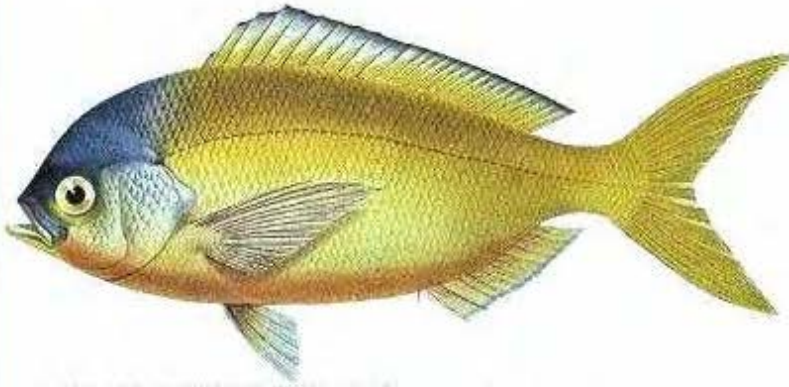


*Symphorus nematophorus* 316  
7 ♀ ~ ~ ~ ~ ~ 26°C sg: 1.022 80 cm 800L

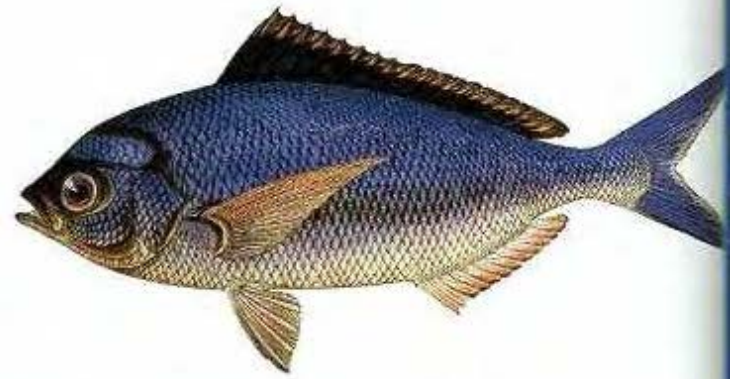


*Caesio xanthonota* 317  
7, 9 ~ ~ ~ ~ ~ 26°C sg: 1.022 40 cm 400L

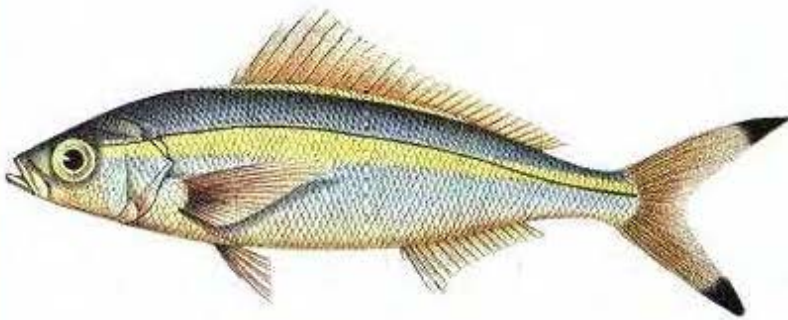




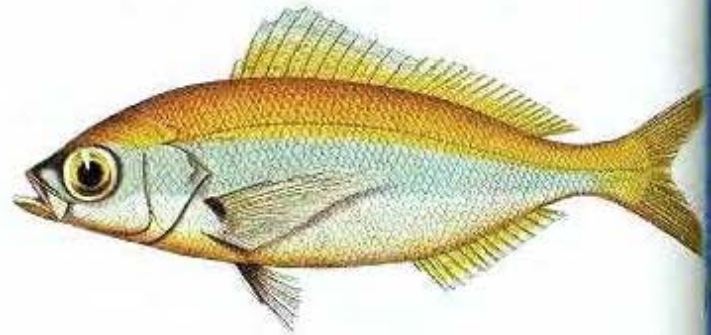
*Caesio erythrogaster* 317  
7,9 ~ ♀ ♂ ♀ ♂ ♀ ♂ 26°C sg: 1.022 36 cm 400L



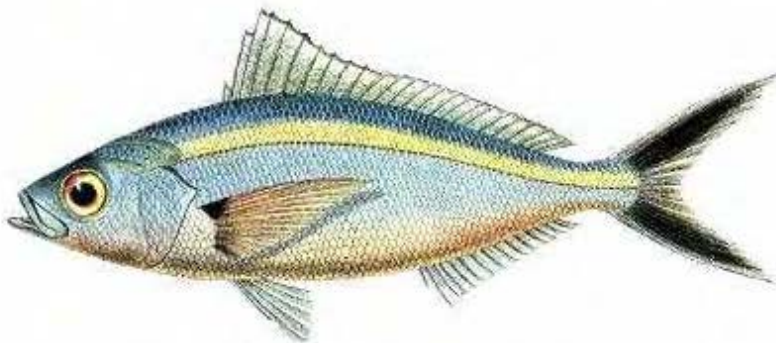
*Caesio lunaris* 317  
7,9 ~ ♀ ♂ ♀ ♂ ♀ ♂ 26°C sg: 1.022 30 cm 300L



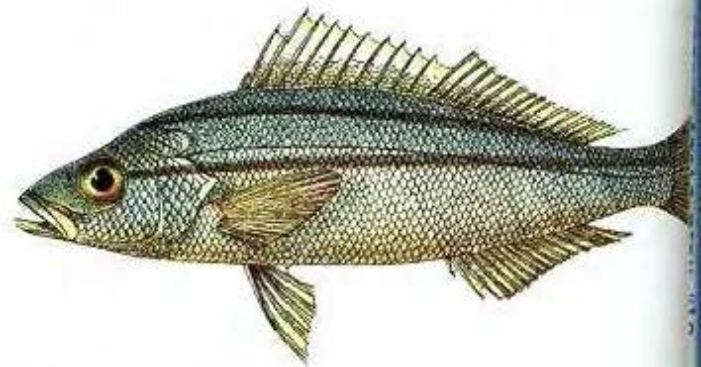
*Pterocaesio chrysozona* 317  
7,9 ~ ♀ ♂ ♀ ♂ ♀ ♂ 26°C sg: 1.022 18 cm 200L



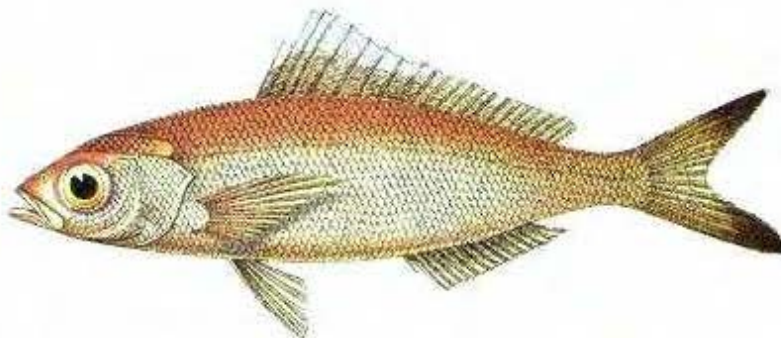
*Caesio xanthonotus* 317  
7,9 ~ ♀ ♂ ♀ ♂ ♀ ♂ 26°C sg: 1.022 40 cm 400L



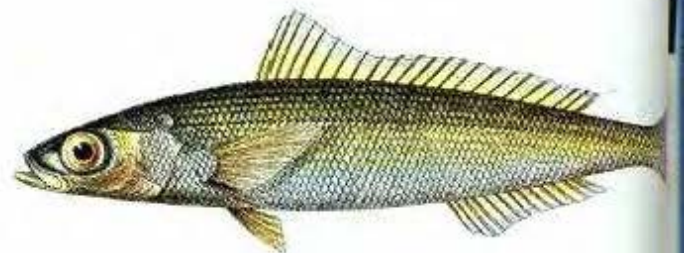
*Caesio caerulaurea* 317  
7,9 ~ ♀ ♂ ♀ ♂ ♀ ♂ 26°C sg: 1.022 18 cm 200L



*Pterocaesio digramma* 317  
7 ~ ♀ ♂ ♀ ♂ ♀ ♂ 26°C sg: 1.022 25 cm 300L



*Caesio pisang* 317  
5,7 ~ ♀ ♂ ♀ ♂ ♀ ♂ 26°C sg: 1.022 20 cm 200L



*Gymnocaesio gymnopterus* 317  
7,9 ~ ♀ ♂ ♀ ♂ ♀ ♂ 26°C sg: 1.022 16 cm 200L

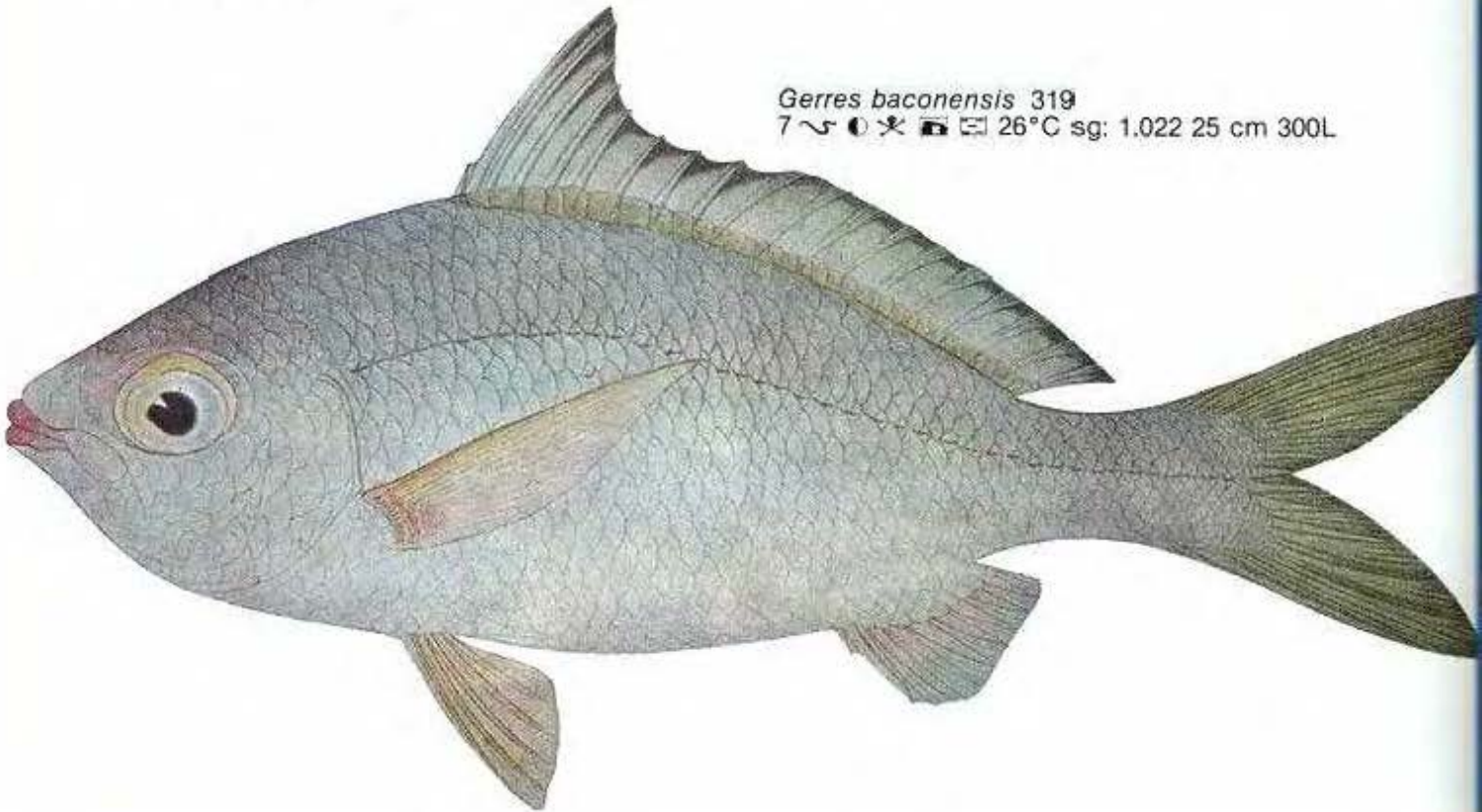


#210

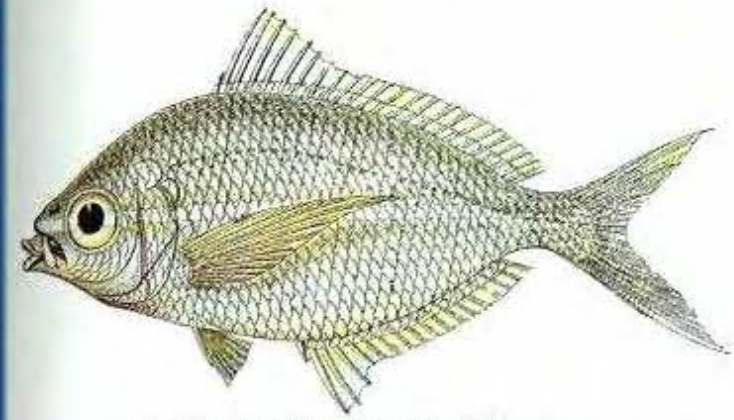


*Gerres oyena* 319  
7, 9 ~ 0 ✕ ☑ 26°C sg: 1.022 25 cm 300L

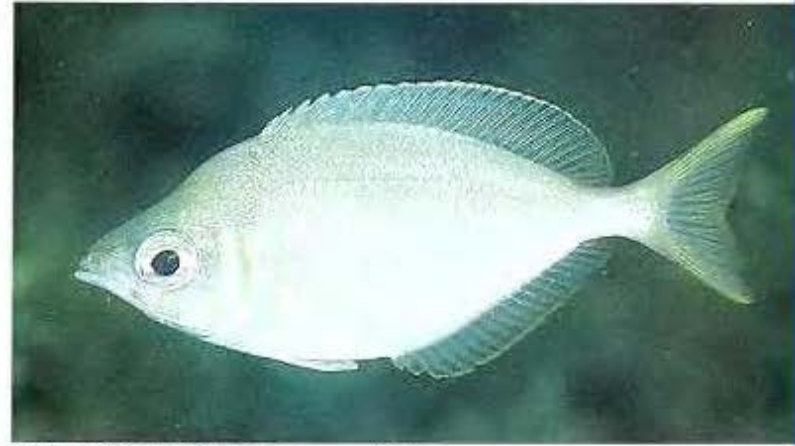
*Gerres baconensis* 319  
7 ~ 0 ✕ ☑ 26°C sg: 1.022 25 cm 300L



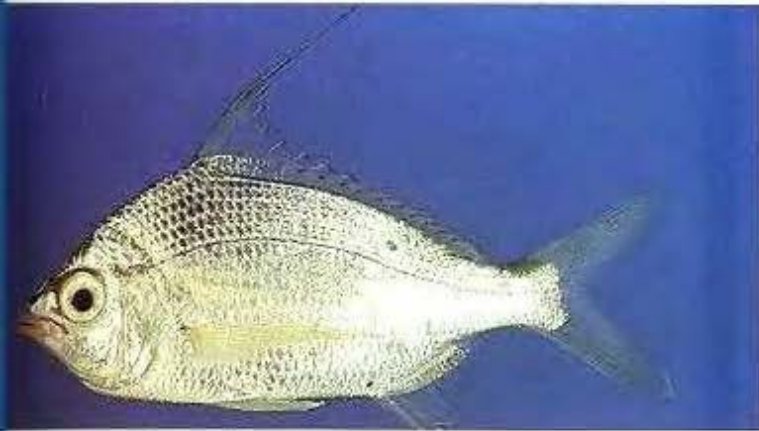




*Pentapirion longimanus* 319  
7, 9 ~ ♀ ♀ ♀ 26°C sg: 1.022 27 cm 300L



*Parequula melbournenses* 319  
12 ~ ♀ ♀ ♀ 26°C sg: 1.022 10 cm 100L



*Gerres filamentosus* 319  
7, 9 ~ ♀ ♀ ♀ 26°C sg: 1.022 27 cm 300L



*Gerres acinaces* 319  
7, 9 ~ ♀ ♀ ♀ 26°C sg: 1.022 25 cm 300L



*Eucinostomus gracilis* 319  
3 ~ ♀ ♀ ♀ 26°C sg: 1.022 20 cm 200L



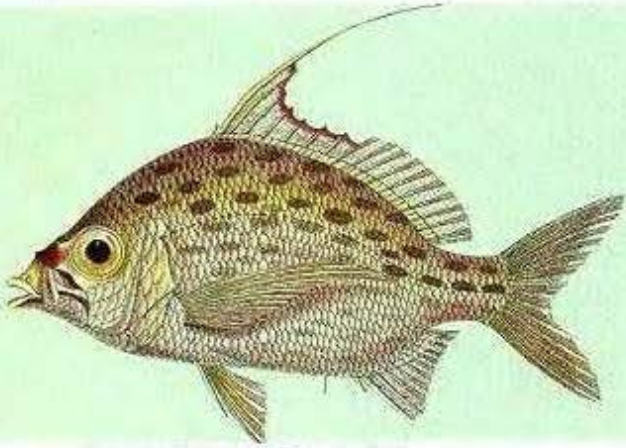
*Gerres cinereus* 319  
2 ~ ♀ ♀ ♀ 26°C sg: 1.022 20 cm 200L



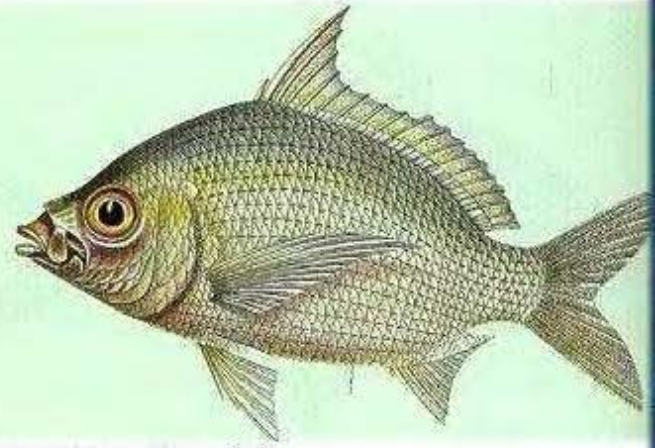
*Eucinostomus argenteus* 319  
1-3 ~ ♀ ♀ ♀ 26°C sg: 1.022 20 cm 200L



*Eucinostomus gula* 320  
1-2 ~ ♀ ♀ ♀ 25°C sg: 1.022 18 cm 200L



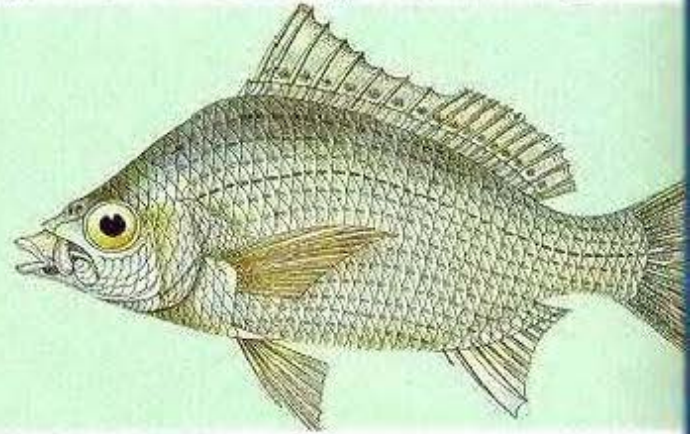
*Gerres filamentosus* 319  
7, 9 ~ ♀ ♥ 📺 📺 26°C sg: 1.022 27 cm 300L



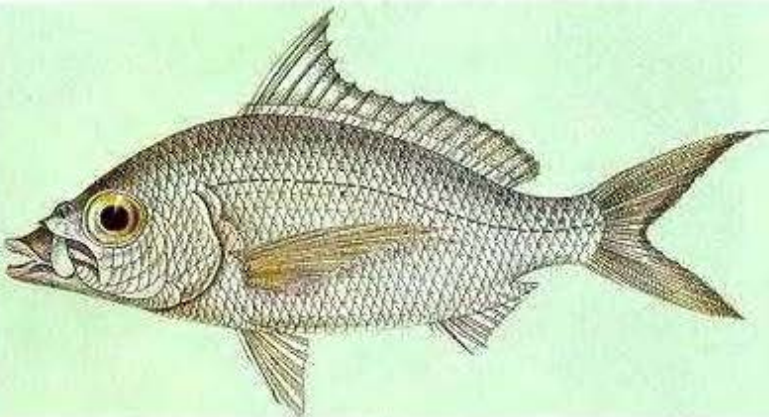
*Gerres abbreviatus* 319  
7, 9 ~ ♀ ♥ 📺 📺 26°C sg: 1.022 25 cm 300L



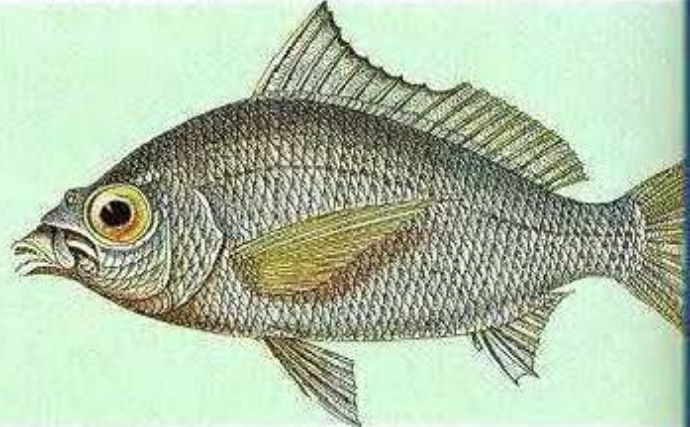
*Gerres macrosoma* 319  
7 ~ ♀ ♥ 📺 📺 26°C sg: 1.022 25 cm 300L



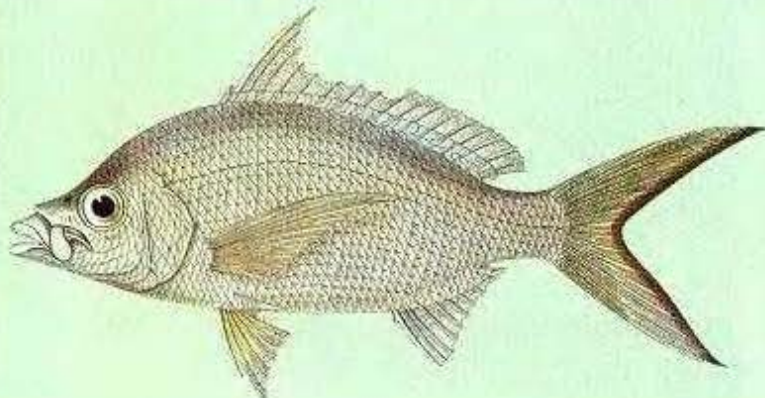
*Gerres poeti* 319  
7 ~ ♀ ♥ 📺 📺 26°C sg: 1.022 23 cm 300L



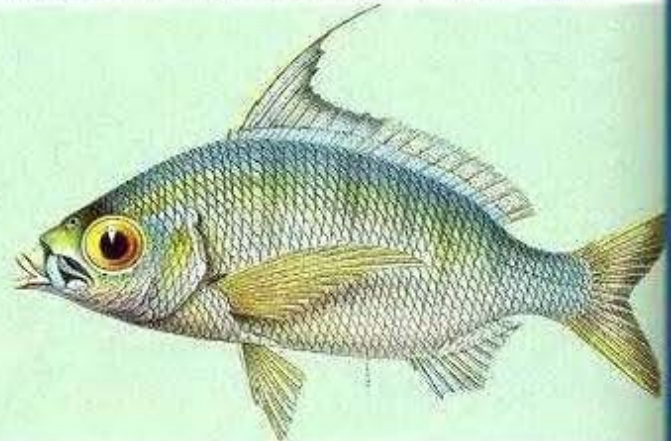
*Gerres oyena* 319  
7, 9 ~ ♀ ✂ 📺 📺 26°C sg: 1.022 25 cm 300L



*Gerres kapas* 319  
7 ~ ♀ ♥ 📺 📺 26°C sg: 1.022 17.5 cm 200L



*Gerres acinaces* 319  
7, 9 ~ ♀ ♥ 📺 📺 26°C sg: 1.022 25 cm 300L



*Gerres macracanthus* 319  
7 ~ ♀ ♥ 📺 📺 26°C sg: 1.022 17 cm 200L



*Haemulon parrai* 320

2 ♀ ~ ~ ~ ~ ~ 26°C sg: 1.022 40 cm 400L

*Haemulon melanurum* 320

♀ ~ ~ ~ ~ ~ 26°C sg: 1.022 33 cm 350L

*Haemulon sciurus* 320

2 ♀ ~ ~ ~ ~ ~ 26°C sg: 1.022 18 cm 200L

*Haemulon plumieri* 320

2 ♀ ~ ~ ~ ~ ~ 26°C sg: 1.022 45 cm 500L

*Haemulon flavolineatum* 320

2 ♀ ~ ~ ~ ~ ~ 26°C sg: 1.022 30 cm 300L

*Haemulon flavolineatum* 320

2 ♀ ~ ~ ~ ~ ~ 26°C sg: 1.022 30 cm 300L

*Haemulon flavolineatum* 320

2 ♀ ~ ~ ~ ~ ~ 26°C sg: 1.022 30 cm 300L

*Haemulon striatum* 320

2 ♀ ~ ~ ~ ~ ~ 26°C sg: 1.022 28 cm 300L



*Haemulon chrysargyreum* 320  
2 ♀ ~ ~ ~ ♂ \* 📺 📺 26°C sg: 1.022 23 cm 300L



*Haemulon album* 320  
2 ♀ ~ ~ ~ ♂ \* 📺 📺 26°C sg: 1.022 60 cm 600L



*Haemulon macrostomum* 320  
2 ♀ ~ ~ ~ ♂ \* 📺 📺 26°C sg: 1.022 43 cm 500L



*Haemulon aurolineatum* 320  
1-2 ♀ ~ ~ ~ ♂ \* 📺 📺 25°C sg: 1.022 25 cm 300L



*Haemulon aurolineatum* 320  
2 ♀ ~ ~ ~ ♂ \* 📺 📺 26°C sg: 1.022 36 cm 400L



*Haemulon sciurus* 320  
2 ♀ ~ ~ ~ ♂ \* 📺 📺 26°C sg: 1.022 30 cm 300L



*Haemulon sciurus* 320  
2 ♀ ~ ~ ~ ♂ \* 📺 📺 26°C sg: 1.022 30 cm 300L



*Haemulon sexfasciatum* 320  
3 ♀ ~ ~ ~ ~ ~ 26°C sg: 1.022 33 cm 500L



*Anisotremus surinamensis* (juv.) 320  
2 ♀ ~ ~ ~ ~ ~ 26°C sg: 1.022 60 cm 600L



*Anisotremus davidsonii* 320  
3 ♀ ~ ~ ~ ~ ~ 26°C sg: 1.022 58 cm 600L



*Anisotremus virginicus* 320  
2 ♀ ~ ~ ~ ~ ~ 26°C sg: 1.022 38 cm 400L



*Haemulon flaviguttatum* 320  
3 ♀ ~ ~ ~ ~ ~ 26° sg: 1.022 30 cm 300L



*Anisotremus surinamensis* 320  
2 ♀ ~ ~ ~ ~ ~ 26°C sg: 1.022 60 cm 600L



*Anisotremus taeniatus* 320  
3 ♀ ~ ~ ~ ~ ~ 26°C sg: 1.022 25 cm 250L



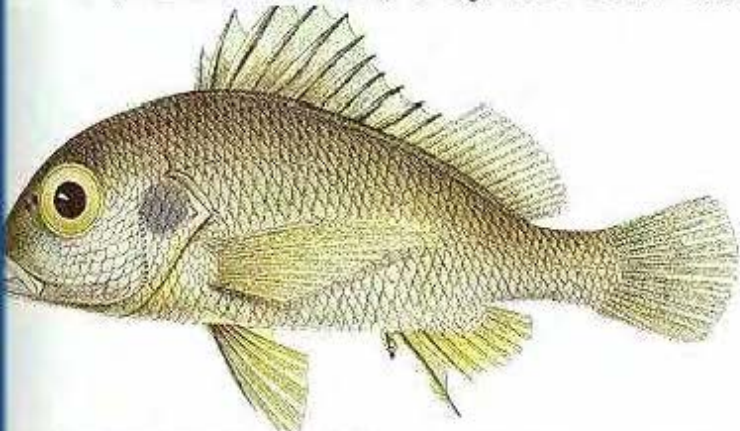
*Anisotremus virginicus* 320  
2 ♀ ~ ~ ~ ~ ~ 26°C sg: 1.022 38 cm 400L



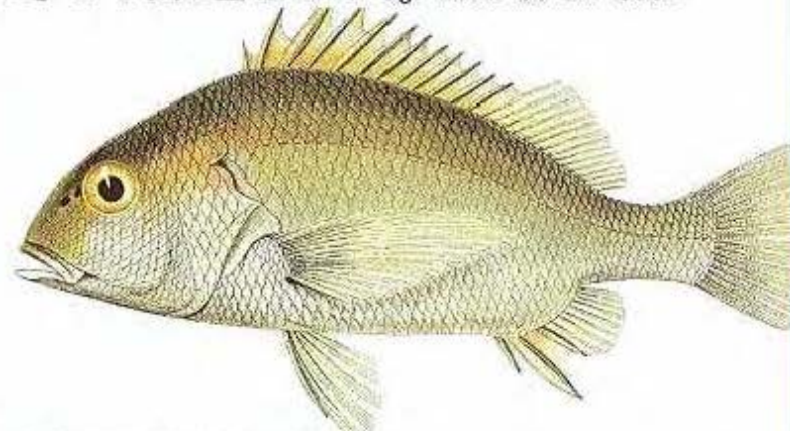
*Parapristipoma trilineatum* 320  
7 ♀ ~ ~ ~ ~ ~ 26°C sg: 1.022 40 cm 400L



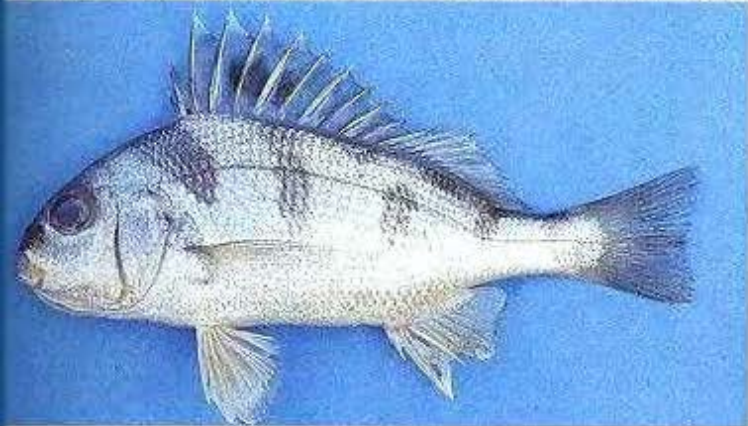
*Conodon nobilis* 320  
2 ♀ ~ ~ ~ ~ ~ 26°C sg: 1.022 30 cm 300L



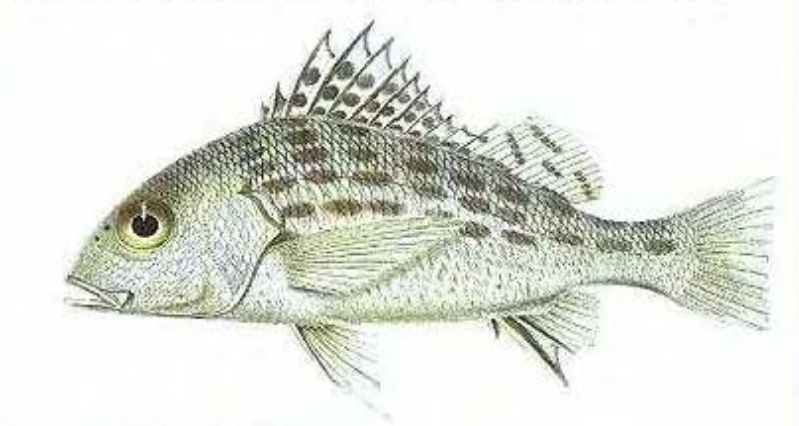
*Pomadasys argyreus* 320  
7, 9 ♀ ~ ~ ~ ~ ~ 26°C sg: 1.022 20 cm 200L



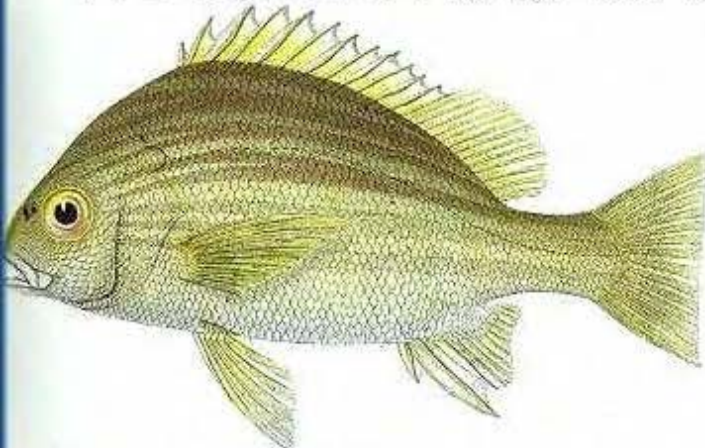
*Pomadasys argyreus* 320  
7, 9 ♀ ~ ~ ~ ~ ~ 26°C sg: 1.022 20 cm 200L



*Pomadasys maculatum* 320  
7 ♀ ~ ~ ~ ~ ~ 26°C sg: 1.022 15 cm 200L



*Pomadasys hasta* 320  
6-10 ♀ ~ ~ ~ ~ ~ 26°C sg: 1.022 40 cm 400L



*Pomadasys furcatus* 320  
7-9 ♀ ~ ~ ~ ~ ~ 26°C sg: 1.022 50 cm 500L



*Pomadasys corvinaeformis* 320  
2 ♀ ~ ~ ~ ~ ~ 26°C sg: 1.022 25 cm 300L

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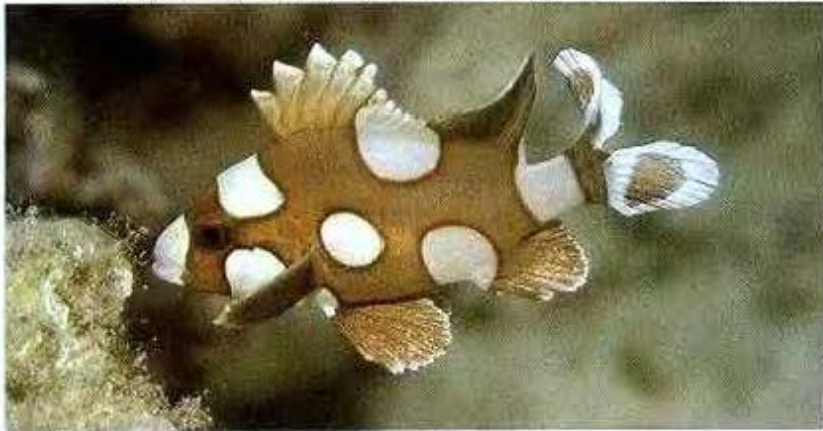


*Scolopsis ghanam* 325  
9-10 ♀ ~ ~ ~ ♀ 26°C sg: 1.022 25 cm 300L

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*Scolopsis ghanam* 325  
9-10 ♀ ~ ~ ~ ♀ 26°C sg: 1.022 25 cm 300L



*Plectorhinchus chaetodonoides* (juv.) 320  
7 ♀ ~ ~ ~ ♀ 26°C sg: 1.022 60 cm 600L



*Plectorhinchus chaetodonoides* 320  
7 ♀ ~ ~ ~ ♀ 26°C sg: 1.022 60 cm 600L



*Plectorhinchus chaetodonoides* 320  
7 ♀ ~ ~ ~ ♀ 26°C sg: 1.022 60 cm 600L



*Plectorhinchus flavomaculatus* 320  
7, 9-10 ♀ ~ ~ ~ ♀ 26°C sg: 1.022 60 cm 600L



*Plectorhinchus gaterinus* 320  
9-10 ♀ ~ ~ ~ ♀ 26°C sg: 1.022 60 cm 600L



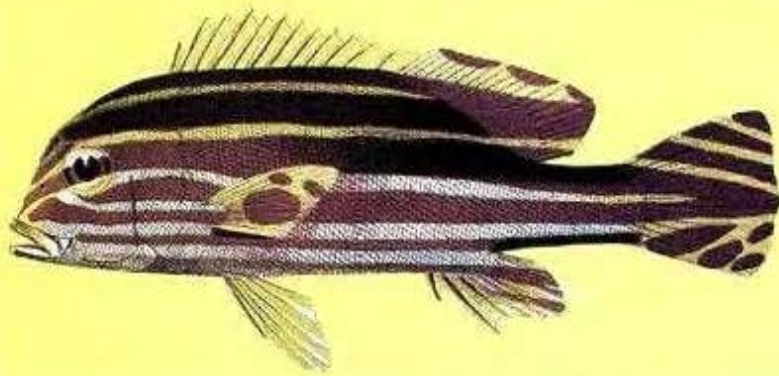
*Plectorhinchus schotaf* 320  
7-9 ♀ ~ ~ ~ ♀ 26°C sg: 1.022 60 cm 600L











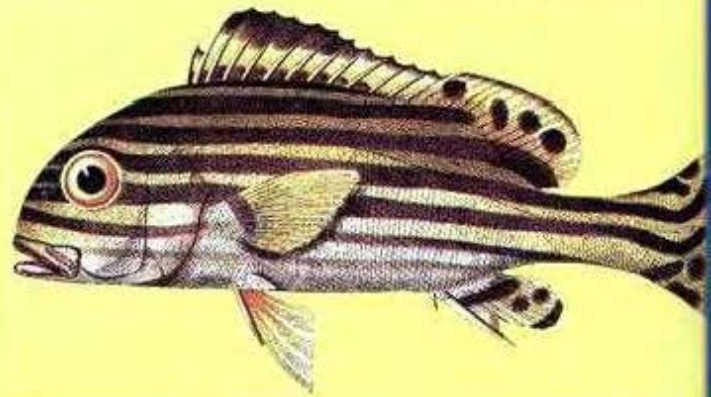
*Plectorhinchus lineatus* 320  
7, 9 ♀ ~ ~ ~ 0 \* [ ] 26°C sg: 1.022 35 cm 400L



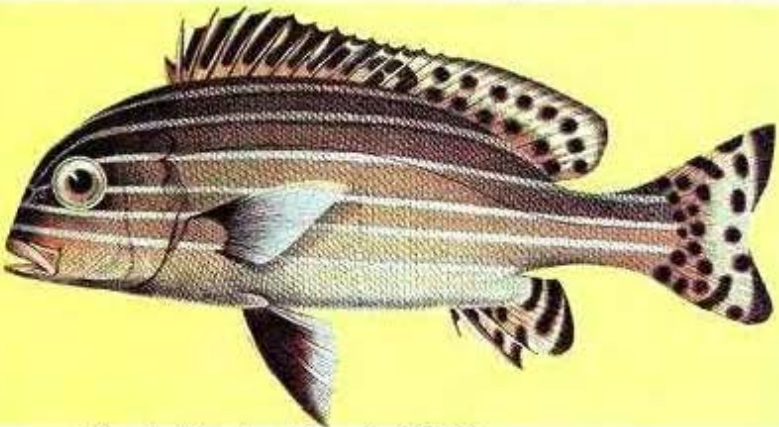
*Plectorhinchus lineatus* 320  
7, 9 ♀ ~ ~ ~ 0 \* [ ] 26°C sg: 1.022 35 cm 400L



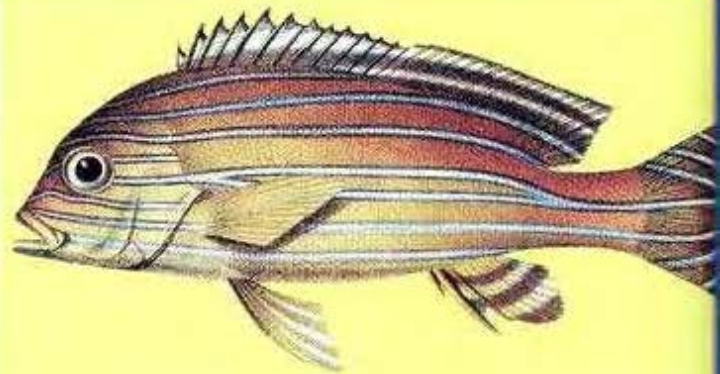
*Plectorhinchus lineatus* 320  
7, 9 ♀ ~ ~ ~ 0 \* [ ] 26°C sg: 1.022 35 cm 400L



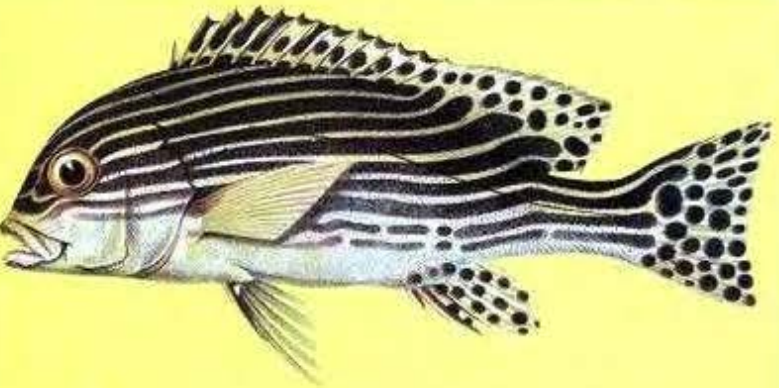
*Plectorhinchus lineatus* 320  
7, 9 ♀ ~ ~ ~ 0 \* [ ] 26°C sg: 1.022 35 cm 400L



*Plectorhinchus lineatus?* 320  
7, 9 ♀ ~ ~ ~ 0 \* [ ] 26°C sg: 1.022 35 cm 400L



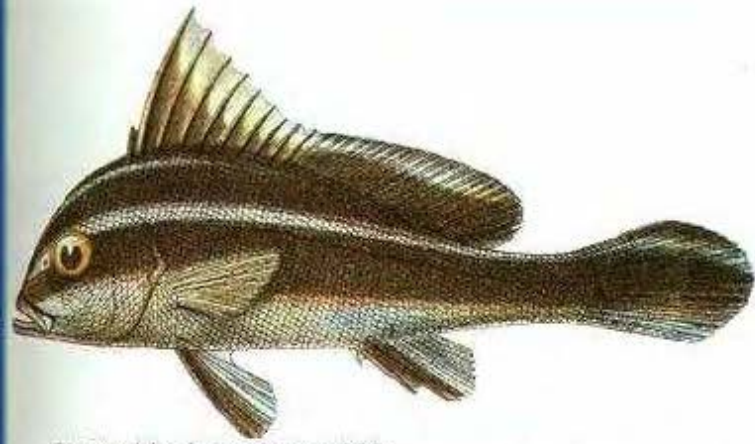
*Plectorhinchus polytaenia* 320  
7, 9 ♀ ~ ~ ~ 0 \* [ ] 26°C sg: 1.022 50 cm 500L



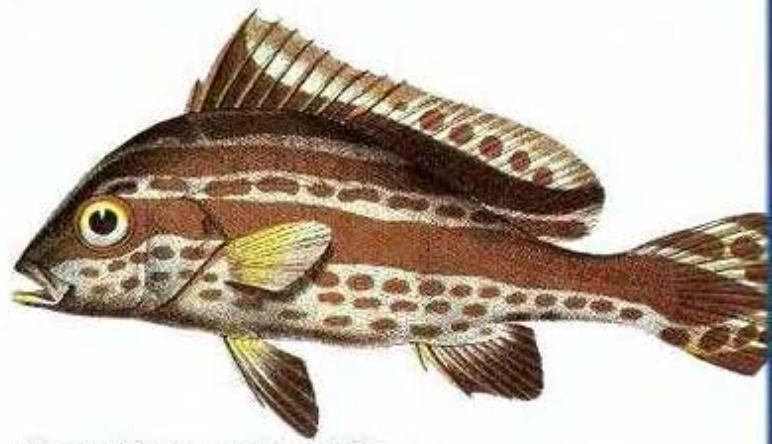
*Plectorhinchus goldmanni?* 320  
6-7 ♀ ~ ~ ~ 0 \* [ ] 26°C sg: 1.022 50 cm 500L



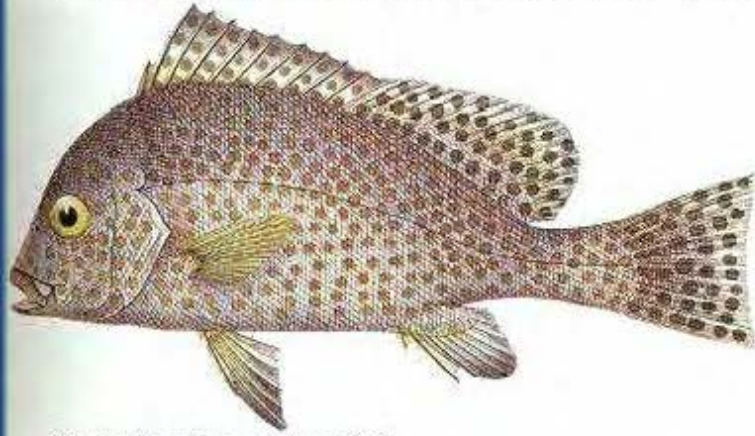
*Plectorhinchus goldmanni* 320  
6-7 ♀ ~ ~ ~ 0 \* [ ] 26°C sg: 1.022 50 cm 500L



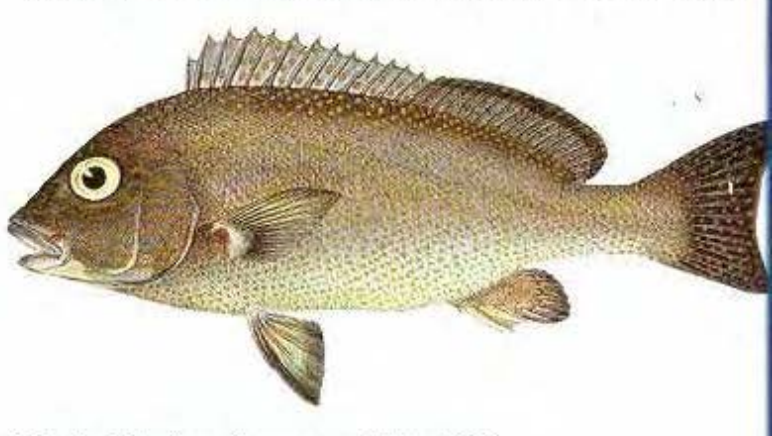
*Plectorhinchus pictus* 320  
7, 9-10 ♀ ~ ~ ~ ~ ~ 26°C sg: 1.022 90 cm 1000L



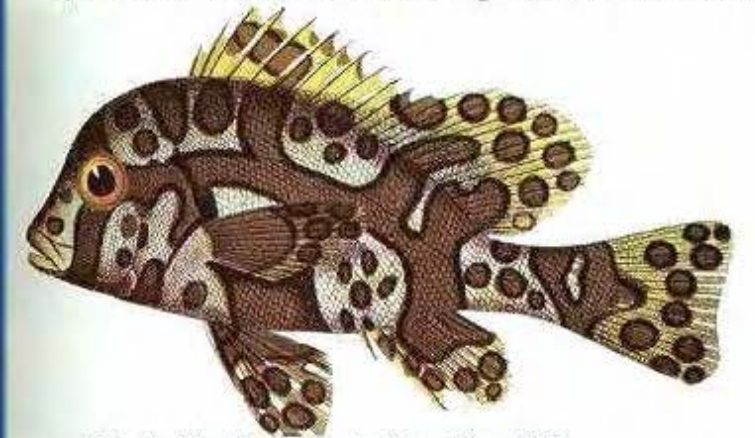
*Plectorhinchus pictus* 320  
7, 9-10 ♀ ~ ~ ~ ~ ~ 26°C sg: 1.022 90 cm 1000L



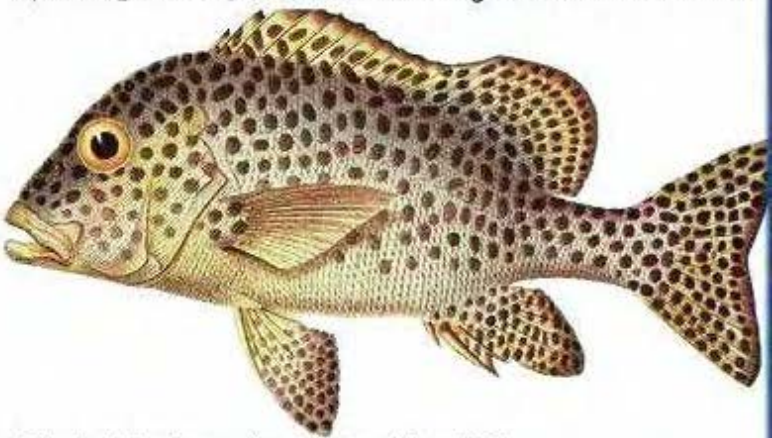
*Plectorhinchus pictus* 320  
7, 9-10 ♀ ~ ~ ~ ~ ~ 26°C sg: 1.022 90 cm 1000L



*Plectorhinchus flavomaculatus* 320  
7, 9-10 ♀ ~ ~ ~ ~ ~ 26°C sg: 1.022 60 cm 600L



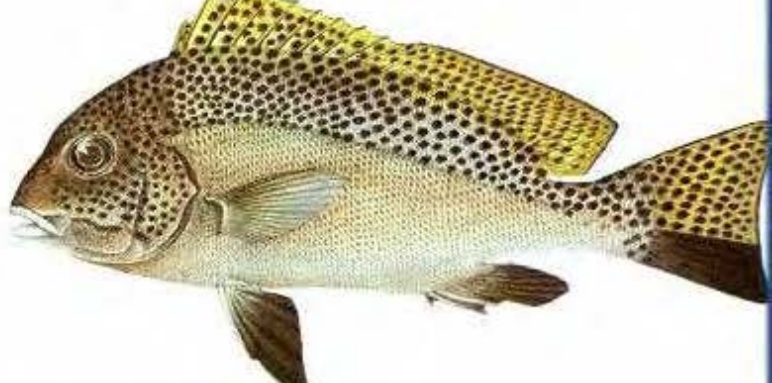
*Plectorhinchus chaetodonoides* 320  
7 ♀ ~ ~ ~ ~ ~ 26°C sg: 1.022 60 cm 600L



*Plectorhinchus chaetodonoides* 320  
7 ♀ ~ ~ ~ ~ ~ 26°C sg: 1.022 60 cm 600L



*Plectorhinchus chaetodonoides* 320  
7 ♀ ~ ~ ~ ~ ~ 26°C sg: 1.022 60 cm 600L



*Plectorhinchus picus* 320  
7, 9 ♀ ~ ~ ~ ~ ~ 26°C sg: 1.022 60 cm 600L

*Inermia vittata* 321

2 ♀ ~ ♀ ♀ ♂ ♀ ♀ 26°C sg: 1.022 13 cm 150L

*Spicara maena flexuosa* 323

15 ♀ ~ ♀ ♀ ♂ ♀ ♀ 26°C sg: 1.022 21 cm 200L

*Boops salpa* 322

13-15 ♀ ~ ♀ ♀ ♂ ♀ ♀ 26°C sg: 1.022 45 cm 500L

*Diplodus bermudensis* 322

2 ♀ ~ ♀ ♀ ♂ ♀ ♀ 26°C sg: 1.022 30 cm 300L

*Emmelichthyops ruber* 315

2 ♀ ~ ♀ ♀ ♂ ♀ ♀ 26°C sg: 1.022 13 cm 150L

*Diplodus puntazzo* 322

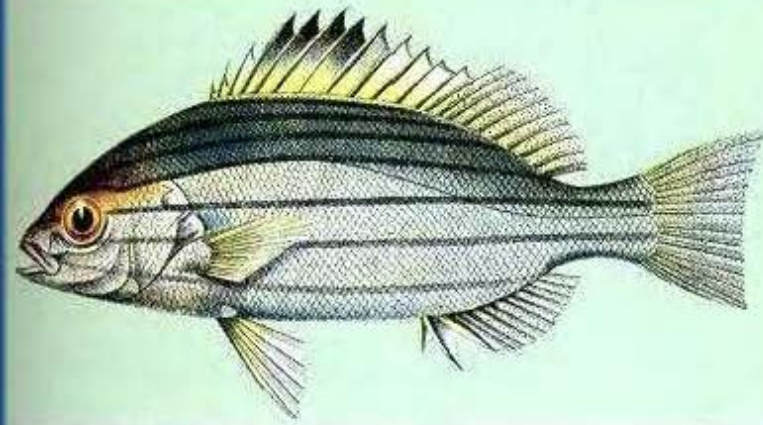
13, 15 ♀ ~ ♀ ♀ ♂ ♀ ♀ 26°C sg: 1.022 45 cm 500L

*Lithognathus mormyrus* 322

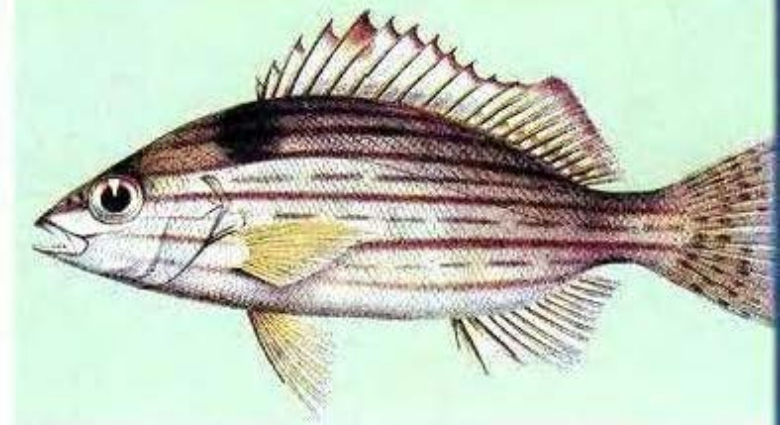
9-10, 15 ♀ ~ ♀ ♀ ♂ ♀ ♀ 26°C sg: 1.022 55 cm 600L

*Diplodus vulgaris* 322

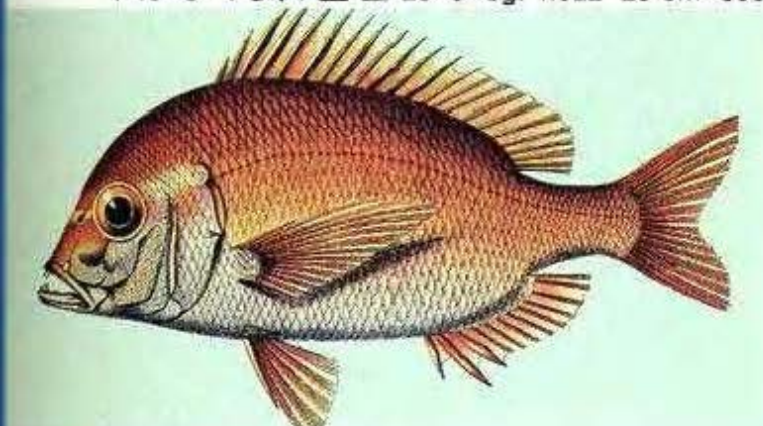
13, 15 ♀ ~ ♀ ♀ ♂ ♀ ♀ 26°C sg: 1.022 30 cm 300L



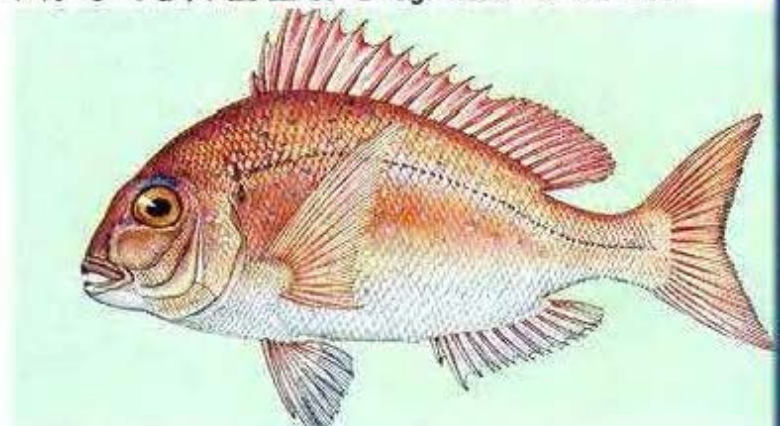
*Pelates quadrilineatus* 291  
7-10 ~ ~ ~ ~ ~ 26°C sg: 1.022 25 cm 300L



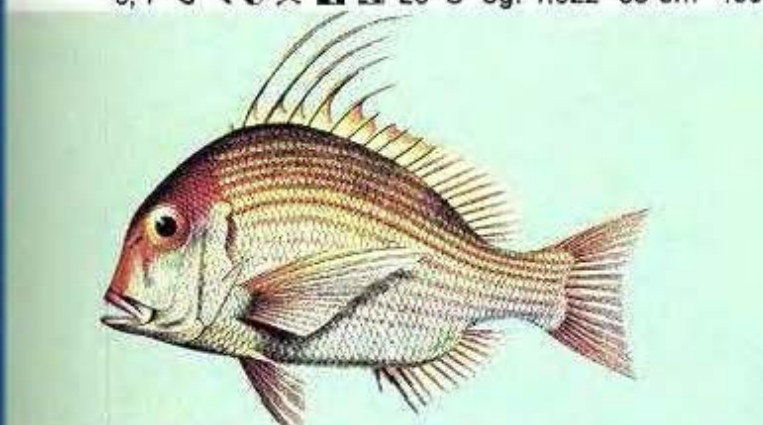
*Pelates quadrilineatus* 291  
7-10 ~ ~ ~ ~ ~ 26°C sg: 1.022 25 cm 300L



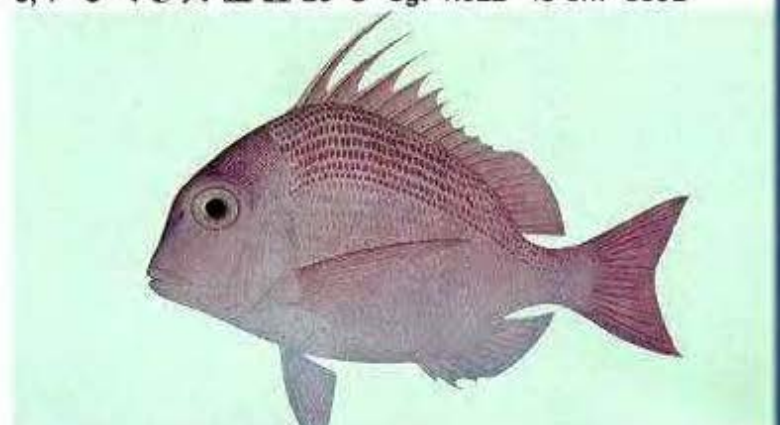
*Dentex tumifrons* 322  
5, 7 ~ ~ ~ ~ ~ 26°C sg: 1.022 35 cm 400L



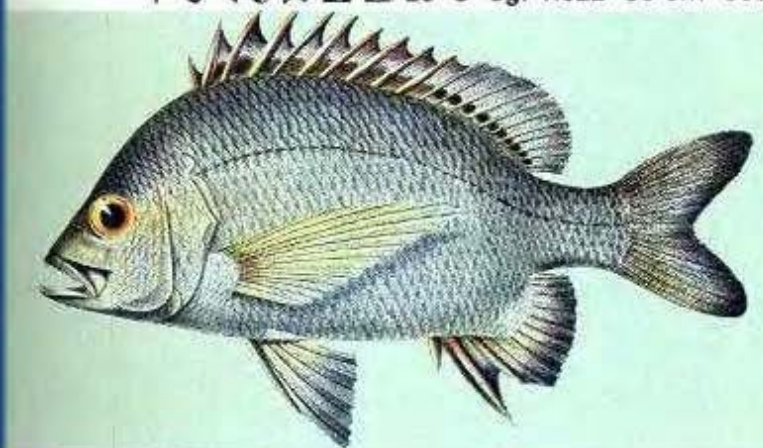
*Evynnis japonica* 322  
5, 7 ~ ~ ~ ~ ~ 26°C sg: 1.022 45 cm 500L



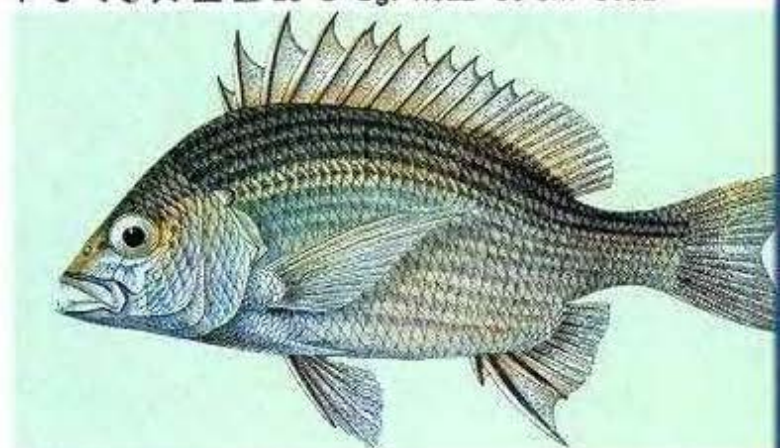
*Argyrops bleekeri* 322  
7 ~ ~ ~ ~ ~ 26°C sg: 1.022 50 cm 500L



*Argyrops spinifer* 322  
7 ~ ~ ~ ~ ~ 26°C sg: 1.022 50 cm 500L



*Acanthopagrus berda* 322  
7, 9-10 ~ ~ ~ ~ ~ 26°C sg: 1.022 50 cm 500L



*Acanthopagrus berda* 322  
7, 9-10 ~ ~ ~ ~ ~ 26°C sg: 1.022 50 cm 500L



*Argyrops bleekeri* 322  
7 ~ ♀ ♂ ✖ 📏 26°C sg: 1.022 50 cm 500L



*Pagrus major* 322  
5, 7 ~ ♀ ♂ ✖ 📏 26°C sg: 1.022 70 cm 800L



*Pagrus auratus* 322  
7-8, 12 ~ ♀ ♂ ✖ 📏 26°C sg: 1.022 100 cm 1000L



*Pagrus major* 322  
5, 7 ~ ♀ ♂ ✖ 📏 26°C sg: 1.022 70 cm 800L



*Gymnocranius japonicus* 324  
6-7 ~ ♀ ♂ ✖ 📏 26°C sg: 1.022 50 cm 500L



*Gymnocranius bitorquatus* 322  
7-8 ~ ♀ ♂ ✖ 📏 26°C sg: 1.022 41 cm 400L



*Pagellus acarne* 322  
14-15 ~ ♀ ♂ ✖ 📏 26°C sg: 1.022 35 cm 400L



*Gymnocranius lethrinoides* 322  
6-7 ~ ♀ ♂ ✖ 📏 26°C sg: 1.022 50 cm 500L





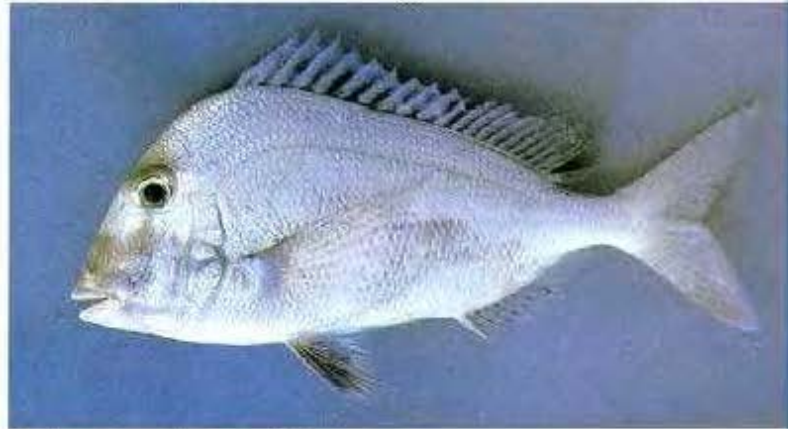
*Calamus bajonado* 322  
 2 ♀ ~ ~ ~ ~ ~ 26°C sg: 1.022 60 cm 600L



*Calamus pennatula* 322  
 2 ♀ ~ ~ ~ ~ ~ 26°C sg: 1.022 35 cm 400L



*Calamus calamus* 322  
 2 ♀ ~ ~ ~ ~ ~ 26°C sg: 1.022 41 cm 400L



*Calamus nodosus* 322  
 2 ♀ ~ ~ ~ ~ ~ 26°C sg: 1.022 46 cm 500L



*Calamus brachysomus* 322  
 3 ♀ ~ ~ ~ ~ ~ 26°C sg: 1.022 60 cm 600L



*Pagrus pagrus* 322  
 2, 13 ♀ ~ ~ ~ ~ ~ 26°C sg: 1.022 90 cm 1000L



*Evynnis cardinalis* 322  
 7 ♀ ~ ~ ~ ~ ~ 26°C sg: 1.022 40 cm 400L



*Evynnis japonica* 322  
 5, 7 ♀ ~ ~ ~ ~ ~ 26°C sg: 1.022 45 cm 500L



*Archosargus probatocephalus* 322  
2 ♀ ~ ~ ~ ~ ~ 26°C sg: 1.022 91 cm 1000L



*Archosargus probatocephalus* 322  
2 ♀ ~ ~ ~ ~ ~ 26°C sg: 1.022 91 cm 1000L



*Acanthopagrus latus* 322  
7, 9-10 ♀ ~ ~ ~ ~ ~ 26°C sg: 1.022 50 cm 500L



*Lagodon rhomboides* 322  
2 ♀ ~ ~ ~ ~ ~ 26°C sg: 1.022 35 cm 400L



*Acanthopagrus schlegeli* 322  
5, 7 ♀ ~ ~ ~ ~ ~ 26°C sg: 1.022 50 cm 500L



*Acanthopagrus bifasciatus* 322  
9-10, 13 ♀ ~ ~ ~ ~ ~ 26°C sg: 1.022 50 cm 500L

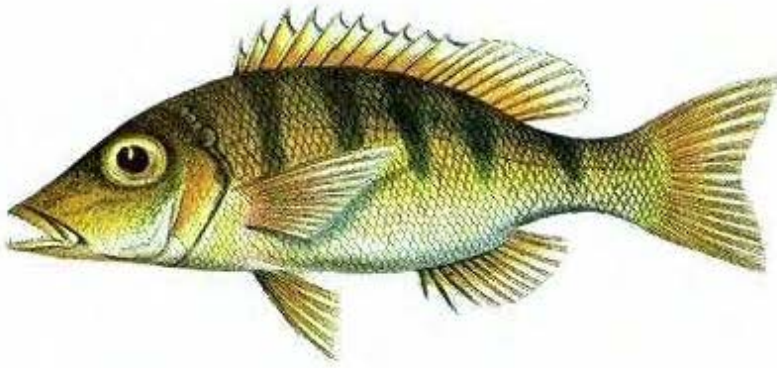


*Rhabdosargus sarba* 322  
5, 7, 9-10 ♀ ~ ~ ~ ~ ~ 26°C sg: 1.022 46 cm 500L

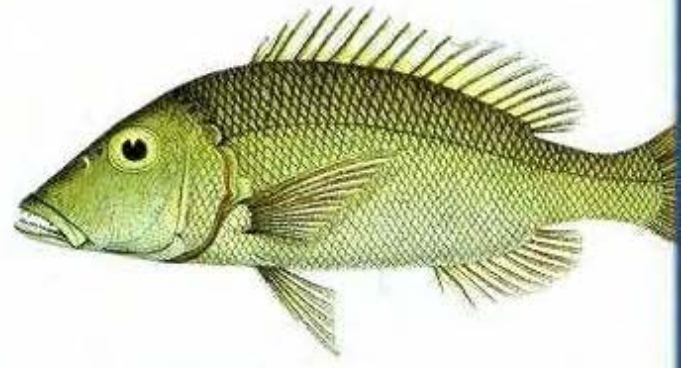


*Acanthopagrus australis* 322  
6-7 ♀ ~ ~ ~ ~ ~ 26°C sg: 1.022 55 cm 600L

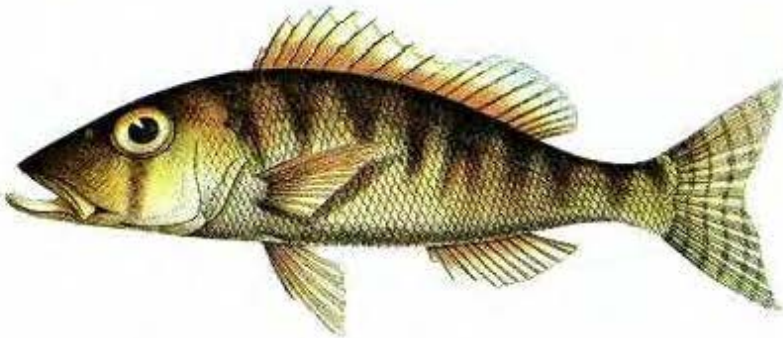




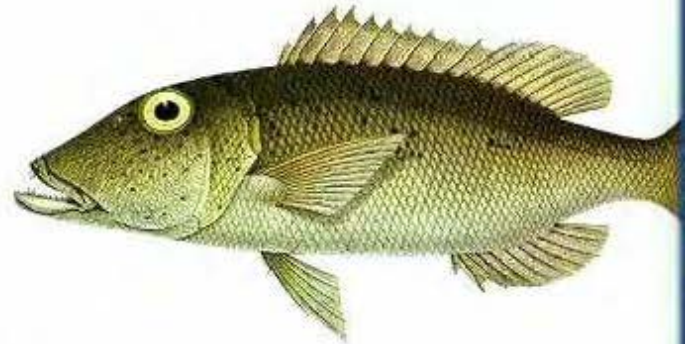
*Lethrinus crocineus* 324  
7-9 ~ ~ ~ ○ ✖ 📊 26°C sg: 1.022 60 cm 600L



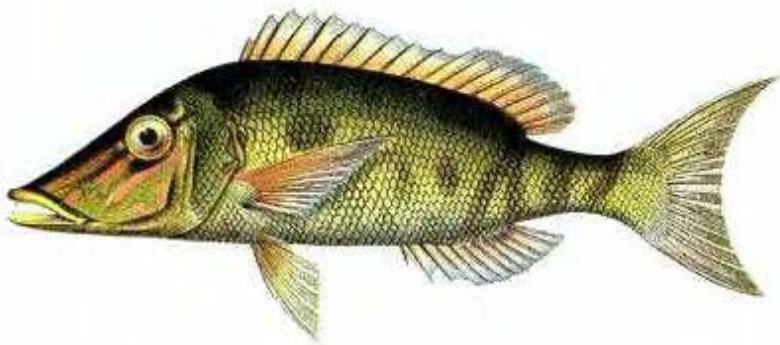
*Lethrinus lentjan* 324  
6-10 ~ ~ ~ ○ ✖ 📊 26°C sg: 1.022 50 cm 500L



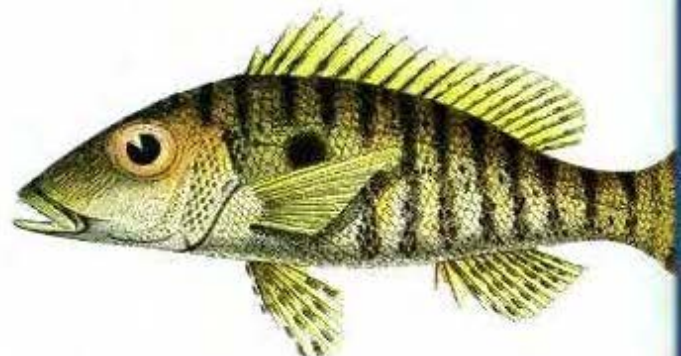
*Lethrinus variegatus* 324  
6-9 ~ ~ ~ ○ ✖ 📊 26°C sg: 1.022 60 cm 600L



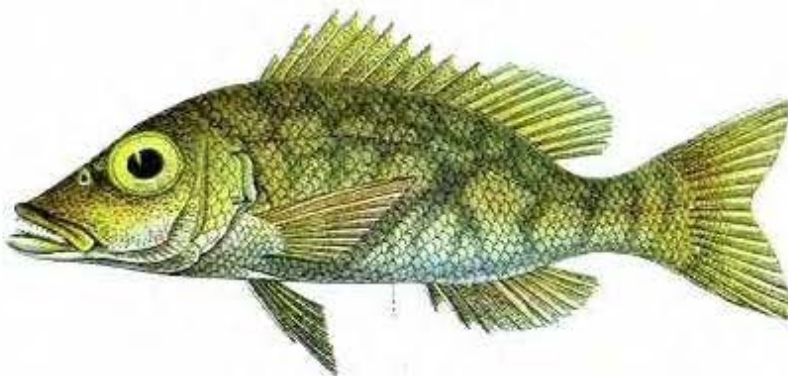
*Lethrinus variegatus* 324  
6-9 ~ ~ ~ ○ ✖ 📊 26°C sg: 1.022 60 cm 600L



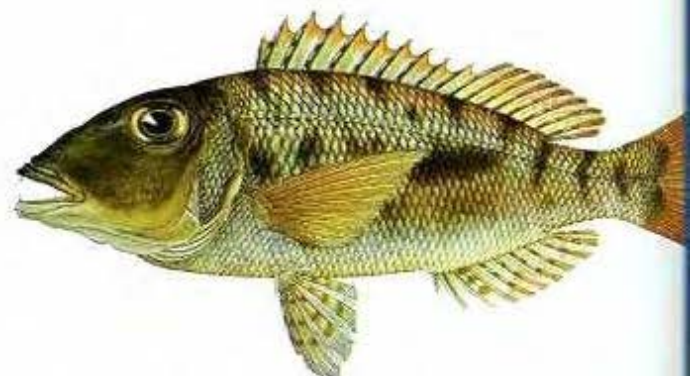
*Lethrinus rostratus* 324  
7 ~ ~ ~ ○ ✖ 📊 26°C sg: 1.022 60 cm 600L



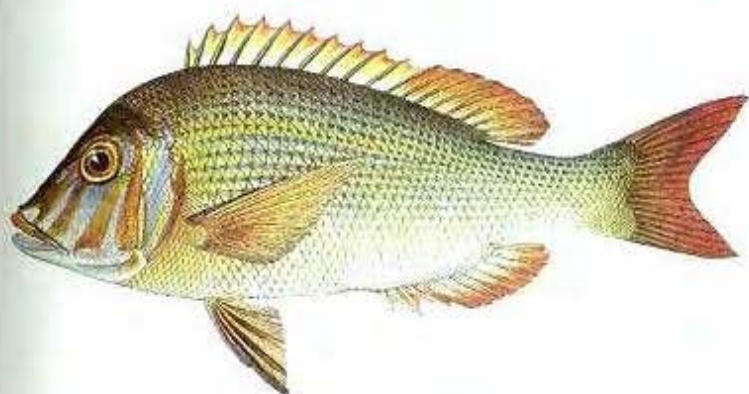
*Lethrinus amboinensis* 324  
6-7 ~ ~ ~ ○ ✖ 📊 26°C sg: 1.022 70 cm 800L



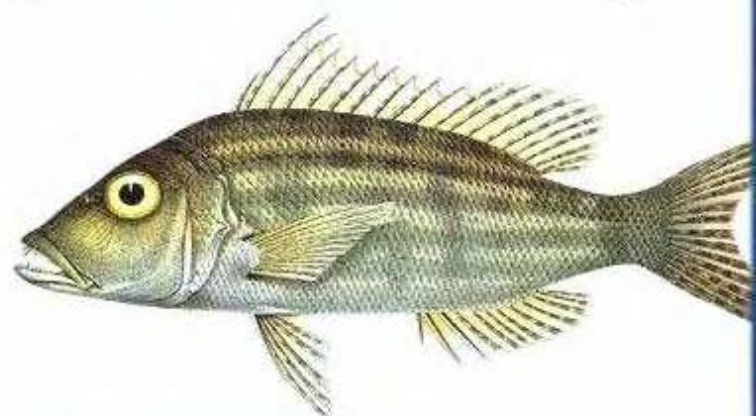
*Lethrinus reticulatus* 324  
7-8 ~ ~ ~ ○ ✖ 📊 26°C sg: 1.022 40 cm 400L



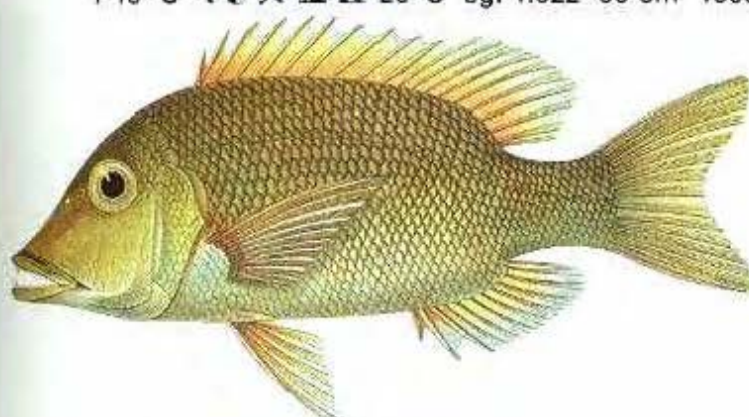
*Lethrinus variegatus?* 324  
6-9 ~ ~ ~ ○ ✖ 📊 26°C sg: 1.022 60 cm 600L



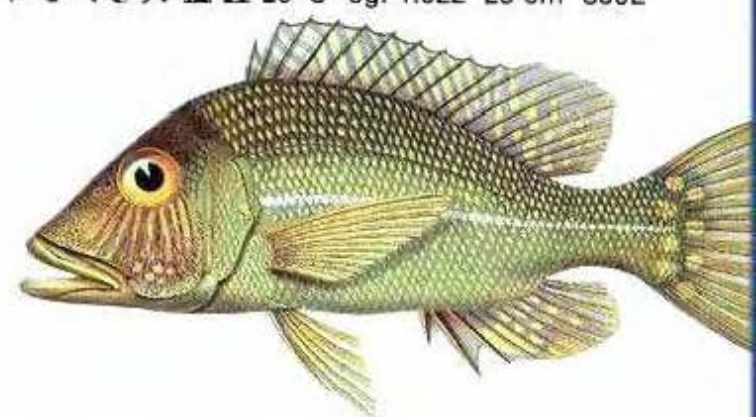
*Lethrinus nebulosus* 324  
7-10 ~ ~ ~ ~ ~ 26°C sg: 1.022 90 cm 1000L



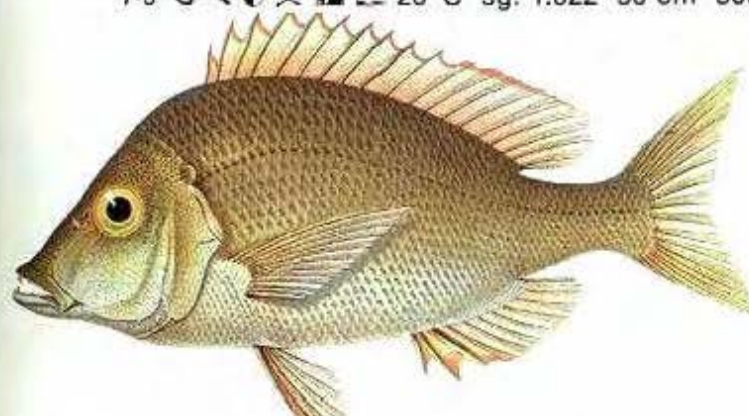
*Lethrinus nematacanthus* 324  
7 ~ ~ ~ ~ ~ 26°C sg: 1.022 25 cm 300L



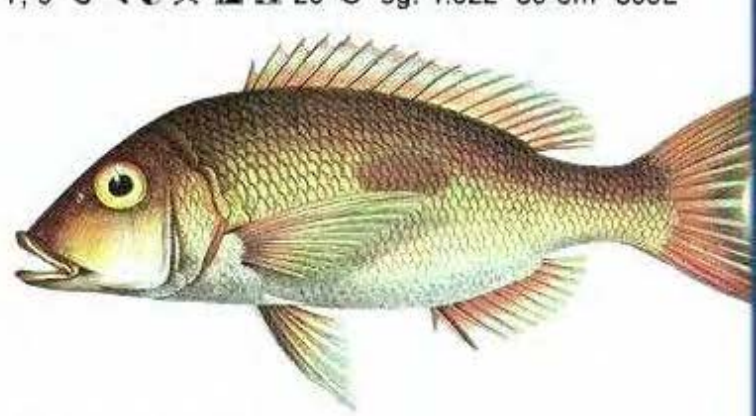
*Lethrinus hypselopterus* 324  
7-9 ~ ~ ~ ~ ~ 26°C sg: 1.022 50 cm 500L



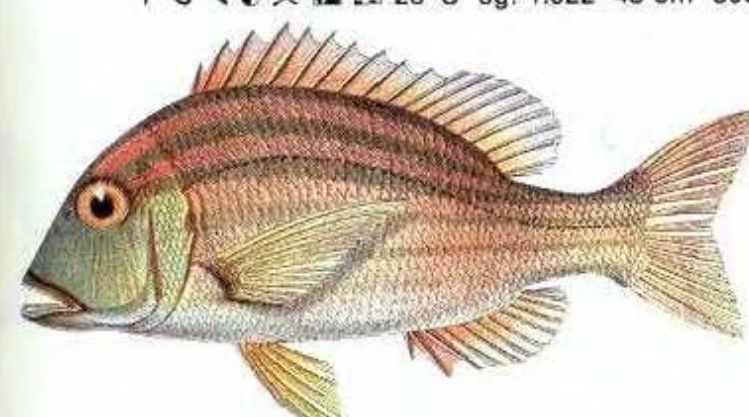
*Lethrinus kallopterus* 324  
7, 9 ~ ~ ~ ~ ~ 26°C sg: 1.022 80 cm 800L



*Lethrinus haematopterus* 324  
7 ~ ~ ~ ~ ~ 26°C sg: 1.022 45 cm 500L



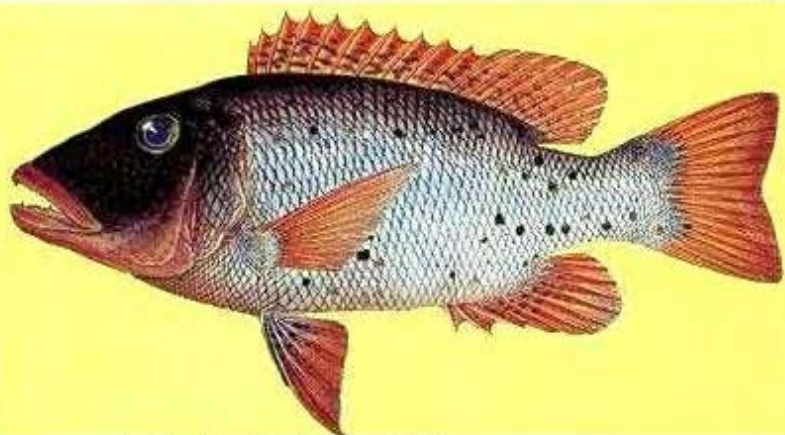
*Lethrinus harak* 324  
6-10 ~ ~ ~ ~ ~ 26°C sg: 1.022 60 cm 600L



*Lethrinus ornatus* 324  
7 ~ ~ ~ ~ ~ 26°C sg: 1.022 45 cm 500L



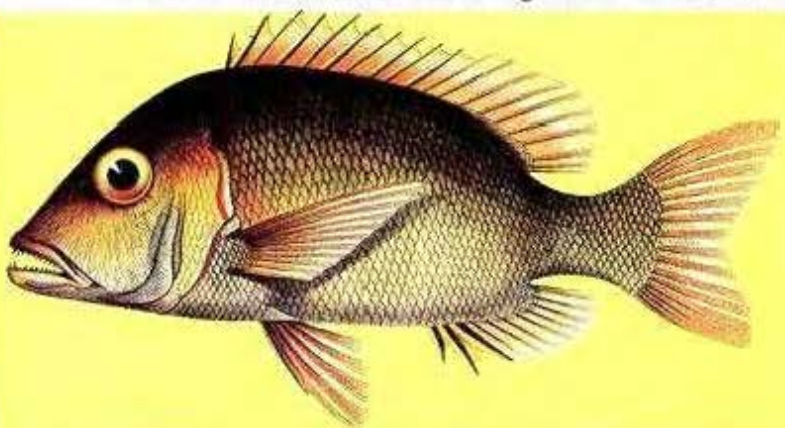
*Lethrinus ornatus* 324  
7 ~ ~ ~ ~ ~ 26°C sg: 1.022 45 cm 500L



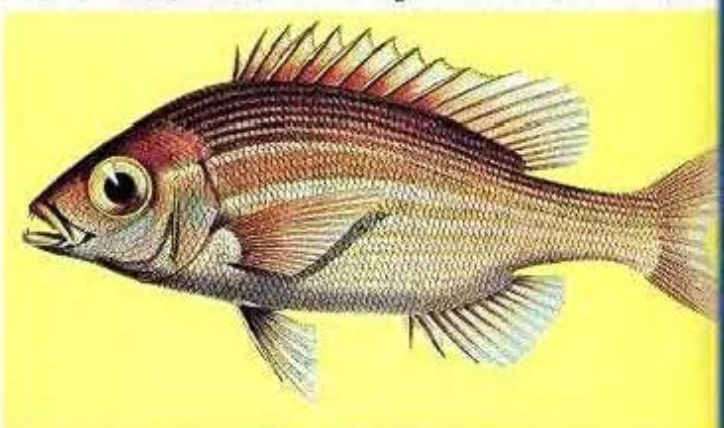
*Lethrinus mahsena* 324  
7-10 ~ ~ ~ ~ ~ 26°C sg: 1.022 50 cm 500L



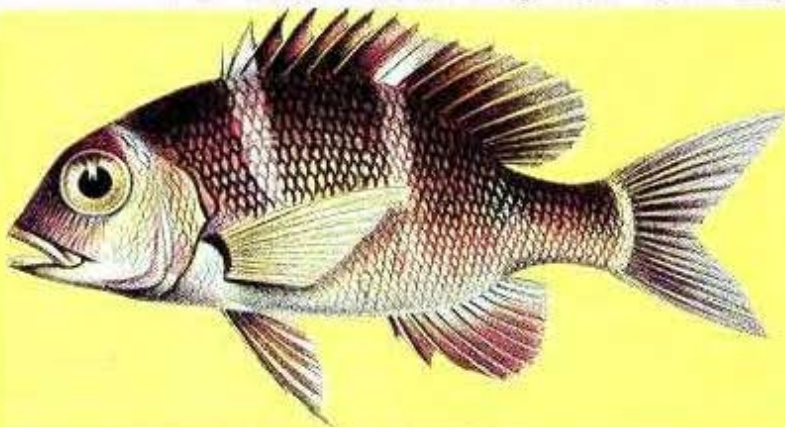
*Lethrinus nebulosus* 324  
7-10 ~ ~ ~ ~ ~ 26°C sg: 1.022 90 cm 1000L



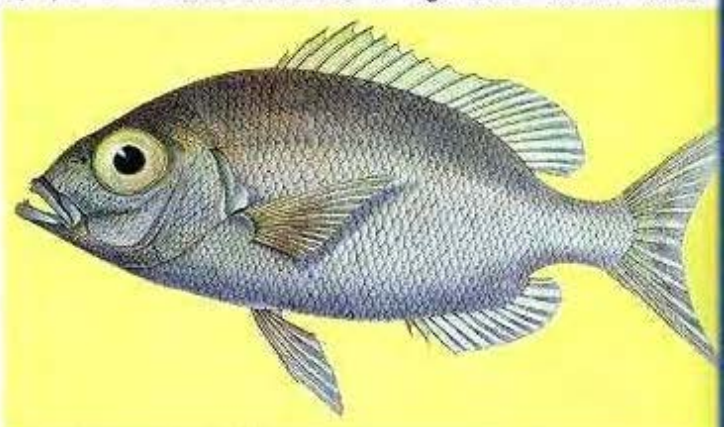
*Lethrinus ornatus* 324  
7 ~ ~ ~ ~ ~ 26°C sg: 1.022 45 cm 500L



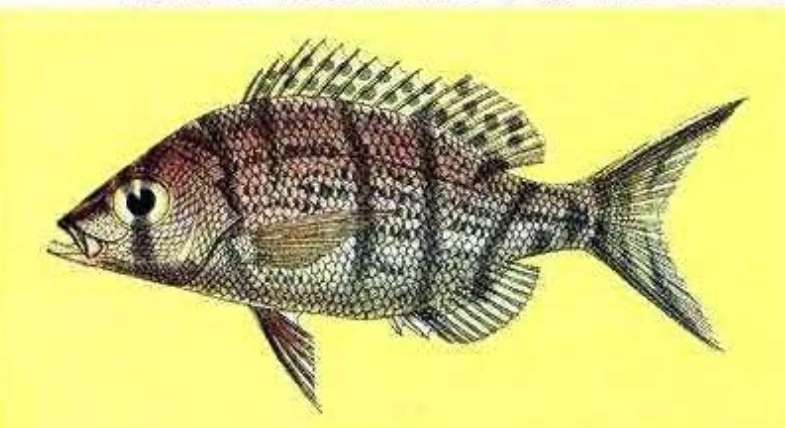
*Gnathodentex aurolineatus* 324  
5, 7, 9 ~ ~ ~ ~ ~ 26°C sg: 1.022 45 cm 500L



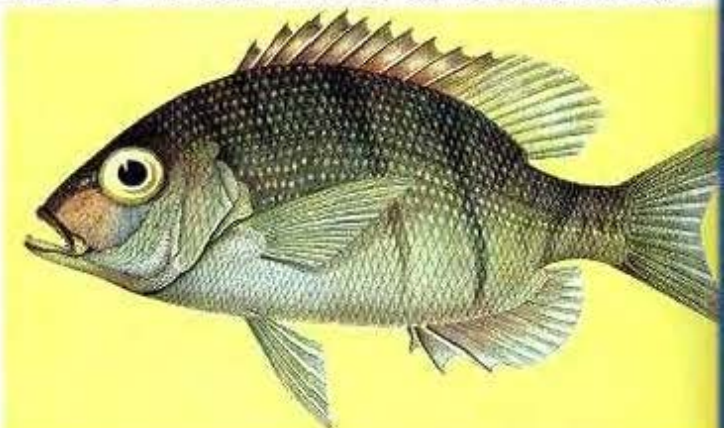
*Monotaxis grandoculis* 324  
7, 9-10 ~ ~ ~ ~ ~ 26°C sg: 1.022 8 cm 80L



*Gymnocranius griseus* 324  
5, 7, 9 ~ ~ ~ ~ ~ 26°C sg: 1.022 50 cm 500L



*Gymnocranius lethrinoides* 324  
7 ~ ~ ~ ~ ~ 26°C sg: 1.022 50 cm 500L



*Gymnocranius griseus* 324  
5, 7, 9 ~ ~ ~ ~ ~ 26°C sg: 1.022 50 cm 500L



*Lethrinus nebulosus* 324  
5, 7, 9-10 ~ ~ ~ ~ ~ 26°C sg: 1.022 100 cm 1000L



*Lethrinus ramak* 324  
7-9 ~ ~ ~ ~ ~ 26°C sg: 1.022 60 cm 600L



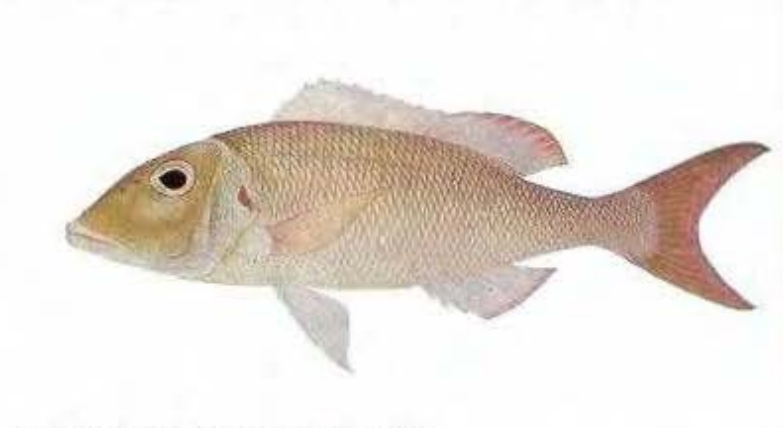
*Lethrinus lentjan* 324  
6-10 ~ ~ ~ ~ ~ 26°C sg: 1.022 50 cm 500L



*Lethrinus mahsena?* 324  
7-10 ~ ~ ~ ~ ~ 26°C sg: 1.022 50 cm 500L



*Lethrinus xanthochilus* 324  
7-10 ~ ~ ~ ~ ~ 26°C sg: 1.022 80 cm 800L



*Lethrinus rubrioperculatus* 324  
5, 7, 9 ~ ~ ~ ~ ~ 26°C sg: 1.022 60 cm 600L



*Lethrinus hypselopterus* 324  
7-9 ~ ~ ~ ~ ~ 26°C sg: 1.022 50 cm 500L



*Lethrinus miniatus* 324  
7, 9-10 ~ ~ ~ ~ ~ 26°C sg: 1.022 100 cm 1000L



*Lethrinus chrysostomus* 324  
7-8 ~ ♀ ♂ ♀ ♂ ♀ ♂ 26°C sg: 1.022 91 cm 1000L



*Lethrinus enigmaticus* 324  
9 ~ ♀ ♂ ♀ ♂ ♀ ♂ 26°C sg: 1.022 40 cm 400L



*Lethrinus harak* 324  
6-7, 9-10 ~ ♀ ♂ ♀ ♂ ♀ ♂ 26°C sg: 1.022 60 cm 600L



*Lethrinus kallopterus* 324  
7, 9 ~ ♀ ♂ ♀ ♂ ♀ ♂ 26°C sg: 1.022 80 cm 800L



*Lethrinus variegatus* 324  
5, 7, 9 ~ ♀ ♂ ♀ ♂ ♀ ♂ 26°C sg: 1.022 60 cm 600L



*Lethrinus variegatus* 324  
5, 7, 9 ~ ♀ ♂ ♀ ♂ ♀ ♂ 26°C sg: 1.022 60 cm 600L

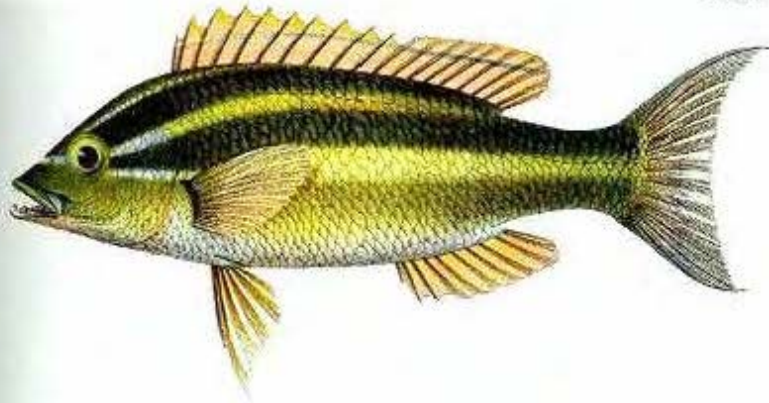


*Gnathodentex aurolineatus* 324  
5, 7, 9 ~ ♀ ♂ ♀ ♂ ♀ ♂ 26°C sg: 1.022 45 cm 500L

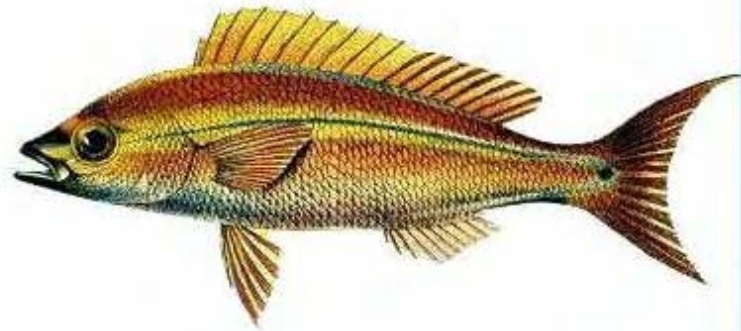


*Gnathodentex aurolineatus* 324  
5, 7, 9 ~ ♀ ♂ ♀ ♂ ♀ ♂ 26°C sg: 1.022 45 cm 500L

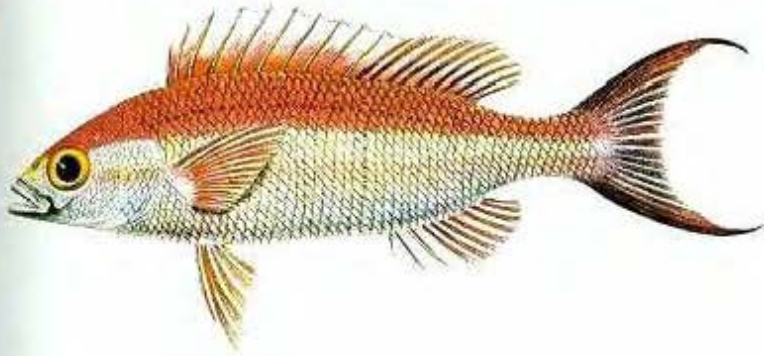




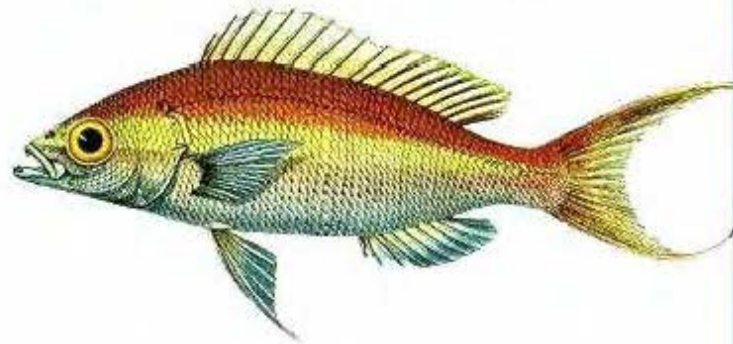
*Pentapodus caninus* 325  
7 ~ ~ ~ ~ ~ 26°C sg: 1.022 28 cm 300L



*Pentapodus setosus* 325  
7-8, 12 ~ ~ ~ ~ ~ 26°C sg: 1.022 35 cm 400L



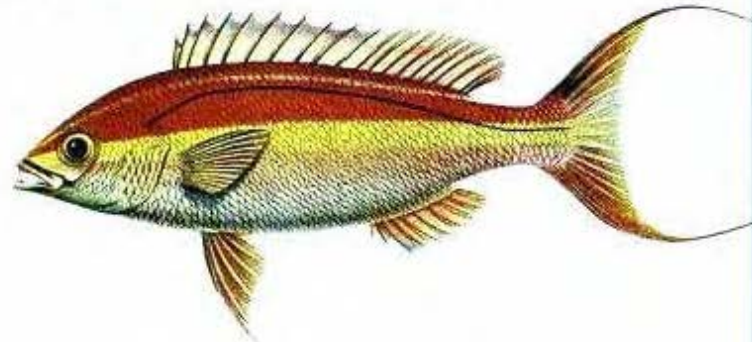
*Pentapodus microdon* 325  
7 ~ ~ ~ ~ ~ 26°C sg: 1.022 20 cm 200L



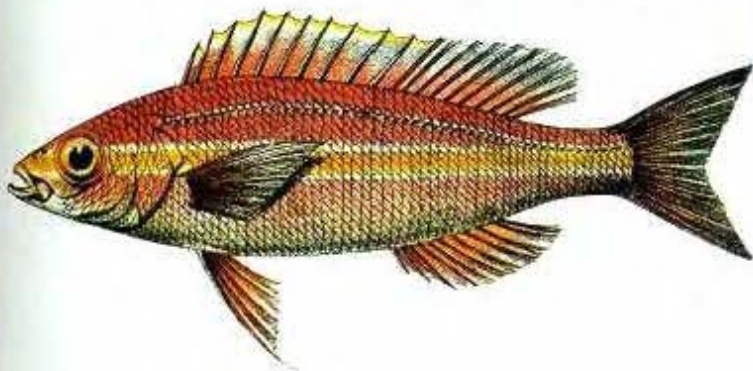
*Pentapodus macrurus* 325  
7 ~ ~ ~ ~ ~ 26°C sg: 1.022 35 cm 400L



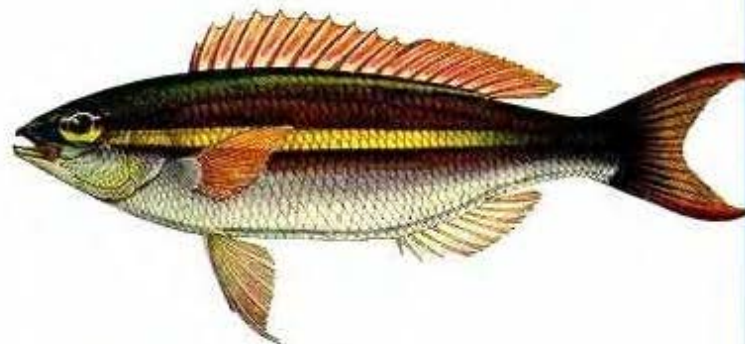
*Pentapodus nemurus* 325  
7 ~ ~ ~ ~ ~ 26°C sg: 1.022 46 cm 500L



*Pentapodus nemurus* 325  
7 ~ ~ ~ ~ ~ 26°C sg: 1.022 46 cm 500L



*Pentapodus hellmuthi* 325  
7 ~ ~ ~ ~ ~ 26°C sg: 1.022 20 cm 200L



*Pentapodus sp.* 325  
7 ~ ~ ~ ~ ~ 26°C sg: 1.022 35 cm 400L



*Pentapodus caninus* 325  
7 ~ ~ ~ ○ ✱ 📏 26°C sg: 1.022 28 cm 300L



*Pentapodus nemurus* 325  
7 ~ ~ ~ ○ ✱ 📏 26°C sg: 1.022 46 cm 500L



*Pentapodus vitta* 325  
7-8, 12 ~ ~ ~ ○ ✱ 📏 26°C sg: 1.022 14 cm 150L



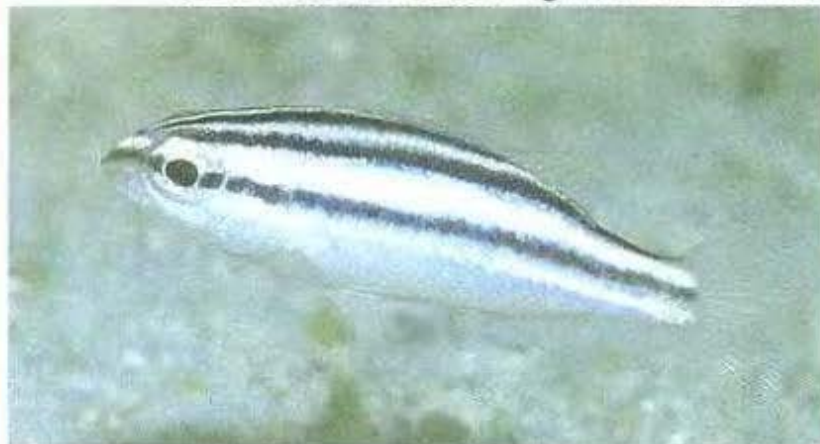
*Pentapodus porosus* 325  
7 ~ ~ ~ ○ ✱ 📏 26°C sg: 1.022 25 cm 300L



*Pentapodus* sp. 325  
7-8 ~ ~ ~ ○ ✱ 📏 26°C sg: 1.022 25 cm 300L



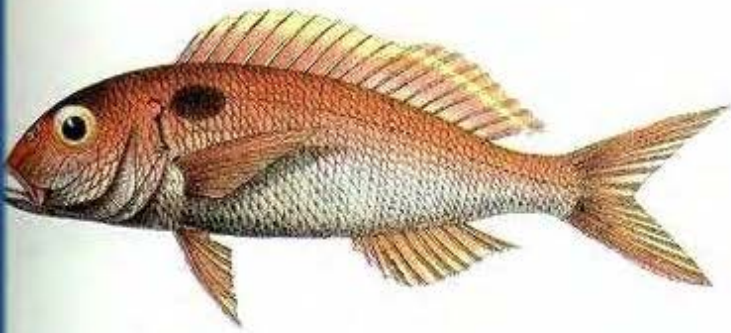
*Pentapodus setosus* 325  
7-8, 12 ~ ~ ~ ○ ✱ 📏 26°C sg: 1.022 35 cm 400L



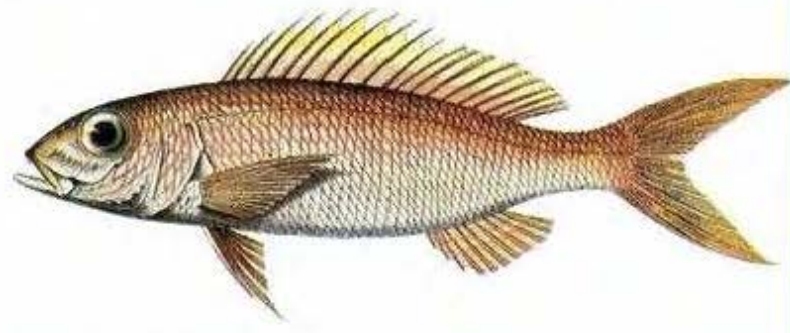
*Pentapodus* sp. 325  
8 ~ ~ ~ ○ ✱ 📏 26°C sg: 1.022 20 cm 200L



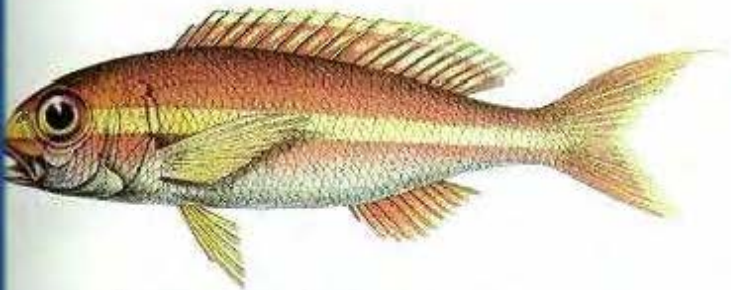
*Pentapodus* sp. 325  
7 ~ ~ ~ ○ ✱ 📏 26°C sg: 1.022 20 cm 200L



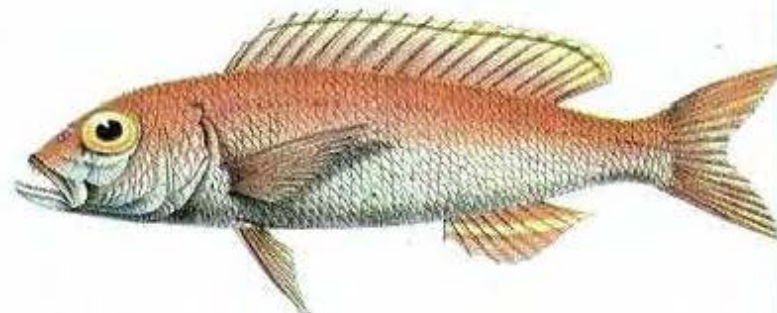
*Nemipterus upeneoides* 325  
7-8 ~ ♀ ♥ 📷 📺 26°C sg: 1.022 16 cm 200L



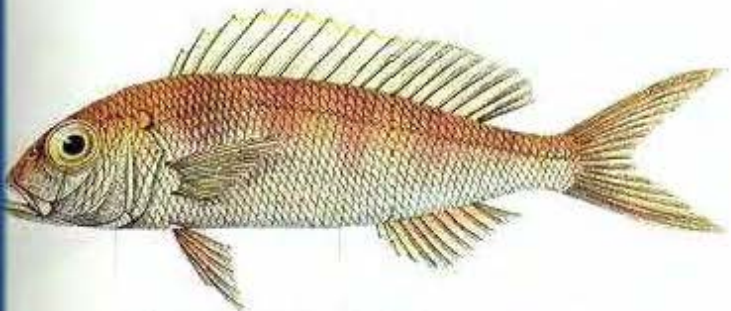
*Nemipterus tolu* 325  
7, 9 ~ ♀ ♥ 📷 📺 26°C sg: 1.022 30 cm 300L



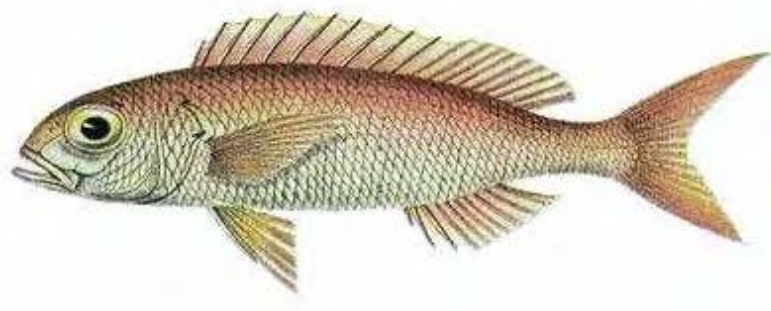
*Nemipterus balinensis* 325  
7 ~ ♀ ♥ 📷 📺 26°C sg: 1.022 15 cm 200L



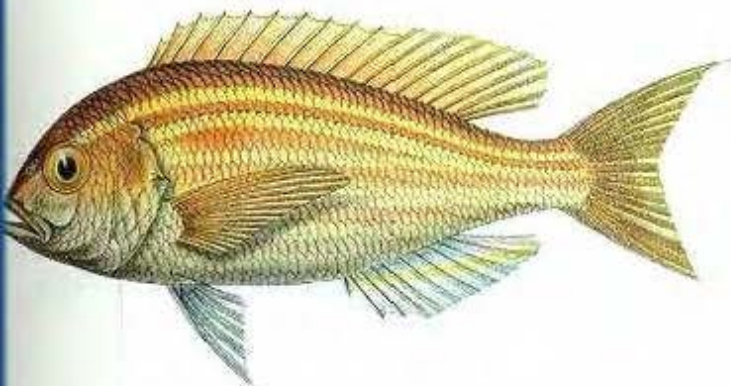
*Nemipterus zysron* 325  
7 ~ ♀ ♥ 📷 📺 26°C sg: 1.022 17 cm 200L



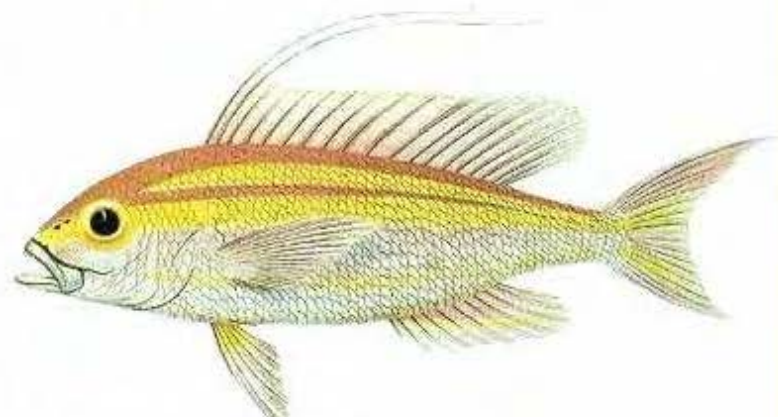
*Nemipterus ovenii* 325  
7 ~ ♀ ♥ 📷 📺 26°C sg: 1.022 19 cm 200L



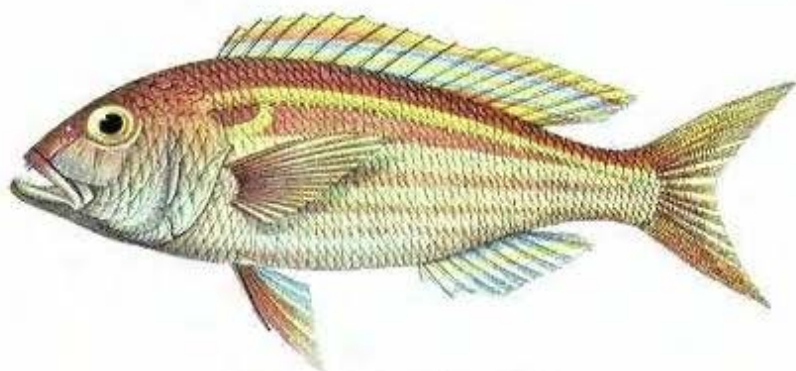
*Nemipterus metopias* 325  
7 ~ ♀ ♥ 📷 📺 26°C sg: 1.022 25 cm 300L



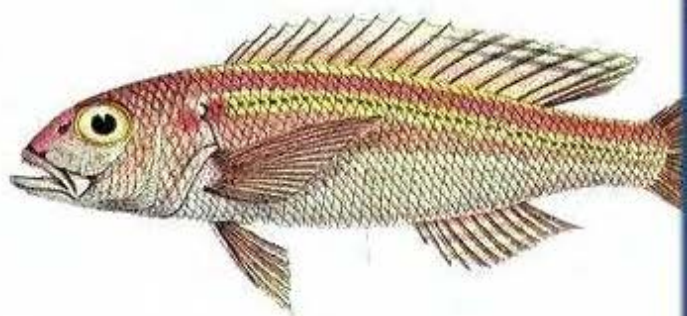
*Nemipterus japonicus* 325  
7 ~ ♀ ♥ 📷 📺 26°C sg: 1.022 30 cm 300L



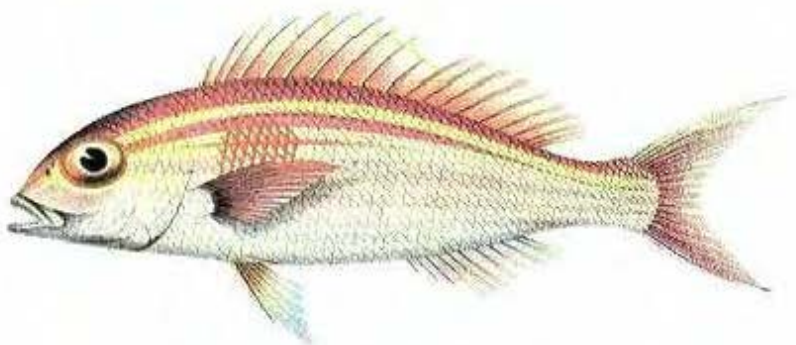
*Nemipterus nematophorus* 325  
7 ~ ♀ ♥ 📷 📺 26°C sg: 1.022 25 cm 300L



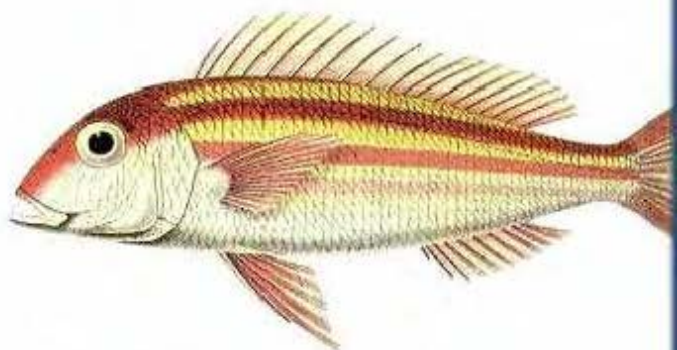
*Nemipterus hexodon* 325  
7 ~ ♀ ♥ 📷 📺 26°C sg: 1.022 30 cm 300L



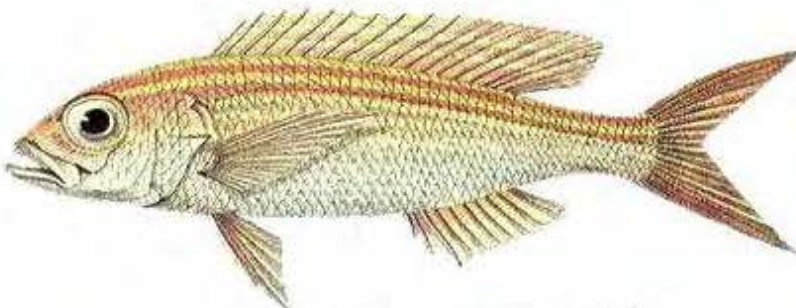
*Nemipterus mesoprion* 325  
7, 9 ~ ♀ ♥ 📷 📺 26°C sg: 1.022 20 cm 200L



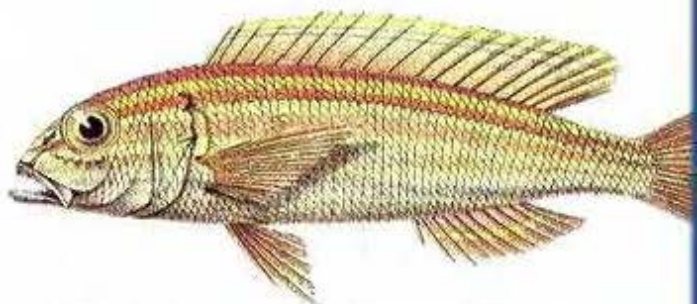
*Nemipterus tolu* 325  
7, 9 ~ ♀ ♥ 📷 📺 26°C sg: 1.022 30 cm 300L



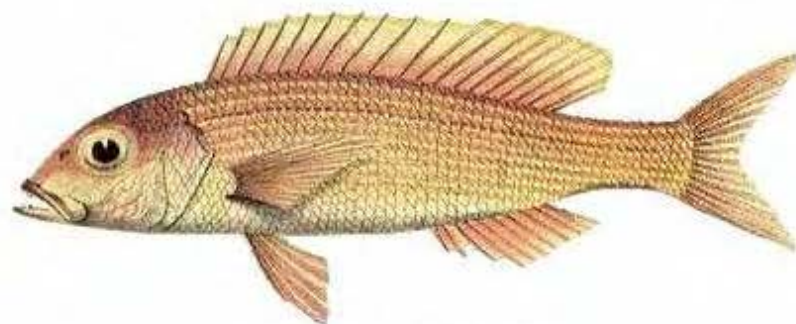
*Nemipterus peronii* 325  
7, 9, 10 ~ ♀ ♥ 📷 📺 26°C sg: 1.022 25 cm 300L



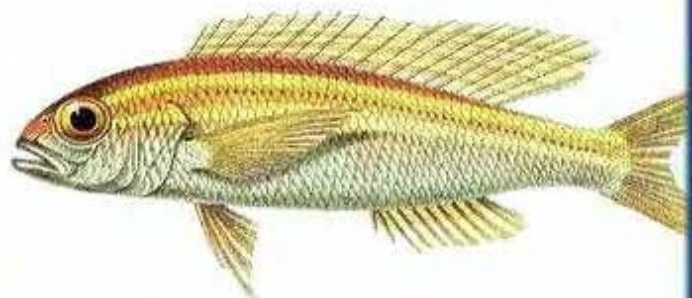
*Nemipterus sumbawensis* 325  
7 ~ ♀ ♥ 📷 📺 26°C sg: 1.022 16 cm 200L



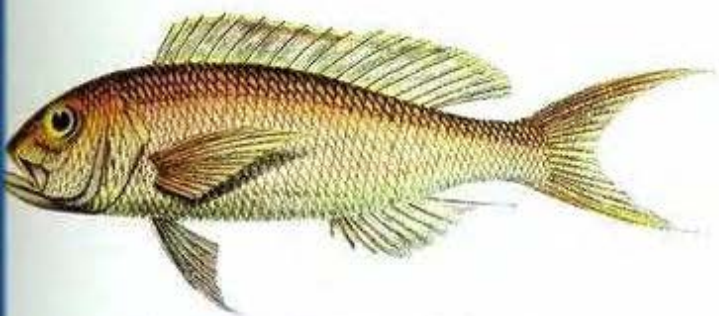
*Nemipterus tambuloides* 325  
7 ~ ♀ ♥ 📷 📺 26°C sg: 1.022 30 cm 300L



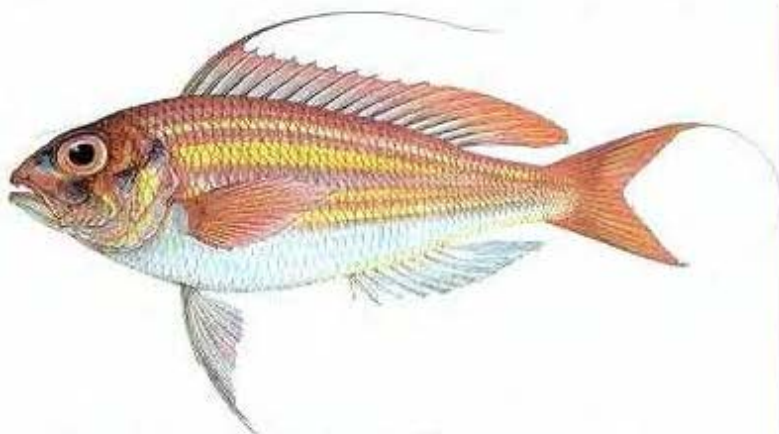
*Nemipterus gracilis* 325  
7 ~ ♀ ♥ 📷 📺 26°C sg: 1.022 18 cm 200L



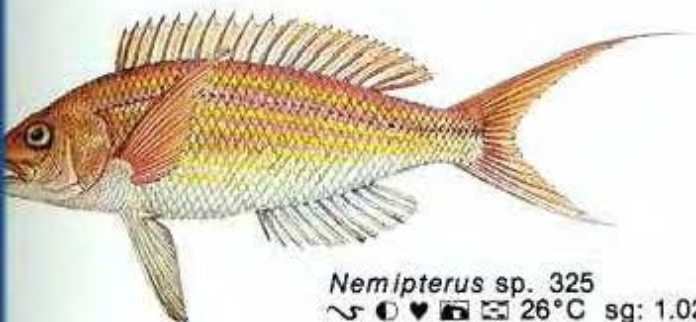
*Nemipterus marginatus* 325  
7 ~ ♀ ♥ 📷 📺 26°C sg: 1.022 30 cm 300L



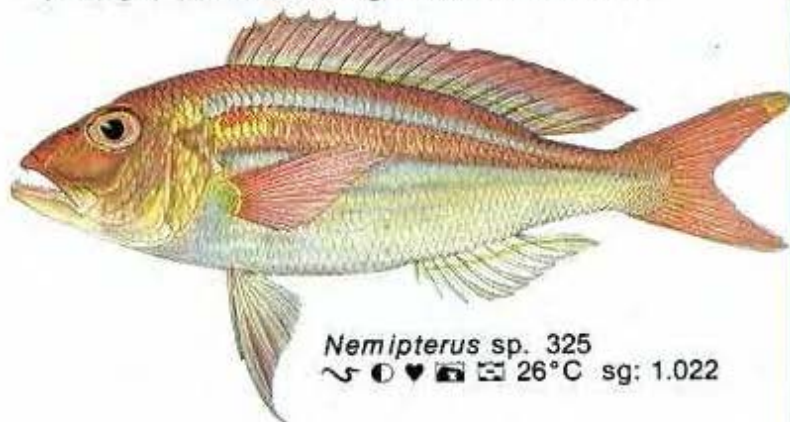
*Nemipterus hexodon* 325  
7 ~ ♀ ♥ 📺 26°C sg: 1.022 30 cm 300L



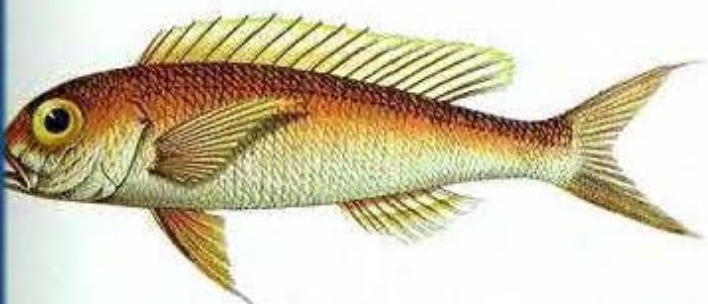
*Nemipterus nematophorus* 325  
7 ~ ♀ ♥ 📺 26°C sg: 1.022 25 cm 300L



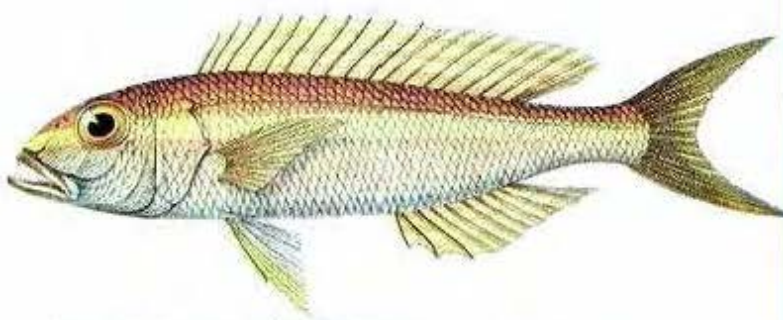
*Nemipterus* sp. 325  
~ ♀ ♥ 📺 26°C sg: 1.022



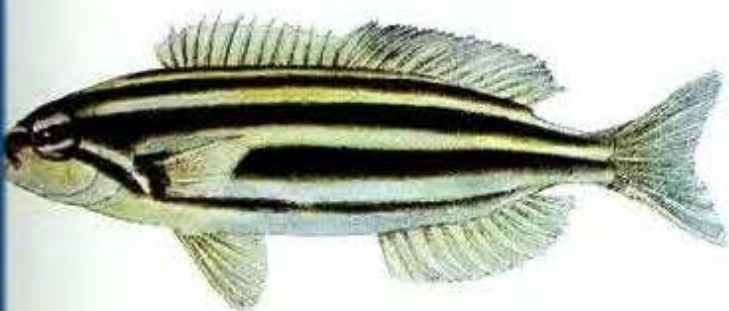
*Nemipterus* sp. 325  
~ ♀ ♥ 📺 26°C sg: 1.022



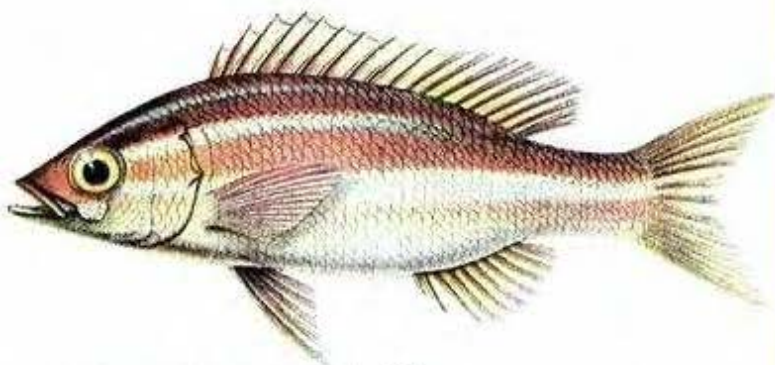
*Nemipterus nemurus* 325  
7 ~ ♀ ♥ 📺 26°C sg: 1.022 25 cm 300L



*Nemipterus celebicus* 325  
7 ~ ♀ ♥ 📺 26°C sg: 1.022 20 cm 200L



*Pentapodus caninus* (juv.) 325  
7, 9 ~ ♀ ♥ 📺 26°C sg: 1.022 28 cm 300L



*Pentapodus bifasciatus* 325  
7 ~ ♀ ♥ 📺 26°C sg: 1.022 20 cm 200L

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*Scolopsis margaritifera* 325  
7 ♀ ~ ♀ ♂ ✕ ♀ ♀ 26°C sg: 1.022 25 cm 300L

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*Scolopsis margaritifera* 325  
7 ♀ ~ ♀ ♂ ✕ ♀ ♀ 26°C sg: 1.022 25 cm 300L



*Nemipterus virgatus* 325  
7, 9 ♀ ~ ♀ ♂ ♥ ♀ ♀ 26°C sg: 1.022 30 cm 300L



*Nemipterus hexodon* 325  
7 ♀ ~ ♀ ♂ ♥ ♀ ♀ 26°C sg: 1.022 30 cm 300L



*Equetus acuminatus* 326  
2 ♀ ~ ♀ ♂ ♥ ♀ ♀ 26°C sg: 1.022 23 cm 300L



*Equetus acuminatus* 326  
2 ♀ ~ ♀ ♂ ♥ ♀ ♀ 26°C sg: 1.022 23 cm 300L



*Equetus acuminatus* 326  
2 ♀ ~ ♀ ♂ ♥ ♀ ♀ 26°C sg: 1.022 23 cm 300L



*Equetus umbrosus* 326  
2 ♀ ~ ♀ ♂ ♥ ♀ ♀ 26°C sg: 1.022 25 cm 300L



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*Equetus lanceolatus* 326  
2 ♀ ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 25 cm 300L

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*Equetus lanceolatus* (juv.) 326  
2 ♀ ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 25 cm 300L



*Equetus punctatus* 326  
2 ♀ ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 25 cm 300L



*Equetus punctatus* 326  
2 ♀ ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 25 cm 300L



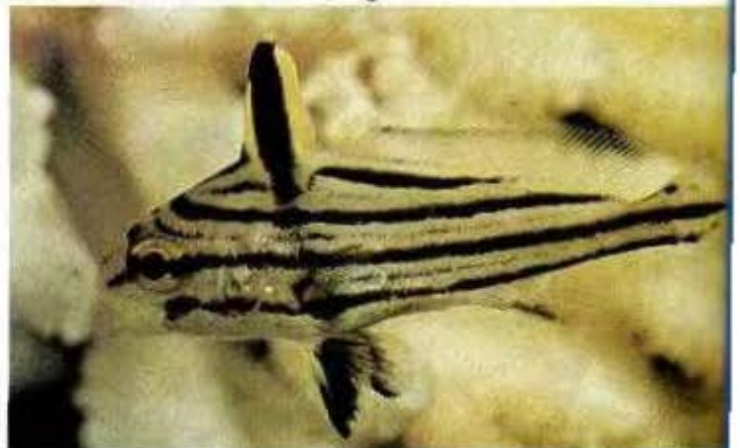
*Equetus viola* 326  
3 ♀ ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 25 cm 300L



*Equetus viola* 326  
3 ♀ ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 25 cm 300L



*Equetus punctatus* 326  
2 ♀ ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 25 cm 300L



*Equetus viola* 326  
3 ♀ ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 25 cm 300L

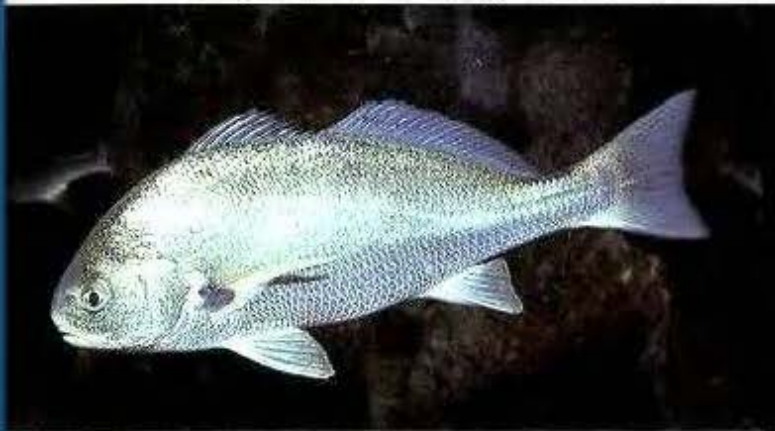




*Menticirrhus undulatus* 326  
3 ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 71 cm 800L



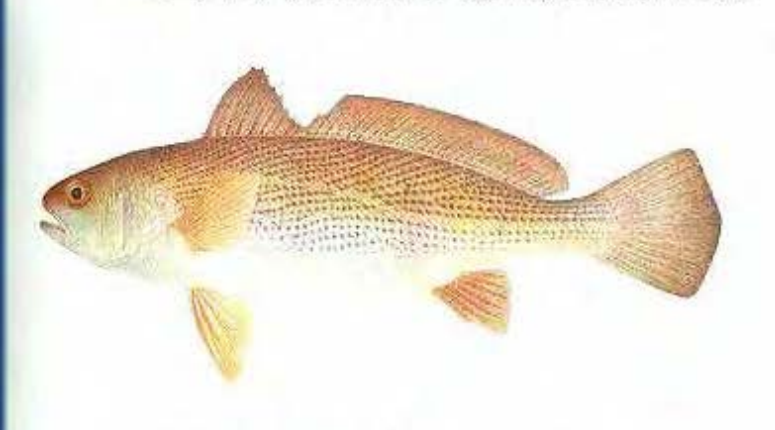
*Umbrina roncadore* 326  
3 ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 51 cm 500L



*Roncadore stearnsi* 326  
3 ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 69 cm 800L



*Genyonemus lineatus* 326  
3 ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 41 cm 400L



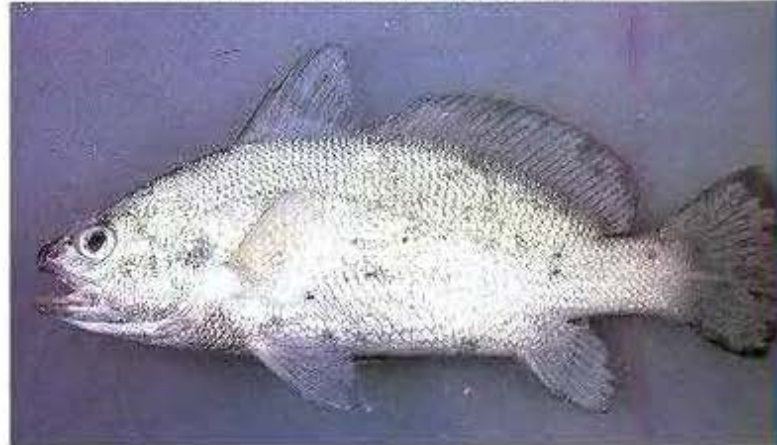
*Nibea mitsukurii* 326  
7 ♀ ♀ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 75 cm 800L



*Odontoscion dentex* 326  
2 ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 20 cm 200L



*Johnius diacanthus* 326  
8 ♀ ♀ ♀ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 150 cm 2500L

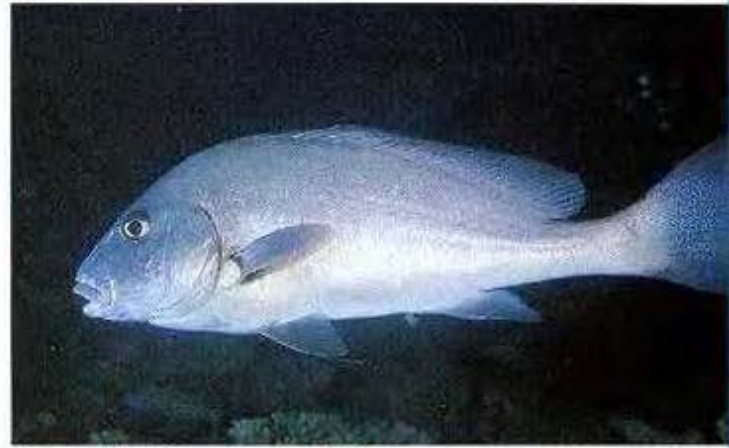


*Bairdiella batabana* 326  
2 ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 20 cm 200L





*Plectorhinchus pictus* 320  
5, 7, 9-10 ~ ~ ~ ~ ~ 26°C sg: 1.022 90 cm 1000L



*Plectorhinchus pictus* 320  
5, 7, 9-10 ~ ~ ~ ~ ~ 26°C sg: 1.022 90 cm 1000L



*Pomadasys commersoni* 320  
9 ~ ~ ~ ~ ~ 26°C sg: 1.022 80 cm 800L



*Pomadasys* sp. 320  
9 ~ ~ ~ ~ ~ 26°C sg: 1.022 35 cm 400L



*Parupeneus rubescens* 327  
7-10 ~ ~ ~ ~ ~ 26°C sg: 1.022 42 cm 500L



*Parupeneus rubescens* 327  
7-10 ~ ~ ~ ~ ~ 26°C sg: 1.022 42 cm 500L



*Parupeneus macronema* 327  
7 ~ ~ ~ ~ ~ 26°C sg: 1.022 35 cm 400L



*Upeneus tragula* 327  
7, 9 ~ ~ ~ ~ ~ 26°C sg: 1.022 25 cm 300L

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*Upeneichthys lineatus* 327  
11-12 ~ ♀ ♥ 📏 📏 23°C sg: 1.024 35 cm 400L

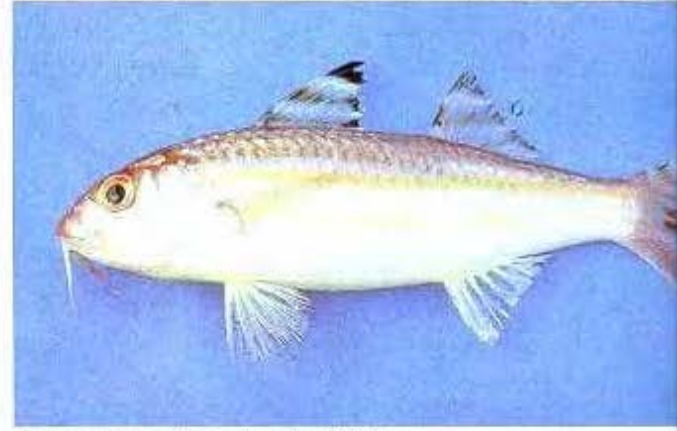
#246



*Upeneichthys porosus* 327  
11, 12 ~ ♀ ♥ 📏 📏 26°C sg: 1.022 25 cm 300L



*Upeneus bensasi* 327  
5, 7, 9 ~ ♀ ♥ 📏 📏 26°C sg: 1.022 20 cm 200L



*Upeneus moluccensis* 327  
7, 9 ~ ♀ ♥ 📏 📏 26°C sg: 1.022 23 cm 300L



*Upeneus tragula* 327  
7, 9 ~ ♀ ♥ 📏 📏 26°C sg: 1.022 25 cm 300L



*Upeneus vittatus* 327  
7, 9-10 ~ ♀ ♥ 📏 📏 26°C sg: 1.022 30 cm 300L



*Pseudupeneus grandisquamis* 327  
3 ~ ♀ ♥ 📏 📏 26°C sg: 1.022 30 cm 300L



*Pseudupeneus maculatus* 327  
2 ~ ♀ ♥ 📏 📏 26°C sg: 1.022 30 cm 300L



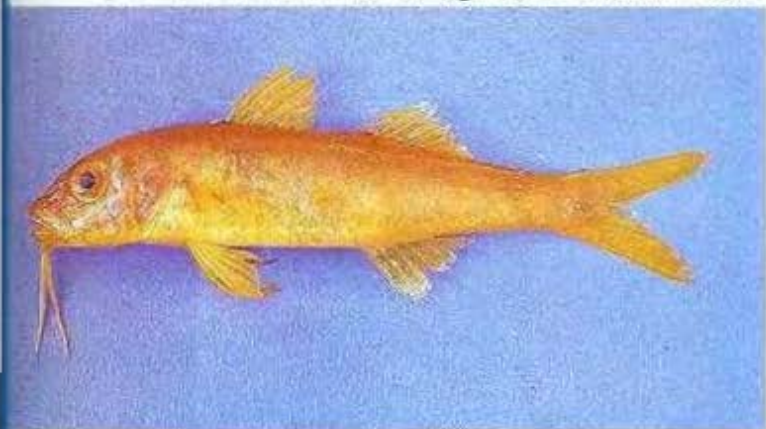
*Mulloides dentatus* 327  
3 ♀ ~ ● ♥ 📏 📏 26°C sg: 1.022 30.5 cm 400L

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*Mulloides martinicus* 327  
2 ♀ ~ ● ♥ 📏 📏 26°C sg: 1.022 40 cm 400L



*Mulloides pflugeri* 327  
7 ♀ ~ ● ♥ 📏 📏 26°C sg: 1.022 30 cm 300L



*Mulloides flavolineatus* 327  
7-10 ♀ ~ ● ♥ 📏 📏 26°C sg: 1.022 40 cm 400L



*Parupeneus multifasciata* 327  
7 ♀ ~ ● ♥ 📏 📏 26°C sg: 1.022 30 cm 300L



*Parupeneus atrocinctus* 327  
6-7 ♀ ~ ● ♥ 📏 📏 26°C sg: 1.022 25 cm 300L



*Pseudupeneus prayensis* 327  
13 ♀ ~ ● ♥ 📏 📏 26°C sg: 1.022 21 cm 200L



*Parupeneus pleurostigma* 327  
6-10 ♀ ~ ● ♥ 📏 📏 26°C sg: 1.022 25 cm 300L



*Parupeneus atrocinctus* 327  
6-7 ♀ ~ ● ♥ 📐 📐 26°C sg: 1.022 25 cm 300L



*Parupeneus cinnabarinus* 327  
9-10 ♀ ~ ● ♥ 📐 📐 26°C sg: 1.022 28 cm 300L



*Parupeneus forsskalii* 327  
9-10 ♀ ~ ● ♥ 📐 📐 26°C sg: 1.022 28 cm 300L



*Parupeneus indicus* 327  
5-7 ♀ ~ ● ♥ 📐 📐 26°C sg: 1.022 40 cm 400L



*Parupeneus chrysopleuron* 327  
7 ♀ ~ ● ♥ 📐 📐 26°C sg: 1.022 30 cm 300L



*Parupeneus cyclostomus* 327  
7-10 ♀ ~ ● ♥ 📐 📐 26°C sg: 1.022 50 cm 500L



*Parupeneus pleurotaenia* 327  
6-7 ♀ ~ ● ♥ 📐 📐 26°C sg: 1.022 35 cm 300L



*Parupeneus porphyreus* 327  
6-7 ♀ ~ ● ♥ 📐 📐 26°C sg: 1.022 31 cm 300L





*Upeneus sulphureus* 327  
7-9 ~ ♀ ♥ 📧 📧 26°C sg: 1.022 20 cm 200L



*Upeneus vittatus* 327  
7, 9-10 ~ ♀ ♥ 📧 📧 26°C sg: 1.022 30 cm 300L



*Upeneus tragula* 327  
7, 9 ~ ♀ ♥ 📧 📧 26°C sg: 1.022 25 cm 300L



*Upeneus moluccensis* 327  
7 ~ ♀ ♥ 📧 📧 26°C sg: 1.022 17 cm 200L



*Mulloides flavolineatus* 327  
5, 7, 9-10 ~ ♀ ♥ 📧 📧 26°C sg: 1.022 30 cm 300L



*Upeneus sondaicus* 327  
7 ~ ♀ ♥ 📧 📧 26°C sg: 1.022 22 cm 200L

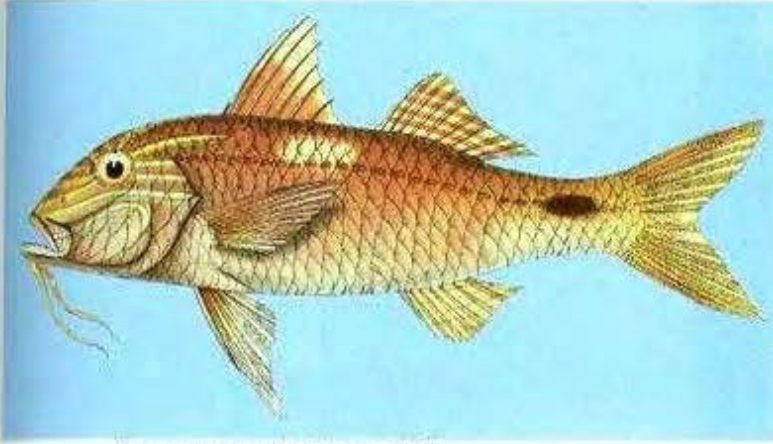


*Mulloides flavolineatus* 327  
5, 7, 9-10 ~ ♀ ♥ 📧 📧 26°C sg: 1.022 30 cm 300L

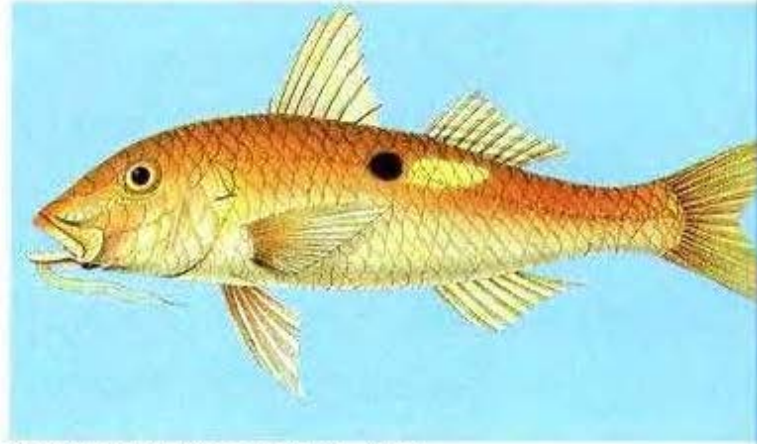


*Mulloides vanicolensis* 327  
6-7, 9-10 ~ ♀ ♥ 📧 📧 26°C sg: 1.022 38 cm 400L





*Parupeneus indicus* 327  
5-9 ♀ ~ ● ♥ ◻ ◻ 26°C sg: 1.022 40 cm 400L



*Parupeneus pleurostigma* 327  
6-10 ♀ ~ ● ♥ ◻ ◻ 26°C sg: 1.022 25 cm 300L



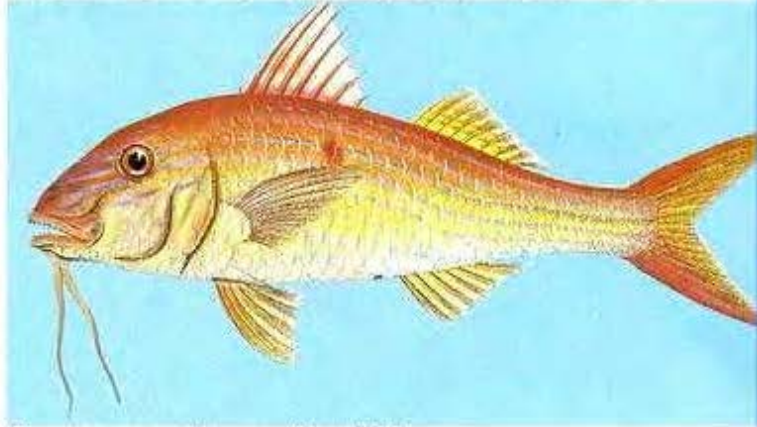
*Parupeneus barberinus* 327  
7-10 ♀ ~ ● ♥ ◻ ◻ 26°C sg: 1.022 50 cm 500L



*Parupeneus macronema* 327  
7 ♀ ~ ● ♥ ◻ ◻ 26°C sg: 1.022 35 cm 400L



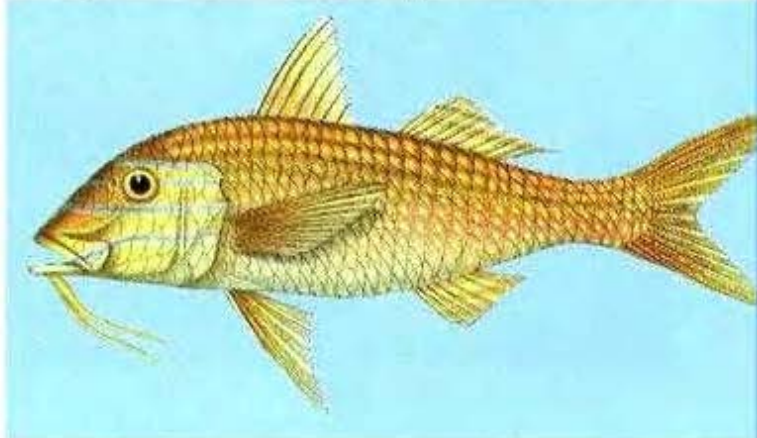
*Parupeneus pleurospilus* 327  
7-10 ♀ ~ ● ♥ ◻ ◻ 26°C sg: 1.022 30 cm 300L



*Parupeneus pleurospilus* 327  
7-10 ♀ ~ ● ♥ ◻ ◻ 26°C sg: 1.022 30 cm 300L

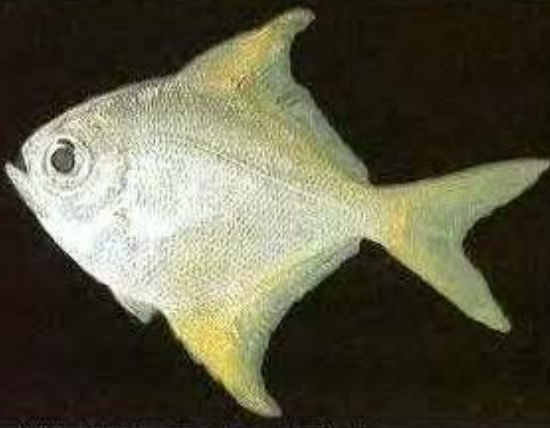


*Parupeneus barberinoides* 327  
6-7 ♀ ~ ● ♥ ◻ ◻ 26°C sg: 1.022 25 cm 300L



*Parupeneus luteus* 327  
7 ♀ ~ ● ♥ ◻ ◻ 26°C sg: 1.022 30 cm 300L





*Schuettea woodwardi* 328  
12 ♀ ~ ♀ ♀ ♀ ♀ ♀ 24°C sg: 1.023 6 cm 100L



*Monodactylus sebae* 328  
9 ♀ ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.018 20 cm 200L



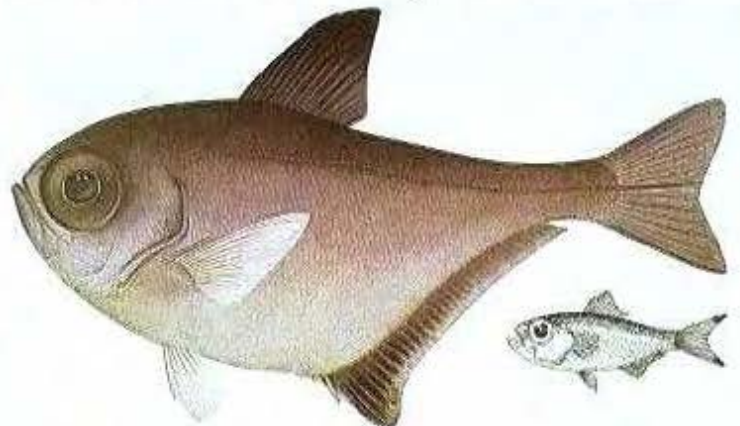
*Parapriacanthus unwini* 329  
12 ♀ ~ ♀ ♀ ♀ ♀ ♀ 24°C sg: 1.023 7 cm 100L



*Parapriacanthus dispar* 329  
11-12 ♀ ~ ♀ ♀ ♀ ♀ ♀ 23°C sg: 1.024 8 cm 100L



*Pempheris oualensis* 329  
6-7, 9 ♀ ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 20 cm 200L



*Pempheris japonica* 329  
5, 7 ♀ ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 18 cm 200L



*Pempheris analis* 329  
12 ♀ ~ ♀ ♀ ♀ ♀ ♀ 24°C sg: 1.023 12 cm 100L











*Atypichthys strigatus* 334  
11-12 ♀ ~ ♀ ♂ ♀ ♀ ♀ 23°C sg: 1.024 15 cm 200L



*Atypichthys latus* 334  
11-12 ♀ ~ ♀ ♂ ♀ ♀ ♀ 24°C sg: 1.023 13 cm 150L



*Girella punctata* 334  
5, 7 ♀ ~ ♀ ♂ ♀ ♀ ♀ 24°C sg: 1.023 55 cm 600L



*Girella nigricans* 334  
3 ♀ ~ ♀ ♂ ♀ ♀ ♀ 26°C sg: 1.022 66 cm 800L



*Girella tephraeops* 334  
12 ♀ ~ ♀ ♂ ♀ ♀ ♀ 24°C sg: 1.023 15 cm 200L



*Girella simplicoidens* 334  
3 ♀ ~ ♀ ♂ ♀ ♀ ♀ 26°C sg: 1.022 46 cm 500L



*Girella mezina* 334  
6-7 ♀ ~ ♀ ♂ ♀ ♀ ♀ 25°C sg: 1.022 11 cm 100L



*Hermosilla azurea* 334  
3 ♀ ~ ♀ ♂ ♀ ♀ ♀ 26°C sg: 1.022 44 cm 500L





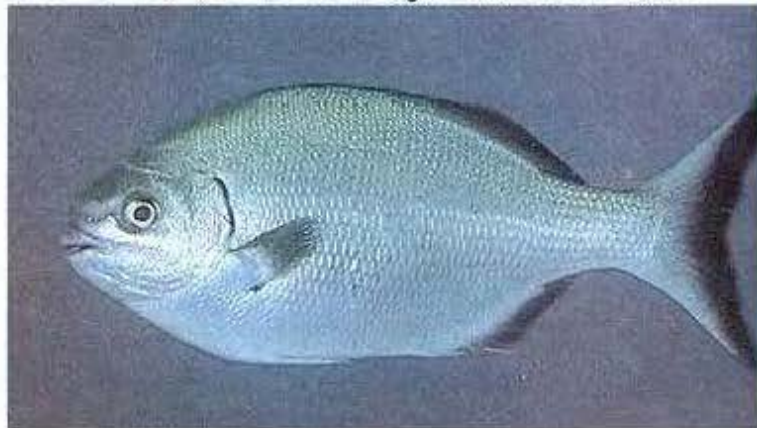
*Tilodon sexfasciatum* 334  
12 ♀ + ~ ♀ ♀ ♀ ♀ ♀ ♀ 23°C sg: 1.024 30 cm 300L



*Tilodon sexfasciatum* 334  
12 ♀ ~ ♀ + ♀ ♀ ♀ ♀ ♀ ♀ 23°C sg: 1.024 30 cm 300L



*Kyphosus cornellii* 334  
12 ♀ ~ ♀ + ♀ ♀ ♀ ♀ ♀ ♀ 23°C sg: 1.024 38 cm 400L



*Kyphosus sydneyanus* 334  
12 ♀ ~ ♀ + ♀ ♀ ♀ ♀ ♀ ♀ 23°C sg: 1.024 80 cm 1000L



*Girella zebra* 334  
12 ♀ ~ ♀ + ♀ ♀ ♀ ♀ ♀ ♀ 23°C sg: 1.024 30 cm 300L



*Microcanthus strigatus* 334  
5-7 ♀ ~ ♀ + ♀ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 20 cm 200L



*Neatypus obliquus* 334  
12 ♀ ~ ♀ + ♀ ♀ ♀ ♀ ♀ ♀ 23°C sg: 1.024 14 cm 150L



*Scorpis georgianus* 334  
12 ♀ ~ ♀ + ♀ ♀ ♀ ♀ ♀ ♀ 23°C sg: 1.022 35 cm 400L

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*Medialuna californiensis* 334  
3 ♀ ~ ♀ ♂ ♀ ♂ 26°C sg: 1.022 48 cm 500L

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*Scorpis aequipinnis* 334  
11 ♀ ~ ♀ ♂ ♀ ♂ 22°C sg: 1.024 40 cm 400L



*Kyphosus analogus* 334  
3 ♀ ~ ♀ ♂ ♀ ♂ 26°C sg: 1.022 45 cm 500L



*Kyphosus elegans* 334  
2 ♀ ~ ♀ ♂ ♀ ♂ 26°C sg: 1.022 38 cm 400L



*Kyphosus* sp. 334  
2 ♀ ~ ♀ ♂ ♀ ♂ 26°C sg: 1.022 32 cm 300L



*Kyphosus cinerascens* (golden form) 334  
7-10 ♀ ~ ♀ ♂ ♀ ♂ 26°C sg: 1.022 50 cm 500L



*Kyphosus incisor* 334  
2 ♀ ~ ♀ ♂ ♀ ♂ 26°C sg: 1.022 30 cm 300L



*Kyphosus sectatrix* 334  
2 ♀ ~ ♀ ♂ ♀ ♂ 26°C sg: 1.022 35 cm 800L



*Kyphosus fuscus* 334  
6 ♀ ~ + ○ ✖ 🏠 🌡 26°C sg: 1.022 60 cm 600L



*Kyphosus gibsoni* 334  
7 ♀ ~ + ○ ✖ 🏠 🌡 26°C sg: 1.022 20 cm 200L



*Kyphosus fuscus* 334  
6 ♀ ~ + ○ ✖ 🏠 🌡 26°C sg: 1.022 60 cm 600L



*Kyphosus sydneyanus* 334  
12 ♀ ~ + ○ ♥ 🏠 🌡 23°C sg: 1.024 80 cm 1000L



*Scatophagus argus* 336  
7, 9 ♀ ~ + ○ ✖ 🏠 🌡 26°C sg: 1.015 35 cm 400L



*Scatophagus tetracanthus* 336  
7, 9 ♀ ~ + ○ ♥ 🏠 🌡 26°C sg: 1.022 40 cm 400L



*Selenotoca multifasciata* 336  
7 ♀ ~ + ○ ✖ 🏠 🌡 26°C sg: 1.015 40 cm 400L



*Scatophagus argus* 336  
7, 9 ♀ ~ + ○ ♥ 🏠 🌡 26°C sg: 1.015 35 cm 400L



*Chaetodipterus faber* 335  
1-2 ♀ ~ + ♀ ♀ ♀ 26°C sg: 1.022 91 cm 1000L



*Chaetodipterus faber* 335  
1-2 ♀ ~ + ♀ ♀ ♀ 26°C sg: 1.022 91 cm 1000L



*Chaetodipterus zonatus* 335  
3 ♀ ~ + ♀ ♀ ♀ 26°C sg: 1.022 65 cm 800L



*Drepane punctata* 335  
7, 9 ♀ ~ + ♀ ♀ ♀ 26°C sg: 1.022 40 cm 400L



*Ehippus orbis* 335  
7, 9 ♀ ~ + ♀ ♀ ♀ 26°C sg: 1.022 25 cm 300L



*Zabidius novemaculeatus* 335  
7-8 ♀ ~ + ♀ ♀ ♀ 26°C sg: 1.022 20 cm 200L



*Platax orbicularis* 335  
7-10 ♀ ~ + ♀ ♀ ♀ 26°C sg: 1.022 50 cm 500L



*Platax pinnatus* 335  
7, 9-10 ♀ ~ + ♀ ♀ ♀ 26°C sg: 1.022 40 cm 400L



*Platax batavianus* 335  
7-8 ♀ ♂ ♡ ♣ ☞ ☜ ☞ ☜ 26°C sg: 1.022 50 cm 500L

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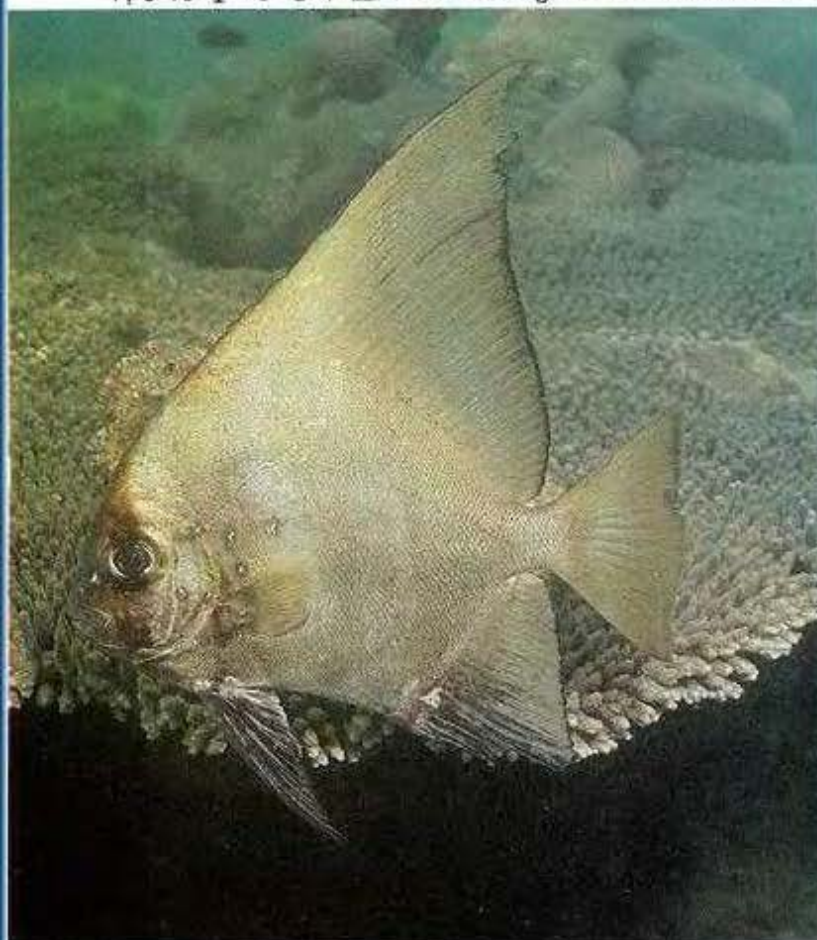


*Platax pinnatus* 335  
7, 9-10 ♀ ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 40 cm 500L

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*Platax pinnatus* 335  
7, 9-10 ♀ ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 40 cm 500L



*Platax batavianus* 335  
7-8 ♀ ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 50 cm 600L



*Platax orbicularis* 335  
7-10 ♀ ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 50 cm 600L





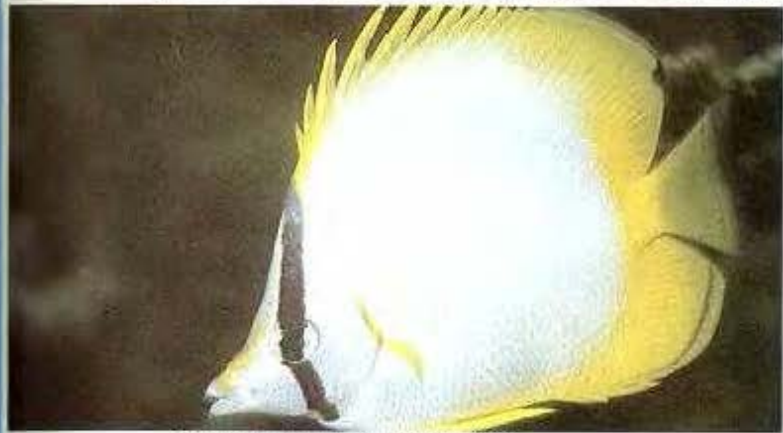




*Chaetodon daedalma* 338  
5, 7 ~ ♀ ♀ ♀ ♀ 25°C sg: 1.022 15 cm 200L



*Chaetodon quadrimaculatus* 338  
6 ~ ♀ ♀ ♀ ♀ 26°C sg: 1.022 15 cm 200L



*Chaetodon ocellatus* 338  
2 ~ ♀ ♀ ♀ ♀ 26°C sg: 1.022 19 cm 200L



*Chaetodon robustus* 338  
13 ~ ♀ ♀ ♀ ♀ 26°C sg: 1.022 15 cm 200L



*Zanclistius elevatus* 341  
11 ~ ♀ ♀ ♀ ♀ 22°C sg: 1.022 30 cm 300L



*Pentaceros japonicus* 341  
7-8 ~ ♀ ♀ ♀ ♀ 26°C sg: 1.022 25 cm 300L



*Evistias acutirostris* 341  
5-6 ~ ♀ ♀ ♀ ♀ 26°C sg: 1.022 55 cm 600L



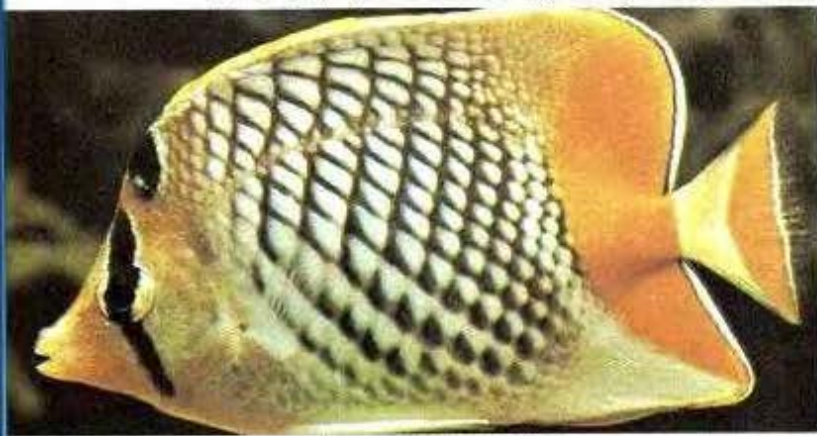
*Evistias acutirostris* 341  
5-6 ~ ♀ ♀ ♀ ♀ 26°C sg: 1.022 55 cm 600L



*Chaetodon declevis* 338  
6 ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 15 cm 200L



*Chaetodon argentatus* 338  
7 ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 13 cm 200L



*Chaetodon xanthurus* 338  
7 ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 15 cm 200L



*Chaetodon mertensii* 338  
6-8 ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 14 cm 200L



*Chaetodon trifascialis* 338  
6-10 ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 15 cm 200L



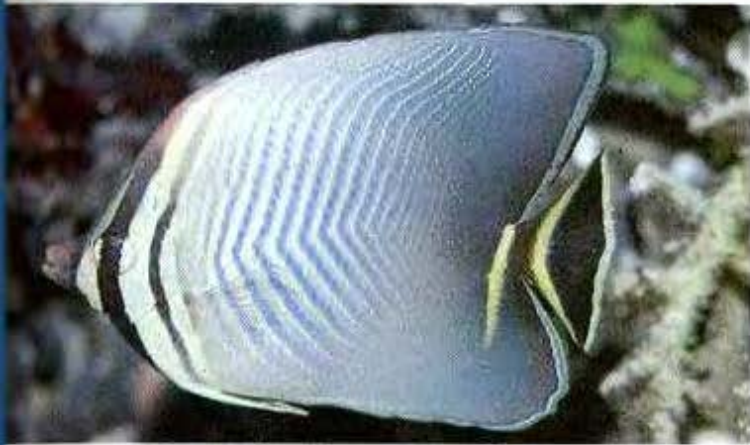
*Chaetodon baronessa* 338  
6-8 ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 15 cm 200L



*Chaetodon trifasciatus* 338  
6-10 ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 17 cm 200L



*Chaetodon reticulatus* 338  
6-7 ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 18 cm 200L



*Chaetodon triangulum* 338  
9 ~ ♀ ♀ ♀ ♀ 25°C sg: 1.022 14 cm 200L



*Chaetodon larvatus* 338  
9, 10 ~ ♀ ♀ ♀ ♀ 26°C sg: 1.023 14 cm 200L



*Chaetodon leucopleura* 338  
9 ~ ♀ ♀ ♀ ♀ 26°C sg: 1.022 19 cm 200L



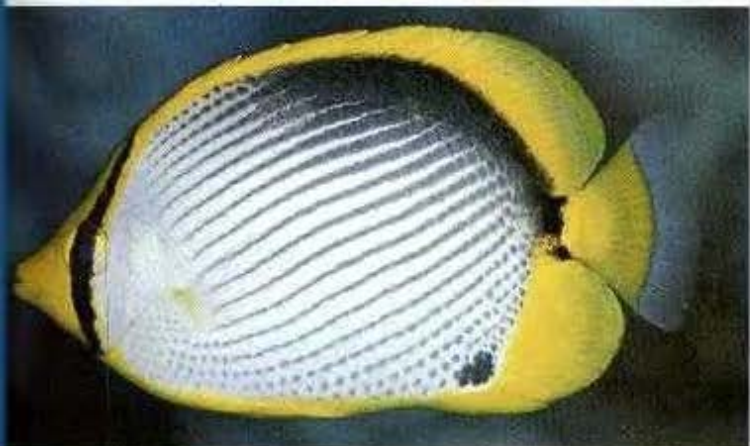
*Chaetodon trifascialis* 338  
6-10 ~ ♀ ♀ ♀ ♀ 26°C sg: 1.022 15 cm 200L



*Chaetodon paucifasciatus* 338  
9-10 ~ ♀ ♀ ♀ ♀ 26°C sg: 1.023 15 cm 200L



*Chaetodon madagascariensis* 338  
9 ~ ♀ ♀ ♀ ♀ 26°C sg: 1.022 15 cm 200L



*Chaetodon melannotus* 338  
6-10 ~ ♀ ♀ ♀ ♀ 25°C sg: 1.022 17 cm 200L



*Chaetodon ocellicaudus* 338  
6-7, 9 ~ ♀ ♀ ♀ ♀ 26°C sg: 1.022 13 cm 200L





*Chaetodon meyeri* 338  
6-7, 9 ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 18 cm 200L



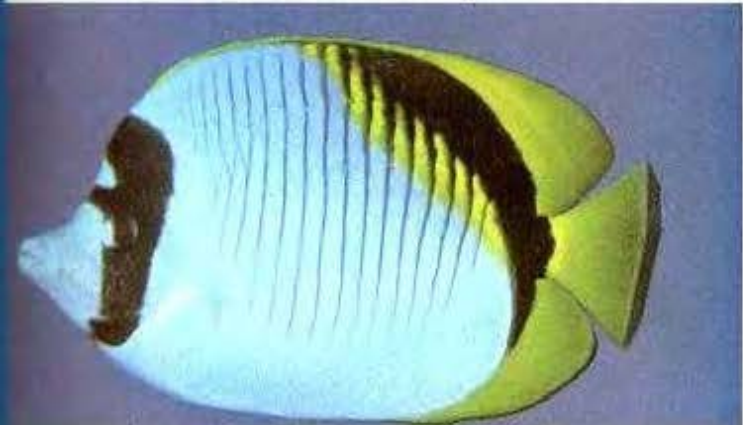
*Chaetodon ornatissimus* 338  
6-8 ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 19 cm 200L



*Chaetodon nigropunctatus* 338  
9 ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 16 cm 200L



*Chaetodon octofasciatus* 338  
7-9 ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 13 cm 200L



*Chaetodon lineolatus* 338  
6-10 ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 29 cm 400L



*Chaetodon oxycephalus* 338  
7,9 ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 22 cm 300L



*Chaetodon plebeius* 338  
6-9 ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 19 cm 200L



*Chaetodon plebeius* 338  
6-9 ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 19 cm 200L

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*Chaetodon aureofasciatus* 338  
7-8 ♀ ♂ ♡ 🐟 🌡 26°C sg: 1.022 14 cm 200L

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*Chaetodon blackburnii* 338  
9 ♀ ♂ ♡ 🐟 🌡 26°C sg: 1.022 13 cm 200L



*Chaetodon ulletensis* 338  
6-8 ♀ ♂ ♡ 🐟 🌡 26°C sg: 1.022 17 cm 200L



*Chaetodon falcula* 338  
9 ♀ ♂ ♡ 🐟 🌡 26°C sg: 1.022 29 cm 400L



*Chaetodon fasciatus* 338  
10 ♀ ♂ ♡ 🐟 🌡 26°C sg: 1.030 20 cm 200L



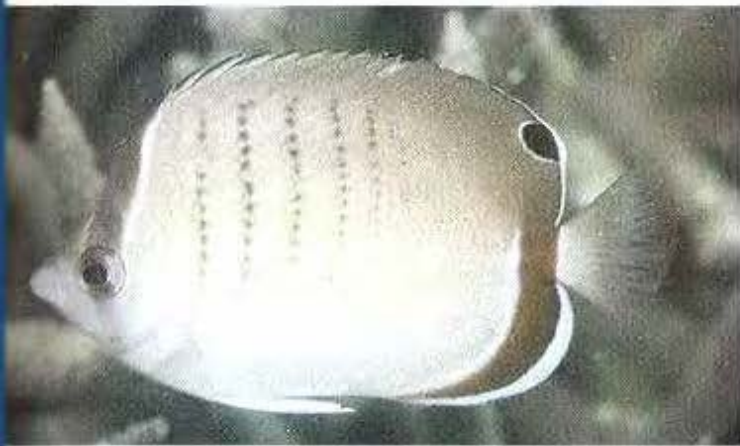
*Chaetodon lunula* 338  
6-9 ♀ ♂ ♡ 🐟 🌡 26°C sg: 1.022 21 cm 200L



*Chaetodon flavocoronatus* 338  
6 ♀ ♂ ♡ 🐟 🌡 26°C sg: 1.022 13 cm 200L



*Chaetodon kleini* 338  
6-10 ♀ ♂ ♡ 🐟 🌡 26°C sg: 1.022 15 cm 200L



*Chaetodon assarius* 338  
7,12 ♀♂ 26°C sg: 1.022 14 cm 200L



*Chaetodon dolosus* 338  
9 ♀♂ 26°C sg: 1.022 14 cm 200L



*Chaetodon melapterus* 338  
9-10 ♀♂ 26°C sg: 1.022 14 cm 200L



*Chaetodon austriacus* 338  
10 ♀♂ 26°C sg: 1.030 16 cm 200L



*Chaetodon bennetti* 338  
6-9 ♀♂ 26°C sg: 1.022 15 cm 200L



*Chaetodon trifasciatus* 338  
6-9 ♀♂ 26°C sg: 1.022 17 cm 200L



*Chaetodon citrinellus* 338  
6-9 ♀♂ 26°C sg: 1.022 13 cm 200L



*Chaetodon collare* 338  
7, 9 ♀♂ 26°C sg: 1.022 18 cm 200L

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*Chaetodon sedentarius* 338  
2 ♀♂ ♀♂ 26°C sg: 1.022 17 cm 200L

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*Chaetodon sanctaehelenae* 338  
13 ♀♂ ♀♂ 26°C sg: 1.022 18 cm 200L



*Chaetodon trichrous* 338  
6 ♀♂ ♀♂ 26°C sg: 1.022 14 cm 200L



*Chaetodon fremblii* 338  
6 ♀♂ ♀♂ 26°C sg: 1.022 18 cm 200L



*Chaetodon litus* 338  
Easter Is. ♀♂ ♀♂ 26°C sg: 1.022 15 cm 200L



*Chaetodon hemichrysus* 338  
6 ♀♂ ♀♂ 26°C sg: 1.022 19 cm 200L



*Chaetodon pelewensis* 338  
6-7 ♀♂ ♀♂ 26°C sg: 1.022 13 cm 200L



*Chaetodon multicinctus* 338  
6 ♀♂ ♀♂ 26°C sg: 1.022 15 cm 200L





*Chaetodon rainfordi* 338  
8 ♀ ♂ ♥ ♣ ☞ ☞ 26°C sg: 1.030 15 cm 200L



*Chaetodon tricinctus* 338  
11, 12 ♀ ♂ ♥ ♣ ☞ ☞ 23°C sg: 1.022 20 cm 200L



*Chaetodon striatus* 338  
2 ♀ ♂ ♥ ♣ ☞ ☞ 26°C sg: 1.022 14 cm 200L



*Chaetodon capistratus* 338  
2 ♀ ♂ ♥ ♣ ☞ ☞ 26°C sg: 1.022 13 cm 200L



*Chaetodon humeralis* 338  
3 ♀ ♂ ♥ ♣ ☞ ☞ 26°C sg: 1.022 18 cm 200L



*Chaetodon hoefleri* 338  
13 ♀ ♂ ♥ ♣ ☞ ☞ 26°C sg: 1.022 18 cm 200L



*Chaetodon guentheri* 338  
7-8 ♀ ♂ ♥ ♣ ☞ ☞ 26°C sg: 1.022 15 cm 200L



*Chaetodon millaris* 338  
6 ♀ ♂ ♥ ♣ ☞ ☞ 26°C sg: 1.022 17 cm 200L





*Chaetodon unimaculatus* 338  
6-9 ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 20 cm 200L



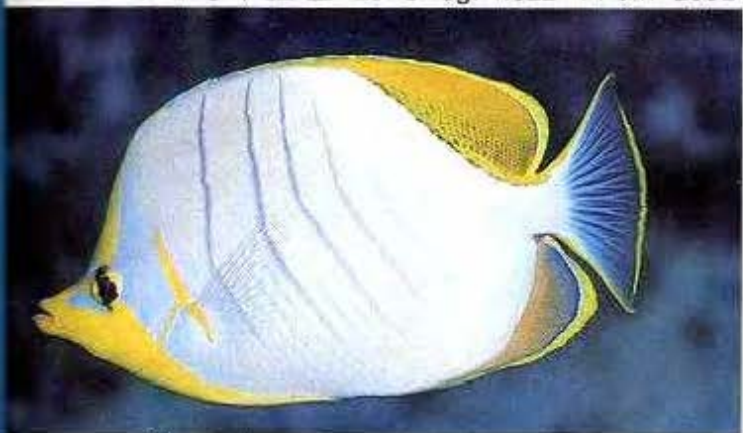
*Chaetodon unimaculatus* 338  
6-9 ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 20 cm 200L



*Chaetodon mitratus* 338  
9 ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 14 cm 200L



*Chaetodon marleyi* 338  
9 ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 28 cm 300L



*Chaetodon xanthocephalus* 338  
9 ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 21 cm 200L



*Chaetodon ehippium* 338  
6-9 ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 21 cm 300L



*Chaetodon auriga* 338  
6-10 ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 19 cm 200L



*Chaetodon rafflesi* 338  
6-9 ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 17 cm 200L

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*Chaetodon dichrous* 338  
13 ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 15 cm 200L

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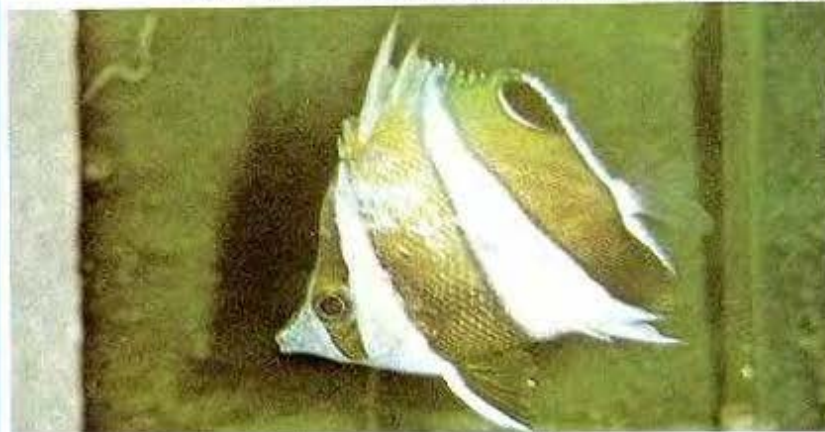
*Chaetodon aculeatus* 338  
2 ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 12 cm 150L



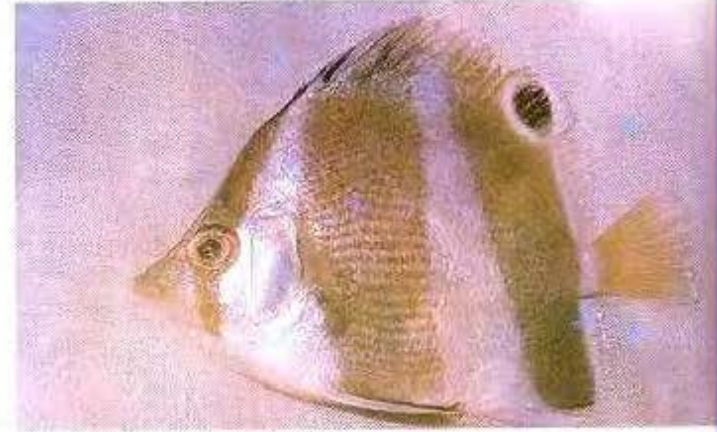
*Chaetodon nippon* 338  
5, 7 ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 17 cm 200L



*Chaetodon modestus* 338  
5, 7 ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 16 cm 200L



*Chaetodon excelsa* 338  
6 ~ ♀ ♀ ♀ ♀ ♀ 25°C sg: 1.022 15 cm 200L



*Chaetodon jayakari* 338  
9 ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 14 cm 200L



*Chaetodon burgessi* 338  
6 ~ ♀ ♀ ♀ ♀ ♀ 25°C sg: 1.022 11 cm 150L

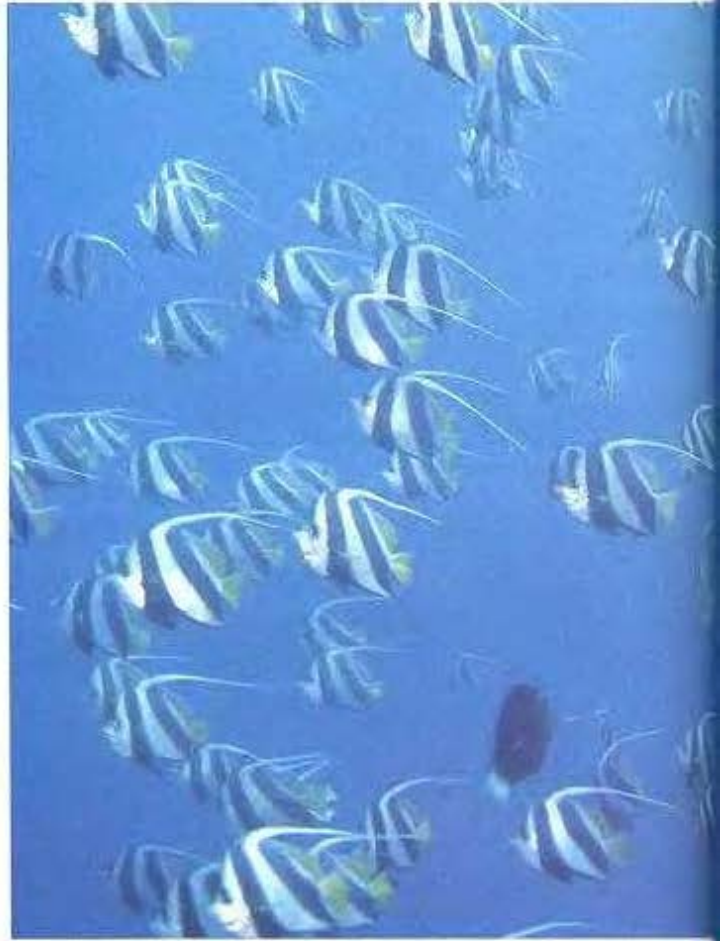


*Chaetodon tinkeri* 338  
6 ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 16 cm 200L





*Heniochus pleurotaenia* 338  
9 ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 16 cm 200L



*Heniochus acuminatus* 338  
6-10 ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 20 cm 200L



*Chelmon marginalis* 338  
7, ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 10 cm 100L



*Parachaetodon ocellatus* 338  
6-9 ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 17 cm 200L



*Chelmonops truncatus* 338  
8, 12 ~ ♀ ♀ ♀ ♀ ♀ 23°C sg: 1.022 23 cm 250L



*Coradion chrysozonus* 338  
7 ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 12 cm 150L





*Amphichaetodon melbae* 338  
3 ~ ♀ ♀ ♀ ♀ 23°C sg: 1.022 16 cm 200L



*Amphichaetodon howensis* 338  
11-12 ~ ♀ ♀ ♀ ♀ 23°C sg: 1.022 20 cm 200L



*Chelmonops truncatus* 338  
8, 12 ~ ♀ ♀ ♀ ♀ 23°C sg: 1.022 23 cm 250L



*Chelmonops truncatus* 338  
8, 12 ~ ♀ ♀ ♀ ♀ 23°C sg: 1.022 23 cm 250L



*Chelmon rostratus* 338  
6-9 ~ ♀ ♀ ♀ ♀ 26°C sg: 1.022 20 cm 200L



*Chelmon muelleri* 338  
7-8 ~ ♀ ♀ ♀ ♀ 26°C sg: 1.022 15 cm 150L



*Chelmon rostratus* 338  
6-9 ~ ♀ ♀ ♀ ♀ 26°C sg: 1.022 20 cm 200L



*Parachaetodon ocellatus* 338  
6-9 ~ ♀ ♀ ♀ ♀ 26°C sg: 1.022 17 cm 200L





*Forcipiger longirostris* 338  
6-7, 9 ♀ ♂ ♀ ♂ 26°C sg: 1.022 27 cm 300L



*Forcipiger longirostris* 338  
6-7, 9 ♀ ♂ ♀ ♂ 26°C sg: 1.022 27 cm 300L



*Forcipiger longirostris* 338  
6-7, 9 ♀ ♂ ♀ ♂ 26°C sg: 1.022 27 cm 300L



*Forcipiger flavissimus* 338  
3, 5-10 ♀ ♂ ♀ ♂ 26°C sg: 1.022 26 cm 300L



*Hemitaurichthys polylepis* 338  
8 ♀ ♂ ♀ ♂ 26°C sg: 1.022 18 cm 200L



*Hemitaurichthys zoster* 338  
9 ♀ ♂ ♀ ♂ 26°C sg: 1.022 20 cm 200L



*Hemitaurichthys thompsoni* 338  
6 ♀ ♂ ♀ ♂ 26°C sg: 1.022 22 cm 300L



*Hemitaurichthys multispinus* 338  
6 ♀ ♂ ♀ ♂ 26°C sg: 1.022 21 cm 200L

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*Heniochus chrysostomus* 338  
6-8 ~ ♡ 🐠 🐡 🐢 26°C sg: 1.022 18 cm 300L

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*Heniochus intermedius* 338  
9-10 ~ ♡ 🐠 🐡 🐢 26°C sg: 1.030 20 cm 200L



*Heniochus monoceros* 338  
6-7, 9 ~ ♡ 🐠 🐡 🐢 26°C sg: 1.022 19 cm 200L



*Heniochus singularis* 338  
7 ~ ♡ 🐠 🐡 🐢 26°C sg: 1.022 24 cm 300L



*Heniochus varius* 338  
6-8 ~ ♡ 🐠 🐡 🐢 26°C sg: 1.022 17 cm 200L



*Heniochus varius* 338  
6-8 ~ ♡ 🐠 🐡 🐢 26°C sg: 1.022 17 cm 200L



*Heniochus acuminatus* 338  
6-10 ~ ♡ 🐠 🐡 🐢 26°C sg: 1.022 25 cm 300L



*Heniochus monoceros* 338  
6-7, 9 ~ ♡ 🐠 🐡 🐢 26°C sg: 1.022 19 cm 200L



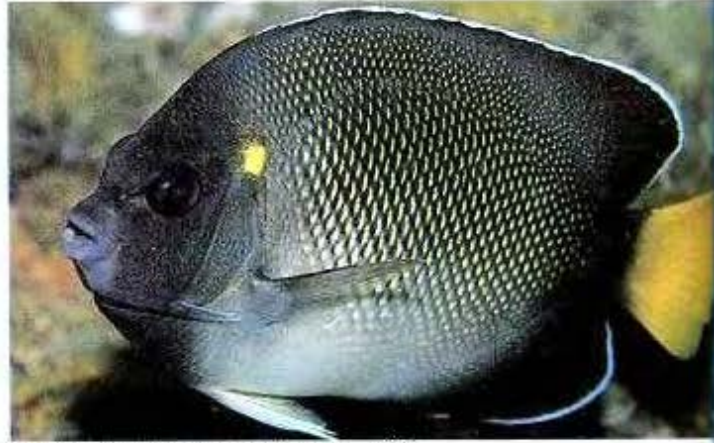
*Pygoplites diacanthus* 339  
6-10 ~ + ♀ ♥ 📺 26°C sg: 1.022 25 cm 300L

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*Apolemichthys trimaculatus* 339  
7.9 ~ ♀ ♂ ♡ 📏 🌡 26°C sg: 1.022 30 cm 300L

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*Apolemichthys xanthurus* 339  
9 ♀ ~ ♀ ♂ ♡ 📏 🌡 26°C sg: 1.022 15 cm 150L



*Centropyge acanthops* 339  
9 ♀ ~ ♀ ♂ ♡ 📏 🌡 26°C sg: 1.022 8 cm 80L



*Centropyge bicolor* 339  
7 ♀ ~ ♀ ♂ ♡ 📏 🌡 26°C sg: 1.022 15 cm 150L



*Centropyge bispinosus* 339  
7.9 ♀ ~ ♀ ♂ ♡ 📏 🌡 26°C sg: 1.022 12 cm 150L



*Centropyge eibli* 339  
9 ♀ ~ ♀ ♂ ♡ 📏 🌡 26°C sg: 1.022 15 cm 150L



*Centropyge flavopectoralis* 339  
9 ♀ ~ ♀ ♂ ♡ 📏 🌡 26°C sg: 1.022 25 cm 300L



*Centropyge multispinis* 339  
9 ♀ ~ ♀ ♂ ♡ 📏 🌡 26°C sg: 1.022 14 cm 150L



*Centropyge shepardi* 339  
6♀ ♀ ♂ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 12 cm 150L



*Centropyge ferrugatus* 339  
7♀ ♀ ♂ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 10 cm 100L



*Centropyge loriculus* 339  
7♀ ♀ ♂ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 12 cm 150L



*Centropyge potteri* 339  
6♀ ♀ ♂ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 10 cm 100L



*Centropyge nox* 339  
7♀ ♀ ♂ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 11 cm 100L



*Centropyge colini* 339  
6♀ ♀ ♂ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 7 cm 80L



*Centropyge heraldi* 339  
7♀ ♀ ♂ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 12 cm 150L



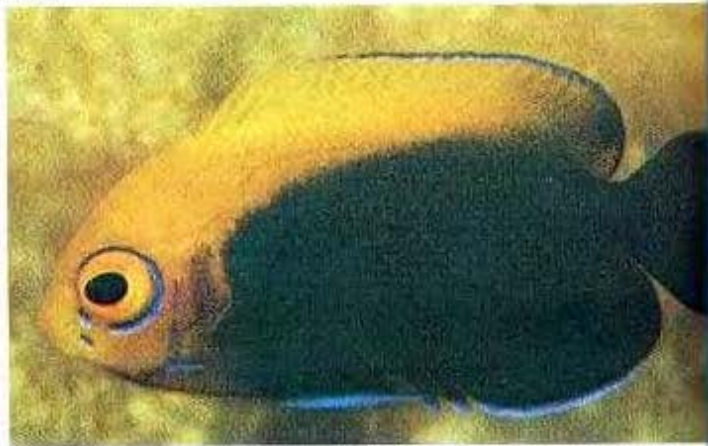
*Centropyge heraldi* (var.) 339  
7♀ ♀ ♂ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 12 cm 150L

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*Centropyge resplendens* 339  
13 ♀ ~ ♀ ♂ ♥ 📺 26°C sg: 1.022 7 cm 100L

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*Centropyge aurantonotus* 339  
2 ♀ ~ ♀ ♂ ♥ 📺 26°C sg: 1.022 6 cm 60L



*Centropyge argi* 339  
2 ♀ ~ ♀ ♂ ♥ 📺 26°C sg: 1.022 7 cm 100L



*Centropyge fisheri* 339  
6 ♀ ~ ♀ ♂ ♥ 📺 26°C sg: 1.022 10 cm 100L



*Centropyge hotumatua* 339  
6 ♀ ~ ♀ ♂ ♥ 📺 26°C sg: 1.022 9 cm 100L



*Centropyge multicolor* 339  
6 ♀ ~ ♀ ♂ ♥ 📺 26°C sg: 1.022 8 cm 80L



*Centropyge interruptus* 339  
5-7 ♀ ~ ♀ ♂ ♥ 📺 26°C sg: 1.022 16 cm 200L



*Centropyge flavicauda* 339  
7 ♀ ~ ♀ ♂ ♥ 📺 26°C sg: 1.022 8 cm 80L



*Centropyge flavissimus* 339  
6-7♀ ~ ♀ ♂ ♡ 📺 26°C sg: 1.022 9 cm 100L



*Centropyge flavissimus* 339  
6-7♀ ~ ♀ ♂ ♡ 📺 26°C sg: 1.022 9 cm 100L



*Centropyge multifasciatus* 339  
6-7♀ ~ ♀ ♂ ♡ 📺 26°C sg: 1.022 15 cm 150L



*Centropyge joculator* 339  
9♀ ~ ♀ ♂ ♡ 📺 26°C sg: 1.022 15 cm 150L



*Centropyge tibicin* 339  
7♀ ~ ♀ ♂ ♡ 📺 26°C sg: 1.022 19 cm 200L



*Centropyge vrolikii* 339  
7♀ ~ ♀ ♂ ♡ 📺 26°C sg: 1.022 10 cm 100L



*Genicanthus caudovittatus* (male) 339  
10♀ ~ ♀ ♂ ♡ 📺 26°C sg: 1.022 20 cm 200L



*Genicanthus caudovittatus* 339 ♀  
10♀ ~ ♀ ♂ ♡ 📺 26°C sg: 1.022 20 cm 200L

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*Genicanthus watanabei* 339  
7♀ ~ + ○ ♥ ♣ ☒ 26°C sg: 1.022 10 cm 100L

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*Genicanthus watanabei* 339  
7♀ ~ + ○ ♥ ♣ ☒ 26°C sg: 1.022 10 cm 100L



*Genicanthus semifasciatus* 339  
7♀ ~ + ○ ♥ ♣ ☒ 26°C sg: 1.022 10 cm 100L



*Genicanthus semifasciatus* 339  
7♀ ~ + ○ ♥ ♣ ☒ 26°C sg: 1.022 10 cm 100L



*Genicanthus melanospilus* 339  
7♀ ~ + ○ ♥ ♣ ☒ 26°C sg: 1.022 21 cm 200L



*Genicanthus melanospilus* 339  
7♀ ~ + ○ ♥ ♣ ☒ 26°C sg: 1.022 21 cm 200L



*Genicanthus semicinctus* 339  
11♀ ~ + ○ ♥ ♣ ☒ 26°C sg: 1.022 10 cm 100L



*Genicanthus semicinctus* 339  
11♀ ~ + ○ ♥ ♣ ☒ 26°C sg: 1.022 10 cm 100L



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*Genicanthus personatus* 339  
6 ♀ ~ ♀ ♂ ♀ ♀ ♀ 26°C sg: 1.022 21 cm 200L

♂ *Genicanthus personatus* 339 ♀  
6 ♀ ~ ♀ ♂ ♀ ♀ ♀ 26°C sg: 1.022 21 cm 200L



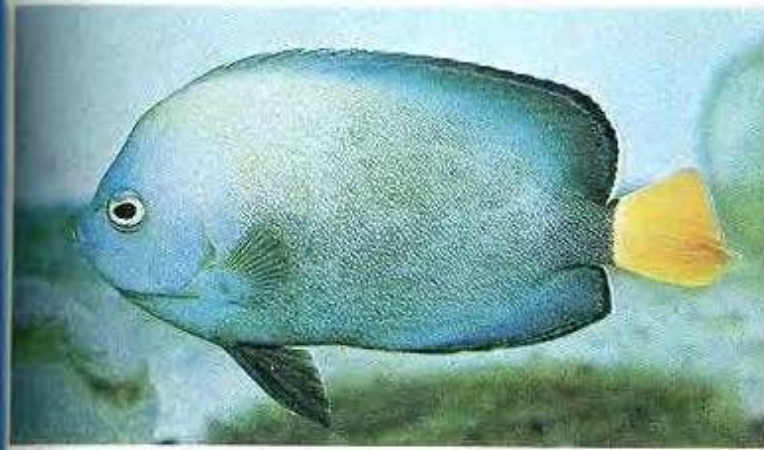
*Genicanthus lamarck* 339 ♀  
7, 9 ♀ ~ ♀ ♂ ♀ ♀ ♀ 26°C sg: 1.022 24 cm 300L

♂ *Genicanthus bellus* 339 ♀  
7 ♀ ~ ♀ ♂ ♀ ♀ ♀ 26°C sg: 1.022 13 cm 150L

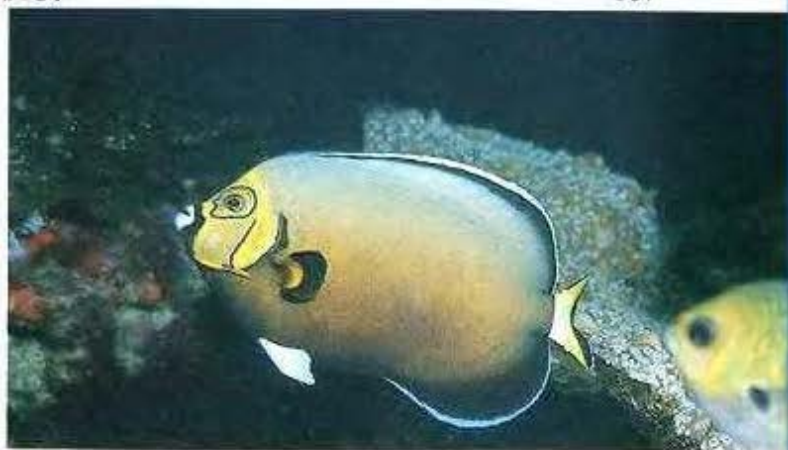


*Genicanthus bellus* 339 ♀  
7 ♀ ~ ♀ ♂ ♀ ♀ ♀ 26°C sg: 1.022 13 cm 150L





*Chaetodontoplus cyanopunctatus* 349  
 7♀ ~ ♀ ♂ ♡ 📏 26°C sg: 1.022 13 cm 150L



*Chaetodontoplus conspicillatus* 339  
 8♀ ~ ♀ ♂ ♡ 📏 26°C sg: 1.022 25 cm 300L



*Chaetodontoplus mesoleucus* 339  
 7♀ ~ ♀ ♂ ♡ 📏 26°C sg: 1.022 15 cm 150L



*Chaetodontoplus mesoleucus* 339  
 7♀ ~ ♀ ♂ ♡ 📏 26°C sg: 1.022 15 cm 150L



*Euxhipops navarchus* 339 (juv.)  
 7♀ ~ ♀ ♂ ♡ 📏 26°C sg: 1.022 25 cm 300L



*Euxhipops xanhometopon?* (juv.) 339  
 7-9♀ ~ ♀ ♂ ♡ 📏 26°C sg: 1.022 45 cm 500L

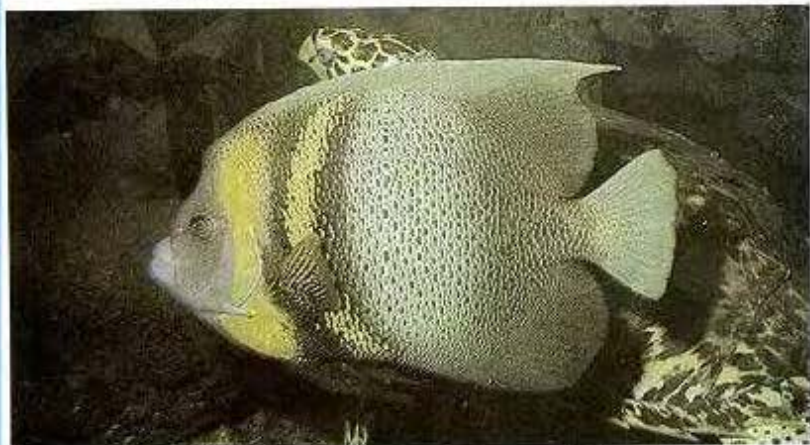


*Euxhipops xanhometopon* 339  
 7-9♀ ~ ♀ ♂ ♡ 📏 26°C sg: 1.022 45 cm 500L



*Pygoplites diacanthus* (juv.) 339  
 7, 9-10♀ ~ ♀ ♂ ♡ 📏 26°C sg: 1.022 30 cm 300L

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*Pomacanthus zonipectus* 339  
3 ♀ ~ + ○ ♥ 📺 26°C sg: 1.022 30 cm 300L

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*Pomacanthus zonipectus* (juv.) 339  
3 ♀ ~ + ○ ♥ 📺 26°C sg: 1.022 30 cm 300L



*Pomacanthus paru* 339  
2, 13 ♀ ~ + ○ ♥ 📺 26°C sg: 1.022 40 cm 400L



*Pomacanthus paru* (juv.) 339  
2, 13 ♀ ~ + ○ ♥ 📺 26°C sg: 1.022 40 cm 400L



*Pomacanthus arcuatus* 339  
2 ♀ ~ + ○ ♥ 📺 26°C sg: 1.022 36 cm 400L



*Pomacanthus arcuatus* 339 (juv.)  
2 ♀ ~ + ○ ♥ 📺 26°C sg: 1.022 36 cm 400L



*Pomacanthus semicirculatus* 339 (juv.)  
7-10 ♀ ~ + ○ ♥ 📺 26°C sg: 1.022 45 cm 500L



*Pomacanthus maculosus* 339 (juv.)  
9-10 ♀ ~ + ○ ♥ 📺 26°C sg: 1.024 40 cm 400L









*Apolemichthys arcuatus* 339  
6 ♀ ~ ♀ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 17.5 cm 200L



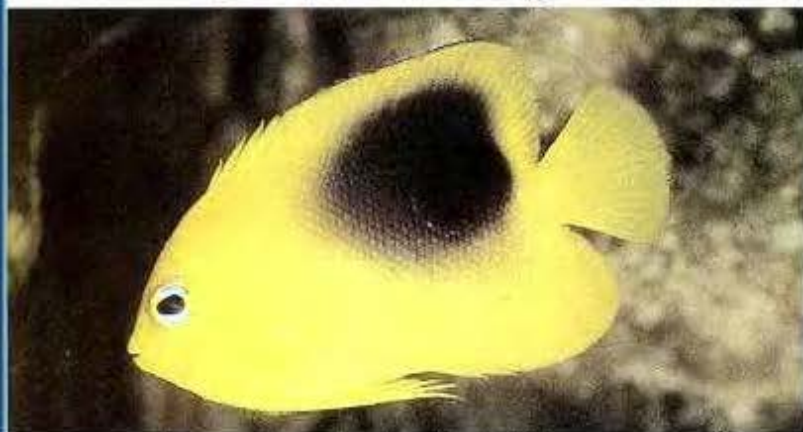
*Apolemichthys xanthotis* 339  
10 ♀ ~ ♀ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.028 20 cm 200L



*Apolemichthys xanthopunctatus* 339  
6 ♀ ~ ♀ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 25 cm 300L



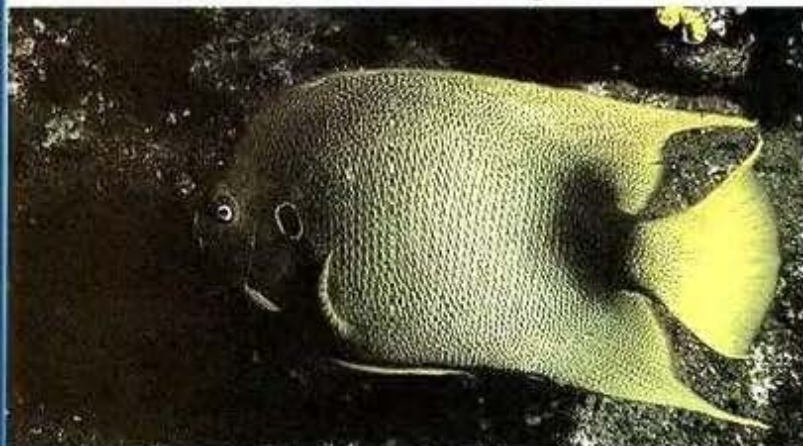
*Holacanthus venustus* 339  
7 ♀ ~ ♀ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 11 cm 100L



*Holacanthus tricolor* (juv.) 339  
2 ♀ ~ ♀ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 25 cm 300L



*Holacanthus tricolor* 339  
2 ♀ ~ ♀ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 25 cm 300L



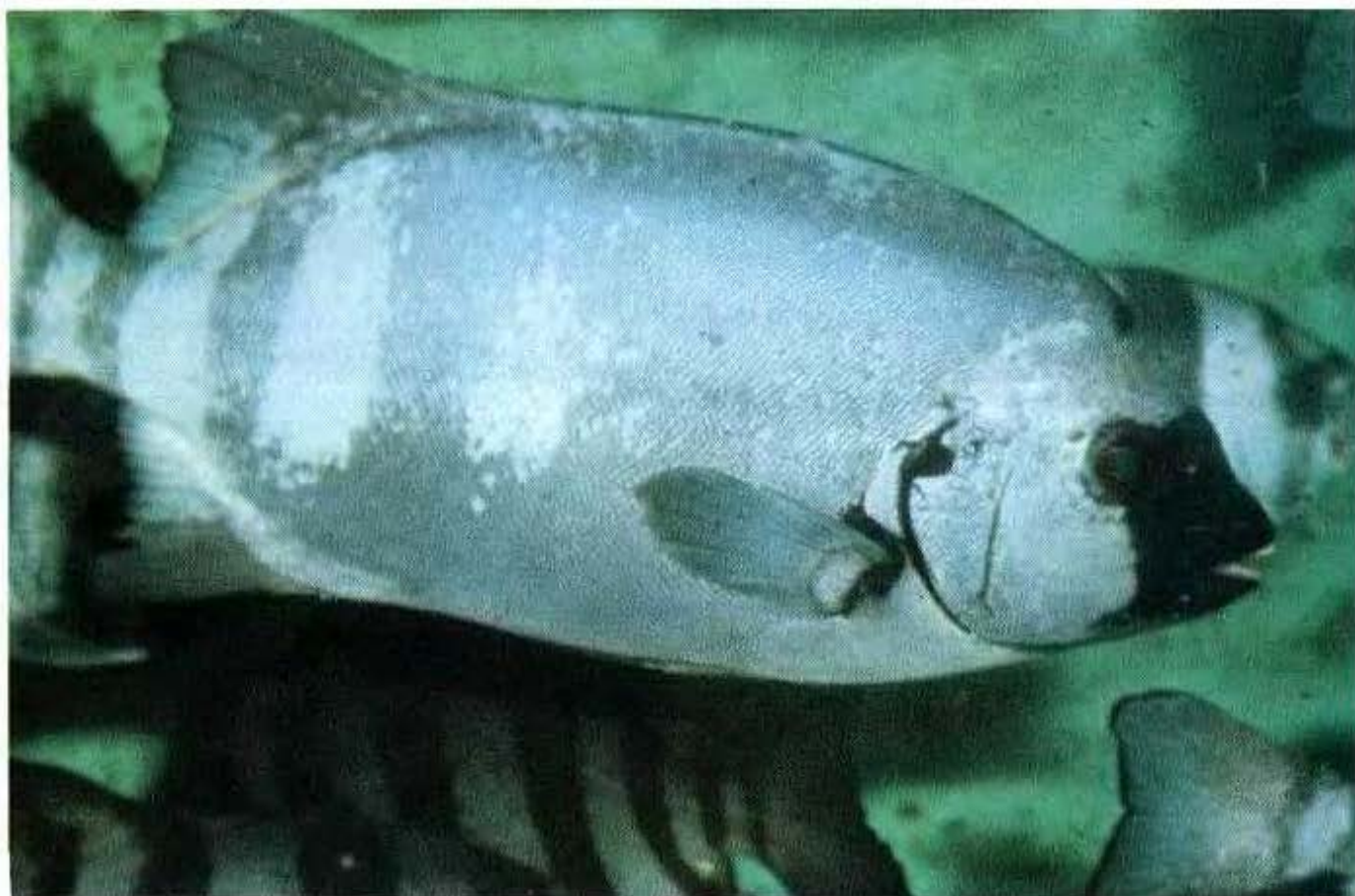
*Holacanthus africanus* 339  
13 ♀ ~ ♀ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 18 cm 200L



*Holacanthus africanus* 339 (juv.)  
13 ♀ ~ ♀ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 18 cm 200L







*Oplegnathus fasciatus* 343  
 5 ~ ♀ ♂ ✖ 🚫 📏 24°C sg: 1.022 80 cm 1000L

*Hypsurus caryi* 345  
 3 ~ ♀ ♂ ✖ 🚫 📏 26°C sg: 1.022 30 cm 300L



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*Girella tricuspidatus* 334  
11 ~ ♀ ♂ ♀ ♀ ♀ ♀ ♀ 23°C sg: 1.022 50 cm 500L



*Oplegnathus fasciatus* 343  
5 ~ ♀ ♂ ♀ ♀ ♀ ♀ 24°C sg: 1.022 80 cm 1000L



*Oplegnathus punctatus* 343  
5-7 ~ ♀ ♂ ♀ ♀ ♀ ♀ 26°C sg: 1.022 86 cm 1200L



*Oplegnathus punctatus* 343  
5-7 ~ ♀ ♂ ♀ ♀ ♀ ♀ 26°C sg: 1.022 86 cm 1200L



*Amphistichus rhodoterus* 345  
3 ~ ♀ ♂ ♀ ♀ ♀ ♀ 26°C sg: 1.022 41 cm 400L



*Amphistichus argenteus* 345  
3 ~ ♀ ♂ ♀ ♀ ♀ ♀ 26°C sg: 1.022 43 cm 500L



*Cymatogaster aggregata* 345  
3-4 ~ ♀ ♂ ♀ ♀ ♀ ♀ 26°C sg: 1.022 18 cm 200L



*Ditrema temmincki* 345  
5 ~ ♀ ♂ ♀ ♀ ♀ ♀ 26°C sg: 1.022 30 cm 300L



*Embiotoca jacksoni* 345  
3 ♀ ♂ ♀ ♀ ♀ 26°C sg: 1.022 39 cm 500L



*Hypsurus caryi* 345  
3 ♀ ♂ ♀ ♀ ♀ 26°C sg: 1.022 30 cm 300L



*Micrometrus aurora* 345  
3 ♀ ♂ ♀ ♀ ♀ 26°C sg: 1.022 18 cm 200L



*Micrometrus minimus* 345  
3 ♀ ♂ ♀ ♀ ♀ 26°C sg: 1.022 16 cm 200L



*Damalichthys vacca* 345  
3 ♀ ♂ ♀ ♀ ♀ 26°C sg: 1.022 44 cm 500L



*Hyperprosopon ellipticum* 345  
3 ♀ ♂ ♀ ♀ ♀ 26°C sg: 1.022 30 cm 300L



*Neoditrema ransonneti* 345  
5 ♀ ♂ ♀ ♀ ♀ 24°C sg: 1.022 15 cm 200L



*Phanerodon furcatus* 345  
3-4 ♀ ♂ ♀ ♀ ♀ 26°C sg: 1.022 32 cm 300L













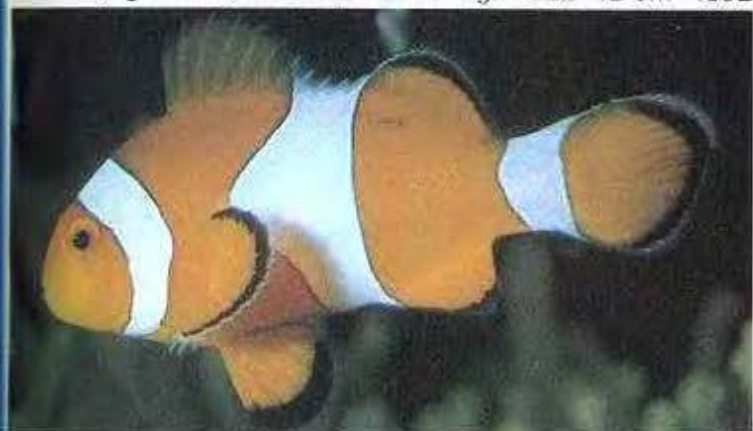




*Amphiprion nigripes* 346  
9 ♀ ~ + ♀ ♀ ♀ 26°C sg: 1.022 12 cm 150L



*Amphiprion nigripes* 346  
9 ♀ ~ + ♀ ♀ ♀ 26°C sg: 1.022 12 cm 150L



*Amphiprion ocellaris* 346  
6-7 ♀ ~ + ♀ ♀ ♀ 26°C sg: 1.022 15 cm 200L



*Amphiprion sebae* 346  
7, 9 ♀ ~ + ♀ ♀ ♀ 26°C sg: 1.022 14 cm 150L



*Dascyllus carneus* 346  
7 ♀ ~ + ♀ ♀ ♀ 26°C sg: 1.022 10 cm 50L



*Dascyllus aruanus* 346  
6-7 ♀ ~ + ♀ ♀ ♀ 26°C sg: 1.022 10 cm 100L



*Dascyllus trimaculatus* 346  
6-7 ♀ ~ + ♀ ♀ ♀ 26°C sg: 1.022 14 cm 150L



*Parma bicolor* 346  
12 ♀ ~ + ♀ ♀ ♀ 26°C sg: 1.022 20 cm 200L

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*Dascyllus albisella* 346  
6 ♀ ~ + ○ ♥ 📺 26°C sg: 1.022 13 cm 200L

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*Dascyllus trimaculatus* 346  
6-7 ♀ ~ + ○ ♥ 📺 26°C sg: 1.022 14 cm 200L



*Dascyllus flavicauda* 346  
6 ♀ ~ + ○ ♥ 📺 26°C sg: 1.022 10 cm 100L



*Dascyllus strasburgi* 346  
6 ♀ ~ + ○ ♥ 📺 26°C sg: 1.022 14 cm 200L



*Dascyllus melanurus* 346  
6-7 ♀ ~ + ○ ♥ 📺 26°C sg: 1.022 10 cm 100L



*Dascyllus marginatus* 346  
9-10 ♀ ~ + ○ ♥ 📺 26°C sg: 1.022 12 cm 100L



*Dascyllus reticulatus* 346  
6-7 ♀ ~ + ○ ♥ 📺 26°C sg: 1.022 10 cm 100L



*Dascyllus carneus* 346  
7 ♀ ~ + ○ ♥ 📺 26°C sg: 1.022 10 cm 50L













*Chromis atripectoralis* 346  
6-7, 9, 12 ♀ ~ ♀ + ♀ ♀ ♀ 25°C sg: 1.022 13 cm 150L



*Chromis axillaris* 346  
9 ♀ ~ ♀ + ♀ ♀ ♀ 26°C sg: 1.022 13 cm 150L



*Chromis viridis* 346  
6 ♀ ~ ♀ + ♀ ♀ ♀ 26°C sg: 1.022 10 cm 100L



*Chromis dimidiata* 346  
9-10 ♀ ~ ♀ + ♀ ♀ ♀ 26°C sg: 1.022 9 cm 100L



*Chromis elerae* 346  
6-7 ♀ ~ ♀ + ♀ ♀ ♀ 26°C sg: 1.022 10 cm 100L



*Chromis klunzingeri* 346  
12 ♀ ~ ♀ + ♀ ♀ ♀ 24°C sg: 1.023 10 cm 100L



*Chromis nigrura* 346  
9 ♀ ~ ♀ + ♀ ♀ ♀ 26°C sg: 1.022 5 cm 50L



*Chromis opercularis* 346  
9 ♀ ~ ♀ + ♀ ♀ ♀ 26°C sg: 1.022 16 cm 200L





*Chromis lineata* 346  
6-7 ♀ ~ ♀ + ♀ ♀ 26°C sg: 1.022 9 cm 100L



*Chromis vanderbilti* 346  
6, 8 ♀ ~ ♀ + ♀ ♀ 26°C sg: 1.022 10 cm 100L



*Chromis acares* 346  
6 ♀ ~ ♀ + ♀ ♀ 26°C sg: 1.022 9 cm 100L



*Chromis agilis* 346  
6-8 ♀ ~ ♀ + ♀ ♀ 26°C sg: 1.022 12 cm 150L



*Chromis analls* 346  
6-7, 9 ♀ ~ ♀ + ♀ ♀ 26°C sg: 1.022 13 cm 150L



*Chromis chrysur* 346  
5-6, 8-9 ♀ ~ ♀ + ♀ ♀ 26°C sg: 1.022 15 cm 200L



*Chromis mirationis* 346  
5 ♀ ~ ♀ + ♀ ♀ 26°C sg: 1.022 12 cm 150L



*Chromis verater* 346  
6 ♀ ~ ♀ + ♀ ♀ 26°C sg: 1.022 20 cm 200L







*Chromis insolfatus* 346  
2 ♀ ~ ♀ + ♀ ♀ 26°C sg: 1.022 10 cm 100L



*Chromis cyaneus* 346  
2 ♀ ~ ♀ + ♀ ♀ 26°C sg: 1.022 13 cm 150L



*Chromis scotti* 346  
2 ♀ ~ ♀ + ♀ ♀ 26°C sg: 1.022 10 cm 100L



*Chromis scotti* 346  
2 ♀ ~ ♀ + ♀ ♀ 26°C sg: 1.022 10 cm 100L



*Chromis cauta* (?) 346  
13 ♀ ~ ♀ + ♀ ♀ 26°C sg: 1.022 11 cm 100L



*Chromis flavicauda* 346  
2 ♀ ~ ♀ + ♀ ♀ 26°C sg: 1.022 8 cm 100L



*Chromis chromis* 346  
13-15 ♀ ~ ♀ + ♀ ♀ 26°C sg: 1.024 12 cm 150L



*Chromis cadenati* 346  
13 ♀ ~ ♀ + ♀ ♀ 26°C sg: 1.022 12 cm 100L



*Chromis limbaughi* 346  
3 ♀ ~ + ♀ ♀ ♀ 26°C sg: 1.022 10 cm 100L



*Chromis limbaughi* 346  
3 ♀ ~ + ♀ ♀ ♀ 26°C sg: 1.022 10 cm 100L



*Chromis altus* 346  
3 ♀ ~ + ♀ ♀ ♀ 26°C sg: 1.022 9 cm 100L



*Chromis altus* 346  
3 ♀ ~ + ♀ ♀ ♀ 26°C sg: 1.022 9 cm 100L



*Chromis multilineatus* 346  
2 ♀ ~ + ♀ ♀ ♀ 26°C sg: 1.022 16 cm 200L



*Chromis punctipinnis* 346  
3 ♀ ~ + ♀ ♀ ♀ 26°C sg: 1.022 30 cm 300L



*Chromis viridis* 346  
6 ♀ ~ + ♀ ♀ ♀ 26°C sg: 1.022 10 cm 100L



*Chromis atrilobata* 346  
3 ♀ ~ + ♀ ♀ ♀ 26°C sg: 1.022 7 cm 80L







*Chrysiptera leucopoma* 346  
6-7 ♀ ~ + ○ ♥ 📺 26°C sg: 1.022 12 cm 150L



*Chrysiptera leucopoma* 346 (juv.)  
6-7 ♀ ~ + ○ ♥ 📺 26°C sg: 1.022 12 cm 150L



*Chrysiptera caeruleolineata* 346  
6-7 ♀ ~ + ○ ♥ 📺 26°C sg: 1.022 9 cm 100L



*Paraglyphidodon* sp. (juv.) 346  
8 ♀ ~ + ○ ♥ 📺 26°C sg: 1.022 10 cm 150L



*Chrysiptera traceyi* 346  
6-7 ♀ ~ + ○ ♥ 📺 26°C sg: 1.022 10 cm 100L



*Chrysiptera talboti* 346  
6-8 ♀ ~ + ○ ♥ 📺 26°C sg: 1.022 10 cm 100L



*Chrysiptera annulata* 346  
9-10 ♀ ~ + ○ ♥ 📺 26°C sg: 1.024 7 cm 80L



*Chrysiptera tricincta* 346  
6 ♀ ~ + ○ ♥ 📺 26°C sg: 1.022 10 cm 100L

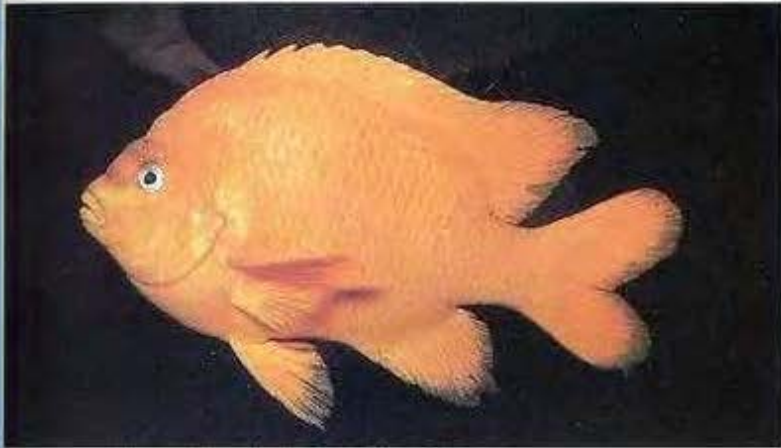












*Hypsypops rubicunda* 346  
3 ♀ ~ ♀ + ♀ ♀ ♀ ♀ 24°C sg: 1.023 36 cm 500L



*Hypsypops rubicunda* 346 (juv.)  
3 ♀ ~ ♀ + ♀ ♀ ♀ ♀ 24°C sg: 1.023 36 cm 500L



*Acanthochromis polyacanthus* 346  
6-7 ♀ ~ ♀ + ♀ ♀ ♀ ♀ 26°C sg: 1.022 10 cm 100L



*Acanthochromis polyacanthus* (juv.) 346  
6-7 ♀ ~ ♀ + ♀ ♀ ♀ ♀ 26°C sg: 1.022 10 cm 100L



*Hemiglyphidodon plagiometopon* 346  
6-7, 9 ♀ ~ ♀ + ♀ ♀ ♀ ♀ 26°C sg: 1.022 19 cm 200L



*Hemiglyphidodon plagiometopon* 346  
6-7, 9 ♀ ~ ♀ + ♀ ♀ ♀ ♀ 26°C sg: 1.022 19 cm 200L



*Cheiloprion labiatus* 346  
6-7, 9 ♀ ~ ♀ + ♀ ♀ ♀ ♀ 26°C sg: 1.022 11 cm 100L



*Amblypomacentrus breviceps* 346  
6-7 ♀ ~ ♀ + ♀ ♀ ♀ ♀ 26°C sg: 1.022 8 cm 100L







*Pomacentrus australis* 346

8 ♀ ~ ♀ + ♀ ♀ 26°C sg: 1.022 11 cm 100L

*Pomacentrus coelestis* 346

6-8 ♀ ~ ♀ + ♀ ♀ 26°C sg: 1.022 12 cm 150L

*Pomacentrus lepidogenys* 346

6-8 ♀ ~ ♀ + ♀ ♀ 26°C sg: 1.022 12 cm 150L

*Pomacentrus reidi* 346

6-8 ♀ ~ ♀ + ♀ ♀ 26°C sg: 1.022 14 cm 150L

*Pomacentrus chrysurus* 346

6-8 ♀ ~ ♀ + ♀ ♀ 26°C sg: 1.022 12 cm 150L

*Dischistodus pseudochrysopoecilus* 346

6-8 ♀ ~ ♀ + ♀ ♀ 26°C sg: 1.022 19 cm 200L

*Pomacentrus tripunctatus* 346

6-8 ♀ ~ ♀ + ♀ ♀ 26°C sg: 1.022 11 cm 100L

*Pomacentrus emarginatus* 346

6-7 ♀ ~ ♀ + ♀ ♀ 26°C sg: 1.022 13 cm 150L



*Pomacentrus brachialis* 346  
7 ♀ ~ ♀ + ♀ ♀ ♀ 26°C sg: 1.022 8 cm 100L



*Pomacentrus nigromarginatus* 346  
6-8 ♀ ~ ♀ + ♀ ♀ ♀ 26°C sg: 1.022 12 cm 150L



*Pomacentrus arenarius* 346  
11-12 ♀ ~ ♀ + ♀ ♀ ♀ 26°C sg: 1.022 8 cm 100L



*Pomacentrus nigromanus* 346  
6-8 ♀ ~ ♀ + ♀ ♀ ♀ 26°C sg: 1.022 12 cm 150L



*Pomacentrus albimaculus* 346  
7 ♀ ~ ♀ + ♀ ♀ ♀ 26°C sg: 1.022 12 cm 150L



*Pomacentrus philippinus* 346  
6-8 ♀ ~ ♀ + ♀ ♀ ♀ 26°C sg: 1.022 13 cm 150L



*Pomacentrus wardi* 346  
8 ♀ ~ ♀ + ♀ ♀ ♀ 26°C sg: 1.022 13 cm 150L



*Pomacentrus stigma* 346  
7 ♀ ~ ♀ + ♀ ♀ ♀ 26°C sg: 1.022 12 cm 150L

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*Pomacentrus amboinensis* 346  
6-8 ♀ ~ ♀ ♂ ♀ ♀ ♀ 26°C sg: 1.022 12 cm 150L

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*Pomacentrus amboinensis* 346 (juv.)  
6-8 ♀ ~ ♀ ♂ ♀ ♀ ♀ 26°C sg: 1.022 12 cm 150L



*Pomacentrus smithi* 346  
6-7 ♀ ~ ♀ ♂ ♀ ♀ ♀ 26°C sg: 1.022 10 cm 100L



*Pomacentrus vaiuli* 346  
6-8 ♀ ~ ♀ ♂ ♀ ♀ ♀ 26°C sg: 1.022 8 cm 100L



*Pomacentrus grammorhynchus* 346  
6-8 ♀ ~ ♀ ♂ ♀ ♀ ♀ 26°C sg: 1.022 13 cm 150L



*Pomacentrus bankanensis* 346  
6-8 ♀ ~ ♀ ♂ ♀ ♀ ♀ 26°C sg: 1.022 11 cm 100L



*Pomacentrus sulfureus* 346  
9-10 ♀ ~ ♀ ♂ ♀ ♀ ♀ 26°C sg: 1.022 10 cm 100L



*Pomacentrus moluccensis* 346  
6-7 ♀ ~ ♀ ♂ ♀ ♀ ♀ 26°C sg: 1.022 11 cm 100L



*Pomacentrus chrysurus* 346  
6-8 ♀ ~ † ○ ♥ 📺 26°C sg: 1.022 12 cm 150L



*Pomacentrus pavo* 346  
6-9 ♀ ~ † ○ ♥ 📺 26°C sg: 1.022 13 cm 150L



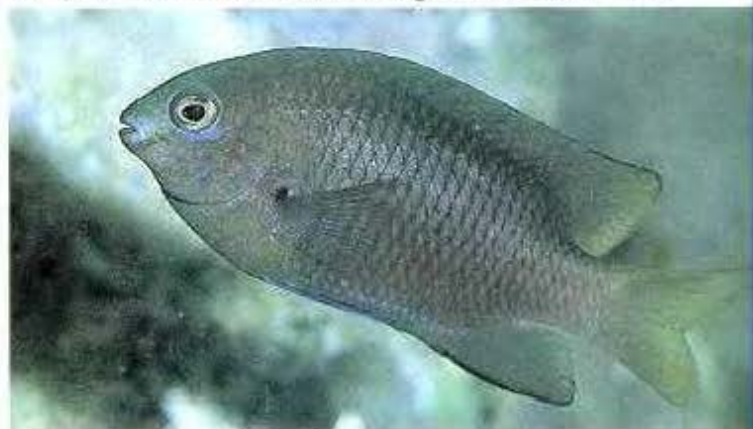
*Pomacentrus pikei* 346  
9 ♀ ~ † ○ ♥ 📺 26°C sg: 1.022 12 cm 150L



*Pomacentrus trilineatus* 346  
10 ♀ ~ † ○ ♥ 📺 26°C sg: 1.022 7 cm 100L



*Pomacentrus* sp. 346  
9 ♀ ~ † ○ ♥ 📺 26°C sg: 1.022 10 cm 150L



*Stegastes fasciolatus* 346  
6 ♀ ~ † ○ ♥ 📺 26°C sg: 1.022 13 cm 150L



*Stegastes* sp. 346  
7, 9 ♀ ~ † ○ ♥ 📺 26°C sg: 1.022 9 cm 100L



*Stegastes* sp. 346  
9 ♀ ~ † ○ ♥ 📺 26°C sg: 1.022 8 cm 100L



*Stegastes albifasciatus* 346  
6-7 ♀ ~ + ○ ♥ ▣ ☒ 26°C sg: 1.022 13 cm 150L



*Stegastes apicalis* 346  
8 ♀ ~ + ○ ♥ ▣ ☒ 26°C sg: 1.022 15 cm 150L



*Stegastes lividus* 346  
6-10 ♀ ~ + ○ ♥ ▣ ☒ 26°C sg: 1.022 15 cm 150L



*Stegastes fasciolatus* 346  
6 ♀ ~ + ○ ♥ ▣ ☒ 26°C sg: 1.022 13 cm 150L



*Stegastes* sp. 346  
3 ♀ ~ + ○ ♥ ▣ ☒ 24°C sg: 1.023 12 cm 150L



*Stegastes simslangi* 346  
7 ♀ ~ + ○ ♥ ▣ ☒ 26°C sg: 1.022 15 cm 150L



*Pomacentrus milleri* 346  
7 ♀ ~ + ○ ♥ ▣ ☒ 26°C sg: 1.022 7 cm 80L



*Pomacentrus milleri* 346  
7 ♀ ~ + ○ ♥ ▣ ☒ 26°C sg: 1.022 7 cm 80L



*Stegastes rectifraenum* 346

3 ♀ ~ + ♀ ♀ ♀ 26°C sg: 1.022 10 cm 100L

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*Stegastes rectifraenum* 346

3 ♀ ~ + ♀ ♀ ♀ 26°C sg: 1.022 10 cm 100L



*Stegastes gascoynei* 346

6, 11-12 ♀ ~ + ♀ ♀ ♀ 26°C sg: 1.022 15 cm 150L



*Stegastes leucorus* 346

3 ♀ ~ + ♀ ♀ ♀ 26°C sg: 1.022 50 cm 500L



*Stegastes aureus* 346

6 ♀ ~ + ♀ ♀ ♀ 26°C sg: 1.022 13 cm 150L



*Stegastes emeryi* 346

6 ♀ ~ + ♀ ♀ ♀ 26°C sg: 1.022 11 cm 100L



*Stegastes nigricans* 346

6-7 ♀ ~ + ♀ ♀ ♀ 26°C sg: 1.022 15 cm 150L



*Stegastes obreptus* 346

7 ♀ ~ + ♀ ♀ ♀ 26°C sg: 1.022 12 cm 150L

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*Stegastes partitus* 346  
2 ♀ ~ + ○ ♥ 📺 26°C sg: 1.022 10 cm 100L

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*Stegastes partitus* 346  
2 ♀ ~ + ○ ♥ 📺 26°C sg: 1.022 10 cm 100L



*Stegastes planifrons* 346  
2 ♀ ~ + ○ ♥ 📺 26°C sg: 1.022 13 cm 150L



*Stegastes planifrons* 346  
2 ♀ ~ + ○ ♥ 📺 26°C sg: 1.022 13 cm 150L



*Stegastes dorsopunicans* 346  
2 ♀ ~ + ○ ♥ 📺 26°C sg: 1.022 15 cm 150L



*Stegastes dorsopunicans* 346  
2 ♀ ~ + ○ ♥ 📺 26°C sg: 1.022 15 cm 150L



*Stegastes redemptus* 346  
3 ♀ ~ + ○ ♥ 📺 26°C sg: 1.022 12 cm 150L



*Stegastes redemptus* 346  
3 ♀ ~ + ○ ♥ 📺 26°C sg: 1.022 12 cm 150L





*Stegastes diencaeus* 346  
2 ♀ ~ + ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 13 cm 150L



*Stegastes mellis* 346  
2 ♀ ~ + ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 12.5 cm 800L



*Stegastes variabilis* 346  
2 ♀ ~ + ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 13 cm 150L



*Stegastes variabilis* 346  
2 ♀ ~ + ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 13 cm 800L



*Stegastes imbricata* 346  
13 ♀ ~ + ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 13 cm 150L



*Stegastes leucostictus* 346  
2 ♀ ~ + ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 10 cm 100L



*Stegastes flavilatus* 346  
3 ♀ ~ + ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 5 cm 50L



*Stegastes flavilatus* 346  
3 ♀ ~ + ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 5 cm 50L



*Microspathodon dorsalis* 346  
3 ♀ ~ ♀ + ♀ ♀ ♀ 26°C sg: 1.022 31 cm 300L



*Microspathodon dorsalis* 346  
3 ♀ ~ ♀ + ♀ ♀ ♀ 26°C sg: 1.022 31 cm 300L



*Microspathodon chrysurus* 346  
2 ♀ ~ ♀ + ♀ ♀ ♀ 26°C sg: 1.022 20 cm 200L



*Microspathodon chrysurus* 346  
2 ♀ ~ ♀ + ♀ ♀ ♀ 26°C sg: 1.022 20 cm 200L



*Microspathodon bairdi* 346  
3 ♀ ~ ♀ + ♀ ♀ ♀ 26°C sg: 1.022 20 cm 200L



*Microspathodon frontalis* 346  
13 ♀ ~ ♀ + ♀ ♀ ♀ 26°C sg: 1.022 25 cm 300L



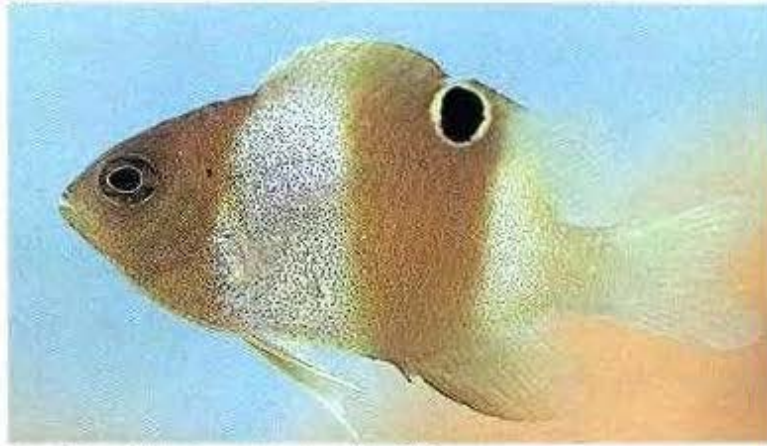
*Pristotis jerdoni* 346  
7-8 ♀ ~ ♀ + ♀ ♀ ♀ 26°C sg: 1.022 11 cm 100L



*Pristotis cyanostigma* 346  
10 ♀ ~ ♀ + ♀ ♀ ♀ 26°C sg: 1.022 10 cm 100L



*Dischistodus prosopotaenia* 346  
6-9 ♀ ~ † ○ ♥ ☒ 26°C sg: 1.022 15 cm 150L



*Dischistodus prosopotaenia* 346  
6-9 ♀ ~ † ○ ♥ ☒ 26°C sg: 1.022 15 cm 150L



*Dischistodus pseudochrysopoecilus* 346  
6-7 ♀ ~ † ○ ♥ ☒ 26°C sg: 1.022 16 cm 200L



*Dichistodus fasciatus* 346  
7-8 ♀ ~ † ○ ♥ ☒ 26°C sg: 1.022 11.5 cm 150L



*Dischistodus chrysopoecilus* 346  
6-7 ♀ ~ † ○ ♥ ☒ 26°C sg: 1.022 16 cm 200L



*Dischistodus melanotus* 346  
6, 11-12 ♀ ~ † ○ ♥ ☒ 24°C sg: 1.022 10 cm 100L



*Dischistodus perspicillatus* 346  
6-9 ♀ ~ † ○ ♥ ☒ 26°C sg: 1.022 16 cm 200L



*Mecaenichthys immaculatus* 346  
12 ♀ ~ † ○ ♥ ☒ 23°C sg: 1.024 10 cm 100L







*Cirrhitichthys aureus* 348  
5-7 ♀ ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 13 cm 150L



*Cirrhitichthys falco* 348  
7 ♀ ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 5 cm 50L



*Cirrhitus rivulatus* 348  
3 ♀ ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 52 cm 500L



*Cirrhitus rivulatus* 348  
3 ♀ ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 50 cm 500L



*Cirrhitus splendens* 348  
11-12 ♀ ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 20 cm 200L



*Cirrhitus atlanticus* 348  
13 ♀ ~ ♀ ♀ ♀ ♀ ♀ 24°C sg: 1.023 19 cm 200L



*Neocirrhites armatus* 348  
6, 8 ♀ ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 7.5 cm 80L



*Cyprinocirrhites* sp. 348  
6 ♀ ~ ♀ ♀ ♀ ♀ ♀ 25°C sg: 1.022 12 cm 150L



*Cirrhitops fasciatus* 348  
6-9 ♀ ♂ ~ ♀ ♀ ♀ 26°C sg: 1.022 13 cm 150L



*Cyprinocirrhites polyactus* 348  
6-9 ♀ ♂ ~ ♀ ♀ ♀ 25°C sg: 1.022 12 cm 150L



*Paracirrhites arcatus* 348  
6-9 ♀ ♂ ~ ♀ ♀ ♀ 26°C sg: 1.022 14 cm 150L



*Paracirrhites forsteri* 348  
6-10 ♀ ♂ ~ ♀ ♀ ♀ 26°C sg: 1.022 25 cm 300L



*Paracirrhites hemistictus* 348  
6 ♀ ♂ ~ ♀ ♀ ♀ 26°C sg: 1.022 18 cm 200L



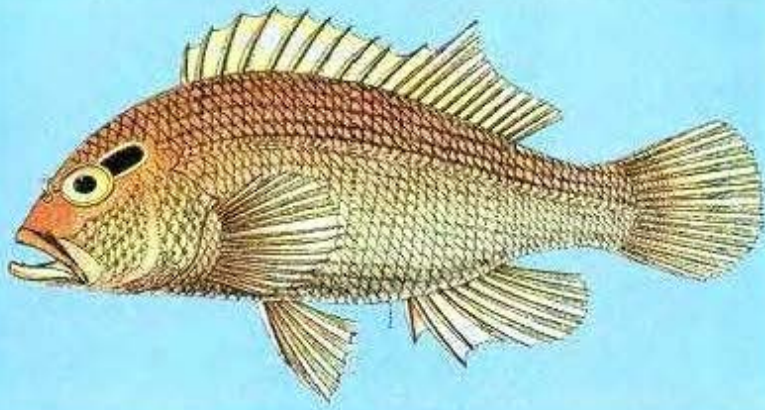
*Paracirrhites hemistictus* 348  
6 ♀ ♂ ~ ♀ ♀ ♀ 26°C sg: 1.022 18 cm 200L



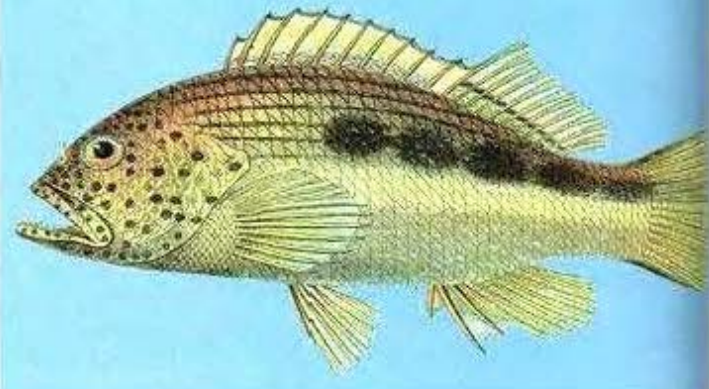
*Cirrhitus pinnulatus* 348  
6-10 ♀ ♂ ~ ♀ ♀ ♀ 26°C sg: 1.022 25 cm 300L



*Oxycirrhites typus* 348  
3, 6-10 ♀ ♂ ~ ♀ ♀ ♀ 26°C sg: 1.022 13 cm



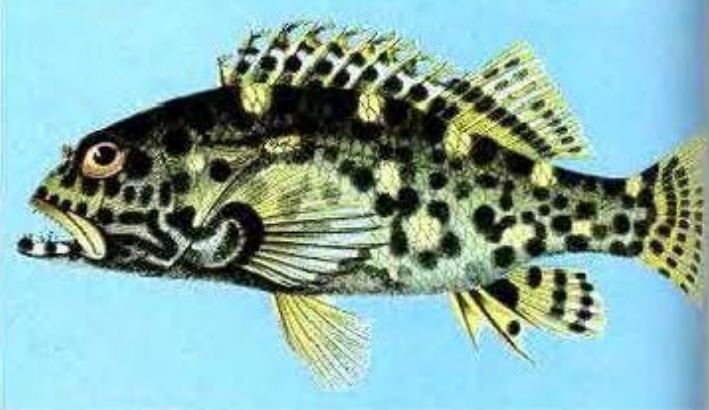
*Paracirrhites arcatus* 348  
6-9 ♀ ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 14 cm 150L



*Paracirrhites forsteri* 348  
6-10 ♀ ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 25 cm 300L



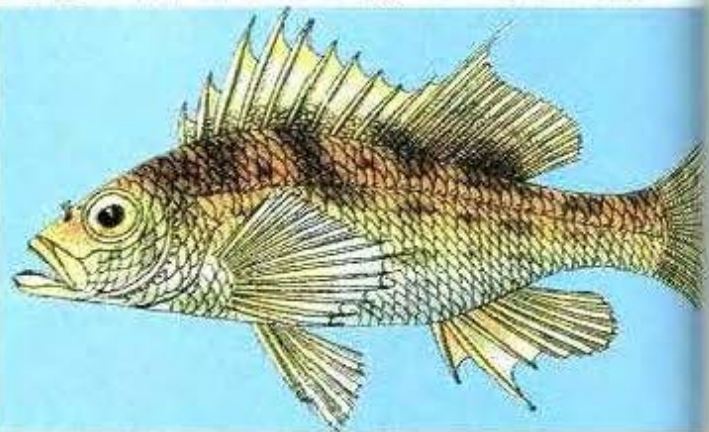
*Cirrhites pinnulatus* 348  
6-10 ♀ ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 25 cm 300L



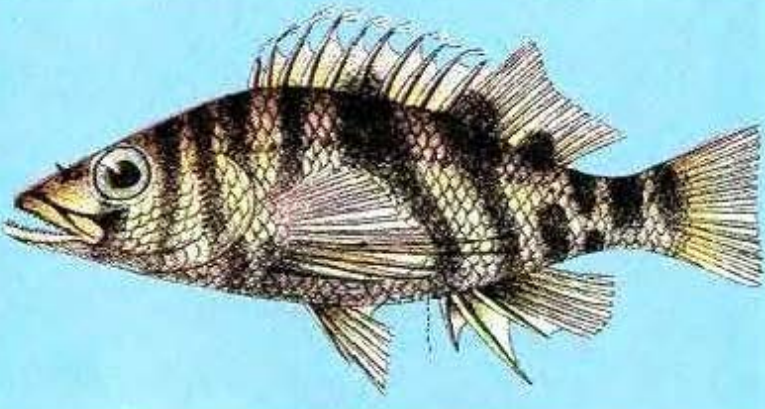
*Cirrhites pinnulatus* 348  
6-10 ♀ ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 25 cm 300L



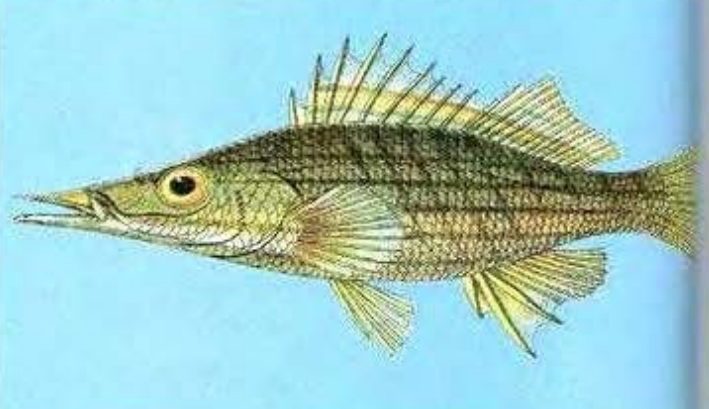
*Cirrhitichthys aprinus* 348  
6-9 ♀ ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 7 cm 80L



*Cirrhitichthys oxycephalus* 348  
3-10 ♀ ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 8 cm 100L



*Amblycirrhitus oxyrhynchus* 348  
7 ♀ ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 8 cm 50L



*Oxycirrhites typus* 348  
3, 6-10 ♀ ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 13 cm 150L





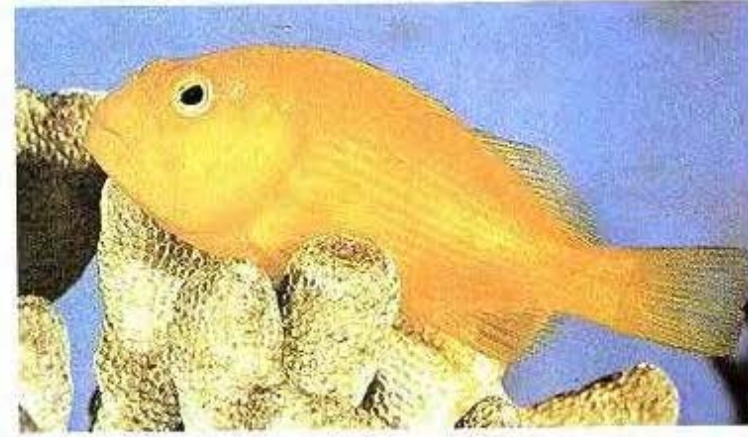
*Amblycirrhitus pinos* 348  
2, 13 ♀ ~ ~ ♀ ~ ♀ ~ ♀ ~ ♀ ~ 26°C sg: 1.022 68 cm 700L



*Amblycirrhitus bimacula* 348  
6-9 ♀ ~ ~ ♀ ~ ♀ ~ ♀ ~ ♀ ~ 26°C sg: 1.022 7 cm 80L



*Amblycirrhitus earnshawi* 348  
13 ♀ ~ ~ ♀ ~ ♀ ~ ♀ ~ ♀ ~ 26°C sg: 1.022 18 cm 200L



*Paracirrhites xanthus* 348  
6 ♀ ~ ~ ♀ ~ ♀ ~ ♀ ~ ♀ ~ 26°C sg: 1.022 51 cm 500L



*Paracirrhites forsteri* 348  
7-10 ♀ ~ ~ ♀ ~ ♀ ~ ♀ ~ ♀ ~ 26°C sg: 1.022 25 cm 300L



*Paracirrhites forsteri* 348  
7-10 ♀ ~ ~ ♀ ~ ♀ ~ ♀ ~ ♀ ~ 26°C sg: 1.022 25 cm 300L

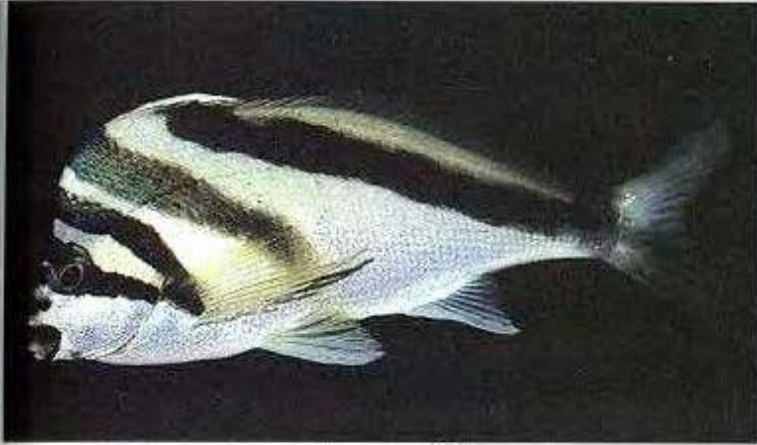


*Chironemus marmoratus* 349  
11 ♀ ~ ~ ♀ ~ ♀ ~ ♀ ~ ♀ ~ 21°C sg: 1.024 35 cm 350L



*Threpterus maculosus* 349  
12 ♀ ~ ~ ♀ ~ ♀ ~ ♀ ~ ♀ ~ 24°C sg: 1.024 12 cm 150L





*Cheilodactylus gibbosus* 351  
8, 12 ♀ ~ ♀ ♀ ♀ ♀ ♀ 24°C sg: 1.022 30 cm 300L



*Cheilodactylus gibbosus* 351  
8, 12 ♀ ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 30 cm 300L



*Cheilodactylus ephippium* 351  
11-12 ♀ ~ ♀ ♀ ♀ ♀ ♀ 23°C sg: 1.024 20 cm 200L



*Cheilodactylus vittatus* 351  
6-7 ♀ ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 25 cm 300L



*Cheilodactylus vittatus* 351  
6-7 ♀ ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 25 cm 300L



*Cheilodactylus quadricornis* 351  
5, 7 ♀ ~ ♀ ♀ ♀ ♀ ♀ 25°C sg: 1.022 40 cm 400L



*Cheilodactylus gibbosus* 351  
8, 12 ♀ ~ ♀ ♀ ♀ ♀ ♀ 25°C sg: 1.022 30 cm 300L



*Cheilodactylus vittatus* 351  
6-7 ♀ ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 25 cm 300L

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*Cheilodactylus nigripes* 351  
12 ♀ ~ ♀ ♀ ♀ ♀ ♀ 23°C sg: 1.024 24 cm 250L

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*Cheilodactylus rubrolabiatus* 351  
12 ♀ ~ ♀ ♀ ♀ ♀ ♀ 24°C sg: 1.022 50 cm 500L



*Dactylosargus* sp. 350  
7, 12 ♀ ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 40 cm 500L



*Dactylophora nigricans* 351  
12 ♀ ~ ♀ ♀ ♀ ♀ ♀ 24°C sg: 1.024 120 cm 1200L



*Chirodactylus brachydactylus* 351  
9 ♀ ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 40 cm 400L



*Chirodactylus brachydactylus* 351  
9 ♀ ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 40 cm 400L



*Monodactylus argentus* 328  
6-10 ♀ ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.017 23 cm 250L

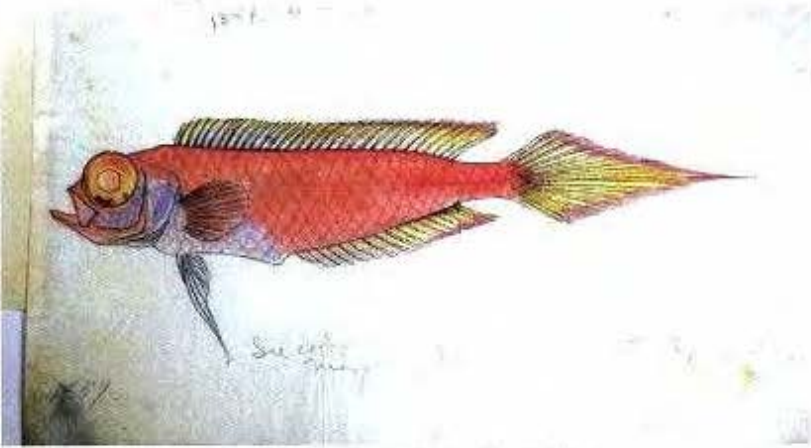


*Monodactylus falciformes* 328  
9-10 ♀ ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.017 31 cm 300L



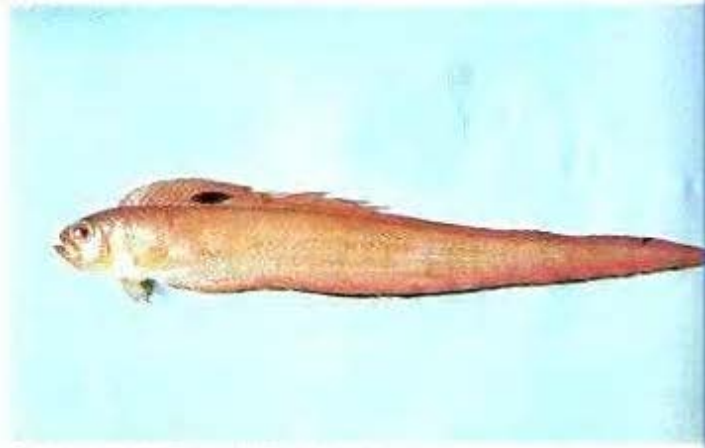
*Cheilodactylus zonatus* 351  
6, 7 ♀ ~ ♀ ♀ ♀ ♀ ♀ 25°C sg: 1.022 45 cm 500L

420



*Owstonia grammodon* (?) 353  
7~ 20 26°C sg: 1.022 23 cm 250L

#345



*Acanthocephala limbata* 354  
7~ 20 26°C sg: 1.022 41 cm 400L



*Cepola australis* 354  
12~ 20 26°C sg: 1.022 38 cm 400L



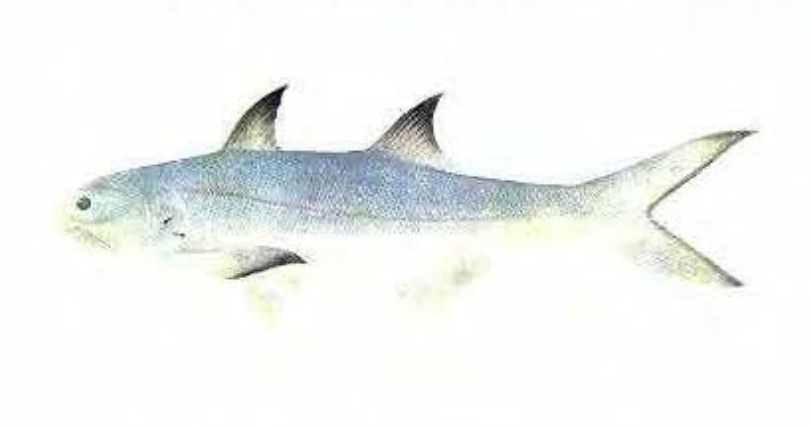
*Acanthocephala indica* 354  
7~ 20 26°C sg: 1.022 35 cm 400L



*Polydactylus* sp. 357  
7~ 20 26°C sg: 1.022 30 cm 300L



*Polydactylus virginicus* 357  
2~ 20 26°C sg: 1.022 30 cm 300L



*Eleutheronema tetradactylum* 357  
7~ 20 26°C sg: 1.022 22 cm 200L



*Polydactylus sexfilis* 357  
7-9~ 20 26°C sg: 1.022 100 cm 1000L



422

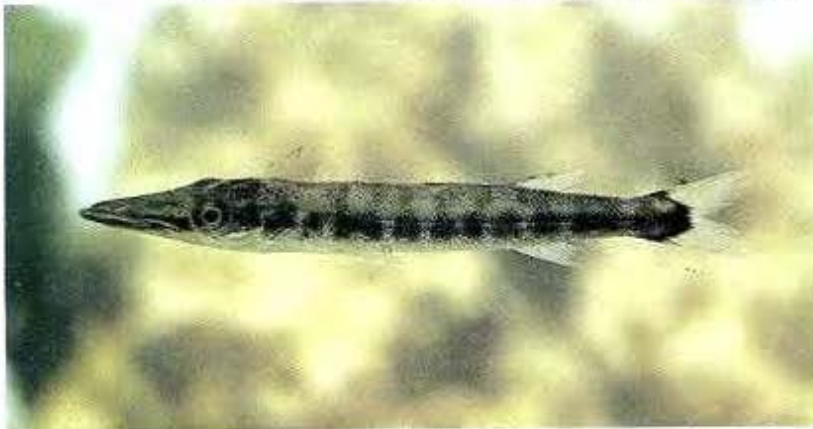


*Sphyraena obtusata* 356  
7-10 ~ ◉ ✖ ◻ ≡ 26°C sg: 1.022 90 cm 1000L

#347



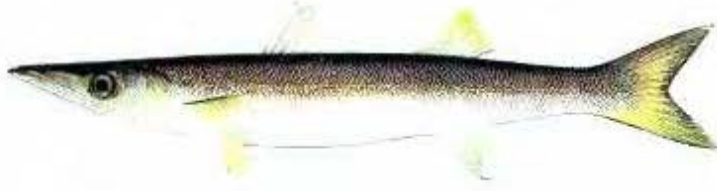
*Sphyraena jello* 356  
7-10 ~ ◉ ✖ ◻ ≡ 26°C sg: 1.022 125 cm 1500L



*Sphyraena barracuda* (juv.) 356  
1-2, 7-10 ~ ◉ ✖ ◻ ≡ 25°C sg: 1.022 30 cm 2000L



*Sphyraena barracuda* 356  
1-2, 7-10 ~ ◉ ✖ ◻ ≡ 25°C sg: 1.022 200 cm 2000L



*Sphyraena pinguis* 356  
5-7 ~ ◉ ✖ ◻ ≡ 26°C sg: 1.022 30 cm 300L



*Sphyraena qenie* 356  
7-10 ~ ◉ ✖ ◻ ≡ 26°C sg: 1.022 115 cm 1200L



*Sphyraena argentea* 356  
3-4 ~ ◉ ✖ ◻ ≡ 26°C sg: 1.022 110 cm 1200L



*Sphyraena flavicauda* 356  
7-9 ~ ◉ ✖ ◻ ≡ 26°C sg: 1.022 50 cm 500L



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*Sphyaena barracuda* 356  
1-2, 7-10 ~ ☉ ✖ 📷 ☒ 25°C sg: 1.022 200 cm 2000L

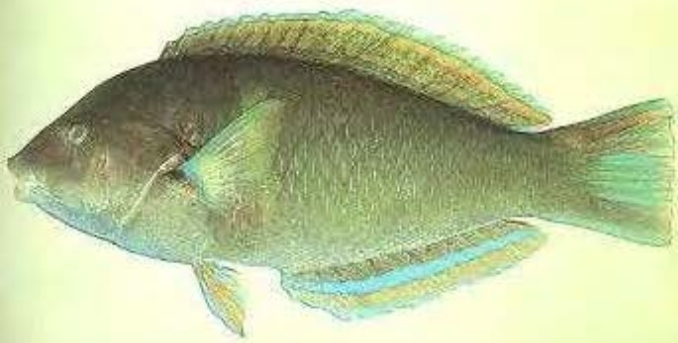
*Sphyaena barracuda* 356  
1-2, 7-10 ~ ☉ ✖ 📷 ☒ 25°C sg: 1.022 200 cm 2000L



#348

*Paracheilinus filamentosus* 358  
7 ~ C ♥ 📷 🌡 26°C sg: 1.022 8 cm 100L





*Anampses caeruleopunctatus* 358  
6-10 ~ ♀ ♥ 📷 📏 26°C sg: 1.020 40 cm 300L



*Anampses meleagrides* 358  
7-10 ~ ♀ ♥ 📷 📏 26°C sg: 1.020 22 cm 200L



*Anampses cuvier* 358 ♂  
6 ~ ♀ ♥ 📷 📏 26°C sg: 1.020 38 cm 300L



*Anampses cuvier* 358 ♀  
6 ~ ♀ ♥ 📷 📏 26°C sg: 1.020 38 cm 300L



*Anampses chrysocephalus* 358 ♂  
6 ~ ♀ ♥ 📷 📏 26°C sg: 1.020 16 cm 200L



*Anampses chrysocephalus* 358 ♀  
6 ~ ♀ ♥ 📷 📏 26°C sg: 1.020 16 cm 200L

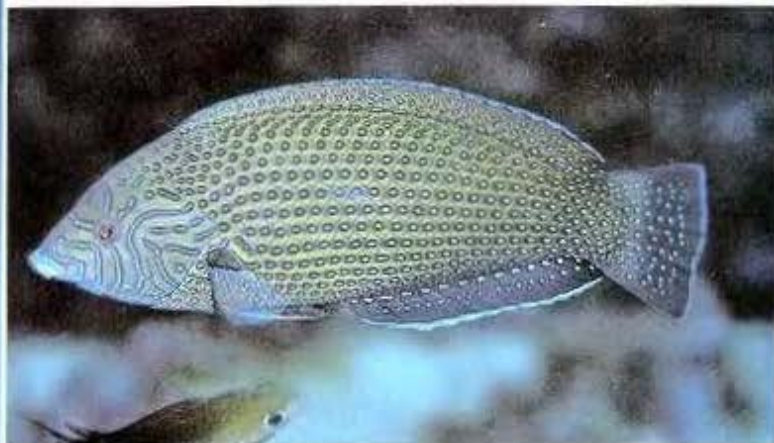


*Anampses geographicus* 358  
6-9 ~ ♀ ♥ 📷 📏 26°C sg: 1.020 25 cm 250L



*Anampses neoguinaicus* 358  
7-8 ~ ♀ ♥ 📷 📏 25°C sg: 1.020 14 cm 150L

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*Anampses caeruleopunctatus* 358  
6-10 ♀ ♂ ♥ 📺 📺 26°C sg: 1.020 40 cm 300L



*Anampses lineatus* 358  
9-10 ♀ ♂ ♥ 📺 📺 26°C sg: 1.020 12 cm 150L



*Bodianus opercularis* 358  
7-9 ♀ ♂ ♥ 📺 📺 26°C sg: 1.020 12 cm 150L



*Bodianus axillaris* 358 (juv.)  
6-9 ♀ ♂ ♥ 📺 📺 26°C sg: 1.020 20 cm 250L

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*Anampses lennardi* 358  
7 ♀ ♂ ♥ 📺 📺 25°C sg: 1.020 25 cm 300L



*Anampses twisti* 358  
6-10 ♀ ♂ ♥ 📺 📺 26°C sg: 1.020 18 cm 200L



*Bodianus bimaculatus* 358  
7 ♀ ♂ ♥ 📺 📺 26°C sg: 1.020 9 cm 100L



*Bodianus axillaris* 358  
6-9 ♀ ♂ ♥ 📺 📺 26°C sg: 1.020 20 cm 250L



*Anampses lennardi* 358  
7 ♀ ♂ ♥ 📱 📺 25°C sg: 1.020 25 cm 300L



*Anampses femininus* 358  
6 ♀ ♂ ♥ 📱 📺 26°C sg: 1.020 21 cm 200L



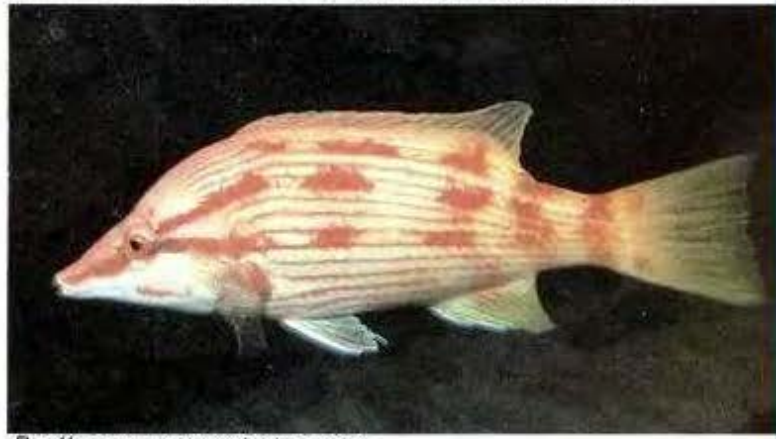
*Pseudocoris bleekeri* 358  
7 ♀ ♂ ♥ 📱 📺 26°C sg: 1.022 15 cm 200L



*Anampses elegans* 358  
11-12 ♀ ♂ ♥ 📱 📺 26°C sg: 1.020 28 cm 300L



*Bodianus* sp. 358  
9 ♀ ♂ ♥ 📱 📺 25°C sg: 1.020 21 cm 200L



*Bodianus oxycephalus* 358  
7, 9 ♀ ♂ ♥ 📱 📺 25°C sg: 1.020 27 cm 300L



*Bodianus speciosus* 358  
13 ♀ ♂ ♥ 📱 📺 26°C sg: 1.022 80 cm 800L



*Bodianus masudai* 358  
5, 7 ♀ ♂ ♥ 📱 📺 26°C sg: 1.020 12 cm 200L

428



*Bodianus bilunulatus* 358  
6-9 ♀ ♂ ♡ 📷 📏 26°C sg: 1.020 55 cm 600L

#351



*Bodianus macrourus* 358  
7-9 ♀ ♂ ♡ 📷 📏 26°C sg: 1.020 40 cm 500L



*Bodianus mesothorax* 358 (juv.)  
7 ♀ ♂ ♡ 📷 📏 26°C sg: 1.020 30 cm 300L



*Bodianus mesothorax* 358  
7 ♀ ♂ ♡ 📷 📏 26°C sg: 1.020 30 cm 300L



*Bodianus diana* 358 (juv.)  
7-10 ♀ ♂ ♡ 📷 📏 26°C sg: 1.020 25 cm 300L



*Bodianus diana* 358 (juv.)  
7-10 ♀ ♂ ♡ 📷 📏 26°C sg: 1.020 25 cm 300L



*Bodianus perditio* 358  
6-9 ♀ ♂ ♡ 📷 📏 26°C sg: 1.020 80 cm 800L



*Bodianus perditio* 358  
6-9 ♀ ♂ ♡ 📷 📏 26°C sg: 1.020 80 cm 800L



*Bodianus bilunulatus* 358 (juv.)  
6-9 ♀ ♂ ♡ ♣ ☞ ☞ 26°C sg: 1.020 55 cm 600L



*Bodianus bilunulatus* 358  
6-9 ♀ ♂ ♡ ♣ ☞ ☞ 26°C sg: 1.020 55 cm 600L



*Bodianus anthioides* 358  
6-10 ♀ ♂ ♡ ♣ ☞ ☞ 26°C sg: 1.020 21 cm 200L



*Bodianus diana* 358  
7-10 ♀ ♂ ♡ ♣ ☞ ☞ 26°C sg: 1.020 25 cm 300L



*Bodianus frenchii* 358  
7-9 ♀ ♂ ♡ ♣ ☞ ☞ 26°C sg: 1.020 50 cm 500L



*Bodianus macrourus* 358  
7-9 ♀ ♂ ♡ ♣ ☞ ☞ 26°C sg: 1.020 40 cm 500L



*Choerodon rubescens* 358  
12 ♀ ♂ ♡ ♣ ☞ ☞ 25°C sg: 1.020 75 cm 800L



*Achoerodus gouldii* 358  
8, 12 ♀ ♂ ♡ ♣ ☞ ☞ 26°C sg: 1.020 125 cm 2000L



*Bodianus rufus* 358  
2 ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.020 50 cm 500L



*Bodianus rufus* 358  
2 ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.020 50 cm 500L



*Bodianus pulchellus* 358 (juv.)  
2 ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.020 23 cm 300L



*Bodianus pulchellus* 358  
2 ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.020 23 cm 300L



*Bodianus eclancheri* 358  
3 ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.020 25 cm 300L



*Bodianus eclancheri* 358  
3 ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.020 25 cm 300L



*Bodianus diplotaenia* 358 ♀  
3 ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.020 76 cm 800L



*Bodianus diplotaenia* 358 ♂  
3 ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.020 76 cm 800L





*Choerodon cyanodus* 358  
12 ♀ ♂ ♥ 📷 📏 26°C sg: 1.020 30 cm 300L



*Choerodon anchorago* 358  
7-9 ♀ ♂ ♥ 📷 📏 26°C sg: 1.020 25 cm 300L



*Choerodon azurio* 358  
7 ♀ ♂ ♥ 📷 📏 26°C sg: 1.020 40 cm 500L



*Choerodon jordani* 358  
7 ♀ ♂ ♥ 📷 📏 26°C sg: 1.020 14 cm 200L



*Choerodon schoenleinii* 358  
7 ♀ ♂ ♥ 📷 📏 26°C sg: 1.020 100 cm 2000L



*Choerodon schoenleinii* 358  
7 ♀ ♂ ♥ 📷 📏 26°C sg: 1.020 100 cm 2000L



*Cheilinus oxycephalus* 358  
7-9 ♀ ♂ ♥ 📷 📏 26°C sg: 1.020 17 cm 200L



*Cheilinus unifasciatus* 358  
6-7 ♀ ♂ ♥ 📷 📏 26°C sg: 1.020 30 cm 300L



*Cheilinus bimaculatus* 358  
7-9 ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.020 15 cm 200L



*Cheilinus bimaculatus* 358  
7-9 ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.020 15 cm 200L



*Cheilinus digrammus* 358  
6-10 ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.020 35 cm 400L



*Cheilinus digrammus* 358  
6-10 ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.020 35 cm 400L



*Cheilinus digrammus* 358  
6-10 ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.020 35 cm 400L



*Cheilinus fasciatus* 358  
6-9 ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.020 35 cm 400L



*Cheilinus lunulatus* 358  
10 ~ ♀ ♀ ♀ ♀ ♀ 27°C sg: 1.020 50 cm 500L



*Cheilinus trilobatus* 358  
6-9 ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.020 40 cm 400L



*Cheilinus undulatus* 358  
6-10 ♀ ♂ ♀ ♂ ♀ ♂ ♀ ♂ 26°C sg: 1.022 230 cm 5000L



*Cheilinus digrammus* 358  
6-10 ♀ ♂ ♀ ♂ ♀ ♂ ♀ ♂ 26°C sg: 1.020 35 cm 400L



*Cheilinus chlorourus* 358  
6-9 ♀ ♂ ♀ ♂ ♀ ♂ ♀ ♂ 26°C sg: 1.020 36 cm 400L



*Cirrhilabrus* sp. 358  
9 ♀ ♂ ♀ ♂ ♀ ♂ ♀ ♂ 26°C sg: 1.020 10 cm 100L



*Cirrhilabrus cyanopleura* 358  
7 ♀ ♂ ♀ ♂ ♀ ♂ ♀ ♂ 25°C sg: 1.020 15 cm 200L



*Cirrhilabrus cyanopleura* 358  
7 ♀ ♂ ♀ ♂ ♀ ♂ ♀ ♂ 25°C sg: 1.020 15 cm 200L



*Cirrhilabrus exquisitus* 358  
6-9 ♀ ♂ ♀ ♂ ♀ ♂ ♀ ♂ 26°C sg: 1.020 11 cm 150L



*Cirrhilabrus exquisitus* 358  
6-9 ♀ ♂ ♀ ♂ ♀ ♂ ♀ ♂ 26°C sg: 1.020 11 cm 150L

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♂ *Cirrhilabrus rubriventralis* 358  
10 ~ ♀ ♥ 📷 📏 26°C sg: 1.030 7.5 cm 100L

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*Cirrhilabrus melanomarginatus* 358  
7 ~ ♀ ♥ 📷 📏 26°C sg: 1.022 13 cm 100L ♂



*Cirrhilabrus* sp. 358  
7-8 ~ ♀ ♥ 📷 📏 26°C sg: 1.022 10 cm 100L



*Cirrhilabrus temmincki* 358  
7, 12 ~ ♀ ♥ 📷 📏 26°C sg: 1.022 10 cm 100L ♂



*Cirrhilabrus labouti* 358  
7-8 ~ ♀ ♥ 📷 📏 26°C sg: 1.022 10 cm 100L



*Cirrhilabrus* sp. "D." 358  
7-8 ~ ♀ ♥ 📷 📏 26°C sg: 1.022 10 cm 100L ♂



♂ *Cirrhilabrus lineatus* 358  
7-8 ~ ♀ ♥ 📷 📏 26°C sg: 1.022 10 cm 100L



*Cirrhilabrus cyanopleura* 358  
5, 7 ~ ♀ ♥ 📷 📏 26°C sg: 1.022 9 cm 100L ♂



*Cirrhilabrus jordani* 358  
6 ~ ♀ ♥ 📷 📏 26°C sg: 1.022 10 cm 100L



*Cirrhilabrus scottorum* 358  
6 ~ ♀ ♥ 📷 📏 26°C sg: 1.022 8 cm 100L



*Cirrhilabrus lubbocki* 358  
7 ~ ♀ ♥ 📷 📏 26°C sg: 1.022 7 cm 100L



*Cirrhilabrus rubripinnis* 358  
7 ~ ♀ ♥ 📷 📏 26°C sg: 1.022 7 cm 100L



*Verriculus sanguineus* 358  
6 ~ ♀ ♥ 📷 📏 26°C sg: 1.022 20 cm 150L



*Conniella apterygia* 358  
12 ♀ ♂ ♡ 📏 📏 24°C sg: 1.020 8 cm 100L ♂



*Coris caudimacula* 358  
7-10 ♀ ♂ ♡ 📏 📏 26°C sg: 1.020 20 cm 200L



*Coris auricularis* 358  
12 ♀ ♂ ♡ 📏 📏 24°C sg: 1.020 32 cm 400L ♂



*Coris auricularis* 358 (juv.)  
12 ♀ ♂ ♡ 📏 📏 24°C sg: 1.020 32 cm 400L



*Coris aygula* 358 (juv.)  
6-10 ♀ ♂ ♡ 📏 📏 26°C sg: 1.020 120 cm 2000L



*Coris aygula* 358  
6-10 ♀ ♂ ♡ 📏 📏 26°C sg: 1.020 120 cm 2000L ♂



*Coris variegata* 358  
6-10 ♀ ♂ ♡ 📏 📏 26°C sg: 1.020 20 cm 200L



*Coris variegata* 358  
6-10 ♀ ♂ ♡ 📏 📏 26°C sg: 1.020 20 cm 200L



*Coris julis* 358 ♀  
15 ♀ ○ ♥ 📏 📏 26°C sg: 1.022 25 cm 300L



*Coris julis* 358 ♂  
15 ♀ ○ ♥ 📏 📏 26°C sg: 1.022 25 cm 300L



*Coris pictoides* 358  
7, 12 ♀ ○ ♥ 📏 📏 24°C sg: 1.020 15 cm 200L



*Coris bulbifrons* 358 ♂  
11-12 ♀ ○ ♥ 📏 📏 26°C sg: 1.020 30 cm 400L



*Coris picta* 358 (juv.)  
7-8, 11-12 ♀ ○ ♥ 📏 📏 26°C sg: 1.020 25 cm 300L



*Coris picta* 358 ♂  
7-8, 11-12 ♀ ○ ♥ 📏 📏 26°C sg: 1.020 25 cm 300L



*Coris sandageri* 358 (juv.)  
11-12 ♀ ○ ♥ 📏 📏 25°C sg: 1.020 25 cm 300L



*Coris dorsomacula* 358 ♂  
7-8 ♀ ○ ♥ 📏 📏 26°C sg: 1.020 15 cm 200L

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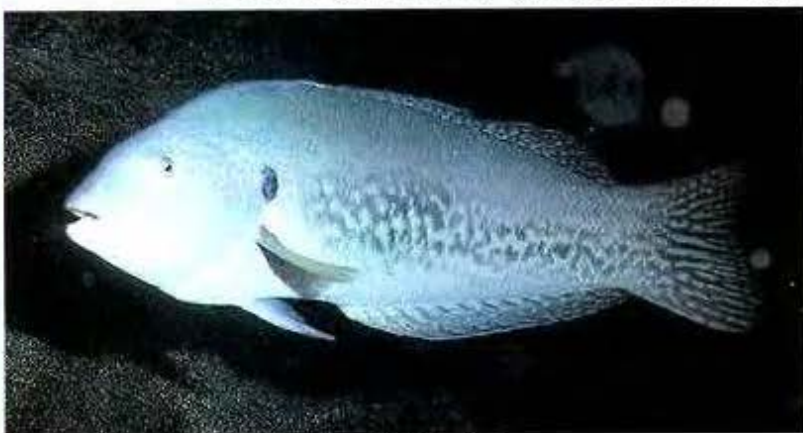


*Coris auricularis* 358 (juv.)  
12 ♀ ♂ ♥ 📏 📏 24°C sg: 1.020 32 cm 400L

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*Coris auricularis* 358  
12 ♀ ♂ ♥ 📏 📏 24°C sg: 1.020 32 cm 400L ♀



*Coris flavovittata* 358  
6 ♀ ♂ ♥ 📏 📏 26°C sg: 1.020 45 cm 500L



*Coris flavovittata* 358  
6 ♀ ♂ ♥ 📏 📏 26°C sg: 1.020 45 cm 500L ♀



*Coris caudimacula* 358  
7-10 ♀ ♂ ♥ 📏 📏 26°C sg: 1.020 20 cm 200L ♀



*Coris caudimacula* 358  
7-10 ♀ ♂ ♥ 📏 📏 26°C sg: 1.020 20 cm 200L ♀



*Coris venusta* 358  
6 ♀ ♂ ♥ 📏 📏 26°C sg: 1.020 15 cm 200L



*Coris ballieui* 358  
6 ♀ ♂ ♥ 📏 📏 26°C sg: 1.020 35 cm 400L

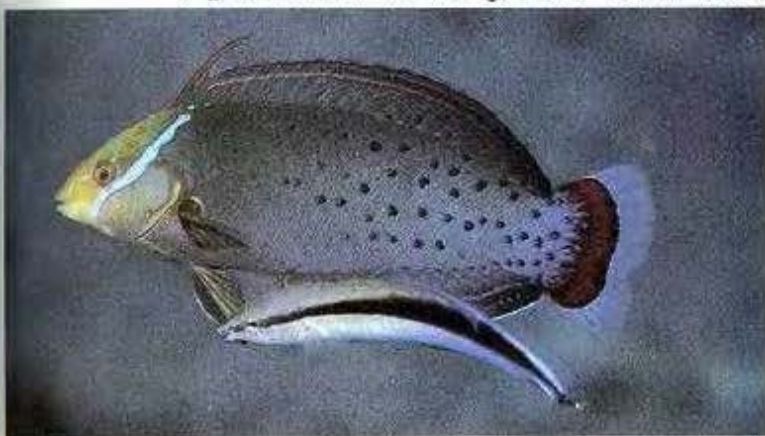




*Coris gaimard africana* 358 ♂  
9 ♀ ○ ♥ 📧 📧 26°C sg: 1.020 35 cm 400L



*Coris gaimard africana* 358 (juv.)  
9 ♀ ○ ♥ 📧 📧 26°C sg: 1.020 35 cm 400L



*Coris formosa* 358 ♀  
9 ♀ ○ ♥ 📧 📧 26°C sg: 1.020 60 cm 800L



*Coris formosa* 358 (juv.)  
9 ♀ ○ ♥ 📧 📧 26°C sg: 1.020 60 cm 800L



*Coris formosa* 358 ♂  
9 ♀ ○ ♥ 📧 📧 26°C sg: 1.020 60 cm 800L



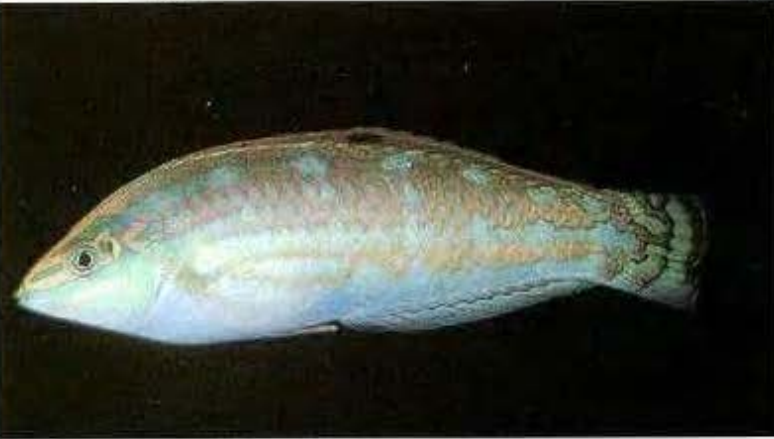
*Epibulus insidiator* 358  
6-10 ♀ ○ ♥ 📧 📧 26°C sg: 1.022 35 cm 400L



*Diproctacanthus xanthurus* 358  
7 ♀ ○ ♥ 📧 📧 26°C sg: 1.020 10 cm 100L



*Gomphosus varius* 358  
7-9 ♀ ○ ♥ 📧 📧 26°C sg: 1.020 30 cm 300L



*Halichoeres biocellatus* 358  
7 ♀ ♂ ♥ 📏 📧 26°C sg: 1.020 10 cm 100L



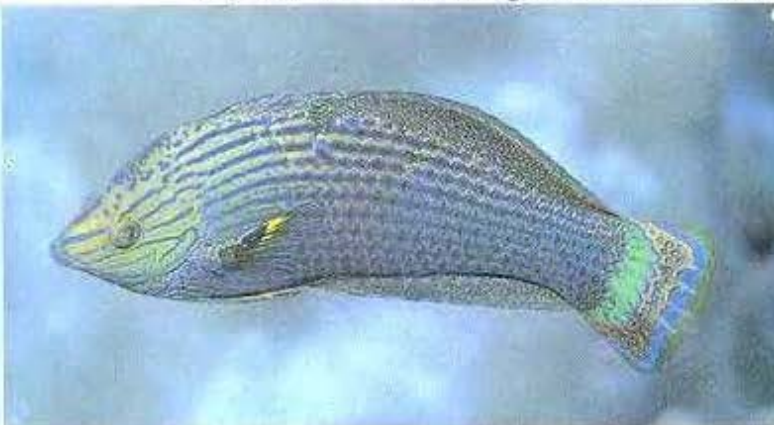
*Halichoeres chrysus* 358  
7 ♀ ♂ ♥ 📏 📧 26°C sg: 1.020 10 cm 100L



*Halichoeres trispilus* 358  
9 ♀ ♂ ♥ 📏 📧 26°C sg: 1.020 10 cm 100L



*Halichoeres nebulosus* 358  
7-9 ♀ ♂ ♥ 📏 📧 26°C sg: 1.020 11 cm 100L



*Halichoeres marginatus* 358 ♂  
6-10 ♀ ♂ ♥ 📏 📧 26°C sg: 1.020 18 cm 200L



*Halichoeres marginatus* 358 ♀  
6-10 ♀ ♂ ♥ 📏 📧 26°C sg: 1.020 18 cm 200L



*Halichoeres scapularis* 358 ♀  
9-10 ♀ ♂ ♥ 📏 📧 26°C sg: 1.020 20 cm 200L



*Halichoeres scapularis* 358 ♂  
9-10 ♀ ♂ ♥ 📏 📧 26°C sg: 1.020 20 cm 200L



*Halichoeres prosopeion* 358 (juv.)  
 7 ♀ ♂ ♥ 📏 🌡️ 26°C sg: 1.020 17 cm 200L



*Halichoeres prosopeion* 358  
 7 ♀ ♂ ♥ 📏 🌡️ 26°C sg: 1.020 17 cm 200L



*Halichoeres zeylonicus* 358  
 9 ♀ ♂ ♥ 📏 🌡️ 26°C sg: 1.020 17 cm 200L



*Halichoeres hartzfeldii* 358  
 7 ♀ ♂ ♥ 📏 🌡️ 26°C sg: 1.020 18 cm 200L



*Halichoeres trispilus* 358  
 9 ♀ ♂ ♥ 📏 🌡️ 26°C sg: 1.020 10 cm 100L



*Halichoeres iridis* 358 (juv.)  
 9 ♀ ♂ ♥ 📏 🌡️ 26°C sg: 1.020 11 cm 100L



*Halichoeres brownfieldi* 358 (juv.)  
 12 ♀ ♂ ♥ 📏 🌡️ 26°C sg: 1.020 15 cm 200L



*Halichoeres brownfieldi* 358  
 12 ♀ ♂ ♥ 📏 🌡️ 26°C sg: 1.020 15 cm 200L



*Halichoeres pelicieri* 358 ♀  
9 ♀ ○ ♥ 📏 📏 26°C sg: 1.020 15 cm 200L



*Halichoeres melasmopomas* 358 ♀  
7,9 ♀ ○ ♥ 📏 📏 26°C sg: 1.020 12 cm 100L



*Halichoeres cosmetus* 358 ♀  
9 ♀ ○ ♥ 📏 📏 26°C sg: 1.020 11 cm 100L



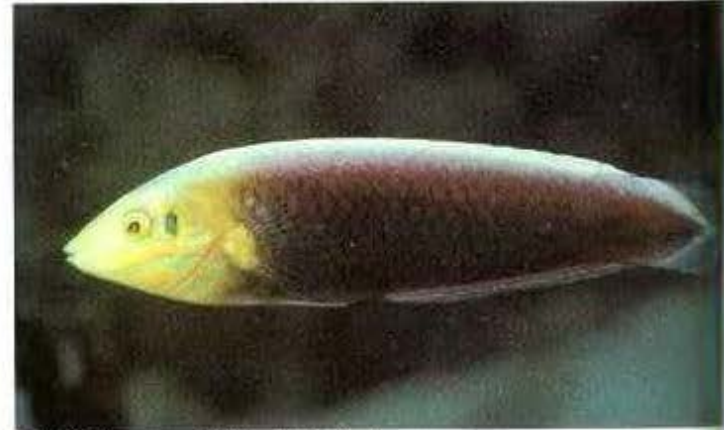
*Halichoeres timorensis* 358 ♂  
7 ♀ ○ ♥ 📏 📏 26°C sg: 1.020 20 cm 200L



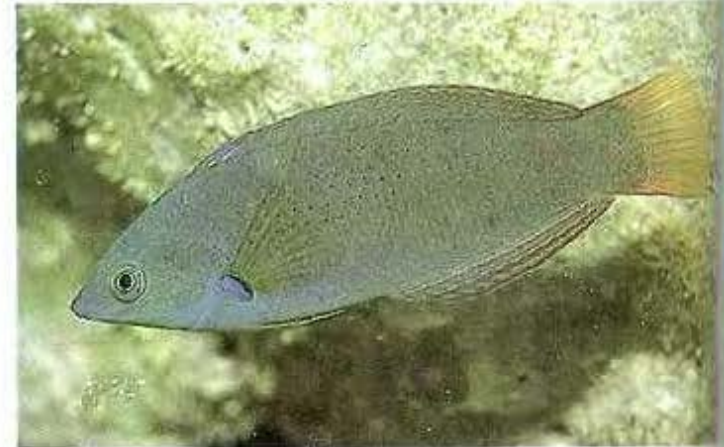
*Halichoeres timorensis* 358 (juv.)  
7 ♀ ○ ♥ 📏 📏 26°C sg: 1.020 20 cm 200L



*Halichoeres melanurus* 358  
7 ♀ ○ ♥ 📏 📏 26°C sg: 1.020 12 cm 100L



*Halichoeres iridis* 358 (juv.)  
9 ♀ ○ ♥ 📏 📏 26°C sg: 1.020 11 cm 100L



*Halichoeres melanochir* 358  
7 ♀ ○ ♥ 📏 📏 26°C sg: 1.020 18 cm 200L



*Halichoeres argus* 358 (juv.)  
7 ♀ ○ ♥ 📏 📧 26°C sg: 1.020 12 cm 100L



*Halichoeres argus* 358  
7 ♀ ○ ♥ 📏 📧 26°C sg: 1.020 12 cm 100L ♂



*Halichoeres biocellatus* 358 (juv.)  
7 ♀ ○ ♥ 📏 📧 26°C sg: 1.020 10 cm 100L



*Halichoeres biocellatus* 358  
7 ♀ ○ ♥ 📏 📧 26°C sg: 1.020 10 cm 100L



*Halichoeres hoeveni* 358 (juv.)  
6-7 ♀ ○ ♥ 📏 📧 26°C sg: 1.020 12 cm 100L



*Halichoeres melanurus* 358  
7 ♀ ○ ♥ 📏 📧 26°C sg: 1.020 12 cm 100L ♂



*Halichoeres bimaculatus* 358  
7, 9 ♀ ○ ♥ 📏 📧 26°C sg: 1.020 12 cm 100L



*Halichoeres chloropterus* 358  
7 ♀ ○ ♥ 📏 📧 26°C sg: 1.020 15 cm 200L



*Halichoeres nigrescens* 358  
7, 12 ♀ ♂ ♥ 📏 📏 26°C sg: 1.020 30 cm 400L



*Halichoeres marginatus* 358 (juv.)  
6-10 ♀ ♂ ♥ 📏 📏 26°C sg: 1.020 18 cm 200L



*Halichoeres poecilopterus* 358 ♀  
7 ♀ ♂ ♥ 📏 📏 26°C sg: 1.020 34 cm 400L



*Halichoeres poecilopterus* 358 ♂  
7 ♀ ♂ ♥ 📏 📏 26°C sg: 1.020 34 cm 400L



*Halichoeres margaritaceus* 358 ♂  
6-8 ♀ ♂ ♥ 📏 📏 26°C sg: 1.020 12 cm 100L



*Halichoeres margaritaceus* 358 ♀  
6-8 ♀ ♂ ♥ 📏 📏 26°C sg: 1.020 12 cm 100L



*Halichoeres nebulosus* 358  
7-9 ♀ ♂ ♥ 📏 📏 26°C sg: 1.020 11 cm 100L



*Halichoeres trimaculatus* 358 ♀  
7 ♀ ♂ ♥ 📏 📏 26°C sg: 1.020 18 cm 200L



*Halichoeres chloropterus* 358 (juv.)  
7 ♀ ○ ♥ 📏 📏 26°C sg: 1.020 15 cm 200L



*Halichoeres chloropterus* 358  
7 ♀ ○ ♥ 📏 📏 26°C sg: 1.020 15 cm 200L



*Halichoeres hortulanus* 358 (juv.)  
6-10 ♀ ○ ♥ 📏 📏 26°C sg: 1.020 22 cm 300L



*Halichoeres hortulanus* 358 ♂  
6-10 ♀ ○ ♥ 📏 📏 26°C sg: 1.020 22 cm 300L



*Halichoeres melanochir* 358  
7 ♀ ○ ♥ 📏 📏 26°C sg: 1.020 18 cm 200L



*Halichoeres podostigma* 358  
6-7 ♀ ○ ♥ 📏 📏 26°C sg: 1.020 16 cm 200L



*Halichoeres miniatus* 358  
7-8 ♀ ○ ♥ 📏 📏 26°C sg: 1.020 10 cm 100L



*Halichoeres ornatissimus* 358  
6-7 ♀ ○ ♥ 📏 📏 26°C sg: 1.020 18 cm 200L

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*Halichoeres cyanocephalus* 358 (juv.)  
2 ♀ ○ ♥ 📏 📧 26°C sg: 1.020 30 cm 300L

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*Halichoeres cyanocephalus* 358 ♂  
2 ♀ ○ ♥ 📏 📧 26°C sg: 1.020 30 cm 300L



*Halichoeres maculipinna* 358 ♂  
2 ♀ ○ ♥ 📏 📧 26°C sg: 1.020 18 cm 200L



*Halichoeres maculipinna* 358 ♂  
2 ♀ ○ ♥ 📏 📧 26°C sg: 1.020 18 cm 200L



*Halichoeres poeyi*, (juv.) 358  
2 ♀ ○ ♥ 📏 📧 26°C sg: 1.020 20 cm 200L



*Halichoeres poeyi* 358 ♂  
2 ♀ ○ ♥ 📏 📧 26°C sg: 1.020 20 cm 200L



*Halichoeres bathyphilus* 358  
2 ♀ ○ ♥ 📏 📧 26°C sg: 1.020 23 cm 300L



*Halichoeres pictus* 358 ♂  
2 ♀ ○ ♥ 📏 📧 26°C sg: 1.020 13 cm 150L





*Halichoeres garnoti* 358  
2 ♀ ○ ♥ 📏 📧 26°C sg: 1.020 19 cm 200L



*Halichoeres garnoti* 358 (juv.)  
2 ♀ ○ ♥ 📏 📧 26°C sg: 1.020 19 cm 200L



*Halichoeres bivittatus* 358 ♂  
2 ♀ ○ ♥ 📏 📧 26°C sg: 1.020 22 cm 300L



*Halichoeres garnoti* 358 ♂  
2 ♀ ○ ♥ 📏 📧 26°C sg: 1.020 19 cm 200L



*Halichoeres bivittatus* 358 ♂  
2 ♀ ○ ♥ 📏 📧 26°C sg: 1.020 22 cm 300L



*Halichoeres bivittatus* 358 ♀  
2 ♀ ○ ♥ 📏 📧 26°C sg: 1.020 22 cm 300L



*Halichoeres radiatus* 358  
2 ♀ ○ ♥ 📏 📧 26°C sg: 1.020 46 cm 500L



*Halichoeres radiatus* 358 ♂  
2 ♀ ○ ♥ 📏 📧 26°C sg: 1.020 46 cm 500L



*Halichoeres semicinctus* 358  
3 ♀ ♂ ♥ 📏 📏 24°C sg: 1.020 36 cm 400L



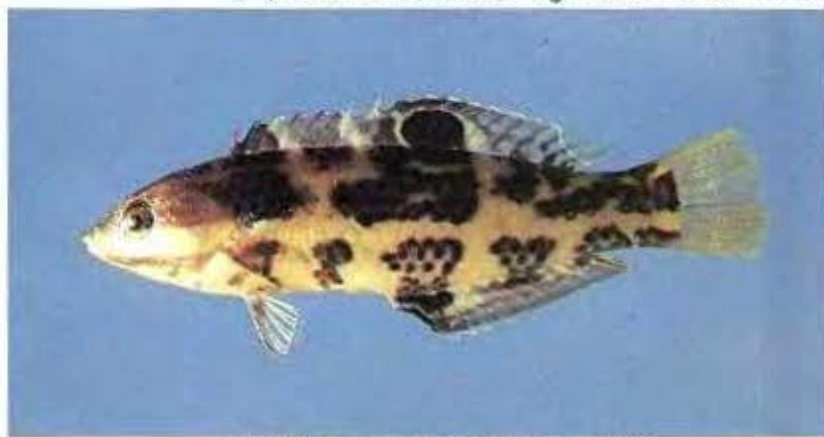
*Halichoeres chierchiaie* 358  
3 ♀ ♂ ♥ 📏 📏 26°C sg: 1.020 20 cm 200L ♂



*Halichoeres nicholsi* 358 ♀  
3 ♀ ♂ ♥ 📏 📏 26°C sg: 1.020 38 cm 400L



*Halichoeres nicholsi* 358 ♂  
3 ♀ ♂ ♥ 📏 📏 26°C sg: 1.020 38 cm 400L



*Halichoeres nicholsi* 358 (juv.)  
3 ♀ ♂ ♥ 📏 📏 26°C sg: 1.020 38 cm 400L



*Halichoeres* sp. 358  
3 ♀ ♂ ♥ 📏 📏 26°C sg: 1.020 12 cm 100L



♀ *Halichoeres dispilus* 358  
3 ♀ ♂ ♥ 📏 📏 26°C sg: 1.020 20 cm 200L



*Halichoeres dispilus* 358 ♂  
3 ♀ ♂ ♥ 📏 📏 26°C sg: 1.020 20 cm 200L



*Gomphosus varius* 358  
7-9 ♀ ♂ ♀ ♀ ♀ ♀ 26°C sg: 1.020 30 cm 300L



*Gomphosus caeruleus* 358  
9-10 ♀ ♂ ♀ ♀ ♀ ♀ 26°C sg: 1.020 28 cm 300L



*Gomphosus varius* 358 (juv.)  
7-9 ♀ ♂ ♀ ♀ ♀ ♀ 26°C sg: 1.020 30 cm 300L



*Hologymnosus annulatus* 358 (juv.)  
7-10 ♀ ♂ ♀ ♀ ♀ ♀ 26°C sg: 1.020 40 cm 400L



*Epibulus insidiator* 358  
6-10 ♀ ♂ ♀ ♀ ♀ ♀ 26°C sg: 1.022 35 cm 400L



*Epibulus insidiator* 358 (juv.)  
6-10 ♀ ♂ ♀ ♀ ♀ ♀ 26°C sg: 1.022 35 cm 400L



*Pteragogus flagellifer* 358  
9 ♀ ♂ ♀ ♀ ♀ ♀ 26°C sg: 1.020 20 cm 200L



*Pteragogus pelycus* 358  
9 ♀ ♂ ♀ ♀ ♀ ♀ 26°C sg: 1.020 15 cm 200L



*Hemigymnus fasciatus* (juv.) 358  
7-10 ♀ ♂ ♥ 📺 📺 26°C sg: 1.020 40 cm 400L



*Hemigymnus melapterus* 358  
6-10 ♀ ♂ ♥ 📺 📺 26°C sg: 1.020 90 cm 1000L



*Hologymnosus doliatus* 358 (juv.)  
6-10 ♀ ♂ ♥ 📺 📺 26°C sg: 1.020 45 cm 500L



*Hologymnosus doliatus* 358  
6-10 ♀ ♂ ♥ 📺 📺 26°C sg: 1.020 45 cm 500L



*Hemigymnus fasciatus* 358  
7-10 ♀ ♂ ♥ 📺 📺 26°C sg: 1.020 40 cm 400L



*Hologymnosus annulatus* 358  
7-10 ♀ ♂ ♥ 📺 📺 26°C sg: 1.020 40 cm 400L



*Hologymnosus doliatus* 358  
6-10 ♀ ♂ ♥ 📺 📺 26°C sg: 1.020 45 cm 500L



*Pteragogus pelycus* 358  
9 ♀ ♂ ♥ 📺 📺 26°C sg: 1.020 15 cm 200L



*Labrichthys unilineatus* 358 (juv.)  
6-10 ♀ ♂ ♡ 📺 📺 26°C sg: 1.020 18 cm 200L



*Labrichthys unilineatus* 358  
6-10 ♀ ♂ ♡ 📺 📺 26°C sg: 1.020 18 cm 200L



*Labropsis xanthonota* 358  
6-9 ♀ ♂ ♡ 📺 📺 26°C sg: 1.020 10 cm 100L



*Labricus quadrilineatus* 358  
10 ♀ ♂ ♡ 📺 📺 27°C sg: 1.030 12 cm 100L



*Macropharyngodon bipartitus* 358  
9-10 ♀ ♂ ♡ 📺 📺 26°C sg: 1.020 11 cm 100L



*Macropharyngodon cyanoguttatus* 358  
9 ♀ ♂ ♡ 📺 📺 26°C sg: 1.020 12 cm 100L



*Macropharyngodon ornatus* 358  
7-9 ♀ ♂ ♡ 📺 📺 26°C sg: 1.020 12 cm 100L



*Cheilio inermis* 358  
6-10 ♀ ♂ ♡ 📺 📺 26°C sg: 1.020 50 cm 500L



*Lienardella fasciata* (juv.) 358  
7-8 ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.020 30 cm 300L



*Lienardella fasciata* (adult) 358  
7-8 ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.020 30 cm 300L



*Macropharyngodon choati* (juv.) 358  
8 ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.020 10 cm 100L



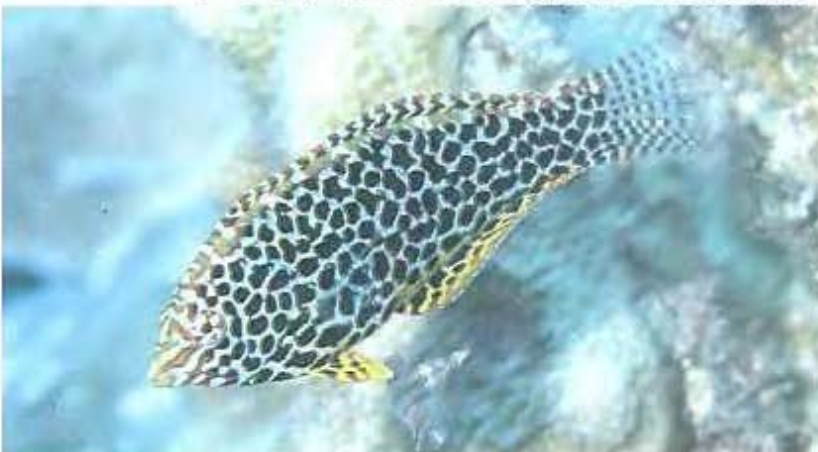
*Macropharyngodon choati* (adult) 358  
8 ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.020 10 cm 100L



*Macropharyngodon negrosensis* 358  
7 ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.020 12 cm 100L



*Macropharyngodon geoffroyi* 358  
6-7 ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.020 15 cm 200L



*Macropharyngodon meleagris* 358 ♀  
6-9 ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.020 15 cm 200L



*Macropharyngodon meleagris* 358 ♂  
6-9 ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.020 15 cm 200L



*Lienardella fasciata*(adult) 358  
7-8 ♀ ♂ ♡ 🐟 🌡️ 26°C sg: 1.020 30 cm 300L



*Stethojulis interrupta* 358 ♀  
7-9 ~ ♀ ♀ ♀ ♀ 26°C sg: 1.020 13 cm 100L



*Stethojulis interrupta* 358 ♂  
7-9 ~ ♀ ♀ ♀ ♀ 26°C sg: 1.020 13 cm 100L



*Stethojulis strigiventer* 358 ♀  
6-9 ~ ♀ ♀ ♀ ♀ 26°C sg: 1.022 15 cm 200L



*Labropsis alleni* 358  
6-7 ~ ♀ ♀ ♀ ♀ 26°C sg: 1.020 8 cm 100L



*Labropsis micronesica* 358  
6 ~ ♀ ♀ ♀ ♀ 26°C sg: 1.020 8 cm 100L



*Labropsis xanthonota* 358  
6-9 ~ ♀ ♀ ♀ ♀ 26°C sg: 1.020 10 cm 100L



*Wetmorella nigropinnata* 358  
6-10 ~ ♀ ♀ ♀ ♀ 26°C sg: 1.020 7 cm 100L



*Labropsis manabei* 358  
7 ~ ♀ ♀ ♀ ♀ 26°C sg: 1.020 12 cm 100L





*Stethojulis balteata* 358 ♀  
7 ~ ♀ ♡ 📏 📊 26°C sg: 1.022 14 cm 100L



*Stethojulis balteata* 358 ♂  
7 ~ ♀ ♡ 📏 📊 26°C sg: 1.022 14 cm 100L



*Stethojulis bandanensis* 358 ♀  
7 ~ ♀ ♡ 📏 📊 26°C sg: 1.022 15 cm 200L



*Stethojulis bandanensis* 358 ♂  
7 ~ ♀ ♡ 📏 📊 26°C sg: 1.022 15 cm 200L



*Stethojulis trilineata* 358 ♀  
7-10 ~ ♀ ♡ 📏 📊 26°C sg: 1.022 15 cm 200L



*Stethojulis trilineata* 358 ♂  
7-10 ~ ♀ ♡ 📏 📊 26°C sg: 1.022 15 cm 200L



*Stethojulis albovittata* 358 ♀  
9-10 ~ ♀ ♡ 📏 📊 26°C sg: 1.022 13 cm 100L



*Stethojulis albovittata* 358 ♂  
9-10 ~ ♀ ♡ 📏 📊 26°C sg: 1.022 13 cm 100L



*Xyrichthys splendens* 358 ♀  
2 ~ ♀ ♥ 📧 📧 26°C sg: 1.022 14 cm 100L



*Xyrichthys novacula* 358  
2, 13 ~ ♀ ♥ 📧 📧 26°C sg: 1.022 22 cm 200L



*Xyrichthys splendens* 358 ♂  
2 ~ ♀ ♥ 📧 📧 26°C sg: 1.022 14 cm 100L



*Xyrichthys martinicensis* 358 ♂  
2 ~ ♀ ♥ 📧 📧 26°C sg: 1.022 15 cm 200L



*Xyrichthys pavo (juv.)* 358  
3, 6-10 ~ ♀ ♥ 📧 📧 26°C sg: 1.022 35 cm 400L



*Xyrichthys martinicensis* 358  
2 ~ ♀ ♥ 📧 📧 26°C sg: 1.022 15 cm 200L







*Paracheilinus filamentosus* 358  
7 ~ ♀ ♥ 📏 📦 26°C sg: 1.022 8 cm 100L ♂



*Paracheilinus carpenteri* 358  
7 ~ ♀ ♥ 📏 📦 26°C sg: 1.022 7 cm 100L



*Paracheilinus lineopunctatus* 358  
7 ~ ♀ ♥ 📏 📦 26°C sg: 1.022 7 cm 100L ♂



*Pseudocoris yamashiroi* 358  
5, 7 ~ ♀ ♥ 📏 📦 26°C sg: 1.022 15 cm 200L



*Minilabrus striatus* 358  
10 ~ ♀ ♥ 📏 📦 26°C sg: 1.030 4 cm 50L

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*Paracheilinus octotaenia* 358  
10 ♀ ♂ ♥ 📏 📦 27°C sg: 1.030 9 cm 100L



*Pseudocoris yamashiroi* 358  
7 ♀ ♂ ♥ 📏 📦 26°C sg: 1.022 15 cm 200L



*Ophthalmolepis lineolatus* 358  
12 ♀ ♂ ♥ 📏 📦 24°C sg: 1.020 40 cm 400L ♂



*Ophthalmolepis lineolatus* 358  
12 ♀ ♂ ♥ 📏 📦 24°C sg: 1.020 40 cm 400L ♀



*Pseudojuloides erythroptus* 358  
9 ♀ ♂ ♥ 📏 📦 26°C sg: 1.022 9 cm 100L ♀



*Pseudojuloides erythroptus* 358  
9 ♀ ♂ ♥ 📏 📦 26°C sg: 1.022 9 cm 100L ♂



*Pseudojuloides trifasciatus* 358  
9 ♀ ♂ ♥ 📏 📦 26°C sg: 1.022 9 cm 100L



*Pseudojuloides cerasinus* 358  
6-9 ♀ ♂ ♥ 📏 📦 26°C sg: 1.022 12 cm 100L



*Pseudojuloides* sp. 358  
7 ♀ ○ ♥ 📏 📏 26°C sg: 1.022 10 cm 100L



*Pseudojuloides cerasinus* 358 ♂  
6-9 ♀ ○ ♥ 📏 📏 26°C sg: 1.022 12 cm 100L



*Pseudojulius melanotus* 358  
3 ♀ ○ ♥ 📏 📏 26°C sg: 1.022 20 cm 200L



*Pseudojuloides elongatus* 358 ♂  
7-8, 12 ♀ ○ ♥ 📏 📏 25°C sg: 1.022 14 cm 100L



*Pseudojulius notospilus* 358 ♀  
3 ♀ ○ ♥ 📏 📏 26°C sg: 1.022 25 cm 300L



*Pseudojulius notospilus* 358 ♂  
3 ♀ ○ ♥ 📏 📏 26°C sg: 1.022 25 cm 300L



*Pseudocheilinus* sp. 358  
6 ♀ ○ ♥ 📏 📏 26°C sg: 1.022 13 cm 100L



*Pseudocheilinus tetrataenia* 358  
6 ♀ ○ ♥ 📏 📏 26°C sg: 1.022 12 cm 100L



*Cirrhilabrus blatteus* 358 ♂  
10 ~ ♀♥♣ 26°C sg: 1.028 10 cm 100L



*Cirrhilabrus blatteus* 358 ♀  
10 ~ ♀♥♣ 26°C sg: 1.028 10 cm 100L



*Leptojulius cyanopleura* 358  
6-7 ~ ♀♥♣ 26°C sg: 1.022 9 cm 200L



*Leptojulius chrysotaenia* 358  
7 ~ ♀♥♣ 26°C sg: 1.022 6 cm



*Pictilabrus* sp. 358  
7, 12 ~ ♀♥♣ 26°C sg: 1.022 14 cm 150L



*Pictilabrus laticlavus* 358  
7, 12 ~ ♀♥♣ 26°C sg: 1.022 20 cm 200L



*Pseudolabrus biserialis* 358  
7 ~ ♀♥♣ 25°C sg: 1.022 20 cm 200L



*Pictilabrus laticlavus* 358  
7, 12 ~ ♀♥♣ 26°C sg: 1.022 20 cm 200L





*Semicossyphus pulcher* 358 ♂  
3-4 ~ ♀ \* 📏 📐 22°C sg: 1.024 91 cm 1500L



*Semicossyphus pulcher* 358 ♀  
3-4 ~ ♀ \* 📏 📐 22°C sg: 1.024 91 cm 1500L



*Semicossyphus reticulatus* 358 (juv.)  
7 ~ ♀ \* 📏 📐 26°C sg: 1.022 100 cm 2000L



*Semicossyphus reticulatus* 358  
7 ~ ♀ \* 📏 📐 26°C sg: 1.022 100 cm 2000L



*Pseudolabrus milesi* 358  
11-12 ~ ♀ ♥ 📏 📐 22°C sg: 1.024 38 cm 400L



*Eupetrichthys angustipes* 358  
12 ~ ♀ ♥ 📏 📐 22°C sg: 1.024 15 cm 400L



*Dotalabrus aurantiacus* 358  
12 ~ ♀ ♥ 📏 📐 23°C sg: 1.022 20 cm 200L



*Dotalabrus* sp. 358  
12 ~ ♀ ♥ 📏 📐 23°C sg: 1.022 9 cm 100L

464



*Suezichthys gracilis* 358 ♀  
5, 7, 8, 12 ♀ ♂ ♥ 📷 📧 26°C sg: 1.022 15 cm 200L

#387



*Suezichthys gracilis* 358 ♀  
5, 7, 8, 12 ♀ ♂ ♥ 📷 📧 26°C sg: 1.022 15 cm 200L



*Pseudolabrus gymnogenis* 358 ♀  
12 ♀ ♂ ♥ 📷 📧 26°C sg: 1.022 38 cm 450L



*Pseudolabrus luculentus* 358 ♀  
11-12 ♀ ♂ ♥ 📷 📧 26°C sg: 1.022 24 cm 300L



*Pseudolabrus inscriptus* 358 ♀  
11 ♀ ♂ ♥ 📷 📧 26°C sg: 1.022 25 cm 300L



*Pseudolabrus celidotus* 358 ♀  
11 ♀ ♂ ♥ 📷 📧 26°C sg: 1.022 24 cm 300L



*Pseudolabrus japonicus* 358 ♀  
5, 7 ♀ ♂ ♥ 📷 📧 26°C sg: 1.022 25 cm 300L



*Pseudolabrus guntheri* 358 ♀  
8 ♀ ♂ ♥ 📷 📧 26°C sg: 1.022 18 cm 200L



*Pseudolabrus biserialis* 358  
 12 ♀ ○ ♥ 📷 📧 24°C sg: 1.022 20 cm 200L



*Pseudolabrus parilus* 358  
 12 ♀ ○ ♥ 📷 📧 26°C sg: 1.022 45 cm 500L



*Stethojulis bandanensis* 358 ♂  
 7 ♀ ○ ♥ 📷 📧 26°C sg: 1.022 15 cm 200L



*Stethojulis strigiventer* 358 ♀  
 6-9 ♀ ○ ♥ 📷 📧 26°C sg: 1.022 15 cm 200L



*Thalassoma amblycephalum* 358 ♂  
 7-9 ♀ ○ ♥ 📷 📧 26°C sg: 1.022 16 cm 200L



*Thalassoma amblycephalum* 358 ♀  
 7-9 ♀ ○ ♥ 📷 📧 26°C sg: 1.022 16 cm 200L



*Thalassoma genivittatum* 358 ♂  
 9 ♀ ○ ♥ 📷 📧 26°C sg: 1.022 20 cm 200L



*Thalassoma hardwicke* 358 ♀  
 7-9 ♀ ○ ♥ 📷 📧 26°C sg: 1.022 18 cm 200L



*Thalassoma lucasanum* 358 (juv.)  
3 ♀ ○ ♥ 📏 🌡 26°C sg: 1.022 15 cm 200L



*Thalassoma lucasanum* 358 ♂  
3 ♀ ○ ♥ 📏 🌡 26°C sg: 1.022 15 cm 200L



*Thalassoma bifasciatum* 358  
2 ♀ ○ ♥ 📏 🌡 26°C sg: 1.022 15 cm 200L



*Thalassoma bifasciatum* 358  
2 ♀ ○ ♥ 📏 🌡 26°C sg: 1.022 15 cm 200L



*Thalassoma janseni* 358  
7 ♀ ○ ♥ 📏 🌡 26°C sg: 1.022 20 cm 200L



*Thalassoma bifasciatum* 358 ♂  
2 ♀ ○ ♥ 📏 🌡 26°C sg: 1.022 15 cm 200L



*Thalassoma ballieu* 358  
6 ♀ ○ ♥ 📏 🌡 26°C sg: 1.022 45 cm 500L



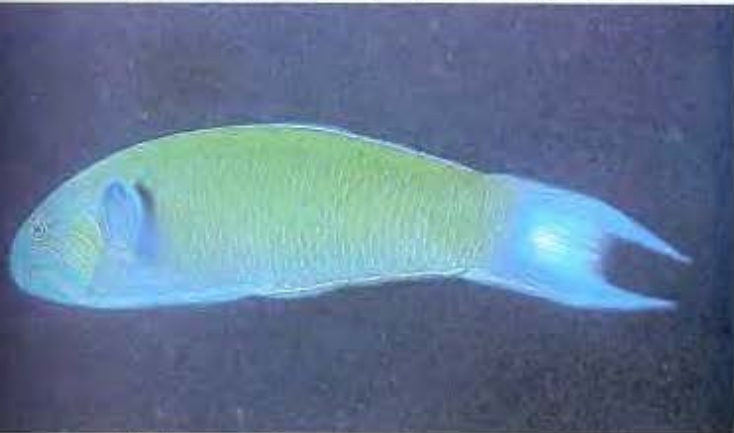
*Thalassoma duperreyi* 358  
6 ♀ ○ ♥ 📏 🌡 26°C sg: 1.022 30 cm 300L



*Thalassoma hebraicum* 358  
7-9 ♀ ♂ ♡ 📏 📏 26°C sg: 1.022 18 cm 200L



*Thalassoma hebraicum* 358 ♂  
7-9 ♀ ♂ ♡ 📏 📏 26°C sg: 1.022 18 cm 200L



*Thalassoma lunare* 358 ♂  
6-10 ♀ ♂ ♡ 📏 📏 26°C sg: 1.022 25 cm 300L



*Thalassoma lutescens* 358 ♂  
7 ♀ ♂ ♡ 📏 📏 26°C sg: 1.022 15 cm 200L



*Thalassoma quinquevittatum* 358 ♂  
6-9 ♀ ♂ ♡ 📏 📏 26°C sg: 1.022 17 cm 200L



*Thalassoma klunzingeri* 358 ♂  
10 ♀ ♂ ♡ 📏 📏 26°C sg: 1.030 20 cm 200L



*Thalassoma genivittatum* 358  
9 ♀ ♂ ♡ 📏 📏 26°C sg: 1.022 20 cm 200L



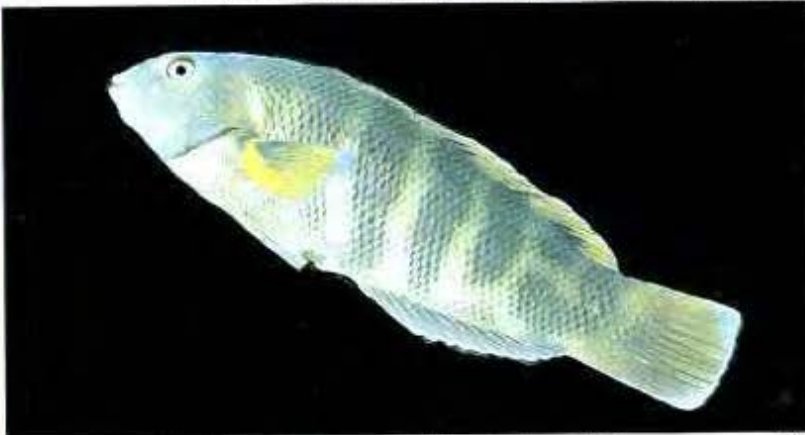
*Pseudodax moluccanus* 358  
6-10 ♀ ♂ ♡ 📏 📏 26°C sg: 1.022 25 cm 300L



*Thalassoma purpureum* 358  
6-9 ♀ ○ ♥ 📏 📏 26°C sg: 1.022 43 cm 500L



*Thalassoma lutescens* 358  
7 ♀ ○ ♥ 📏 📏 26°C sg: 1.022 15 cm 200L



*Thalassoma septemfasciatum* 358 ♀  
7, 12 ♀ ○ ♥ 📏 📏 26°C sg: 1.022 23 cm 300L



*Thalassoma septemfasciatum* 358 ♂  
7, 12 ♀ ○ ♥ 📏 📏 26°C sg: 1.022 23 cm 300L



*Tautoglabrus adpersus* 358  
1 ♀ ○ ♥ 📏 📏 26°C sg: 1.022 38 cm 400L



*Thalassoma trilobatum* 358  
6-9 ♀ ○ ♥ 📏 📏 26°C sg: 1.022 30 cm 300L



*Suezichthys* sp. 358 ♂  
11 ♀ ○ ♥ 📏 📏 26°C sg: 1.022 16 cm 200L



*Suezichthys* sp. 358 ♀  
11 ♀ ○ ♥ 📏 📏 20°C sg: 1.024 16 cm 200L



*Labroides dimidiatus* 358  
6-10 ♀ ♂ ♥ 📏 📧 26°C sg: 1.022 12 cm 150L



*Labroides phthirophagus* 358  
6 ♀ ♂ ♥ 📏 📧 26°C sg: 1.022 10 cm 100L



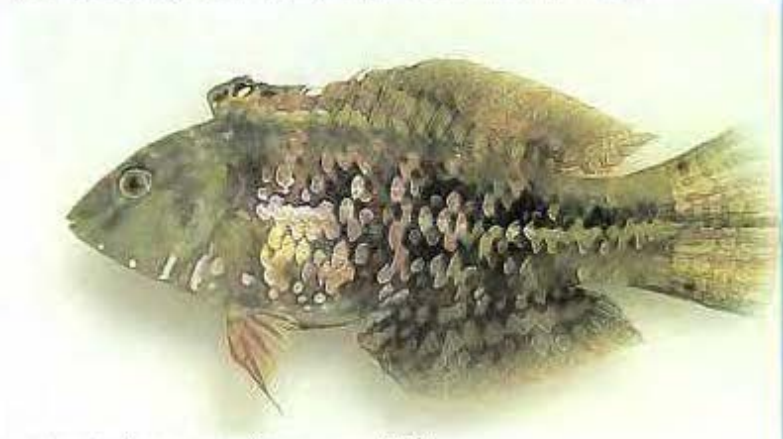
*Labroides rubrolabiatus* 358  
6 ♀ ♂ ♥ 📏 📧 26°C sg: 1.022 6 cm 100L



*Labroides pectoralis* 358  
7-8 ♀ ♂ ♥ 📏 📧 26°C sg: 1.022 12 cm 100L



*Labroides bicolor* 358  
7-9 ♀ ♂ ♥ 📏 📧 26°C sg: 1.022 14 cm 150L



*Xenojulis margaritaceus* 358  
7, 12 ♀ ♂ ♥ 📏 📧 25°C sg: 1.023 12 cm 100L



*Labrus bergylta* 358  
13-15 ♀ ♂ ♥ 📏 📧 26°C sg: 1.022 60 cm 800L



*Labrus merula* 358  
13-15 ♀ ♂ ♥ 📏 📧 26°C sg: 1.022 45 cm 500L



*Lachnolaimus maximus* 358  
2 ~ ♀ ♂ ♀ ♂ 26°C sg: 1.022 91 cm 1500L



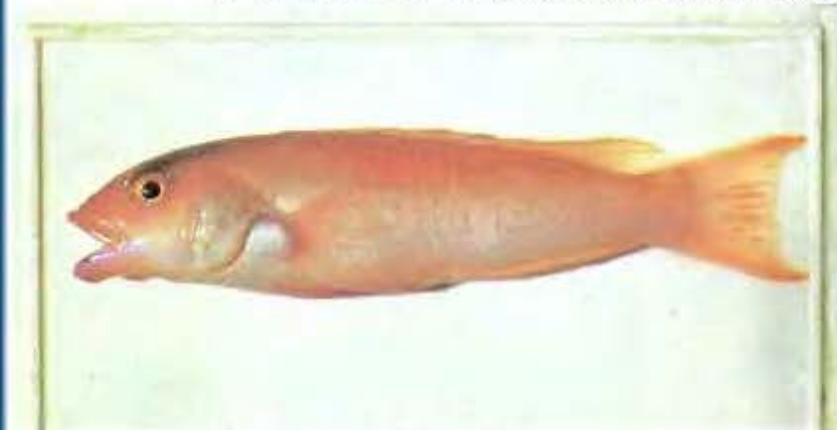
*Lachnolaimus maximus* 358  
2 ~ ♀ ♂ ♀ ♂ 26°C sg: 1.022 91 cm 1500L



*Clepticus parrae* 358  
2 ~ ♀ ♀ ♀ ♂ 26°C sg: 1.022 30 cm 300L



*Clepticus parrae* 358  
2 ~ ♀ ♀ ♀ ♂ 26°C sg: 1.022 30 cm 300L



*Decodon puellaris* 358  
2 ~ ♀ ♀ ♀ ♂ 26°C sg: 1.022 15 cm 200L



*Decodon melasma* 358  
3 ~ ♀ ♀ ♀ ♀ ♂ 26°C sg: 1.022 20 cm 200L



*Doratonotus megalepis* 358  
2 ~ ♀ ♀ ♀ ♀ ♂ 24°C sg: 1.022 7.5 cm 100L



*Oxyjulis californica* 358  
3-4 ~ ♀ ♀ ♀ ♀ ♀ ♂ 22°C sg: 1.023 25 cm 300L





*Symphodus melanocercus* 358 ♀  
15 ♀ ○ ♥ 📏 📦 25°C sg: 1.022 14 cm 150L



*Symphodus ocellatus* 358 ♂  
15 ♀ ○ ♥ 📏 📦 25°C sg: 1.022 12 cm 100L



*Symphodus dodereleini* 358  
15 ♀ ○ ♥ 📏 📦 25°C sg: 1.022 10 cm 100L



*Symphodus tinca* 358  
14-15 ♀ ○ ♥ 📏 📦 24°C sg: 1.022 35 cm 400L



*Symphodus cinereus* 358  
14-15 ♀ ○ ♥ 📏 📦 24°C sg: 1.022 15 cm 200L



*Symphodus mediterraneus* 358  
14-15 ♀ ○ ♥ 📏 📦 25°C sg: 1.022 15 cm 200L



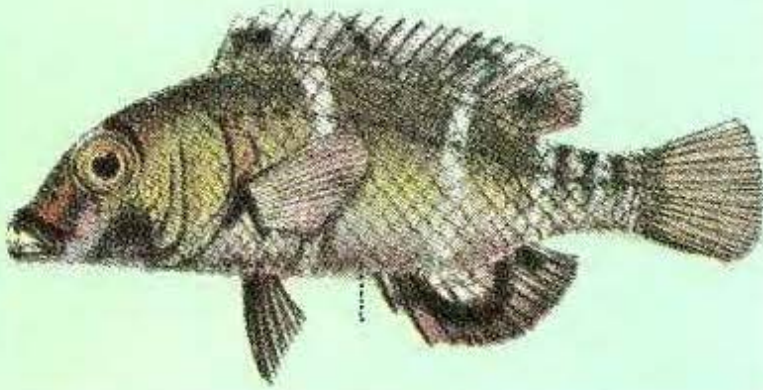
*Symphodus roissali* 358 ♀  
14-15 ♀ ○ ♥ 📏 📦 24°C sg: 1.022 17 cm 200L



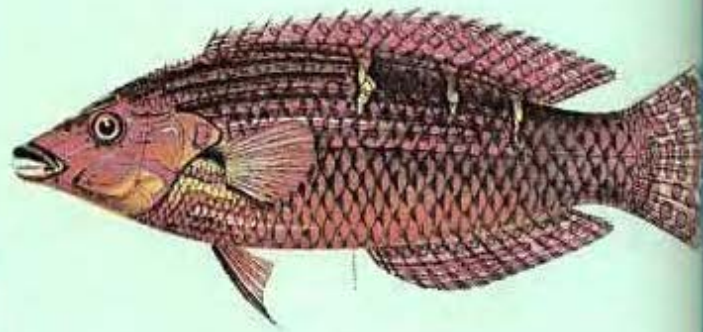
*Symphodus rostratus* 358  
15 ♀ ○ ♥ 📏 📦 24°C sg: 1.022 13 cm 150L



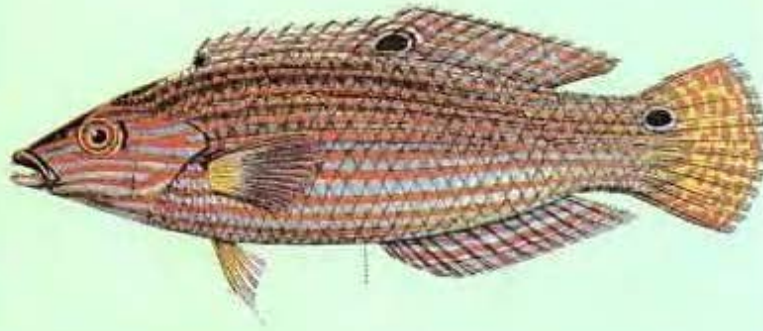




*Choerodon anchorago* (juv.) 358  
7-9 ♀ ♂ ♥ 📏 📦 26°C sg: 1.020 25 cm 300L



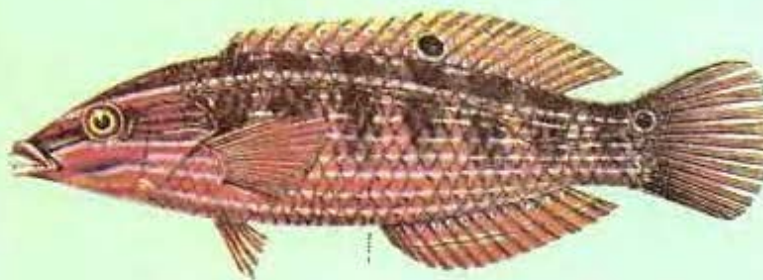
*Halichoeres hoevenii* 358  
6-7 ♀ ♂ ♥ 📏 📦 26°C sg: 1.020 12 cm 100L



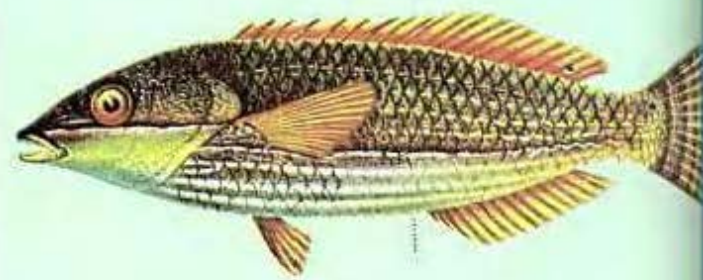
*Halichoeres hoevenii* 358  
6-7 ♀ ♂ ♥ 📏 📦 26°C sg: 1.020 12 cm 100L



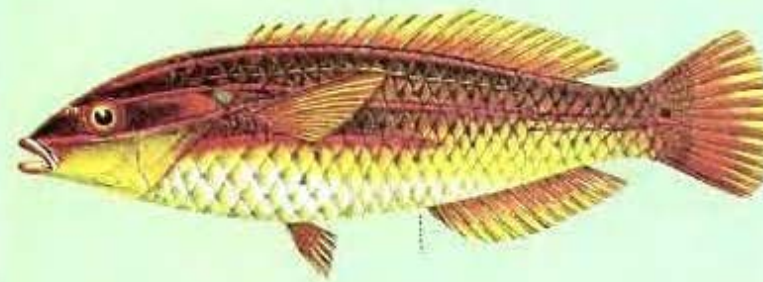
*Halichoeres kallochroma* 358  
7 ♀ ♂ ♥ 📏 📦 26°C sg: 1.020 15 cm 100L



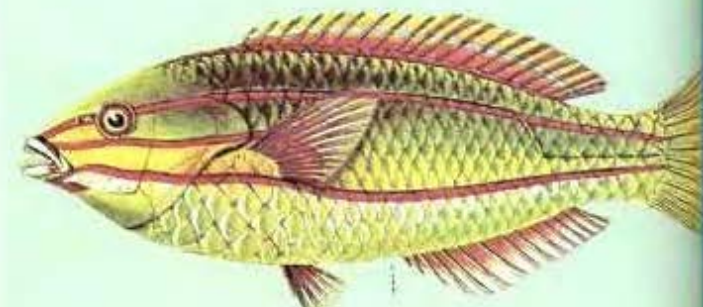
*Halichoeres argus* 358  
7 ♀ ♂ ♥ 📏 📦 26°C sg: 1.020 12 cm 100L



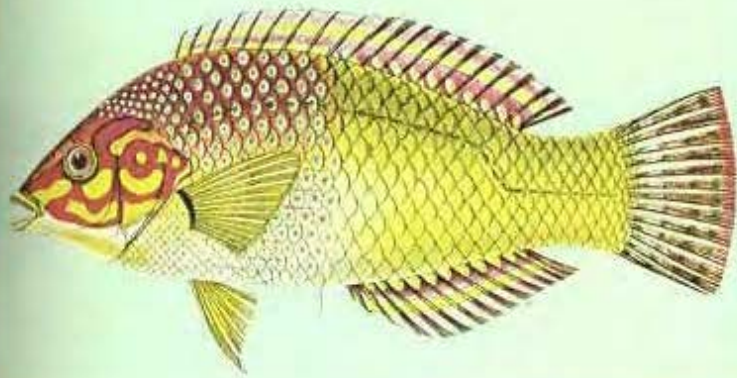
*Stethojulis strigiventer* 358  
6-9 ♀ ♂ ♥ 📏 📦 26°C sg: 1.022 15 cm 200L



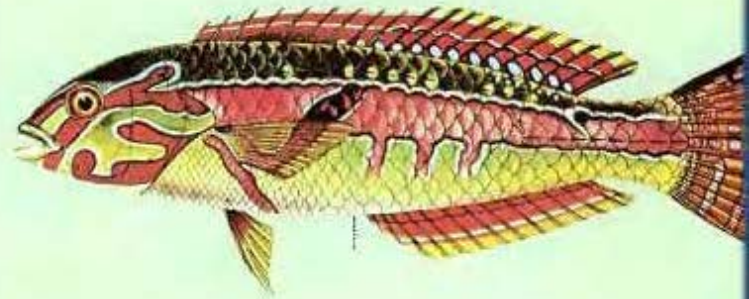
*Stethojulis strigiventer* 358  
6-9 ♀ ♂ ♥ 📏 📦 26°C sg: 1.022 15 cm 200L



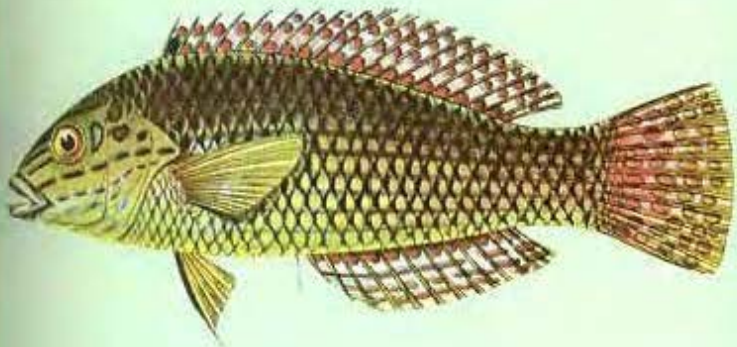
*Stethojulis trilineata* 358  
7-10 ♀ ♂ ♥ 📏 📦 26°C sg: 1.022 15 cm 200L



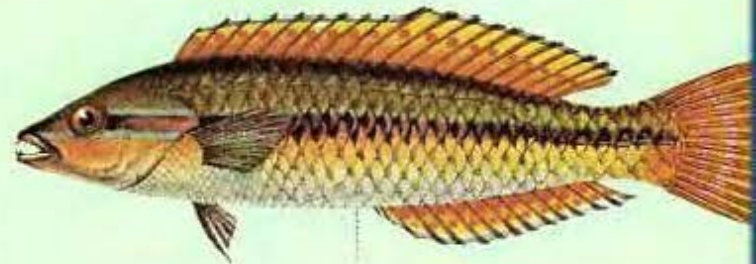
*Halichoeres chloropterus* 358  
7 ♀ ○ ♥ 📏 📏 26°C sg: 1.020 15 cm 200L



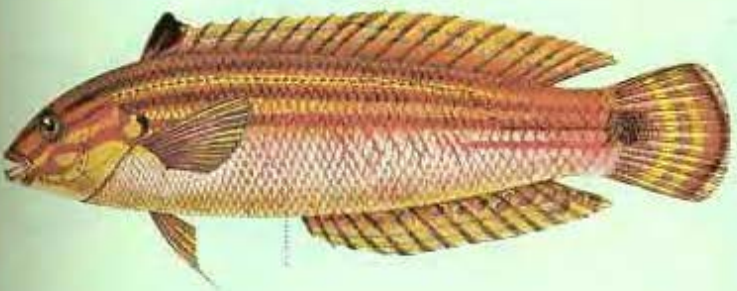
*Halichoeres hartzfeldii* 358  
7 ♀ ○ ♥ 📏 📏 26°C sg: 1.020 18 cm 200L



*Halichoeres pardaleocephalus* 358  
7, 9 ♀ ○ ♥ 📏 📏 26°C sg: 1.020 9 cm 100L



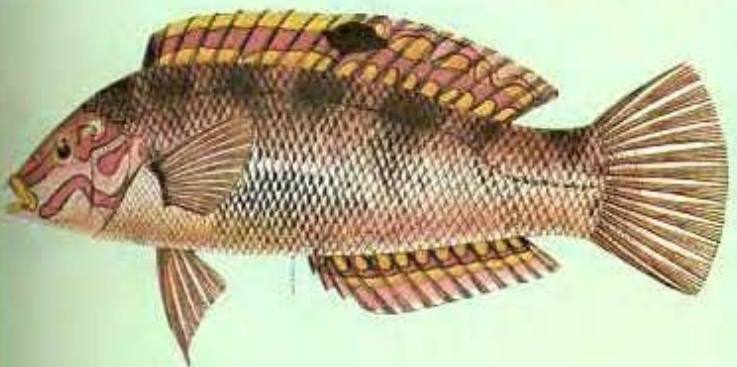
*Leptojulis cyanopleura* 358  
6-7 ♀ ○ ♥ 📏 📏 26°C sg: 1.022 9 cm 200L



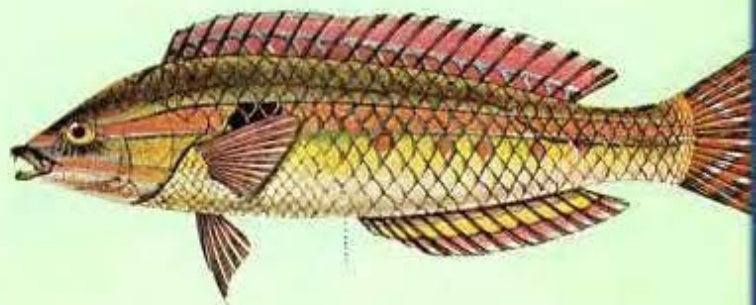
*Coris caudimacula* 358  
7-10 ♀ ○ ♥ 📏 📏 26°C sg: 1.020 20 cm 200L



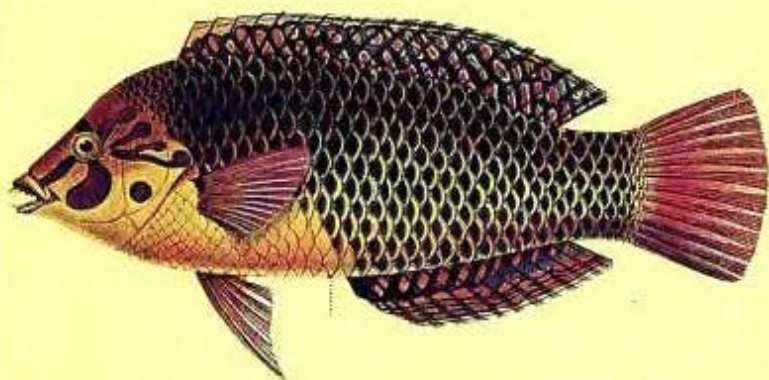
*Coris batuensis* 358  
7 ♀ ○ ♥ 📏 📏 26°C sg: 1.022 11 cm 150L



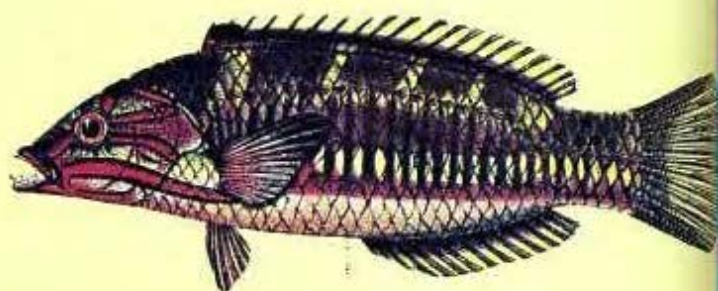
*Coris variegata* 358  
6-10 ♀ ○ ♥ 📏 📏 26°C sg: 1.020 20 cm 200L



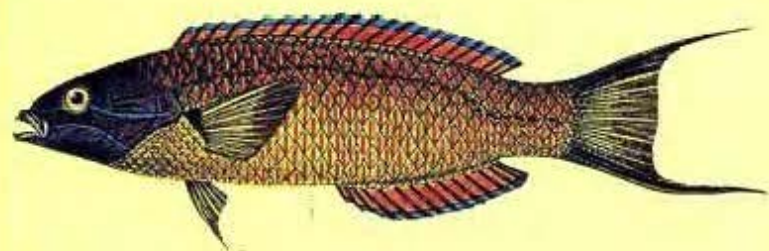
*Leptojulis cyanopleura* 358  
6-7 ♀ ○ ♥ 📏 📏 26°C sg: 1.022 9 cm 200L



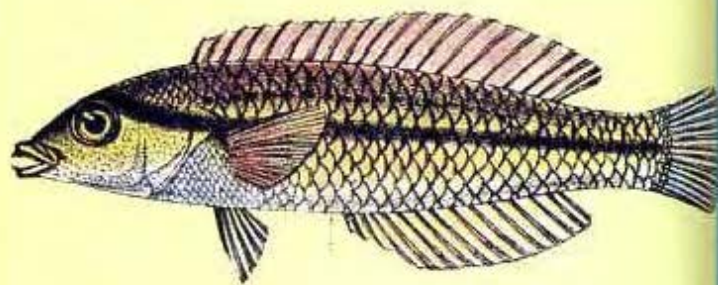
*Halichoeres podostigma* 358  
7 ♀ ~ ◯ ♥ ◻ ◻ 26°C sg: 1.022 18.5 cm 200L



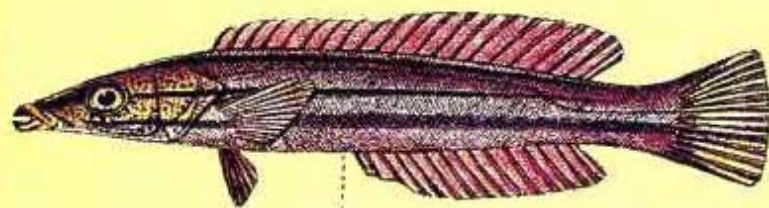
*Thalassoma cupido* 358  
5, 7 ♀ ~ ◯ ♥ ◻ ◻ 26°C sg: 1.022 15 cm 150L



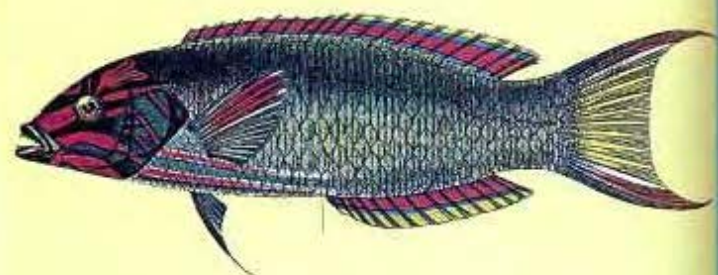
*Thalassoma amblycephalus* 358  
7, 9 ♀ ~ ◯ ♥ ◻ ◻ 26°C sg: 1.022 16 cm 200L



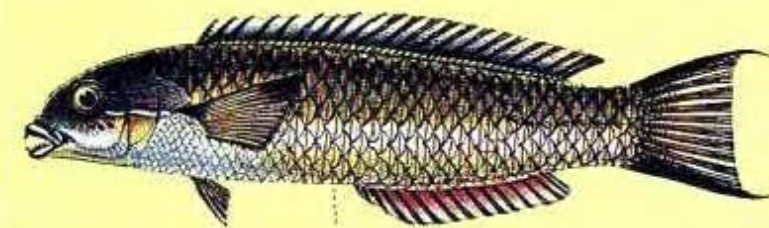
*Pseudojulis girardi* 358  
7 ♀ ~ ◯ ♥ ◻ ◻ 26°C sg: 1.022 10 cm 100L



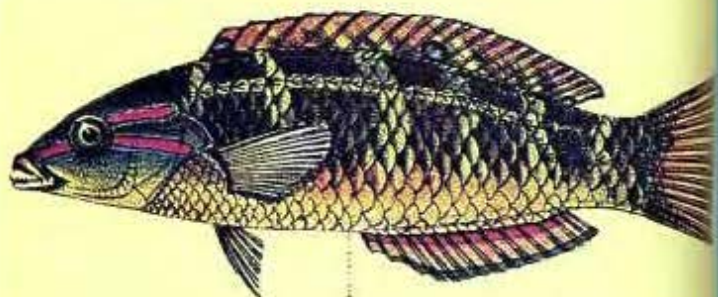
*Hologymnosus doliatus* 358  
6-9, 12 ♀ ~ ◯ ♥ ◻ ◻ 26°C sg: 1.022 32 cm 300L



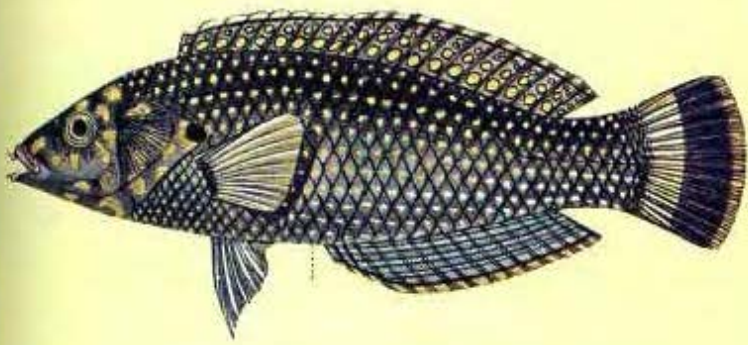
*Thalassoma lunare* 358  
7, 9 ♀ ~ ◯ ♥ ◻ ◻ 26°C sg: 1.022 25 cm 300L



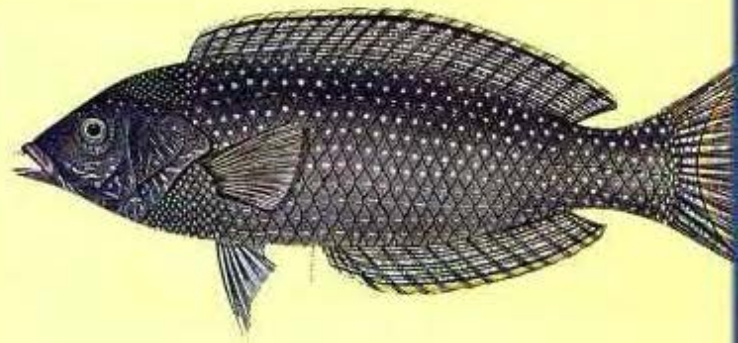
*Thalassoma amblycephalus* 358  
7, 9 ♀ ~ ◯ ♥ ◻ ◻ 26°C sg: 1.022 16 cm 200L



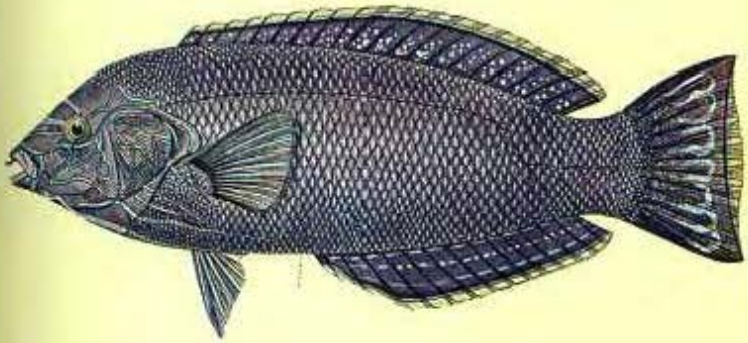
*Thalassoma schwanefeldi* 358  
6, 7 ♀ ~ ◯ ♥ ◻ ◻ 26°C sg: 1.022 10 cm 100L



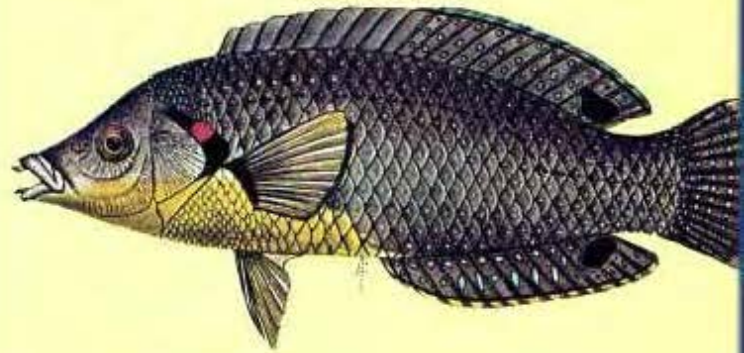
*Anampses melanurus melanurus* 358  
6-7 ~ ♀ ♀ ♀ ♀ 26°C sg: 1.020 12 cm 150L



*Anampses meleagrides* 358  
7, 9 ~ ♀ ♀ ♀ ♀ 26°C sg: 1.020 20 cm 200L



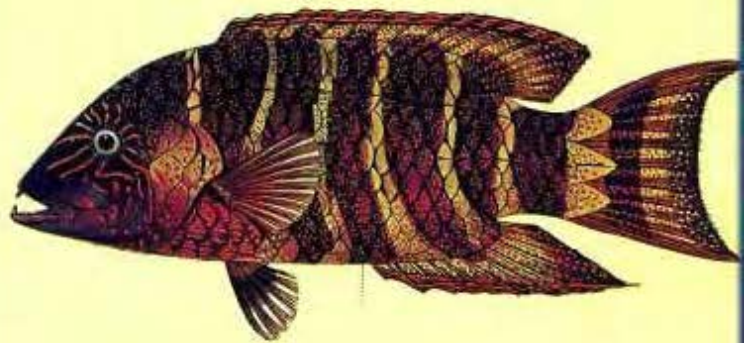
*Anampses geographicus* 358  
6-9 ~ ♀ ♀ ♀ ♀ 26°C sg: 1.020 25 cm 250L



*Anampses twistii* 358  
6-10 ~ ♀ ♀ ♀ ♀ 26°C sg: 1.020 18 cm 200L



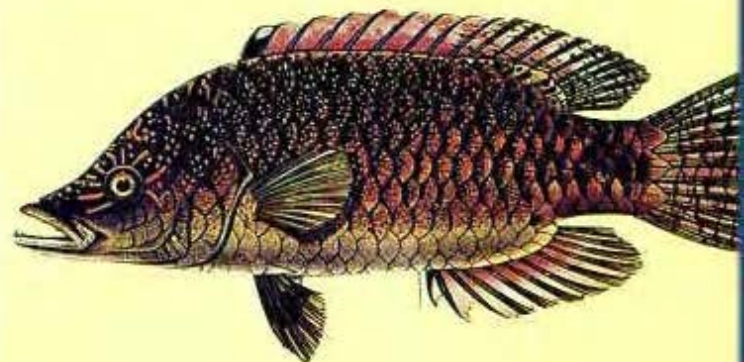
*Cheilinus digrammus* 358  
6-10 ~ ♀ ♀ ♀ ♀ 26°C sg: 1.020 35 cm 400L



*Cheilinus fasciatus* 358  
6-9 ~ ♀ ♀ ♀ ♀ 26°C sg: 1.020 35 cm 400L



*Cheilinus undulatus* 358  
6-10 ~ ♀ ♀ ♀ ♀ 26°C sg: 1.022 230 cm 5000L



*Cheilinus celebicus* 358  
7 ~ ♀ ♀ ♀ ♀ 26°C sg: 1.020 20 cm 200L



*Odax acroptilus* 359 ♀  
12 ~ ♀ ○ ♥ ♣ ☞ ☞ 23°C sg: 1.023 25 cm 300L



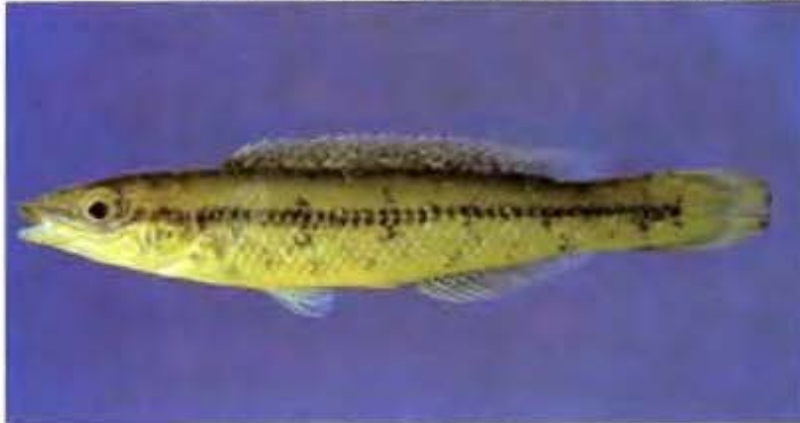
*Odax acroptilus* 359 ♂  
12 ~ ♀ ○ ♥ ♣ ☞ ☞ 23°C sg: 1.023 25 cm 300L



*Odax cyanomelas* 359  
12 ~ ♀ ○ ♥ ♣ ☞ ☞ 24°C sg: 1.023 45 cm 500L



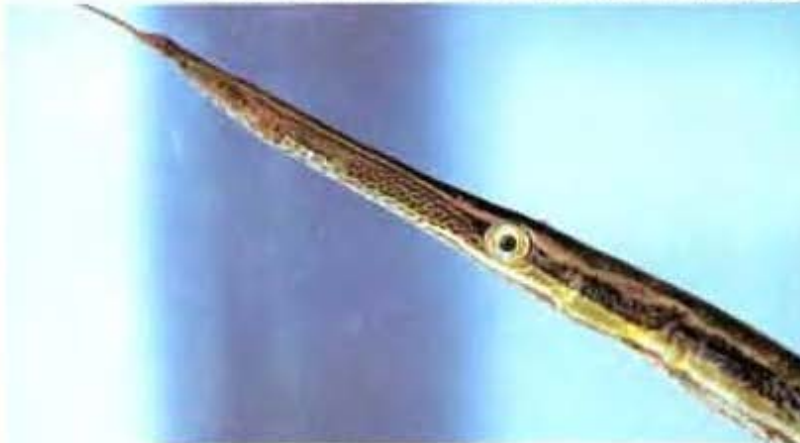
*Odax cyanomelas* 359  
12 ~ ♀ ○ ♥ ♣ ☞ ☞ 24°C sg: 1.023 45 cm 500L



*Neoodax balteatus* 359  
7, 12 ♀ ○ ♥ ♣ ☞ ☞ 24°C sg: 1.022 7 cm 100L



*Siphonognathus radiatus* 359  
12 ~ ♀ ○ ♥ ♣ ☞ ☞ 24°C sg: 1.023 12 cm



*Siphonognathus argyrophanes* 359  
6, 7 ~ ♀ ○ ♥ ♣ ☞ ☞ 26°C sg: 1.022 30 cm 300L



*Siphonognathus beddomei* 359  
12 ~ ♀ ○ ♥ ♣ ☞ ☞ 23°C sg: 1.023 13 cm 100L





*Scarus frenatus* 360  
5, 7 ~ + O ♥ ♣ ☒ 26°C sg: 1.022 40 cm 400L



*Cetoscarus bicolor* 360 (juv.)  
6-10 ~ ♀ ♂ ♡ 📺 📧 26°C sg: 1.022 80 cm 1000L



*Cetoscarus bicolor* 360  
6-10 ~ ♀ ♂ ♡ 📺 📧 26°C sg: 1.022 80 cm 1000L



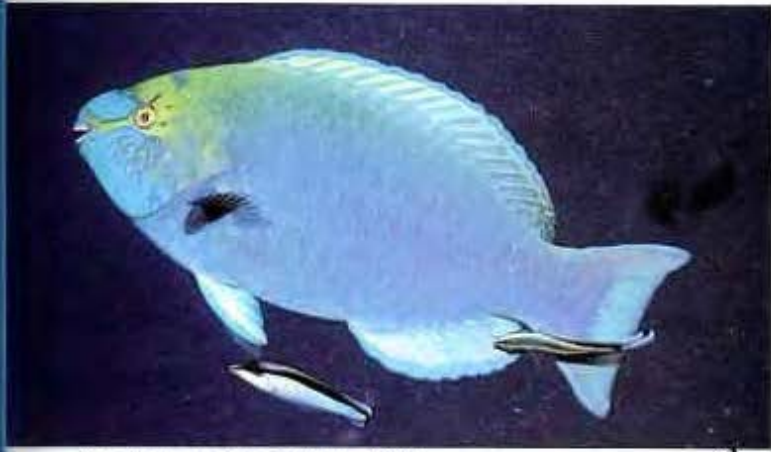
*Hipposcarus harid* 360  
9-10 ~ ♀ ♂ ♡ 📺 📧 26°C sg: 1.022 75 cm 1000L



*Scarus gibbus* 360  
7-10 ~ ♀ ♂ ♡ 📺 📧 26°C sg: 1.022 70 cm 1000L



*Scarus gibbus* 360 ♀  
7-10 ~ ♀ ♂ ♡ 📺 📧 26°C sg: 1.022 70 cm 1000L



*Scarus prasiognathos* 360 ♂  
5-7, 15 ~ ♀ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 70 cm 800L



*Scarus niger* 360 ♂  
7-10 ~ ♀ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 40 cm 500L



*Scarus niger* 360 ♀  
7-10 ~ ♀ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 40 cm 500L



*Scarus niger* 360 ♂  
7-10 ~ ♀ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 40 cm 500L



*Scarus cyanescens* 360 ♂  
9 ~ ♀ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 50 cm 500L



*Scarus psittacus* 360 ♂  
7-10 ~ ♀ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 27 cm 300L



*Scarus rubroviolaceus* 360 ♂  
3, 6-9 ~ ♀ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 66 cm 800L



*Scarus rubroviolaceus* 360 ♀  
3, 6-9 ~ ♀ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 66 cm 800L





*Scarus brevililis* 360 ♂  
6,7 ~ ♀ ♀ ♀ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 45 cm 500L



*Scarus bleekeri* 360 ♂  
6,7 ~ ♀ ♀ ♀ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 25 cm 300L



*Scarus frontalis* 360 ♂  
6,7 ~ ♀ ♀ ♀ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 50 cm 500L



*Scarus perspicillatus* 360 ♂  
6 ~ ♀ ♀ ♀ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 62 cm 600L



*Scarus rubroviolaceus* 360 ♂  
7-9 ~ ♀ ♀ ♀ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 60 cm 600L



*Scarus* sp. 360  
6 ~ ♀ ♀ ♀ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 50 cm



*Scarus ferrugineus* 360 ♂  
9-10 ~ ♀ ♀ ♀ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 41 cm 500L



*Scarus perspicillatus* 360 ♀  
6 ~ ♀ ♀ ♀ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 62 cm 600L





*Scarus psittacus* 360  
7-10 ~ ♀ ♂ ♡ 📏 🌡 26°C sg: 1.022 27 cm 300L



*Scarus ghobban* 360  
6-10 ~ ♀ ♂ ♡ 📏 🌡 26°C sg: 1.022 80 cm 800L



*Scarus ferrugineus* 360  
10 ~ ♀ ♂ ♡ 📏 🌡 26°C sg: 1.022 41 cm 400L



*Scarus prasiognathos* 360  
6-9 ~ ♀ ♂ ♡ 📏 🌡 26°C sg: 1.022 70 cm 800L



*Scarus frenatus* 360  
5, 7 ~ ♀ ♂ ♡ 📏 🌡 26°C sg: 1.022 40 cm 400L



*Scarus frenatus* 360  
5, 7 ~ ♀ ♂ ♡ 📏 🌡 26°C sg: 1.022 40 cm 400L



*Scarus guacamaia* 360  
2 ~ ♀ ♂ ♡ 📏 🌡 26°C sg: 1.022 93 cm 1000L



*Scarus perrico* 360  
3 ~ ♀ ♂ ♡ 📏 🌡 26°C sg: 1.022 80 cm 800L



*Sparisoma atomarium* 360 ♂  
2~ ♀♥♣☞☞ 26°C sg: 1.022 10 cm 100L



*Sparisoma atomarium* 360 ♀  
2~ ♀♥♣☞☞ 26°C sg: 1.022 10 cm 100L



*Sparisoma aurofrenatum* 360 ♂  
2~ ♀♥♣☞☞ 26°C sg: 1.022 28 cm 300L



*Sparisoma aurofrenatum* 360 ♀  
2~ ♀♥♣☞☞ 26°C sg: 1.022 28 cm 300L



*Sparisoma chrysopterygum* 360 ♂  
2~ ♀♥♣☞☞ 26°C sg: 1.022 50 cm 500L



*Sparisoma chrysopterygum* 360 ♀  
2~ ♀♥♣☞☞ 26°C sg: 1.022 50 cm 500L



*Sparisoma viride* 360 ♂  
2~ ♀♥♣☞☞ 26°C sg: 1.022 51 cm 500L



*Sparisoma viride* 360 ♀  
2~ ♀♥♣☞☞ 26°C sg: 1.022 51 cm 500L



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*Cryptotomus roseus* 360  
2 ♀ + ♂ ♀ ♀ 25°C sg: 1.022 7 cm 100L

#411



*Calotomus zonarchia* 360  
6 ♀ + ♂ ♀ ♀ 26°C sg: 1.022 35 cm 400L



*Calotomus japonicus* 360  
6-9 ♀ + ♂ ♀ ♀ 26°C sg: 1.022 60 cm 600L



*Calotomus spinidens* 360  
7, 9 ♀ + ♂ ♀ ♀ 26°C sg: 1.022 19 cm 200L



*Leptoscarus vaigiensis* 360  
7-9 ♀ + ♂ ♀ ♀ 26°C sg: 1.022 35 cm 400L



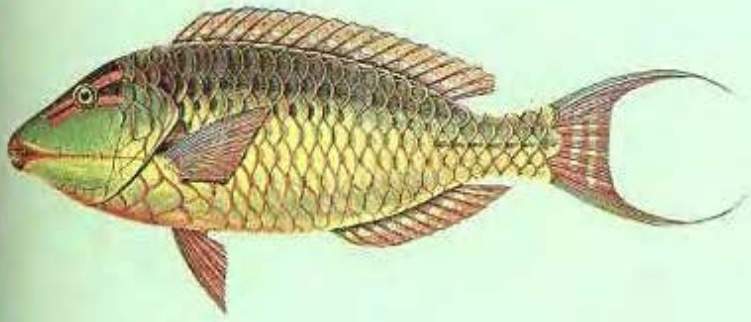
*Nicholsina denticulata* 360  
3 ♀ + ♂ ♀ ♀ 26°C sg: 1.022 7 cm 100L



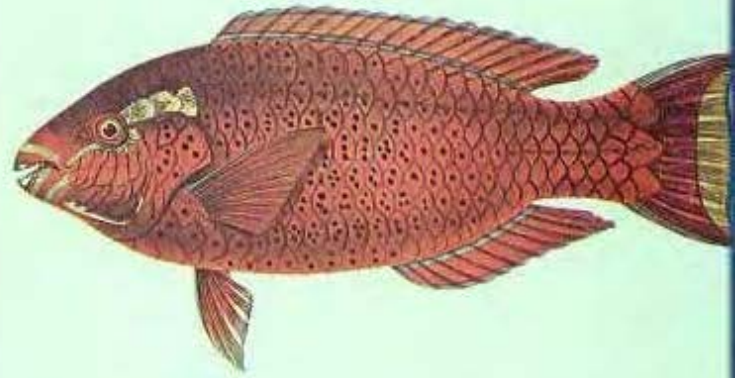
*Sparisoma radians* 360  
2, 13 ♀ + ♂ ♀ ♀ 26°C sg: 1.022 13.5 cm 200L



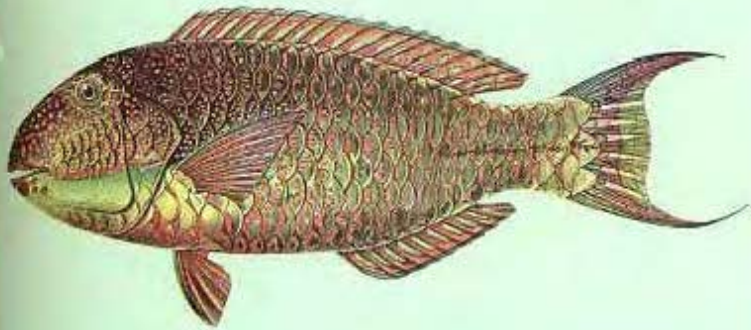
*Sparisoma rubripinne* 360  
2, 13 ♀ + ♂ ♀ ♀ 26°C sg: 1.022 46 cm 500L



*Hipposcarus harid* 360  
9~ ♀ ♂ ♥ 📏 26°C sg: 1.022 75 cm 750L



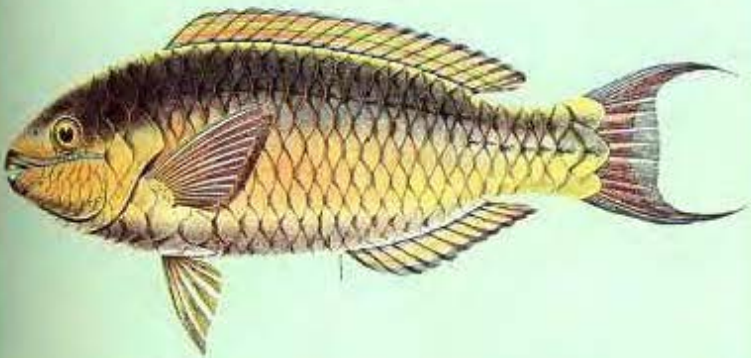
*Scarus niger* 360  
7-10~ ♀ ♂ ♥ 📏 26°C sg: 1.022 40 cm 500L



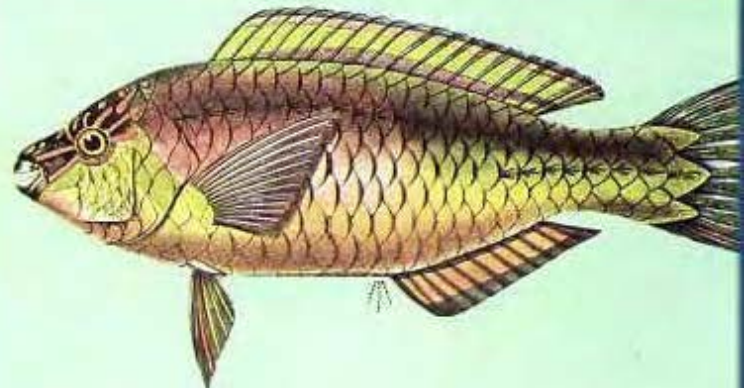
*Cetoscarus bicolor* 360  
6-9~ ♀ ♂ ♥ 📏 26°C sg: 1.022 60 cm 600L



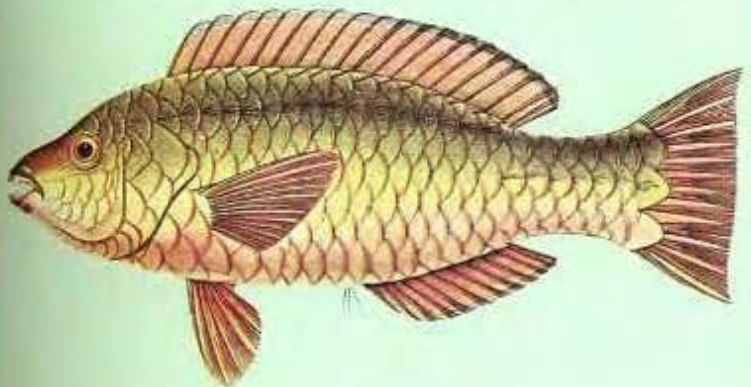
*Scarus psittacus* 360  
7-10~ ♀ ♂ ♥ 📏 26°C sg: 1.022 27 cm 300L



*Scarus oviceps* 370  
7~ ♀ ♂ ♥ 📏 26°C sg: 1.022 35 cm 400L



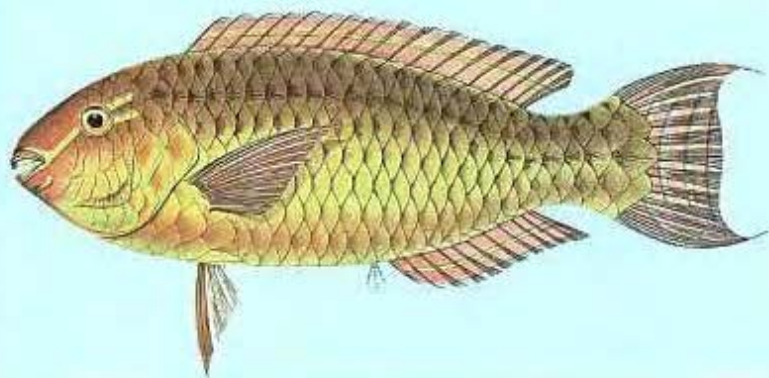
*Scarus javanicus* 360  
7~ ♀ ♂ ♥ 📏 26°C sg: 1.022 28 cm 300L



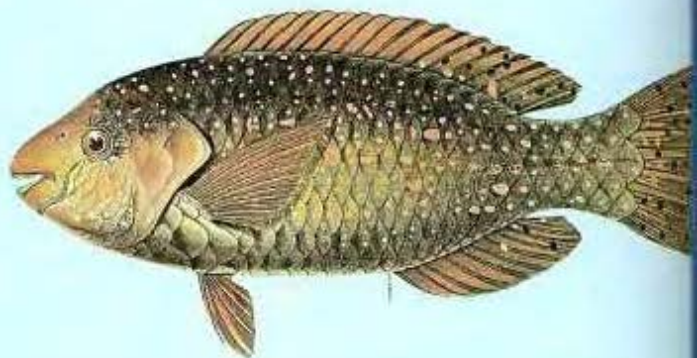
*Scarus moensi* 360  
6-9~ ♀ ♂ ♥ 📏 26°C sg: 1.022 20 cm 200L



*Scarus psittacus* 360  
7-10~ ♀ ♂ ♥ 📏 26°C sg: 1.022 27 cm 300L



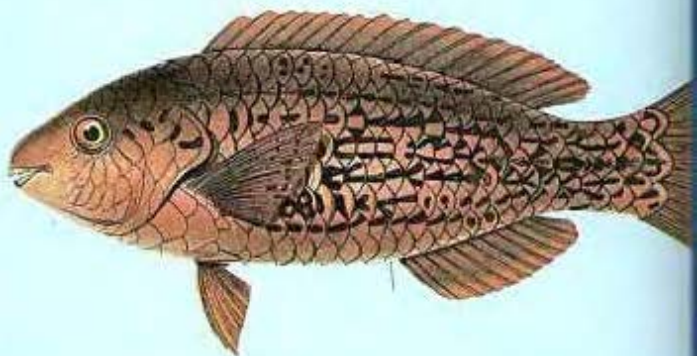
*Scarus bataviensis* 360  
7, 9~ ♀ ♂ ♥ 📏 26°C sg: 1.022 35 cm 400L



*Scarus prasiognathos* 360  
6-9~ ♀ ♂ ♥ 📏 26°C sg: 1.022 70 cm 800L



*Scarus oktodon* 360  
7, 9~ ♀ ♂ ♥ 📏 26°C sg: 1.022 33 cm 300L



*Scarus rubroviolaceus* 360  
3, 6-9~ ♀ ♂ ♥ 📏 26°C sg: 1.022 66 cm 800L



*Cetoscarus bicolor* 360  
6-9~ ♀ ♂ ♥ 📏 26°C sg: 1.022 60 cm 600L



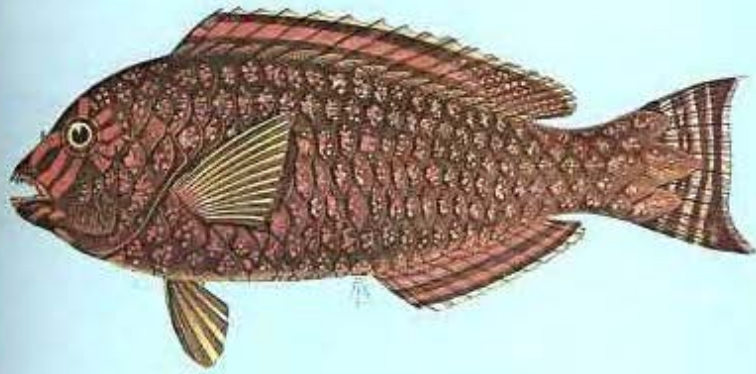
*Scarus macrocheilus* 360  
7, 9~ ♀ ♂ ♥ 📏 26°C sg: 1.022 12 cm 200L



*Scarus sordidus* 360  
6-9~ ♀ ♂ ♥ 📏 26°C sg: 1.022 50 cm 500L



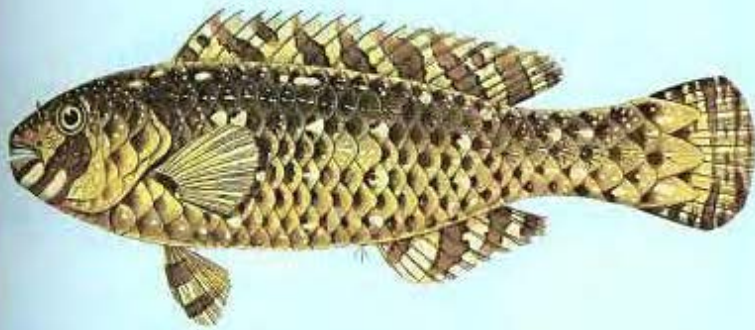
*Scarus erythron* 360  
7, 9~ ♀ ♂ ♥ 📏 26°C sg: 1.022 40 cm 400L



*Calotomus spinidens* 360  
7, 9 ~ ♀ ♂ ♡ ♣ 26°C sg: 1.022 19 cm 200L



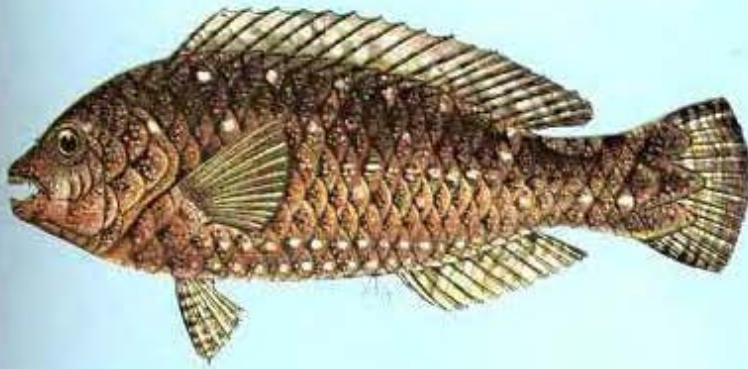
*Leptoscarus vaigiensis* 360  
7-9 ~ ♀ ♂ ♡ ♣ 26°C sg: 1.022 35 cm 400L



*Leptoscarus vaigiensis* 360  
7-9 ~ ♀ ♂ ♡ ♣ 26°C sg: 1.022 35 cm 400L



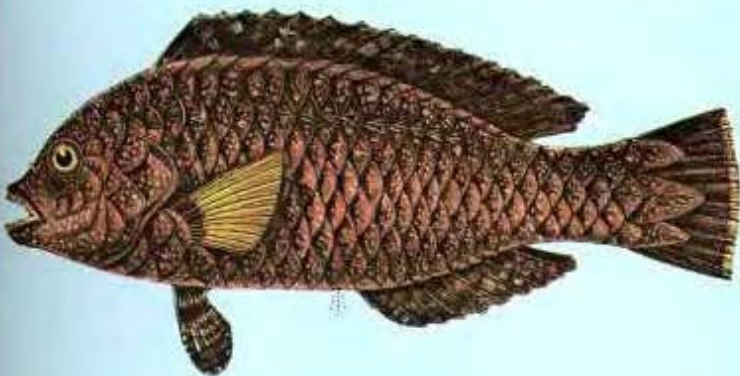
*Calotomus spinidens* 360  
7, 9 ~ ♀ ♂ ♡ ♣ 26°C sg: 1.022 19 cm 200L



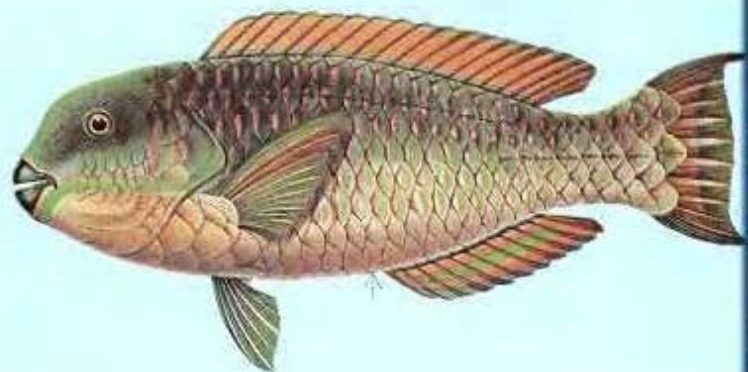
*Calotomus spinidens* 360  
7, 9 ~ ♀ ♂ ♡ ♣ 26°C sg: 1.022 19 cm 200L



*Calotomus spinidens* 360  
7, 9 ~ ♀ ♂ ♡ ♣ 26°C sg: 1.022 19 cm 200L

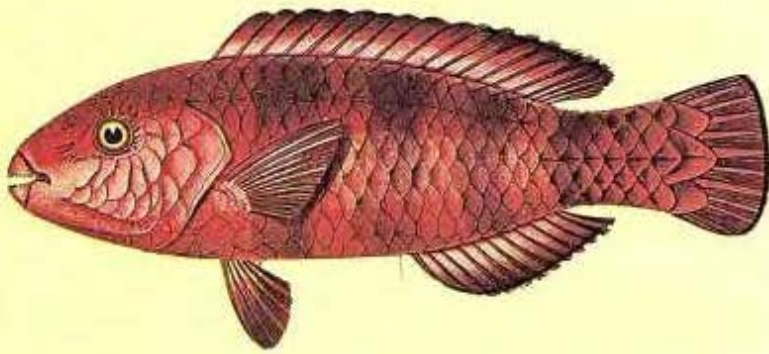


*Calotomus spinidens* 360  
7, 9 ~ ♀ ♂ ♡ ♣ 26°C sg: 1.022 19 cm 200L



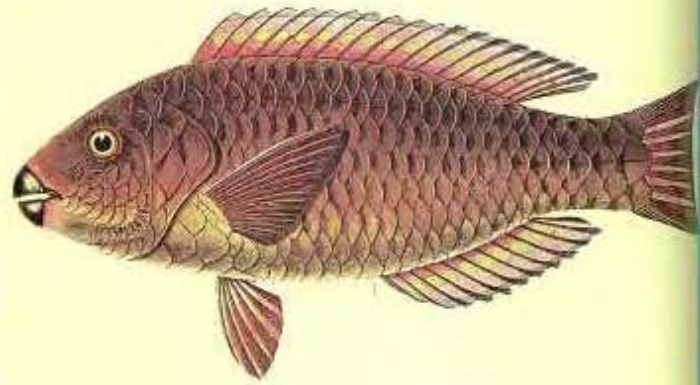
*Scarus gibbus* 360  
7-10 ~ ♀ ♂ ♡ ♣ 26°C sg: 1.022 70 cm 1000L

492

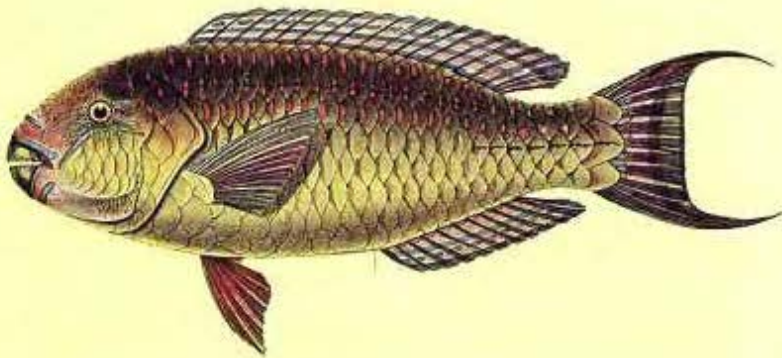


*Scarus rhodropterus* 360  
7~ ♀ ♂ ♥ ♣ ☞ ☞ 26°C sg: 1.022 25 cm 250L

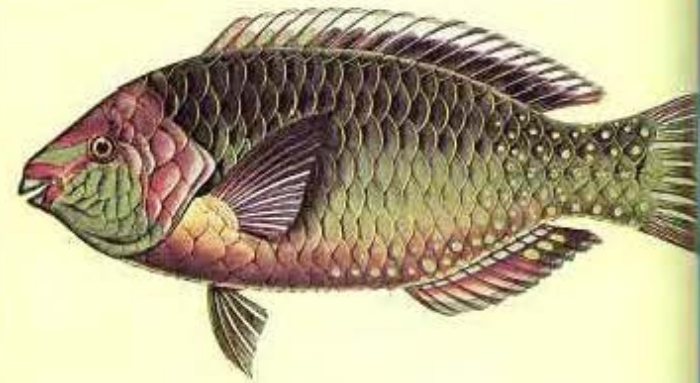
#415



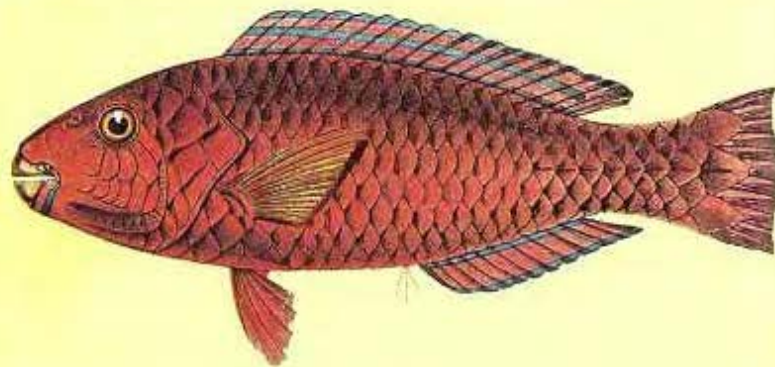
*Scarus microcheilus* 360  
6, 7~ ♀ ♂ ♥ ♣ ☞ ☞ 26°C sg: 1.022 30 cm 300L



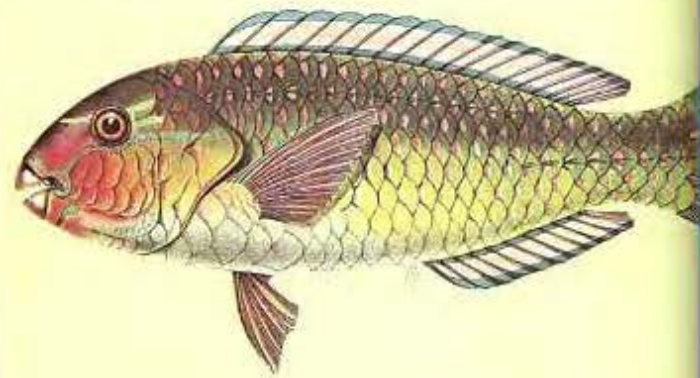
*Scarus gibbus* 360  
7-10~ ♀ ♂ ♥ ♣ ☞ ☞ 26°C sg: 1.022 70 cm 1000L



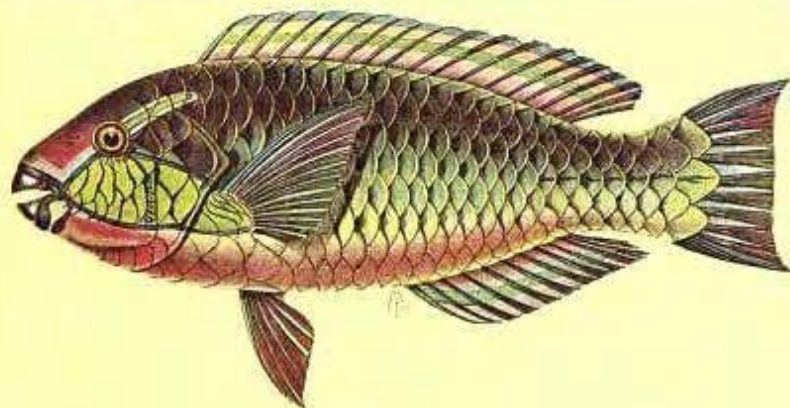
*Scarus prasiognathos* 360  
6-9~ ♀ ♂ ♥ ♣ ☞ ☞ 26°C sg: 1.022 70 cm 800L



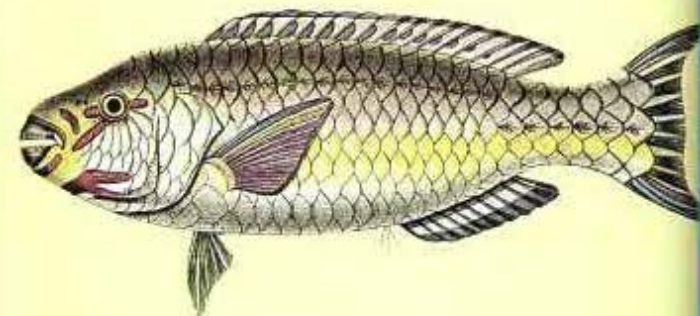
*Scarus cyanotaenia* 360  
7-8~ ♀ ♂ ♥ ♣ ☞ ☞ 26°C sg: 1.022 21 cm 250L



*Scarus japonensis* 360  
6-7~ ♀ ♂ ♥ ♣ ☞ ☞ 26°C sg: 1.022 30 cm 300L



*Scarus bleekeri* 360  
6, 7~ ♀ ♂ ♥ ♣ ☞ ☞ 26°C sg: 1.022 25 cm 300L



*Scarus psittacus* 360  
7-10~ ♀ ♂ ♥ ♣ ☞ ☞ 26°C sg: 1.022 27 cm 300L





*Rathbunella hypoplecta* 361  
3-4 ~ \ ○ ✱ ☐ 23°C sg: 1.024 30 cm 300L



*Lycodes pacificus* 362  
4 ~ \ ○ ✱ ☐ 23°C sg: 1.024 30 cm 300L



*Bathymaster derjugini* 361  
3-4 ~ \ ○ ✱ ☐ 23°C sg: 1.024 25 cm 300L



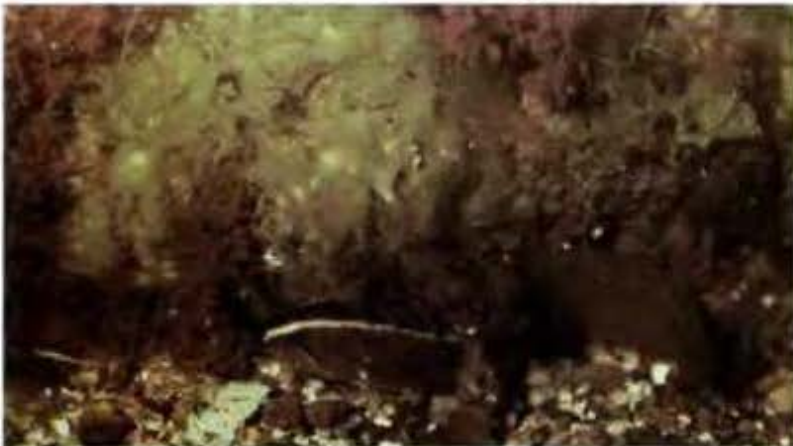
*Macrozoarces americanus* 362  
1 ~ \ ○ ✱ ☐ 23°C sg: 1.024 110 cm 1500L



*Lycogramma zesta* 362  
5 ~ \ ♥ ☐ 24°C sg: 1.023 10 cm 100L



*Zoarchias veneficus* 362  
14 ~ \ ○ ✱ ☐ 20°C sg: 1.024 25 cm 300L



*Dictyosoma burgeri* 363  
5 ~ \ ♥ ☐ 24°C sg: 1.023 6 cm 60L



*Ernogrammus hexagrammus* 363  
5, 7 ~ \ ○ ✱ ☐ 24°C sg: 1.023 15 cm 150L



*Chirolophis japonicus* 363  
5 ♀ ~ ~ ~ ~ ~ 23°C sg: 1.024 55 cm 500L



*Chirolophis decoratus* 363  
4 ♀ ~ ~ ~ ~ ~ 22°C sg: 1.024 42 cm 400L



*Chirolophis nugator* 363  
4 ♀ ~ ~ ~ ~ ~ 23°C sg: 1.024 42 cm 500L



*Cebidichthys violaceus* 363  
4 ♀ ~ ~ ~ ~ ~ 26°C sg: 1.022 50 cm 500L



*Anarrhichthys ocellatus* 366  
4-5 ♀ ~ ~ ~ ~ ~ 24°C sg: 1.023 200 cm 2000L



*Anarrhichthys lupus* 366  
4-5 ♀ ~ ~ ~ ~ ~ 23°C sg: 1.024 200 cm 2000L



*Liocranium praepositum* 267  
8 ~ ~ ~ ~ ~ 26°C sg: 1.022 10 cm 100L



*Pholis gunnellus* 365  
1, 14 ♀ ~ ~ ~ ~ ~ 23°C sg: 1.024 20 cm 200L





*Opistognathus gilberti* 375  
2 ~ ♀ ♀ 26°C sg: 1.022 5 cm 50L

*Opistognathus gilberti* 375  
2 ~ ♀ ♀ 26°C sg: 1.022 5 cm 50L





*Opistognathus rhomaleus* 375  
 3-4 ~ ~ ~ ~ ~ 24°C sg: 1.023 50 cm 500L

*Opistognathus* sp. 375  
 3 ~ ~ ~ ~ ~ 26°C sg: 1.022 10 cm 100L

*Opistognathus aurifrons* 375  
 2 ~ ~ ~ ~ ~ 26°C sg: 1.022 10 cm 100L





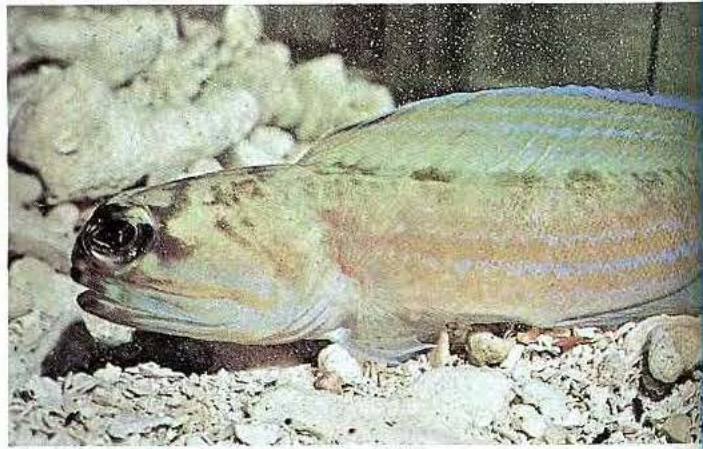
*Opistognathus rhomaleus* 375  
3-4 ~ ♀ ♂ ♀ ♀ 24°C sg: 1.023 50 cm 500L



*Lonchopisthus micrognathus* 375  
2 ~ ♀ ♀ ♀ ♀ 26°C sg: 1.022 10 cm 100L



*Opistognathus darwiniensis* 375  
8 ~ ♀ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 23 cm 250L



*Opistognathus lonchurus* 375  
8 ~ ♀ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 12 cm 150L



*Tandyia latitabunda* 375  
8 ~ ♀ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 26 cm 250L



*Opistognathus* sp. 375  
3 ~ ♀ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 10 cm 100L



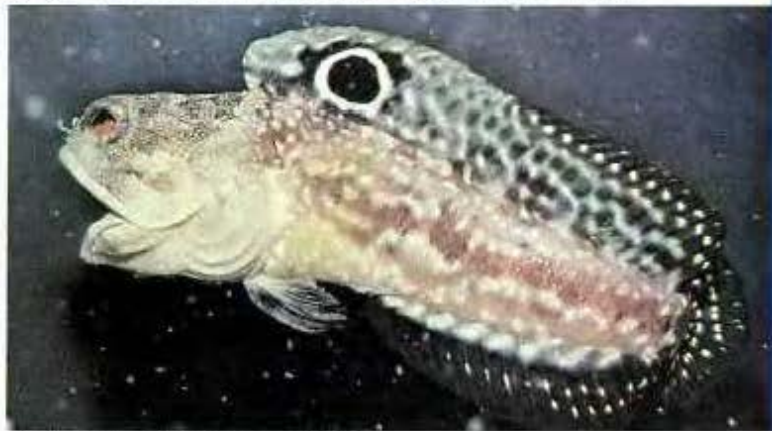
*Opistognathus* sp. 375  
3 ~ ♀ ♀ ♀ 26°C sg: 1.022 10 cm 100L



*Opistognathus auritrans* 375  
2 ~ ♀ ♀ ♀ 26°C sg: 1.022 10 cm 100L



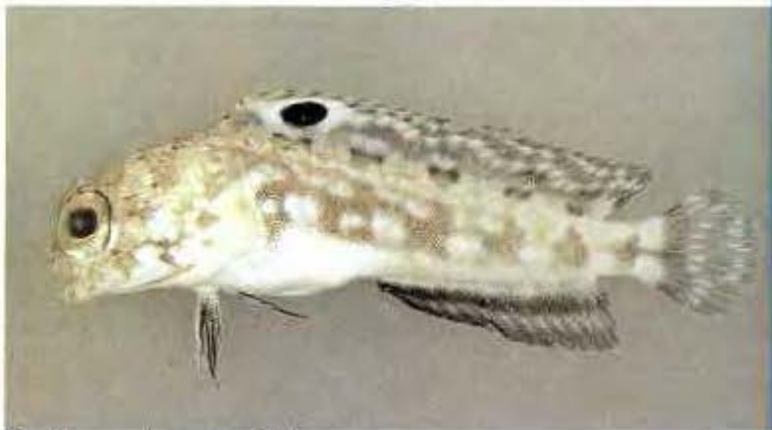
*Opistgnathus* sp. 375  
2 ~ ♀ ♀ ♀ 26°C sg: 1.022 11 cm 100L



*Opistgnathus scops* 375  
3-4 ~ ♀ ♀ ♀ ♀ 26°C sg: 1.022 15 cm 150L



*Opistgnathus gilberti* 375  
2 ~ ♀ ♀ ♀ 26°C sg: 1.022 5 cm 50L



*Opistgnathus* sp. 375  
2 ~ ♀ ♀ ♀ 26°C sg: 1.022 11 cm 100L



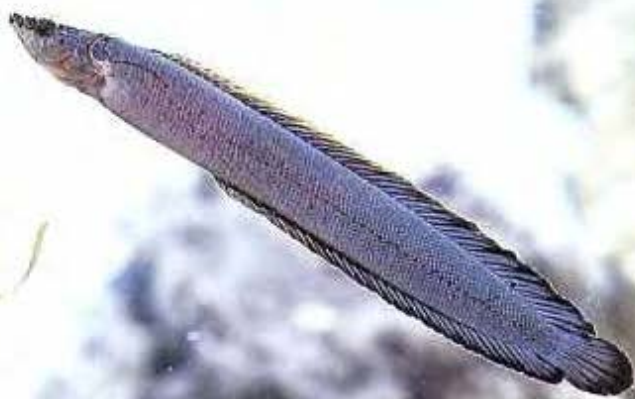
*Opistgnathus whitehursti* 375  
2 ~ ♀ ♀ ♀ 26°C sg: 1.022 7.5 cm 80L



*Opistgnathus macrognathus* 375  
2 ~ ♀ ♀ ♀ 26°C sg: 1.022 20 cm 200L

500

#420



*Haloiphis guttatus* 376  
9-10 ♀ ♂ ♀ ♀ ♀ ♀ 26°C sg: 1.024 12 cm 150L



*Blennodesmus scapularis* 376  
8 ♀ ♂ ♀ ♀ ♀ ♀ 26°C sg: 1.022 5 cm 50L



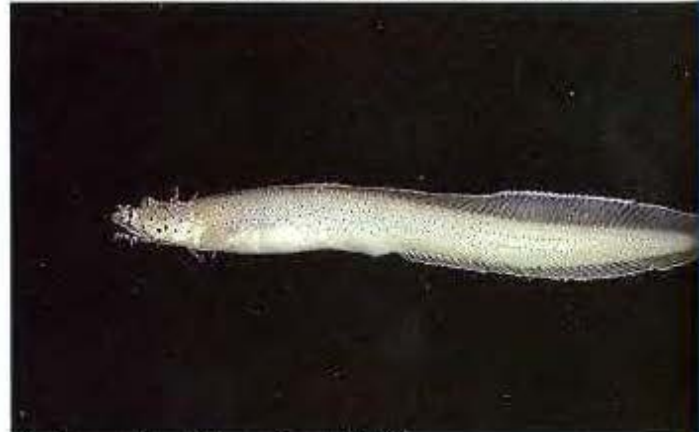
*Pholidichthys leucotaenia* (juv.) 380  
7 ♀ ♂ ♀ ♀ ♀ ♀ 26°C sg: 1.022 6 cm 60L



*Pholidichthys leucotaenia* 380  
7 ♀ ♂ ♀ ♀ ♀ ♀ 26°C sg: 1.022 6 cm 60L



*Arctoscopus japonicus* 381  
4-5 ♀ ♂ ♀ ♀ ♀ ♀ 23°C sg: 1.023 22 cm 200L



*Notograptus livingstonei* 379  
8 ♀ ♂ ♀ ♀ ♀ ♀ 26°C sg: 1.022 7 cm 80L



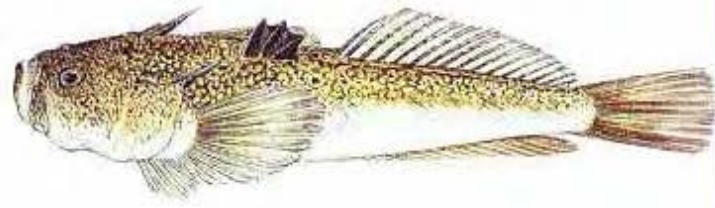
*Kathetostoma averruncus* 383  
3-4 ♀ ♂ ♀ ♀ ♀ ♀ 24°C sg: 1.023 31 cm 300L



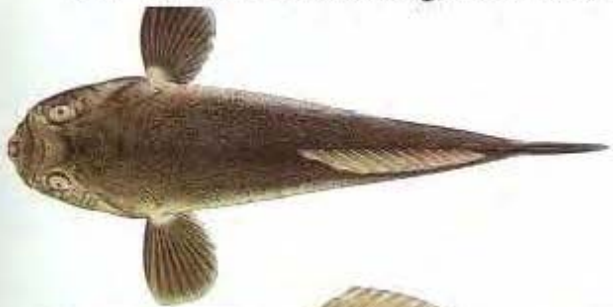
*Ichthyoscopus lebeck* 383  
5 ♀ ♂ ♀ ♀ ♀ ♀ 23°C sg: 1.024 40 cm 400L



*Uranoscopus bicinctus* 383  
5 ~ ♀ ♂ ✕ 📐 📏 23°C sg: 1.024 10 cm 100L



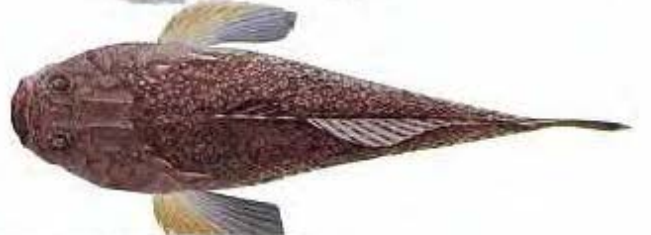
*Uranoscopus asper* 383  
7 ~ ♀ ♂ ✕ 📐 📏 26°C sg: 1.022 15 cm 150L



*Gnathagnus elongatus* 383  
5 ~ ♀ ♂ ✕ 📐 📏 24°C sg: 1.023 35 cm 400L



*Uranoscopus japonicus* 383  
5, 7 ~ ♀ ♂ ✕ 📐 📏 24°C sg: 1.022 18 cm 200L



*Creedia alleni* 385  
7, 12 ~ ♀ ♂ ♥ 📐 📏 25°C sg: 1.023 5 cm 50L



*Limnichthys fasciatus* 385  
7, 12 ~ ♀ ♂ ♥ 📐 📏 26°C sg: 1.022 5 cm 50L



*Crapatalus arenarius* 386  
8 ~ ♀ ♂ ♥ 📐 📏 26°C sg: 1.022 9 cm 100L



*Stichaeus grigorjewi* 363  
5 ~ ♀ ♂ ♥ 📐 📏 23°C sg: 1.024 10 cm 100L





*Parapercis snyderi* 388  
7 ~ ~ ~ ~ ~ 26°C sg: 1.022 10 cm 100L



504



*Parapercis cephalopunctata?* 388  
7, 9 ~ ~ ~ ~ ~ 26°C sg: 1.022 17 cm 200L



*Parapercis bivittata* 388  
9 ~ ~ ~ ~ ~ 26°C sg: 1.022 20 cm 200L



*Parapercis hexophthalma* 388  
7-10 ~ ~ ~ ~ ~ 26°C sg: 1.022 25 cm 250L



*Parapercis trispilota* 388  
9 ~ ~ ~ ~ ~ 26°C sg: 1.022 15 cm 150L

#424



*Parapercis cephalopunctata* 388  
7-9 ~ ~ ~ ~ ~ 26°C sg: 1.022 17 cm 150L



*Parapercis haackei* 388  
7 ~ ~ ~ ~ ~ 26°C sg: 1.022 15 cm 150L



*Parapercis tetracantha* 388  
7, 9 ~ ~ ~ ~ ~ 26°C sg: 1.022 20 cm 200L



*Parapercis* sp. (juv. *cylindrica*?) 388  
7, 9 ~ ~ ~ ~ ~ 26°C sg: 1.022 17 cm 150L



*Parapercis tetracantha* 388  
7, 9 ~ ~ ~ ~ ~ 26°C sg: 1.022 20 cm 200L

*Parapercis snyderi* 388  
7 ~ ~ ~ ~ ~ 26°C sg: 1.022 10 cm 100L



#425A



*Plagiotremus rhinorhynchus* 395  
6-10 ~ ♀ ♥ 📏 📏 26°C sg: 1.022 12 cm 100L



*Vaucelusella* sp. 390  
12 ♀ ~ ♀ ♀ ♀ ♀ ♀ ♀ ♀ ♀ ♀ ♀ ♀ ♀ 24°C sg: 1.023 3 cm 50L



*Helcogramma decurrens* 390  
7 ♀ ~ ♀ ♀ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 5 cm 50L



*Enneanectes altivelis* 390  
2 ♀ ~ ♀ ♀ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 4 cm 50L



*Norfolkia* sp. 390  
12 ♀ ~ ♀ ♀ ♀ ♀ ♀ ♀ ♀ ♀ ♀ ♀ ♀ ♀ 24°C sg: 1.023 3 cm 50L



*Enneanectes boehlkei* 390  
2 ♀ ~ ♀ ♀ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 4 cm 50L



*Enneanectes pectoralis* 390  
2 ♀ ~ ♀ ♀ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 4 cm 50L



*Enneanectes sexmaculatus* 390  
3 ♀ ~ ♀ ♀ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 2.5 cm 50L



*Enneanectes* sp. 390  
2 ♀ ~ ♀ ♀ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 4 cm 50L



*Undescribed Tripterygiid* 390  
3 ♀ ~ ♀ ♀ ♀ ♀ ♀ 25°C sg: 1.023 8 cm 80L



*Enneanectes atrorus* 390  
2 ♀ ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 3.3 cm 50L



*Norfolkia* sp. 390  
12 ♀ ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 5 cm 50L



*Norfolkia brachylepis* 390  
7 ♀ ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 3.5 cm 50L



*Lepidoblennius marmoratus* 390  
7 ♀ ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 9 cm 100L



*Gilloblennius tripennis* 390  
11 ♀ ~ ♀ ♀ ♀ ♀ ♀ 22°C sg: 1.024 5 cm 50L



*Vauclusella* sp. 390  
12 ♀ ~ ♀ ♀ ♀ ♀ ♀ 24°C sg: 1.023 3 cm 50L



*Helcogramma* sp. 390  
7 ♀ ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 3 cm 50L



510



*Tripterygion* sp. 390  
11 ~ ♀ ♥ 📏 24°C sg: 1.023 6 cm 60L



*Tripterygion* sp. 390  
11 ~ ♀ ♥ 📏 24°C sg: 1.023 6 cm 60L

#428



*Tripterygion bucknilli* 390  
11 ~ ♀ ♥ 📏 22°C sg: 1.024 8 cm 80L



*Tripterygion* sp. B. 390  
11 ~ ♀ ♥ 📏 22°C sg: 1.024 8 cm 80L



*Norfolkia cristata* 390  
12 ~ ♀ ♥ 📏 24°C sg: 1.023 5 cm 50L



*Norfolkia incisa* 390  
12 ~ ♀ ♥ 📏 24°C sg: 1.023 3 cm 40L



*Norfolkia clarkel* 390  
12 ~ ♀ ♥ 📏 24°C sg: 1.023 6 cm 60L



*Apopterygion alta* 390  
12 ~ ♀ ♥ 📏 24°C sg: 1.023 4.4 cm 50L



*Helcogramma striata* 390  
7 ~ ♀ ♥ 📺 📺 25°C sg: 1.022 3 cm 50L



*Helcogramma decurrens* 390  
12 ~ ♀ ♥ 📺 📺 24°C sg: 1.023 5 cm 50L



*Helcogramma decurrens* 390  
12 ~ ♀ ♥ 📺 📺 24°C sg: 1.023 5 cm 50L



*Helcogramma* sp. 390  
9 ~ ♀ ♥ 📺 📺 26°C sg: 1.020 3 cm 50L



*Gunnelichthys curiosus* 407  
6 ~ ♀ ♥ 📺 📺 26°C sg: 1.022 11 cm 100L



*Gunnelichthys monostigma* 407  
13 ~ ♀ ♥ 📺 📺 26°C sg: 1.022 7.5 cm 80L



*Malacanthus brevirostris* 300  
3, 6-10 ~ ♀ ♥ 📺 📺 26°C sg: 1.022 30 cm 300L



*Hoplolatilus cuniculus* 300  
6 ~ ♀ ♥ 📺 📺 26°C sg: 1.022 9 cm 100L





*Heteristius rubrocinctus* 391  
2 ♀ ~ ♀ ♀ ♀ ♀ 26°C sg: 1.022 6.0 cm 60L



*Dactyloscopus pectoralis* 391  
3 ♀ ~ ♀ ♀ ♀ 26°C sg: 1.022 7.5 cm 80L



*Gillelus greyae* 391  
2 ♀ ~ ♀ ♀ ♀ 26°C sg: 1.022 7.5 cm 80L



*Exerpes asper* 392  
3 ♀ ~ ♀ ♀ ♀ 26°C sg: 1.022 5 cm 50L



*Starksia spinipenis* 392  
3 ♀ ~ ♀ ♀ ♀ 26°C sg: 1.022 5 cm 50L



*Neoclinus bryope* 392  
5 ♀ ~ ♀ ♀ ♀ 26°C sg: 1.022 6 cm 60L



*Starksia ocellata* 392  
2 ♀ ~ ♀ ♀ ♀ 26°C sg: 1.022 5 cm 50L



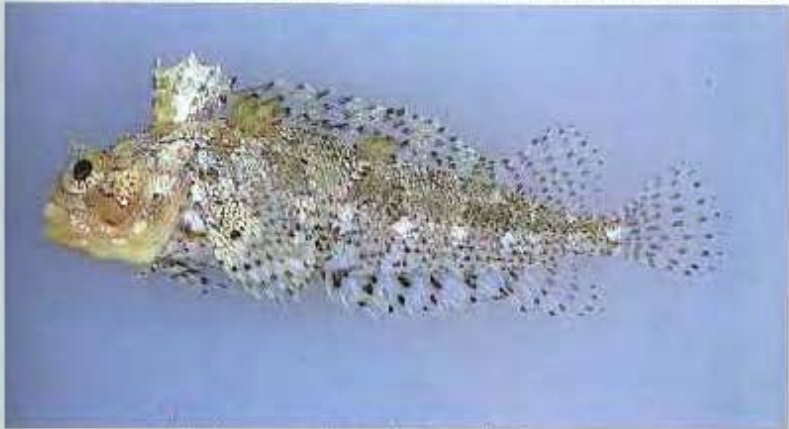
*Starksia* sp. 392  
3 ♀ ~ ♀ ♀ ♀ 26°C sg: 1.022 5 cm 50L



*Labrisomus nuchipinnis* 392  
1-2, 13 ♀ ~ ~ ~ ~ ~ 26°C sg: 1.022 23 cm 300L



*Labrisomus filamentosus* 392  
2 ♀ ~ ~ ~ ~ ~ 26°C sg: 1.022 8.0 cm 80L



*Labrisomus bucciferus* 392  
1-2 ♀ ~ ~ ~ ~ ~ 25°C sg: 1.022 9 cm 100L



*Labrisomus nigricinctus* 392  
2 ♀ ~ ~ ~ ~ ~ 26°C sg: 1.022 7.5 cm 80L



*Labrisomus nuchipinnis* 392  
1-2, 13 ♀ ~ ~ ~ ~ ~ 26°C sg: 1.022 23 cm 300L



*Labrisomus kalisherar* 392  
2 ♀ ~ ~ ~ ~ ~ 26°C sg: 1.022 7.5 cm 80L



*Labrisomus haitiensis* 392  
2 ♀ ~ ~ ~ ~ ~ 26°C sg: 1.022 7.5 cm 80L



*Starksia starcki* 392  
2 ♀ ~ ~ ~ ~ ~ 26°C sg: 1.022 4 cm 50L



*Malacoctenus gigas* 392  
3 ~ ♀ ♥ 📏 26°C sg: 1.022 13 cm 150L



*Malacoctenus tetranemus* 392  
3 ~ ♀ ♥ 📏 26°C sg: 1.022 120 cm 150L



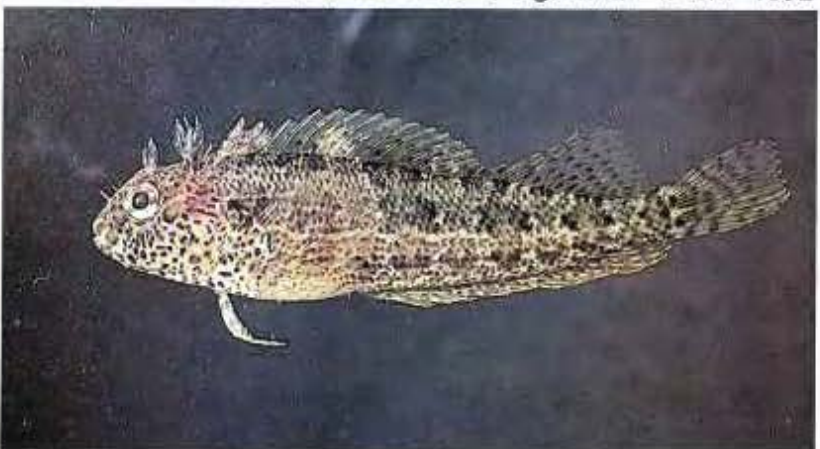
*Paraclinus mexicanus* 392  
3 ~ ♀ ♥ 📏 26°C sg: 1.022 4 cm 40L



*Malacoctenus ebisui* 392  
3 ~ ♀ ♥ 📏 26°C sg: 1.022 12 cm 150L



*Malacoctenus margaritae* 392  
3 ~ ♀ ♥ 📏 26°C sg: 1.022 12 cm 150L



*Malacoctenus tetranemus* 392  
3 ~ ♀ ♥ 📏 26°C sg: 1.022 12 cm 150L



*Malacoctenus zonifer* 392  
3 ~ ♀ ♥ 📏 26°C sg: 1.022 12 cm 150L



*Malaccoctenus triangulatus* 392  
 2 ♀ ~ ♂ ♥ 📏 📐 26°C sg: 1.022 6.5 cm 80L



*Malaccoctenus gilli* 392  
 2 ♀ ~ ♂ ♥ 📏 📐 26°C sg: 1.022 4.7 cm 50L



*Malaccoctenus macropus* 392  
 2 ♀ ~ ♂ ♥ 📏 📐 24°C sg: 1.023 5.5 cm 60L



*Malaccoctenus boehkei* 392  
 2 ♀ ~ ♂ ♥ 📏 📐 26°C sg: 1.022 6 cm 60L



*Paraclinus marmoratus* 392  
 2 ♀ ~ ♂ ♥ 📏 📐 26°C sg: 1.022 10 cm 100L



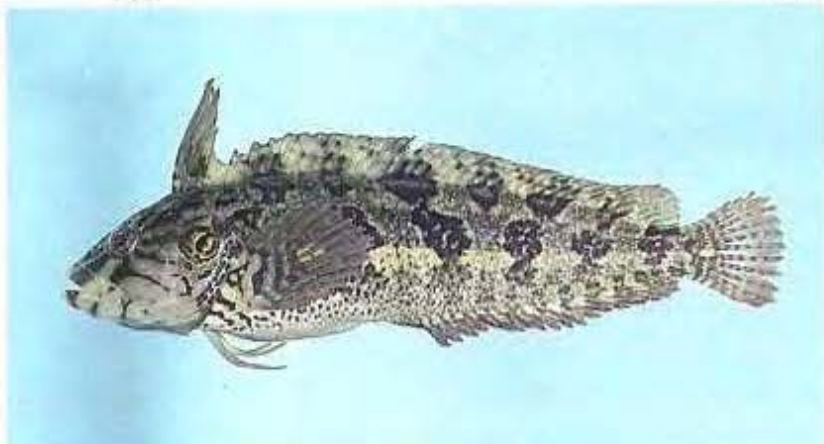
*Dialommus fuscus* 392  
 3 ♀ ~ ♂ ♥ 📏 📐 26°C sg: 1.022 7.0 cm 80L



*Paraclinus fasciatus* 392  
 2 ♀ ~ ♂ ♥ 📏 📐 26°C sg: 1.022 6.5 cm 80L



*Paraclinus nigripinnis* 392  
 1-2 ♀ ~ ♂ ♥ 📏 📐 24°C sg: 1.023 5 cm 50L



*Clinus superciliosus* 393  
9 ~ ♀ ♥ 📏 📦 26°C sg: 1.020 30 cm 250L



*Gibbonsia metzi* 393  
4 ~ ♀ ♥ 📏 📦 26°C sg: 1.022 24 cm 250L



*Sticharium dorsale* 393  
12 ~ ♀ ♥ 📏 📦 26°C sg: 1.022 5 cm 50L



*Heterostichus rostratus* 393  
3-4 ~ ♀ ♥ 📏 📦 26°C sg: 1.022 61 cm 600L



*Stathmonotus hemphilli* 392  
2 ~ ♀ ♥ 📏 📦 26°C sg: 1.022 5 cm 50L



*Ophiclinus gracilis* 392  
7 ~ ♀ ♥ 📏 📦 26°C sg: 1.022 6 cm 80L



*Stathmonotus sinuscalifornici* 392  
3 ~ ♀ ♥ 📏 📦 26°C sg: 1.022 7.5 cm 80L



*Xenomedia rhodopyga* 392  
3 ~ ♀ ♥ 📏 📦 26°C sg: 1.022 6 cm 80L



*Heteroclinus whitleyi* 393  
12 ~ ♀ ♥ 📏 24°C sg: 1.022 6 cm 60L



*Heteroclinus* sp. cf. *roseus* 393  
12 ~ ♀ ♥ 📏 24°C sg: 1.022 8.5 cm 80L



*Heteroclinus eckloniae* 393  
12 ~ ♀ ♥ 📏 24°C sg: 1.022 3 cm 50L



*Heteroclinus roseus* 393  
12 ~ ♀ ♥ 📏 24°C sg: 1.022 7 cm 80L



*Springeratus xanthosoma* 393  
7 ~ ♀ ♥ 📏 26°C sg: 1.022 7 cm 80L



*Heteroclinus adalaidae* 393  
12 ~ ♀ ♥ 📏 24°C sg: 1.022 7 cm 80L



*Cristiceps australis* 393  
7, 12 ~ ♀ ♥ 📏 26°C sg: 1.022 10 cm 100L



*Cristiceps aurantiacus* 393  
12 ~ ♀ ♥ 📏 24°C sg: 1.022 4 cm 50L



*Acanthemblemaria macrospilus* 394  
3 ♀ ♂ ♥ 🏠 📏 26°C sg: 1.022 5 cm 50L



*Acanthemblemaria balanorum* 394  
3 ♀ ♂ ♥ 🏠 📏 26°C sg: 1.022 5 cm 50L



*Acanthemblemaria aspera* 394  
2 ♀ ♂ ♥ 🏠 📏 26°C sg: 1.022 4 cm 50L



*Acanthemblemaria spinosa* 394  
2 ♀ ♂ ♥ 🏠 📏 26°C sg: 1.022 5 cm 50L



*Acanthemblemaria hancocki* 394  
3 ♀ ♂ ♥ 🏠 📏 26°C sg: 1.022 4 cm 50L



*Acanthemblemaria crockeri* 394  
3 ♀ ♂ ♥ 🏠 📏 26°C sg: 1.022 5 cm 50L



*Acanthemblemaria exillispinis* 394  
3 ♀ ♂ ♥ 🏠 📏 26°C sg: 1.022 4 cm 50L



*Lucayablennius zingaro* 394  
2 ♀ ♂ ♥ 🏠 📏 26°C sg: 1.022 4 cm 50L



*Chaenopsis alepidota* 394  
 3 ~ ♀ ♀ ♀ 26°C sg: 1.022 15 cm 100L



*Chaenopsis limbaughi* 394  
 3 ~ ♀ ♀ ♀ 26°C sg: 1.022 8.5 cm 100L



*Ekemblemaria* sp. (*myersi*?) 394  
 3 ~ ♀ ♀ ♀ 26°C sg: 1.022 3.5 cm 50L



*Chaenopsis ocellata* 394  
 2 ~ ♀ ♀ ♀ 26°C sg: 1.022 12.5 cm 100L



*Coralliozetus angelica* 394  
 3 ~ ♀ ♀ ♀ 26°C sg: 1.022 4 cm 50L



*Coralliozetus micropes* 394  
 3 ~ ♀ ♀ ♀ 26°C sg: 1.022 4 cm 50L



*Hemiemblemaria simulus* 394  
 2 ~ ♀ ♀ ♀ 26°C sg: 1.022 10 cm 100L





*Emblemaria walkeri* 394  
3 ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 6 cm 60L



*Emblemaria piratula* 394  
2 ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 5 cm 50L



*Emblemaria pandionis* 394  
2 ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 5 cm 50L



*Emblemaria hypacanthus* 394  
3 ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 5 cm 50L



*Coralliozetus diaphanus* 394  
2 ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 4 cm 50L



*Emblemaria bottomei* 394  
2 ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 5 cm 50L



*Protemblemaria bicirrhis* 394  
3 ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 3.5 cm 50L



*Protemblemaria lucasana* 394  
3 ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 4.5 cm 50L



*Plagiotremus phenax* 395  
9 ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 8 cm 80L



*Plagiotremus laudandus flavus* 395  
6 ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 6 cm 60L



*Plagiotremus azaleus* 395  
3 ~ ♀ ♀ ♀ 26°C sg: 1.022 7.5 cm 80L



*Plagiotremus goslinei* 395  
6 ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 7.5 cm 75L



*Plagiotremus rhinorhynchos* 395  
6-10 ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 12 cm 100L



*Plagiotremus rhinorhynchos* 395  
6-10 ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 12 cm 100L



*Plagiotremus townsendi* 395 ♂  
10 ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.024 6 cm 60L



*Plagiotremus rhinorhynchos* 395  
6-10 ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 12 cm 100L



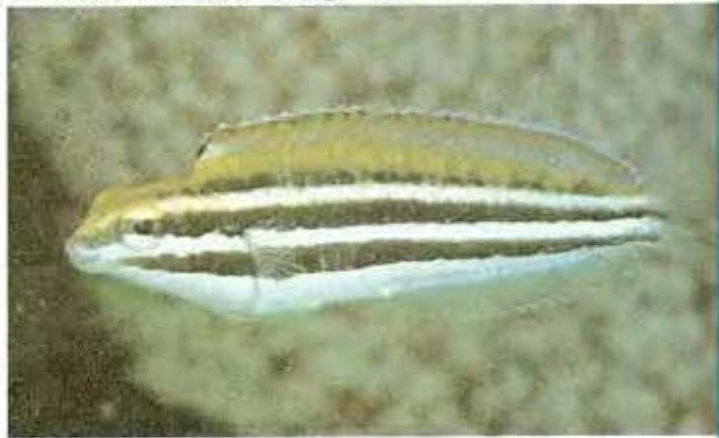
*Meiacanthus lineatus* 395  
7 ~ ♀ ♥ 🏠 🌡 26°C sg: 1.022 8 cm 80L



*Meiacanthus grammistes* 395  
7 ~ ♀ ♥ 🏠 🌡 26°C sg: 1.022 8cm 80L



*Meiacanthus kamoharui* 395  
7 ~ ♀ ♥ 🏠 🌡 26°C sg: 1.022 8 cm 80L



*Petroscirtes fallax* 395  
7-8 ~ ♀ ♥ 🏠 🌡 26°C sg: 1.022 9 cm 100L



*Petroscirtes xestus* 395  
8 ~ ♀ ♥ 🏠 🌡 26°C sg: 1.022 12 cm 100L



*Petroscirtes breviceps* 395  
7-8 ~ ♀ ♥ 🏠 🌡 26°C sg: 1.022 10 cm 100L



*Petroscirtes breviceps* 395  
7-8 ~ ♀ ♥ 🏠 🌡 26°C sg: 1.022 10 cm 100L



*Aspidontus taeniatus* 395  
7-10 ~ ♀ ♥ 🏠 🌡 26°C sg: 1.022 13 cm 150L



*Meiacanthus atrodorsalis* 395  
6-9 ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 7.5 cm 80L



*Meiacanthus oualanensis* 395  
6 ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 7.5 cm 80L



*Ecsenius gravieri* (left), *Meiacanthus nigrolineatus* (right) 395  
10 ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 9.5 cm 100L



*Meiacanthus atrodorsalis* 395  
6-9 ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 7.5 cm 80L



*Meiacanthus bundoon* 395  
6 ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 9 cm 100L



*Meiacanthus smithii* 395  
9 ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 8.5 cm 90L



*Meiacanthus anema* 395  
6-7 ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 9 cm 100L



*Meiacanthus vittatus* 395  
7-8 ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 7.5 cm 80L



*Aidablennius sphynx* 395 ♀  
15 ♀ ~ ~ ~ ♀ 26°C sg: 1.024 7 cm 80L



*Aidablennius sphynx* 395 ♂  
15 ♀ ~ ~ ~ ♀ 26°C sg: 1.024 7 cm 80L



*Parablennius tentacularis* 395  
15 ♀ ~ ~ ~ ♀ 26°C sg: 1.024 16 cm 200L



*Salaria pavo* 395  
13 ♀ ~ ~ ~ ♀ 26°C sg: 1.022 13 cm 150L



*Lipophrys adriaticus* 395  
15 ♀ ~ ~ ~ ♀ 26°C sg: 1.024 10 cm 100L



*Parablennius sanguinolentus* 395  
15 ♀ ~ ~ ~ ♀ 26°C sg: 1.024 20 cm 200L

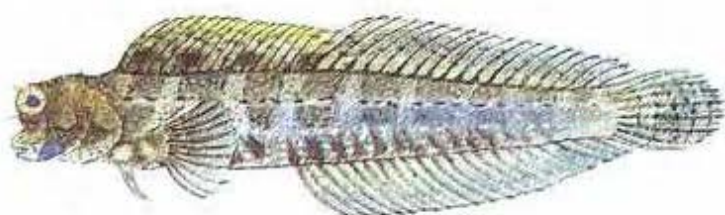


*Lipophrys dalmatinus* 395 ♂  
15 ♀ ~ ~ ~ ♀ 26°C sg: 1.024 6 cm 60L

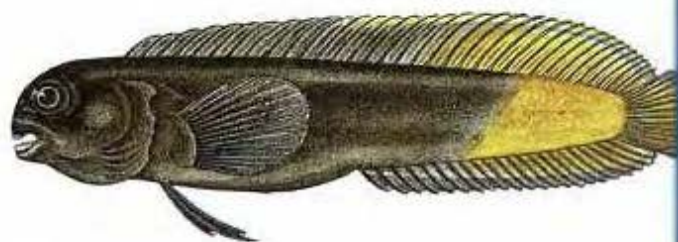


*Parablennius rouxi* 395  
15 ♀ ~ ~ ~ ♀ 26°C sg: 1.024 8 cm 100L

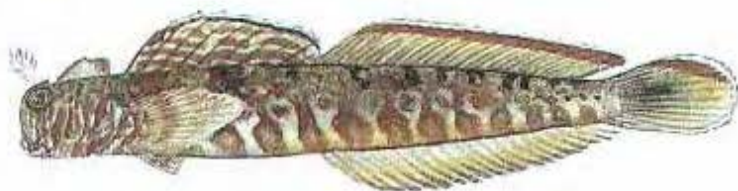




*Salaria* sp. 395  
7 ~ ♀ ♥ 📏 26°C sg: 1.022 10 cm 100L



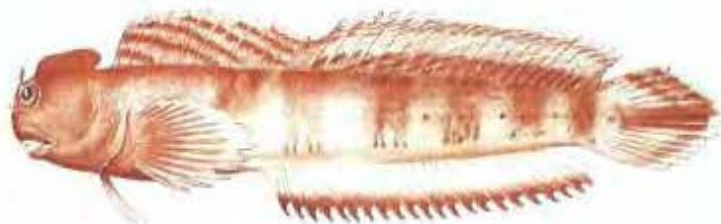
*Enchelyurus flavipes* 395  
7 ~ ♀ ♥ 📏 26°C sg: 1.022 8 cm 80L



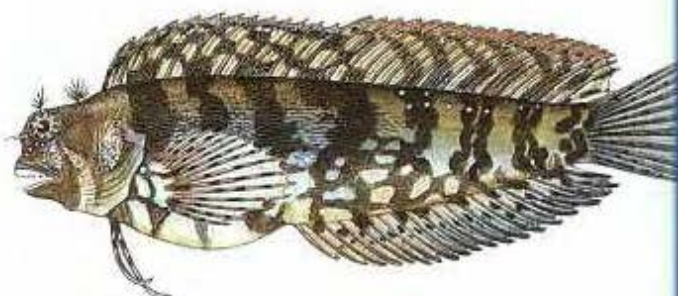
*Istiblennius* sp. 395  
7 ~ ♀ ♥ 📏 26°C sg: 1.022 12 cm 100L



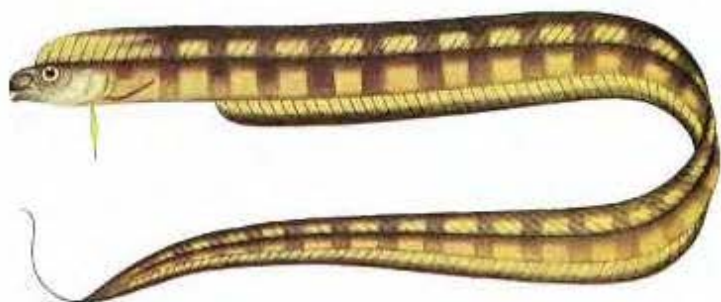
*Istiblennius* sp. 395  
7 ~ ♀ ♥ 📏 26°C sg: 1.022 12 cm 100L



*Istiblennius dussumieri* 395  
7 ~ ♀ ♥ 📏 26°C sg: 1.022 13 cm 100L



*Salaria fasciatus* 395  
7, 9 ~ ♀ ♥ 📏 26°C sg: 1.022 10 cm 100L



*Xiphasia setifer* 395  
7, 9 ~ ♀ ♥ 📏 26°C sg: 1.022 50 cm 500L



*Xiphasia setifer* 395  
7, 9 ~ ♀ ♥ 📏 26°C sg: 1.022 50 cm 500L













*Ecsenius gravieri* 395  
 9-10 ♀ ~ ♀ ♂ ♥ ♀ 26°C sg: 1.022 8 cm 100L

*Meiacanthus nigrolineatus* 395  
 10 ~ ♀ ♂ ♥ ♀ 26° sg: 1.022 9.5 cm 100L



*Ecsenius gravieri* 395  
 9-10 ♀ ~ ♀ ♂ ♥ ♀ 26°C sg: 1.022 8 cm 100L



*Ecsenius gravieri* 395  
 9-10 ♀ ~ ♀ ♂ ♥ ♀ 26°C sg: 1.022 8 cm 100L



*Ecsenius aroni* 395  
10 ♀ ♂ ♀ ♀ ♀ ♀ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.028 4 cm 50L



*Ecsenius pulcher* 395  
9 ♀ ♂ ♀ ♀ ♀ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 7 cm 70L



*Ecsenius pulcher* 395  
9 ♀ ♂ ♀ ♀ ♀ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 7 cm 70L



*Ecsenius pulcher* 395  
9 ♀ ♂ ♀ ♀ ♀ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 7 cm 70L



*Ecsenius lividanalisis* 395  
7 ♀ ♂ ♀ ♀ ♀ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 4 cm 50L



*Ecsenius lividanalisis* 395  
7 ♀ ♂ ♀ ♀ ♀ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 4 cm 50L



*Ecsenius melarchus* 395  
7 ~ ♀ ♂ ♥ ♪ 📏 26°C sg: 1.022 5 cm 50L



*Ecsenius melarchus* 395  
7 ~ ♀ ♂ ♥ ♪ 📏 26°C sg: 1.022 5 cm 50L



*Ecsenius midas* 395  
9-10 ♀ ~ ♂ ♥ ♪ 📏 26°C sg: 1.022 13 cm 150L



*Ecsenius midas* 395  
9-10 ♀ ~ ♂ ♥ ♪ 📏 26°C sg: 1.022 13 cm 150L



*Ecsenius midas* 395  
9-10 ♀ ~ ♂ ♥ ♪ 📏 26°C sg: 1.022 13 cm 150L



*Ecsenius midas* 395  
9-10 ♀ ~ ♂ ♥ ♪ 📏 26°C sg: 1.022 13 cm 150L











*Ecsenius oculatus* 395  
7, 9, 12 ♀ ♂ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 6 cm 60L



*Ecsenius paroculus* 395  
7 ♀ ♂ ♀ ♀ ♀ ♀ 26°C sg: 1.022 4 cm 50L



*Ecsenius oculus* 395  
6-7 ♀ ♂ ♀ ♀ ♀ ♀ 26°C sg: 1.022 7 cm 80L



*Ecsenius monoculus* 395  
7 ♀ ♂ ♀ ♀ ♀ ♀ 26°C sg: 1.022 5 cm 50L



*Ecsenius tessera* 395  
8 ♀ ♂ ♀ ♀ ♀ ♀ 26°C sg: 1.022 5 cm 50L



*Ecsenius pardus* 395  
6 ♀ ♂ ♀ ♀ ♀ ♀ 26°C sg: 1.022 5 cm 50L



*Ecsenius pardus* 395

6 ♀ ~ ♂ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 5 cm 50L

*Ecsenius portenoyi* 395

6 ♀ ~ ♂ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 5 cm 50L

*Ecsenius portenoyi* 395

6 ♀ ~ ♂ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 5 cm 50L

*Ecsenius dentex* 395

10 ~ ♂ ♀ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.026 5 cm 50L

*Ecsenius nalolo* 395

9-10 ♀ ~ ♂ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 7 cm 80L

*Ecsenius nalolo* 395

9-10 ♀ ~ ♂ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 7 cm 80L





*Ecsenius axelrodi* 395  
 7 ♀ ~ ♀ ♀ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 5 cm 50L



*Ecsenius axelrodi* 395  
 7 ♀ ~ ♀ ♀ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 5 cm 50L



*Ecsenius axelrodi* 395  
 7 ♀ ~ ♀ ♀ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 5 cm 50L



*Ecsenius tigris* 395  
8 ♀ ~ ♀ ♀ ♀ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 4 cm 50L



*Ecsenius dilemma* 395  
7 ♀ ~ ♀ ♀ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 4 cm 50L



*Ecsenius dilemma* 395  
7 ♀ ~ ♀ ♀ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 4 cm 50L



*Ecsenius dilemma* 395  
7 ♀ ~ ♀ ♀ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 4 cm 50L



*Ecsenius bathi* 395  
7 ♀ ~ ♀ ♀ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 4 cm 50L



*Ecsenius bathi* 395  
7 ♀ ~ ♀ ♀ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 4 cm 50L

*Ecsenius alleni* 395

7 ♀ ~ + ♀ ♀ ♀ ♀ 26°C sg: 1.022 4 cm 50L

*Ecsenius australianus* 395

8 ♀ ~ + ♀ ♀ ♀ ♀ 26°C sg: 1.022 4 cm 50L

*Ecsenius fijiensis* 395

6 ♀ ~ + ♀ ♀ ♀ ♀ 26°C sg: 1.022 4 cm 50L

*Ecsenius fourmanoiri* 395

6, 8 ♀ ~ + ♀ ♀ ♀ ♀ 26°C sg: 1.022 5 cm 50L

*Ecsenius opsifrontalis* 395

6 ♀ ~ + ♀ ♀ ♀ ♀ 26°C sg: 1.022 4 cm 50L

*Ecsenius opsifrontalis* 395

6 ♀ ~ + ♀ ♀ ♀ ♀ 26°C sg: 1.022 4 cm 50L









*Entomacrodus striatus* 395  
6-7 ♀ ~ ♀ + ♀ ♀ ♀ ♀ 26°C sg: 1.022 9 cm 100L



*Entomacrodus decussatus* 395  
6-7 ♀ ~ ♀ + ♀ ♀ ♀ ♀ 26°C sg: 1.022 17 cm 200L



*Scartella cristata* 395  
2, 13 ♀ ~ ♀ + ♀ ♀ ♀ ♀ 26°C sg: 1.022 11 cm 100L



*Entomacrodus nigricans* 395  
2 ♀ ~ ♀ + ♀ ♀ ♀ ♀ 26°C sg: 1.022 8 cm 100L



*Parablennius marmoratus* 395  
2 ♀ ~ ♀ + ♀ ♀ ♀ ♀ 26°C sg: 1.022 8 cm 100L



*Parablennius tasmanianus* 395  
12-13 ♀ ~ ♀ + ♀ ♀ ♀ ♀ 23°C sg: 1.024 13 cm 150L



*Parablennius marmoratus* 395  
2 ♀ ~ ♀ + ♀ ♀ ♀ ♀ 26°C sg: 1.022 8 cm 100L



*Parablennius marmoratus* 395  
2 ♀ ~ ♀ + ♀ ♀ ♀ ♀ 26°C sg: 1.022 8 cm 100L

530



*Hypsoblennius brevipinnis* 395  
3 ♀ ~ † ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 12 cm 150L

#448



*Hypsoblennius gentilis* 395  
3 ♀ ~ † ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 15 cm 200L



*Hyleurochilus bermudensis* 395  
1-2 ♀ ~ † ♀ ♀ ♀ ♀ ♀ 24°C sg: 1.023 10 cm 100L



*Salarias ceramensis* 395  
7 ♀ ~ † ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 6 cm 60L



*Scartella cristata* 395  
2, 13 ♀ ~ † ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 11 cm 100L



*Parablennius gattorugine* 395  
13-15 ♀ ~ † ♀ ♀ ♀ ♀ ♀ 23°C sg: 1.024 30 cm 300L



*Stanulus talboti* 395  
7-8 ♀ ~ † ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 4 cm 50L



*Stanulus seychellensis* 395  
9 ♀ ~ † ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 3.5 cm 40L



532



*Aspidontus dussumieri* 395  
6-10 ♀ ♂ ♡ ♣ ♠ 26°C sg: 1.022 13 cm 150L



*Cirripectes variolosus* 395  
6-7, 9 ♀ ♂ ♡ ♣ ♠ 26°C sg: 1.022 8 cm 100L



*Plagiotremus tapeinosoma* 395  
6-9 ♀ ♂ ♡ ♣ ♠ 26°C sg: 1.022 16 cm 200L



*Ecsenius bicolor* 395  
6-9 ♀ ♂ ♡ ♣ ♠ 26°C sg: 1.022 8 cm 100L

#450



*Aspidontus dussumieri* 395  
6-10 ♀ ♂ ♡ ♣ ♠ 26°C sg: 1.022 13 cm 150L



*Pereulixia kosiensis* 395  
9 ♀ ♂ ♡ ♣ ♠ 26°C sg: 1.022 24 cm 300L



*Meiacanthus mossambicus* 395  
9 ♀ ♂ ♡ ♣ ♠ 26°C sg: 1.022 9 cm 100L



*Ecsenius bicolor* 395  
6-9 ♀ ♂ ♡ ♣ ♠ 26°C sg: 1.022 8 cm 100L





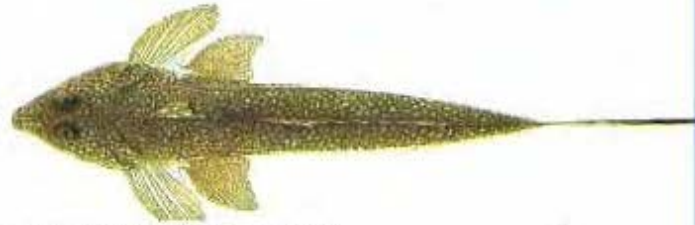
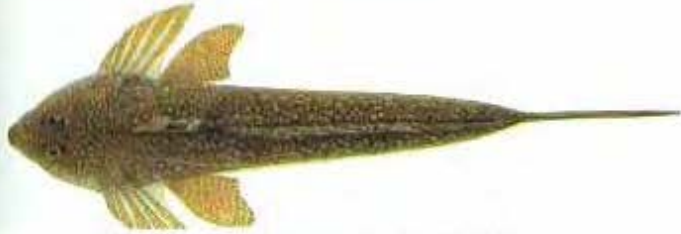






#454

537

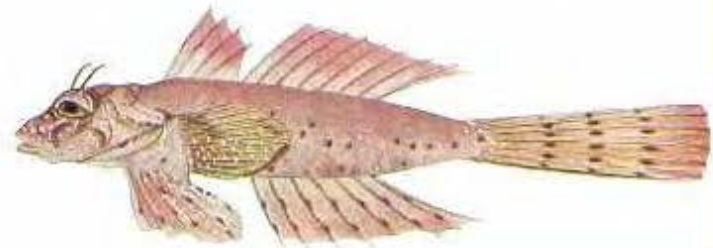


*Repomucenus richardsoni* 399 ♀  
5, 7 ~ ♀ ♀ ♀ ♀ 26°C sg: 1.022 20 cm 200L

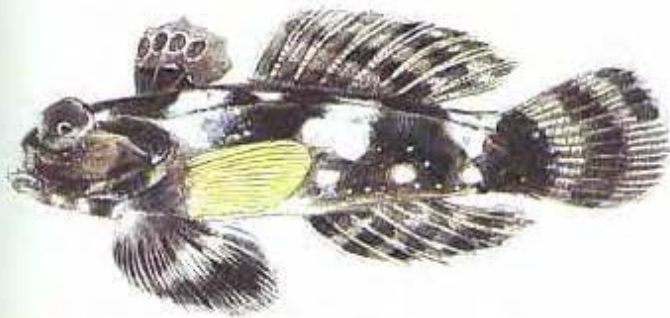
*Repomucenus richardsoni* 399 ♂  
5, 7 ~ ♀ ♀ ♀ ♀ 26°C sg: 1.022 20 cm 200L



*Calliurichthys japonicus* 399  
5, 7, 9 ~ ♀ ♀ ♀ ♀ 26°C sg: 1.022 30 cm 300L



*Anaora tentaculata* 399  
5, 7 ~ ♀ ♀ ♀ ♀ 26°C sg: 1.022 4 cm 50L



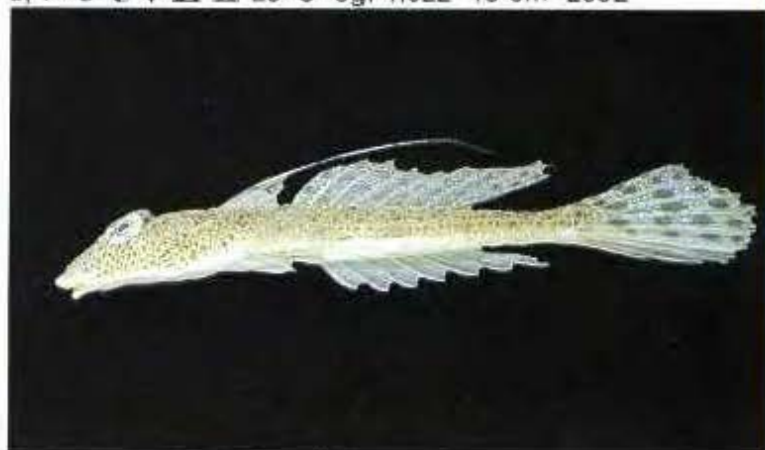
*Neosynchiropus ocellatus* 399  
7, 9 ♀ ~ ♀ ♀ ♀ ♀ 26°C sg: 1.022 9 cm 100L



*Foetorepus* sp. 399  
5, 7 ~ ♀ ♀ ♀ ♀ 25°C sg: 1.022 15 cm 200L



*Callionymus calcaratus* 399  
12 ~ ♀ ♀ ♀ ♀ 24°C sg: 1.023 7 cm 80L



*Callionymus goodladi* 399  
7, 12 ~ ♀ ♀ ♀ ♀ 25°C sg: 1.022 14 cm 150L

538



*Synchiropus* sp. 399  
7-9 ~ ♀ ♀ ♀ ♀ 25°C sg: 1.022 7 cm 75L

#455



*Synchiropus marmoratus* 399  
9 ~ ♀ ♀ ♀ ♀ 26°C sg: 1.022 13 cm 150L



*Synchiropus* sp. 399  
7-9 ~ ♀ ♀ ♀ ♀ 25°C sg: 1.022 7 cm 75L



*Synchiropus* sp. 399  
7-8 ~ ♀ ♀ ♀ ♀ 25°C sg: 1.022 8 cm 80L



*Paradiplogrammus bairdi* 399  
2 ~ ♀ ♀ ♀ ♀ 26°C sg: 1.022 11.4 cm 100L



*Diplogrammus pauciradiatus* 399  
2 ~ ♀ ♀ ♀ ♀ 25°C sg: 1.022 5 cm 50L



*Paradiplogrammus bairdi* 399  
2 ~ ♀ ♀ ♀ ♀ 26°C sg: 1.022 11.4 cm 100L



*Paradiplogrammus bairdi* 399  
2 ~ ♀ ♀ ♀ ♀ 26°C sg: 1.022 11.4 cm 100L



*Trichonotus setigerus* 384  
7-9 ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 25 cm 300L



*Trichonotus setigerus* 384  
7-9 ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 25 cm 300L



*Dactyloptena orientalis* 260  
7-9 ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 35 cm 400L



*Pterosynchiropus splendidus* 399  
7 ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 6 cm 80L



*Synchiropus* sp. 399  
7, 8 ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 8 cm 100L



*Synchiropus picturatus* 399  
7 ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 7 cm 80L



*Synchiropus* sp. 399  
7, 8 ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 9 cm 100L



*Synchiropus* sp. 399  
7, 8 ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 8 cm 100L



*Cryptocentrus leptocephalus* 403  
 7-9 ♀ ♂ ♡ 🏠 🌡️ 26°C sg: 1.022 10 cm 100L

*Signigobius biocellatus* 403  
 6 ♀ ♂ ♡ 🏠 🌡️ 26°C sg: 1.022 5 cm 50L



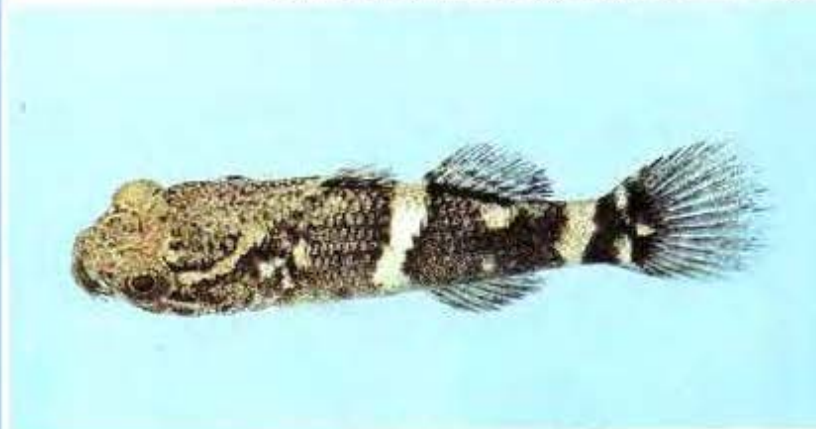




*Oxymetopon* sp. 402  
7 ♀ ~ ♀ ♥ 📺 📺 26°C sg: 1.022 20 cm 200L



*Oxymetopon cyanoctenosum* 402  
7 ♀ ~ ♀ ♥ 📺 📺 26°C sg: 1.022 20 cm 200L



*Ophiocara porocephala* (juv.) 402  
7, 9 ♀ ~ ♀ ♥ 📺 📺 26°C sg: 1.020 34 cm 400L



*Bostrychus sinensis* (adult) 402  
7 ♀ ~ ♀ ♥ 📺 📺 26°C sg: 1.022 10 cm 100L



*Eleotris* cf *acanthopoma* 402  
7 ♀ ~ ♀ ♥ 📺 📺 26°C sg: 1.022 18 cm 200L



*Butis amboinensis* 402  
7 ♀ ~ ♀ ♥ 📺 📺 26°C sg: 1.017 8 cm 100L



*Ophiocara porocephala* 402  
6-9 ♀ ~ ♀ ♥ 📺 📺 26°C sg: 1.018 16 cm 200L



*Bathygobius laddi* 403  
7, 9 ♀ ~ ♀ ♥ 📺 📺 26°C sg: 1.022 5 cm 50L









*Amblyeleotris randalli* 403  
7 ~ ♀ ♥ 📏 📏 26°C sg: 1.022 3 cm 40L



*Amblyeleotris* sp. aff. *periophthalmus* 403  
12 ~ ♀ ♥ 📏 📏 24°C sg: 1.023 5 cm 50L



*Amblyeleotris wheeleri* 403  
7-9 ~ ♀ ♥ 📏 📏 26°C sg: 1.022 9 cm 100L



*Amblyeleotris wheeleri* 403  
7-9 ~ ♀ ♥ 📏 📏 26°C sg: 1.022 9 cm 100L



*Amblyeleotris* sp. 403  
8 ~ ♀ ♥ 📏 📏 26°C sg: 1.022 4 cm 40L



*Amblyeleotris guttata* 403  
7 ~ ♀ ♥ 📏 📏 26°C sg: 1.022 7 cm 80L



*Amblyeleotris gymnocephala* 403  
7, 9 ~ ♀ ♥ 📏 📏 26°C sg: 1.022 14 cm 150L



*Amblyeleotris gymnocephala* 403  
7, 9 ~ ♀ ♥ 📏 📏 26°C sg: 1.022 14 cm 150L



*Ambyeleotris* sp. 403  
? ~ ♀ ♥ 📏 📏 26°C sg: 1.022 13 cm 150L



*Amblyeleotris steinitzi* 403  
7-10 ~ ♀ ♥ 📏 📏 26°C sg: 1.022 8 cm 100L



*Ambyeleotris sungami* 403  
7-10 ~ ♀ ♥ 📏 📏 26°C sg: 1.022 10 cm 100L



*Amblyeleotris steinitzi* 403  
7-10 ~ ♀ ♥ 📏 📏 26°C sg: 1.022 8 cm 100L



*Valenciennea puellaris* 403  
7, 9 ~ ♀ ♥ 📏 📏 26°C sg: 1.022 14 cm 150L



*Ctenogobius aurocingulus* 403  
6-8 ~ ♀ ♥ 📏 📏 26°C sg: 1.022 4 cm 50L



*Sagamia geneionema* 403  
5, 7 ~ ♀ ♥ 📏 📏 26°C sg: 1.022 9 cm 100L



*Amblygobius* sp. 403  
7-8 ~ ♀ ♥ 📏 📏 26°C sg: 1.022 10 cm 100L



*Cryptocentrus cyanotaenia* 403  
7 ~ ♀ ♥ 📏 📏 26°C sg: 1.022 11.5 cm 100L



*Cryptocentrus cinctus* 403  
7-8 ~ ♀ ♥ 📏 📏 26°C sg: 1.022 8 cm 100L



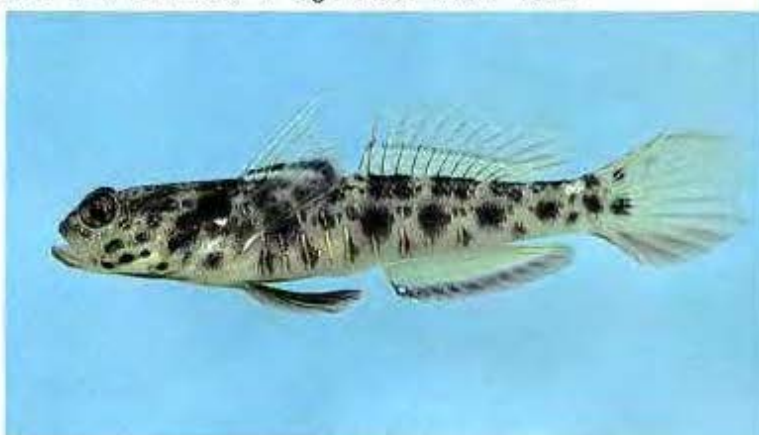
*Redigobius balteata* 403  
7 ~ ♀ ♥ 📏 📏 26°C sg: 1.022 4.5 cm 50L



*Cryptocentrus aurora* 403  
9 ~ ♀ ♥ 📏 📏 26°C sg: 1.022 9 cm 100L



*Ctenogobiops aurocingulus* 403  
6-8 ~ ♀ ♥ 📏 📏 26°C sg: 1.022 4 cm 50L



*Ctenogobiops aurocingulus* 403  
6-8 ~ ♀ ♥ 📏 📏 26°C sg: 1.022 4 cm 50L



*Ctenogobiops pomastictus* 403  
7-8 ~ ♀ ♥ 📏 📏 26°C sg: 1.022 4.5 cm 50L



*Ctenogobiops pomastictus* 403  
7-8 ~ ♀ ♥ 📏 📏 26°C sg: 1.022 4.5 cm 50L



*Ctenogobiops tangaroai* 403  
6 ♀ ♂ ♥ 📏 📏 26°C sg: 1.022 4 cm 50L



*Ctenogobiops pomastictus* 403  
7-8 ♀ ♂ ♥ 📏 📏 26°C sg: 1.022 4.5 cm 50L



*Cryptocentrus ambanora* 403  
8 ♀ ♂ ♥ 📏 📏 26°C sg: 1.022 5 cm 50L



*Gobius casamancus* 403  
13 ♀ ♂ ♥ 📏 📏 26°C sg: 1.022 11.2 cm 100L



*Amblyeleotris* sp. cf *japonica* 403  
8 ♀ ♂ ♥ 📏 📏 26°C sg: 1.022 6 cm 80L



*Amblyeleotris* sp. cf *japonicus* 403  
7-8 ♀ ♂ ♥ 📏 📏 26°C sg: 1.022 10 cm 100L



*Goby* sp. #3 403  
13 ♀ ♂ ♥ 📏 📏 26°C sg: 1.022 3 cm 50L



*Tomiyamichthys oni* 403  
6-8 ♀ ♂ ♥ 📏 📏 26°C sg: 1.022 10 cm 100L



550



*Fusigobius* sp. 403  
7 ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 5 cm 50L

#465



*Fusigobius* sp. (*neophytus*?) 403  
5(?) ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 3(?) cm 50L



?*Eviota* sp. 403  
8 ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 3 cm 50L



?*Eviota* sp. 403  
8 ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 3 cm 50L



*Oplopomus oplopomus* 403  
6-10 ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 8 cm 100L



*Yongeichthys criniger*? 403  
6-10 ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 13 cm 150L



*Nes longus* 403  
2 ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 100L



*Nes longus* 403  
2 ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 10 cm 100L



*Amblygobius rainfordi* 403  
7 ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 10 cm 100L



*Signigobius biocellatus* 403  
6 ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 5 cm 50L



*Nesogobius* sp. 403  
7 ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 6 cm 80L



*Eviota* sp. 403  
8 ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 3.5 cm 50L



*Pandaka lidwilli* 403  
7 ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 4 cm 50L



*Silhouettea insinuans* 403  
7 ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 4 cm 50L



*Kelloggella cardinalis* 403  
6 ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 3 cm 50L



*Acentrogobius gracilis* 403  
7 ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.018 6 cm 80L

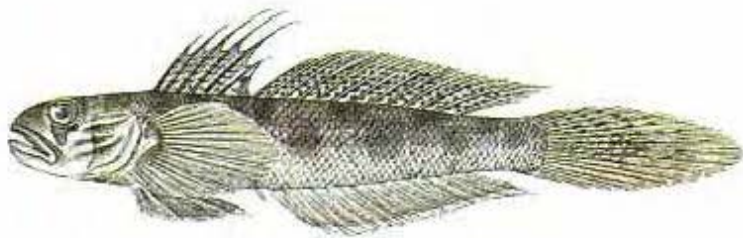




*Rhinogobius brunneus* 403  
5 ~ ♀ ♥ 📷 📏 26°C sg: 1.018 10 cm 100L



*Yongeichthys criniger* 403  
7-10 ~ ♀ ♥ 📷 📏 26°C sg: 1.022 15 cm 200L



*Oxyurichthys microlepis* 403  
7, 9 ~ ♀ ♥ 📷 📏 26°C sg: 1.022 13.5 cm 150L



*Oxyurichthys papuensis* 403  
6 ~ ♀ ♥ 📷 📏 26°C sg: 1.022 17 cm 200L



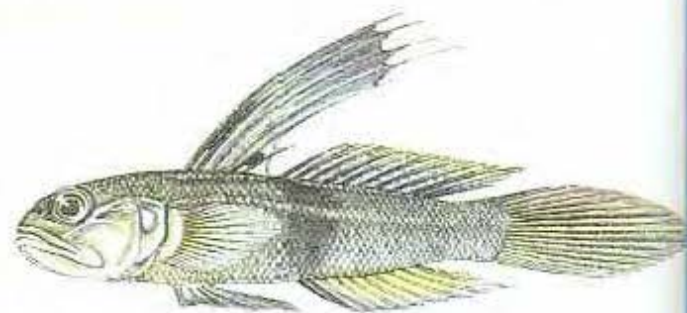
*Acanthogobius flavimanus* 403  
5 ~ ♀ ♥ 📷 📏 26°C sg: 1.022 10 cm 100L



*Stiphodon* sp. 403  
7 ~ ♀ ♥ 📷 📏 26°C sg: 1.022 4.5 cm 50L



*Myersina nigrivirgata* 403  
8 ~ ♀ ♥ 📷 📏 26°C sg: 1.022 8 cm 80L



*Myersina macrostoma* 403  
7 ~ ♀ ♥ 📷 📏 26°C sg: 1.022 6 cm 80L



*Tridentiger trigonocephalus* 403  
5 ~ ♀♥♣ 26°C sg: 1.022 4 cm 50L



*Stonogobiops xanthorhinea* 403  
7-8 ~ ♀♥♣ 26°C sg: 1.022 10 cm 100L



*Asterropteryx* sp. 403  
7, 9 ~ ♀♥♣ 26°C sg: 1.022 7 cm 80L



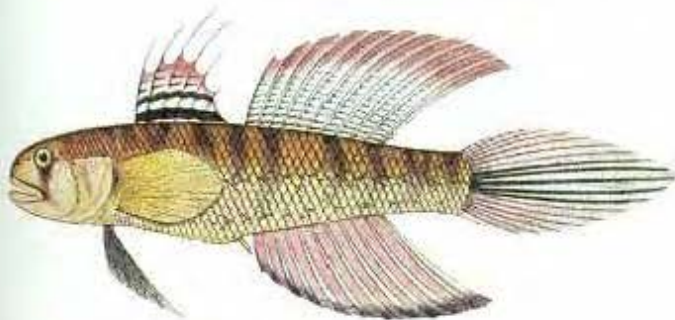
*Mahidolia mystacina* 403  
7-9 ~ ♀♥♣ 26°C sg: 1.022 8 cm 100L



*Lotilia gracilliosa* 403  
7-10 ~ ♀♥♣ 26°C sg: 1.022 4 cm 50L



*Gobulus myersi* 403  
2 ~ ♀♥♣ 26°C sg: 1.022 3 cm 50L



*Stenogobius lachrymosus* 403  
6-9 ~ ♀♥♣ 26°C sg: 1.022 12 cm 150L



*Yongeichthys criniger* 403  
7-10 ~ ♀♥♣ 26°C sg: 1.022 15 cm 200L



*Amblygobius phalaena* 403  
7 ~ ♀♥♣♠ 26°C sg: 1.022 10 cm 100L



*Amblygobius phalaena* 403  
7 ~ ♀♥♣♠ 26°C sg: 1.022 10 cm 100L



*Amblygobius albimacula* 403  
7-10 ~ ♀♥♣♠ 26°C sg: 1.022 18 cm 200L



*Amblygobius phalaena* 403  
7 ~ ♀♥♣♠ 26°C sg: 1.022 10 cm 100L



*Amblygobius phalaena* 403  
7 ~ ♀♥♣♠ 26°C sg: 1.022 10 cm 100L



*Amblygobius sphynx* 403  
7, 9 ~ ♀♥♣♠ 26°C sg: 1.022 18 cm 200L



*Amblygobius bynoensis* 403  
6-7 ~ ♀♥♣♠ 26°C sg: 1.022 10 cm 100L



*Amblygobius bynoensis* 403  
6-7 ~ ♀♥♣♠ 26°C sg: 1.022 10 cm 100L



*Amblygobius decussatus* 403  
7 ~ ♀♥♣☐ 26°C sg: 1.022 7.5 cm 80L



*Amblygobius hectori* 403  
10 ~ ♀♥♣☐ 26°C sg: 1.022 5 cm 50L



*Amblygobius nocturnus* 403  
9 ~ ♀♥♣☐ 26°C sg: 1.022 10 cm 100L



*Amblygobius phalaena* 403  
7 ~ ♀♥♣☐ 26°C sg: 1.022 10 cm 100L



*Amblygobius seminctus* 403  
9 ~ ♀♥♣☐ 26°C sg: 1.022 10 cm 100L



*Amblygobius sphynx* 403  
7, 9 ~ ♀♥♣☐ 26°C sg: 1.022 18 cm 200L



*Asterropteryx semipunctatus* 403  
6-9 ~ ♀♥♣☐ 26°C sg: 1.022 6 cm 60L



*Bryaninops* sp. 403  
8 ~ ♀♥♣☐ 26°C sg: 1.022 3 cm 50L



*Cryptocentrus* sp. 403  
7-8 ~ ♀ ♀ ♀ ♀ 26°C sg: 1.022 8 cm 80L



*Amblyeleotris steinitzi* 403  
7-10 ~ ♀ ♀ ♀ ♀ 26°C sg: 1.022 8 cm 100L



*Cryptocentrus leptocephalus* 403  
7-9 ~ ♀ ♀ ♀ ♀ 26°C sg: 1.022 10 cm 100L



*Cryptocentrus leptocephalus* 403  
7-9 ~ ♀ ♀ ♀ ♀ 26°C sg: 1.022 10 cm 100L



*Cryptocentrus fasciatus* 403  
7 ~ ♀ ♀ ♀ ♀ 26°C sg: 1.022 8 cm 80L



*Cryptocentrus fasciatus* 403  
7 ~ ♀ ♀ ♀ ♀ 26°C sg: 1.022 8 cm 80L



*Cryptocentrus niveatus* 403  
7 ~ ♀ ♀ ♀ ♀ 26°C sg: 1.022 11 cm 100L



*Cryptocentrus niveatus* 403  
7 ~ ♀ ♀ ♀ ♀ 26°C sg: 1.022 11 cm 100L



*Cryptocentrus* sp. 403  
7 ~ ♀ ♥ 📏 📏 26°C sg: 1.022 7 cm 80L



*Cryptocentrus caeruleomaculatus* 403  
7-8 ~ ♀ ♥ 📏 📏 26°C sg: 1.022 8 cm 100L



*Cryptocentrus leptocephalus* 403  
7-9 ~ ♀ ♥ 📏 📏 26°C sg: 1.022 10 cm 100L



*Cryptocentroides insignis* 403  
7 ~ ♀ ♥ 📏 📏 26°C sg: 1.022 9 cm 100L



*Cryptocentrus cinctus* 403  
7-8 ~ ♀ ♥ 📏 📏 26°C sg: 1.022 8 cm 100L



*Cryptocentrus albidorsus* 403  
7 ~ ♀ ♥ 📏 📏 26°C sg: 1.022 6 cm 60L



*Cryptocentrus* sp. 403  
8 ~ ♀ ♥ 📏 📏 26°C sg: 1.022 8 cm 100L



? Unidentified Goby 403  
8 ~ ♀ ♥ 📏 📏 26°C sg: 1.022 11 cm 100L



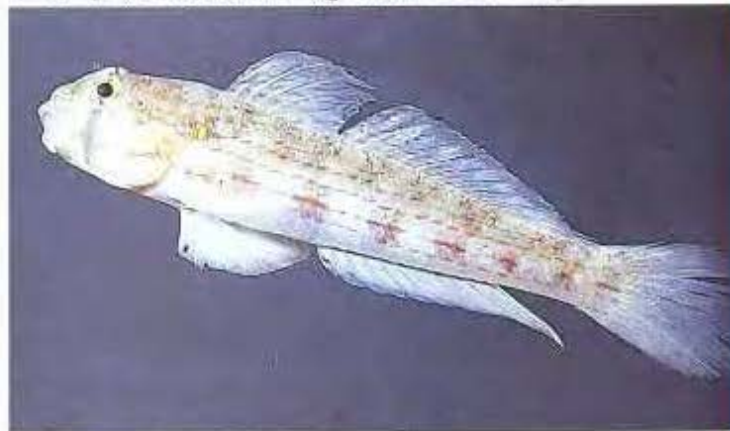
*Gnatholepis thompsoni* 403  
2 ~ ♀ ♥ 📏 26°C sg: 1.022 7.5 cm 80L



*Gnatholepis deltoides* 403  
7 ~ ♀ ♥ 📏 26°C sg: 1.022 8 cm 100L



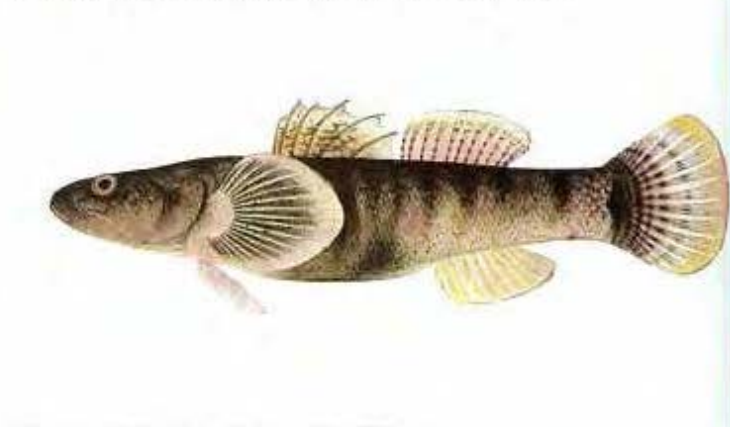
*Gnatholepis* sp. 1 403  
7, 9 ~ ♀ ♥ 📏 26°C sg: 1.022 11 cm 100L



*Gnatholepis inconsequens* 403  
7 ~ ♀ ♥ 📏 26°C sg: 1.022 6 cm 80L



*Favonigobius lateralis* 403  
7 ~ ♀ ♥ 📏 26°C sg: 1.022 6 cm 60L



*Chaenogobius urotaenia* 403  
5, 7 ~ ♀ ♥ 📏 24°C sg: 1.023 11 cm 100L



*Caffrogobius caffer* 403  
9 ~ ♀ ♥ 📏 26°C sg: 1.022 18 cm 200L



*Pomatoschistus microps* 403  
14 ~ ♀ ♥ 📏 26°C sg: 1.022 7 cm 80L



*Gobius niger* 403  
13-15 ~ ♀♥♣☞ 26°C sg: 1.024 15 cm 150L



*Gobius cruentatus* 403  
13-15 ~ ♀♥♣☞ 26°C sg: 1.024 18 cm 200L



*Gobius vittatus* 403  
15 ~ ♀♥♣☞ 26°C sg: 1.024 4 cm 50L



*Gobius auratus* 403  
14-15 ~ ♀♥♣☞ 26°C sg: 1.024 12 cm 100L



*Caffrogobius caffer* 403  
9 ~ ♀♥♣☞ 26°C sg: 1.022 18 cm 200L



*Gobius elanthematicus* 403  
15 ~ ♀♥♣☞ 26°C sg: 1.024 12 cm 100L

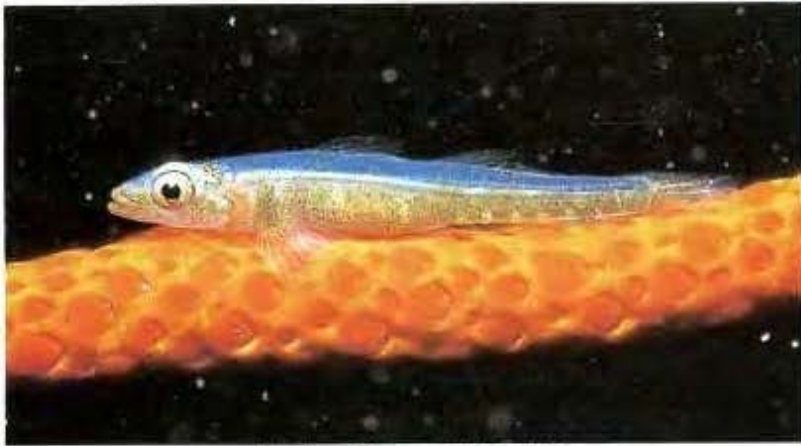


*Gobius bucchichii* 403  
15 ~ ♀♥♣☞ 26°C sg: 1.024 10 cm 100L



*Gobius niger* 403  
13-15 ~ ♀♥♣☞ 26°C sg: 1.024 15 cm 150L





*Bryaninops amphis* 403  
8 ~ ♀ ♥ 📏 26°C sg: 1.022 3 cm 50L



*Bryaninops* sp.403  
8 ~ ♀ ♥ 📏 26°C sg: 1.022 3 cm 50L



*Bryaninops natans* 403  
8 ~ ♀ ♥ 📏 26°C sg: 1.022 3 cm 50L



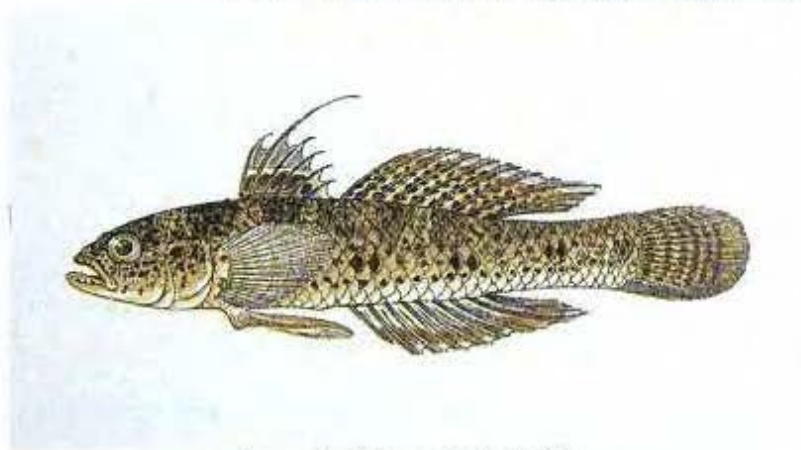
*Bryaninops tigris* 403  
8 ~ ♀ ♥ 📏 26°C sg: 1.022 3 cm 50L



*Parioglossus formosus* 403  
7 ~ ♀ ♥ 📏 26°C sg: 1.022 2.8 cm 50L



*Parioglossus lineatus* 403  
7 ~ ♀ ♥ 📏 26°C sg: 1.022 3 cm 50L



*Favonigobius reichei* 403  
7-9 ~ ♀ ♥ 📏 26°C sg: 1.022 7 cm 80L



*Eviota bifasciata* 403  
7 ~ ♀ ♥ 📏 26°C sg: 1.022 3 cm 50L



*Ptereleotris* sp. 403  
7 ~ ♀ ♥ 📏 📐 26°C sg: 1.022 7 cm 80L



*Nematelotris helfrichi* 403  
6 ~ ♀ ♥ 📏 📐 26°C sg: 1.022 5 cm 50L



*Ptereleotris hanae* 403  
7 ~ ♀ ♥ 📏 📐 26°C sg: 1.022 8 cm 80L



*Ptereleotris monoptera* 403  
7 ~ ♀ ♥ 📏 📐 26°C sg: 1.022 11 cm 100L



*Ptereleotris microlepis* and *P. monoptera* 403  
6-9 ~ ♀ ♥ 📏 📐 26°C sg: 1.022 11 cm 100L



*Ptereleotris zebra* 403  
6-9 ~ ♀ ♥ 📏 📐 26°C sg: 1.022 10 cm 100L



*Gobionellus saepepallens?* 403  
2 ~ ♀ ♥ 📏 📐 26°C sg: 1.022 5 cm 50L



*Vomero gobius flavus* 403  
2 ~ ♀ ♥ 📏 📐 26°C sg: 1.022 4 cm 50L



*Vanderhorstia ornatissima* 403  
7-9 ♀♂ ♀♂ ♀♂ 26°C sg: 1.022 7 cm 80L



*Vanderhorstia ornatissima* 403  
7-9 ♀♂ ♀♂ ♀♂ 26°C sg: 1.022 7 cm 80L



*Callogobius snelliusi* 403  
7 ♀♂ ♀♂ ♀♂ 26°C sg: 1.022 5 cm 50L



*Callogobius* sp. 403  
7 ♀♂ ♀♂ ♀♂ 26°C sg: 1.022 6 cm 60L



*Callogobius mucosus* 403  
7 ♀♂ ♀♂ ♀♂ 26°C sg: 1.022 6 cm 80L



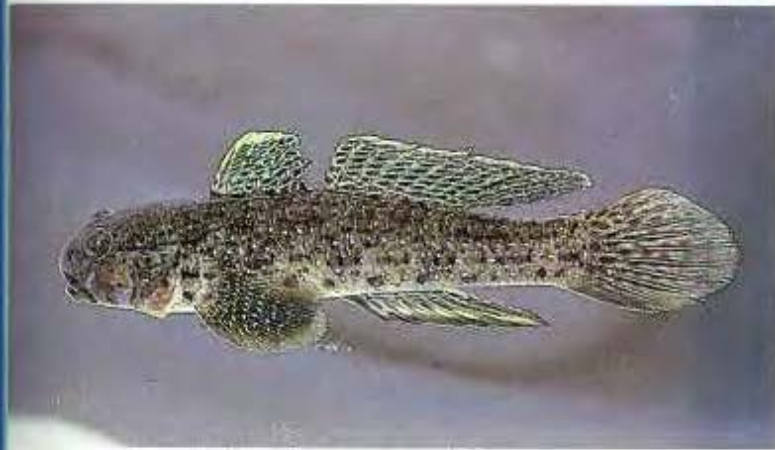
*Callogobius hasselti* 403  
7-8 ♀♂ ♀♂ ♀♂ 26°C sg: 1.022 8 cm 100L



*Arenigobius bifrenatus* 403  
12 ♀♂ ♀♂ ♀♂ 24°C sg: 1.023 8 cm 100L



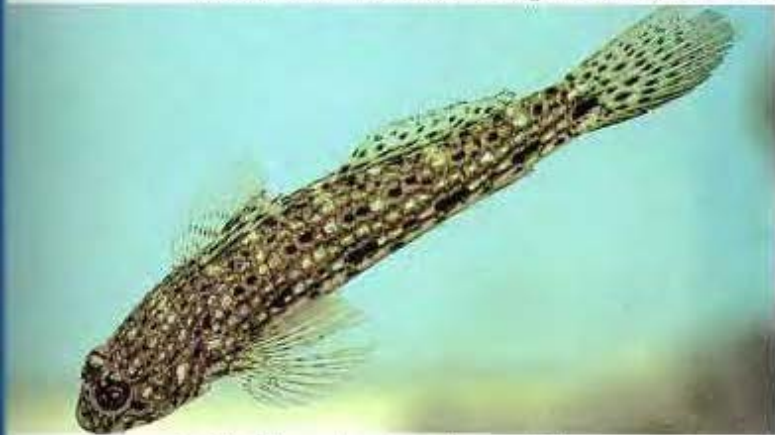
*Arenigobius bifrenatus* 403  
12 ♀♂ ♀♂ ♀♂ 24°C sg: 1.023 8 cm 100L



*Istigobius ornatus* 403  
6-9 ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 8 cm 80L



*Istigobius ornatus* 403  
6-9 ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 8 cm 80L



*Istigobius nigroocellatus* 403  
5, 7 ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 8 cm 80L



*Istigobius decoratus* 403  
7 ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 10 cm 100L



*Istigobius goldmanni* 403  
7-10 ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 8 cm 80L



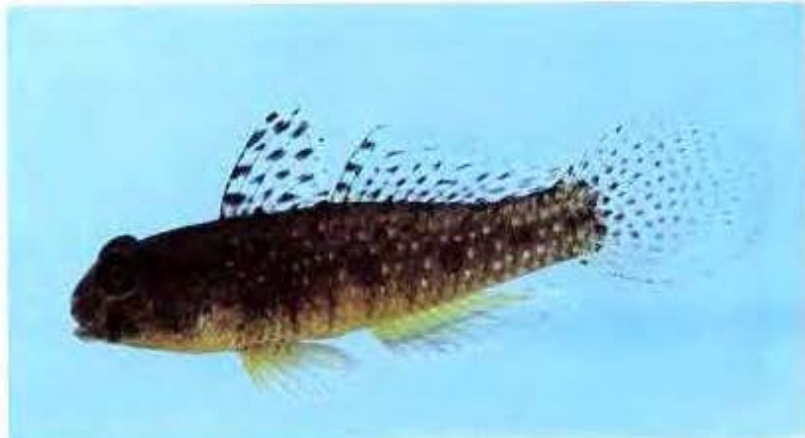
*Istigobius ornatus* 403  
6-9 ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 8 cm 80L



*Redigobius tessellatus* 403  
7 ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 5.2 cm 50L



Unidentified Goby 403  
7 ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 8 cm 80L



*Exyrias puntang* 403  
7 ♀♂ ♀♂ ♀♂ 26°C sg: 1.022 13 cm 150L



*Exyrias belissimus* 403  
7, 9 ♀♂ ♀♂ ♀♂ 26°C sg: 1.022 11 cm 100L



*Aruma histrio* 403  
3 ♀♂ ♀♂ ♀♂ 26°C sg: 1.022 6.4 cm 80L



*Exyrias puntang* 403  
7 ♀♂ ♀♂ ♀♂ 26°C sg: 1.022 13 cm 150L



*Barbulifer ceuthoecus* 403  
2 ♀♂ ♀♂ ♀♂ 26°C sg: 1.022 3 cm 50L



*Barbulifer pantherinus* 403  
3 ♀♂ ♀♂ ♀♂ 26°C sg: 1.022 5 cm 50L



*Bathygobius cocosensis* 403  
7, 9 ♀♂ ♀♂ ♀♂ 26°C sg: 1.022 8 cm 80L



*Bathygobius ramosus* 403  
3 ♀♂ ♀♂ ♀♂ 26°C sg: 1.022 11.4 cm 100L



*Pterogobius zonoleucus* 403  
5, 7 ~ ♀♥♣☐ 23°C sg: 1.024 9 cm 100L



*Pterogobius virgo* 403  
5, 7 ~ ♀♥♣☐ 23°C sg: 1.024 16 cm 200L



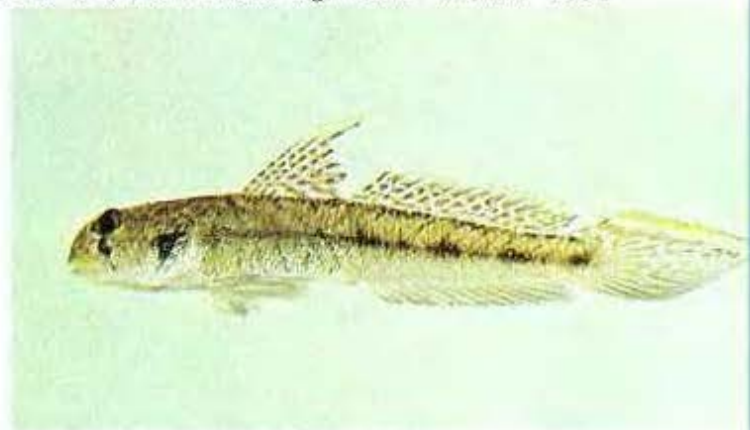
*Pterogobius elapoides* 403  
5, 7 ~ ♀♥♣☐ 23°C sg: 1.024 8.5 cm 100L



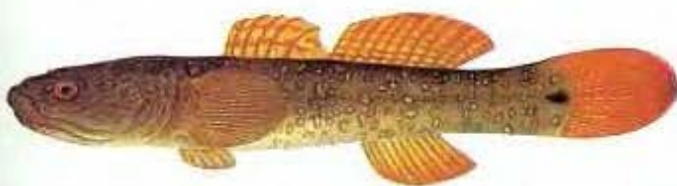
*Gobionellus stigmalophius* 403  
2 ~ ♀♥♣☐ 26°C sg: 1.022 16.5 cm 200L



*Gobionellus stigmaticus* 403  
2 ~ ♀♥♣☐ 26°C sg: 1.022 8 cm 100L



*Gobionellus saepepallens* 403  
2 ~ ♀♥♣☐ 26°C sg: 1.022 5 cm 50L



*Chasmichthys gulosus* 403  
5, 7 ~ ♀♥♣☐ 23°C sg: 1.024 10 cm 100L



*Chasmichthys dolichognathus* 403  
5 ~ ♀♥♣☐ 26°C sg: 1.022 3 cm 50L



*Valenciennea longipinnis* 403  
7 ~ ♀ ♥ 📏 26°C sg: 1.022 17 cm 200L



*Valenciennea helsdingenii* 403  
7, 9 ~ ♀ ♥ 📏 26°C sg: 1.022 16 cm 200L



*Valenciennea puellaris* 403  
7 ~ ♀ ♥ 📏 26°C sg: 1.022 12 cm 100L



*Valenciennea puellaris* 403  
7 ~ ♀ ♥ 📏 26°C sg: 1.022 12 cm 100L



*Valenciennea sexguttata* 403  
7, 9 ~ ♀ ♥ 📏 26°C sg: 1.022 13 cm 150L



*Valenciennea strigata* 403  
7, 9 ~ ♀ ♥ 📏 26°C sg: 1.022 18 cm 200



*Valenciennea muralis* 403  
7 ~ ♀ ♥ 📏 26°C sg: 1.022 10 cm 100L



*Priolepis cincta* 403  
7, 9 ~ ♀ ♥ 📏 26°C sg: 1.022 4 cm 50L



Unidentified Goby 403  
 8 ♀ ♀ ♀ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 4 cm 50L



*Gymneleotris seminudus* 403  
 3 ♀ ♀ ♀ 26°C sg: 1.022 5 cm 50L



*Chriolepis fisheri* 403  
 2 ♀ ♀ ♀ 26°C sg: 1.022 4 cm 50L



*Chriolepis zebra* 403  
 3 ♀ ♀ ♀ 26°C sg: 1.022 6 cm 60L



*Priolepis semidoliatus* 403  
 7 ♀ ♀ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 3 cm 50L



*Priolepis cinctus* 403  
 7-9 ♀ ♀ ♀ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 6 cm 80L



*Priolepis boreus* 403  
 5 ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 2.5 cm 50L



*Priolepis hipoliti* 403  
 2 ♀ ♀ ♀ 26°C sg: 1.022 3.5 cm 50L





*Periophthalmus koelruteri* 403  
9 ~ ♀ ♥ 📷 📏 26°C sg: 1.022 10 cm 100L



*Pleurosicya* sp. 403  
9 ~ ♀ ♥ 📷 📏 26°C sg: 1.022 2.5 cm 30L



*Ptereleotris evides* 403  
7-10 ~ ♀ ♥ 📷 📏 26°C sg: 1.022 12 cm 150L



*Ptereleotris evides* 403  
7-10 ~ ♀ ♥ 📷 📏 26°C sg: 1.022 12 cm 150L



*Ptereleotris heteropterus* 403  
7-9 ~ ♀ ♥ 📷 📏 26°C sg: 1.022 9 cm 100L



*Ptereleotris microlepis* 403  
6-9 ~ ♀ ♥ 📷 📏 26°C sg: 1.022 11 cm 100L



*Vanderhorstia ambonoro* 403  
7-8 ~ ♀ ♥ 📷 📏 26°C sg: 1.022 8 cm 100L



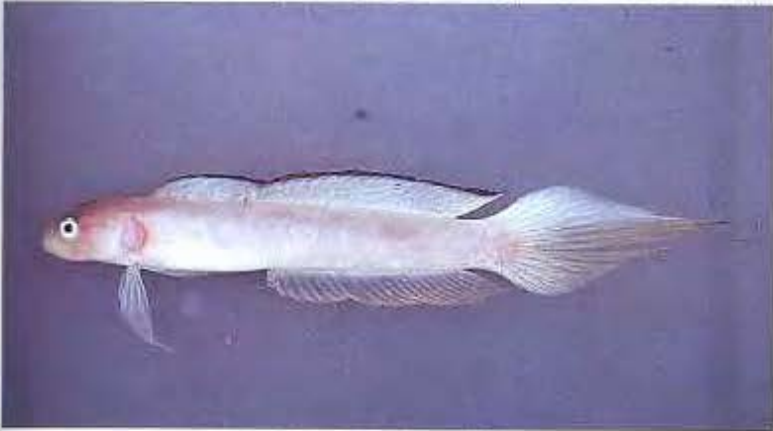
*Vanderhorstia ornatissima* 403  
7-9 ~ ♀ ♥ 📷 📏 26°C sg: 1.022 7 cm 80L



*loglossus* sp. 403  
 3 ~ ♀ ♀ ♀ 26°C sg: 1.022 10 cm 100L



*loglossus helenae* 403  
 2 ~ ♀ ♀ ♀ 26°C sg: 1.022 24 cm 300L



*loglossus calliurus* 403  
 2 ~ ♀ ♀ ♀ 26°C sg: 1.022 10 cm 100L



*loglossus calliurus* 403  
 2 ~ ♀ ♀ ♀ 26°C sg: 1.022 10 cm 100L



*Microgobius carri* 403  
 2 ~ ♀ ♀ ♀ 26°C sg: 1.022 7.5 cm 80L



*Microgobius carri* 403  
 2 ~ ♀ ♀ ♀ 26°C sg: 1.022 7.5 cm 80L



*Bollmannia boqueronensis* 403  
 2 ~ ♀ ♀ ♀ 26°C sg: 1.022 10 cm 100L



*Microgobius signatus* 403  
 2 ~ ♀ ♀ ♀ 26°C sg: 1.022 6 cm 60L



*Ctenogoblops maculosus* 403  
8 ♀ ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 7 cm 80L



*Fusigobius neophytus* 403  
5 ♀ ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 7.5 cm 80L



*Fusigobius* sp. 403  
7 ♀ ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 6 cm 80L



*Gnatholepis* sp. 403  
7 ♀ ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 5 cm 50L



*Gobiodon citrinus* 403  
7-9 ♀ ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 6 cm 80L



*Nemateleotris magnifica* 403  
6-9 ♀ ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 9 cm 100L



*Nemateleotris decora* 403  
7-8 ♀ ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 7.5 cm 80L



*Nemateleotris decora* 403  
7-8 ♀ ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 7.5 cm 80L



*Gobiosoma puncticulatus* 403  
 3 ♀ ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 3 cm 40L



*Gobiosoma saucrum* 403  
 2 ♀ ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 3 cm 40L



*Gobiosoma macrodon* 403  
 2 ♀ ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 5 cm 50L



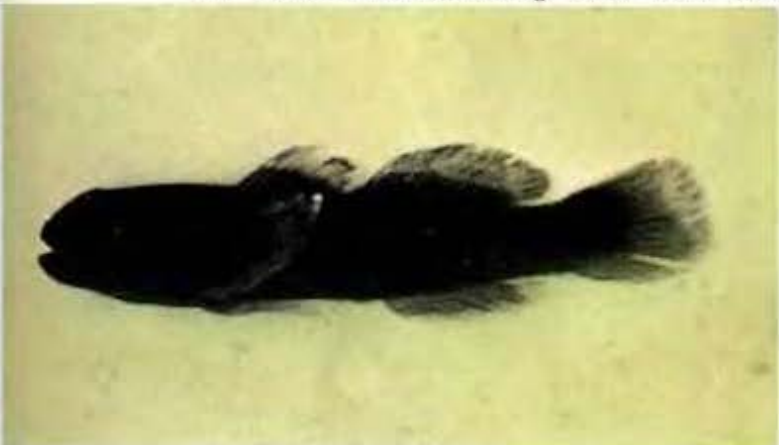
*Gobiosoma multifasciatum* 403  
 2 ♀ ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 4.5 cm 50L



*Gobiosoma aff limbaughi* 403  
 3 ♀ ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 3 cm 40L



*Gobiosoma digueti* 403  
 3 ♀ ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 3 cm 40L



*Gobiosoma tenox* 403  
 2 ♀ ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 3.2 cm 40L



*Gobiosoma* sp. 403  
 3 ♀ ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 2.5 cm 40L





*Gobiosoma oceanops* 403  
 2 ♀ ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 5 cm 50L



*Gobiosoma oceanops* 403  
 2 ♀ ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 5 cm 50L



*Gobiosoma illecebrosus* 403  
 2 ♀ ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 3.5 cm 40L



*Gobiosoma randalli* 403  
 2 ♀ ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 2.5 cm 30L



*Gobiosoma evelynae* 403  
 2 ♀ ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 6 cm 80L



*Gobiosoma evelynae* 403  
 2 ♀ ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 6 cm 80L



*Gobiosoma xanthiprora* 403  
 2 ♀ ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 3.7 cm 40L



*Gobiosoma genie* 403  
 2 ♀ ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 3.6 cm 40L



*Coryphopterus dicrus* 403  
2 ♀ ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 5 cm 50L



*Coryphopterus lipernes* 403  
2 ♀ ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 3 cm 40L



*Coryphopterus personatus* 403  
2 ♀ ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 3 cm 40L



*Coryphopterus glaucofrenum* 403  
2 ♀ ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 7.5 cm 80L



*Coryphopterus* sp. 403  
2 ♀ ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 3 cm 40L



*Coryphopterus nicholsi* 403  
3 ♀ ~ ♀ ♀ ♀ ♀ ♀ 24°C sg: 1.022 15 cm 150L



*Coryphopterus eidolon* 403  
2 ♀ ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 5.5 cm 60L



*Coryphopterus urosipilus* 403  
3 ♀ ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 3 cm 40L



*Eviota* sp. 403  
7 ♀ ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 3 cm 40L



*Eviota* sp. 403  
7 ♀ ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 3 cm 40L



*Eviota bimaculata* 403  
12 ♀ ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 2.3 cm 40L



*Eviota* sp. 403  
7 ♀ ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 3 cm 40L



*Eviota abax* 403  
5 ♀ ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 3.6 cm 40L



*Eviota fasciola* 403  
8 ♀ ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 3 cm 40L



*Eviota infulata* 403  
6-9 ♀ ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 2 cm 40L



*Eviota bifasciata* 403  
7-10 ♀ ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 2.3 cm 40L





*Trimma* sp. 403  
7-8 ♀ ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 3.5 cm 40L



*Trimma striata* 403  
7-8 ♀ ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 3 cm 40L



*Trimma caesiura* 403  
7 ♀ ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 3.5 cm 40L



*Trimma* sp. 403  
7-8 ♀ ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 3.5 cm 40L



*Trimma macrophthalmum* 403  
7-9 ♀ ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 2.5 cm 40L



*Trimma* sp. 403  
7-8 ♀ ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 3.5 cm 40L



*Trimma* sp. 403  
7 ♀ ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 3 cm 40L



*Trimma* sp. 403  
7 ♀ ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 3 cm 40L

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*Gobiodon atrangulatus* 403  
6-7 ♀ ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 3.5 cm 40L

#493



*Gobiodon okinawae* 403  
5, 7 ♀ ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 3.5 cm 40L



*Gobiodon histrio* 403  
7 ♀ ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 7 cm 80L



*Gobiodon rivulatus* 403  
7, 9 ♀ ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 5 cm 50L



*Gobiodon multilineatus* 403  
7 ♀ ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 3.5 cm 40L



*Paragobiodon xanthosomus* 403  
7-9 ♀ ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 3.5 cm 40L



*Paragobiodon echinocephalus* 403  
7 ♀ ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 3 cm 40L



*Gobiodon quinquestrigatus* 403  
5, 7, 9 ♀ ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 4 cm 50L



*Periophthalmus sobrinus?* 403  
9 ♀ ~ ♀ ♂ ♥ 📏 📏 26°C sg: 1.015 14 cm 200L



*Periophthalmus* sp. 403  
7 ♀ ~ ♀ ♂ ♥ 📏 📏 26°C sg: 1.015 12 cm 100L



*Periophthalmus koelreuteri* 403  
8 ♀ ~ ♀ ♂ ♥ 📏 📏 26°C sg: 1.015 15 cm 200L



Unidentified Mudskipper 403  
7 ♀ ~ ♀ ♂ ♥ 📏 📏 26°C sg: 1.015 20 cm 200L



*Periophthalmus argentilineatus* 403  
7-8 ♀ ~ ♀ ♂ ♥ 📏 📏 26°C sg: 1.015 10 cm 100L



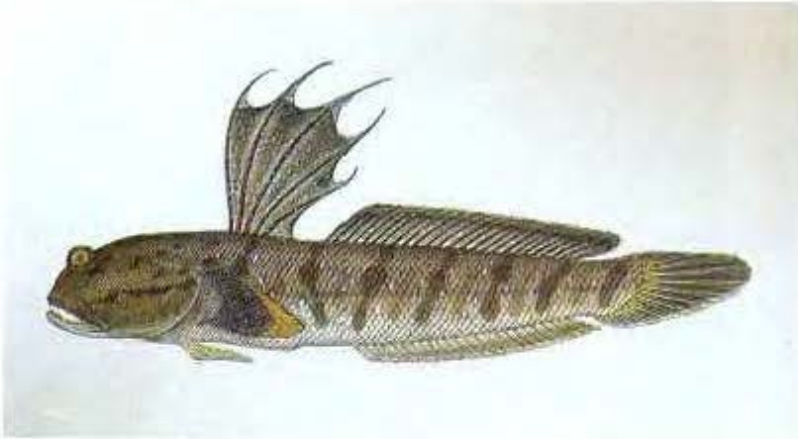
*Periophthalmus regius* 403  
7 ♀ ~ ♀ ♂ ♥ 📏 📏 26°C sg: 1.015 10 cm 100L



*Periophthalmus cantonensis* 403  
5, 7 ♀ ~ ♀ ♂ ♥ 📏 📏 26°C sg: 1.015 12 cm 100L



*Periophthalmus papilio?* 403  
9 ♀ ~ ♀ ♂ ♥ 📏 📏 26°C sg: 1.015 25 cm 300L



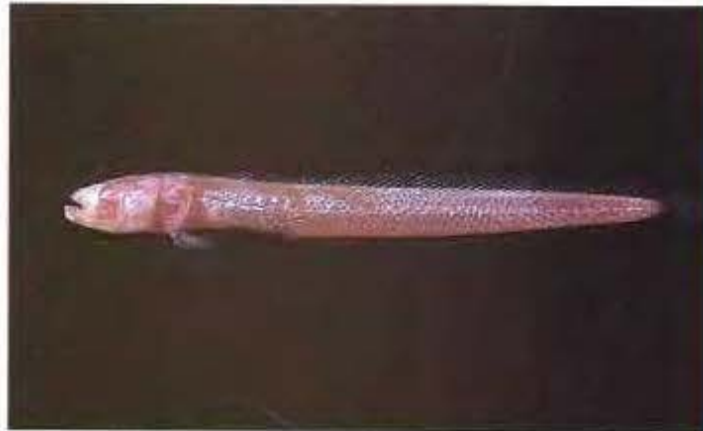
*Boleophthalmus pectinirostris* 403  
5, 7 ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.018 20 cm 200L



*Boleophthalmus polyophthalmus* 403  
5, 7 ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 20 cm 200L



*Ctenotrypauchen microcephalus* 405  
7 ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 17.5 cm 200L



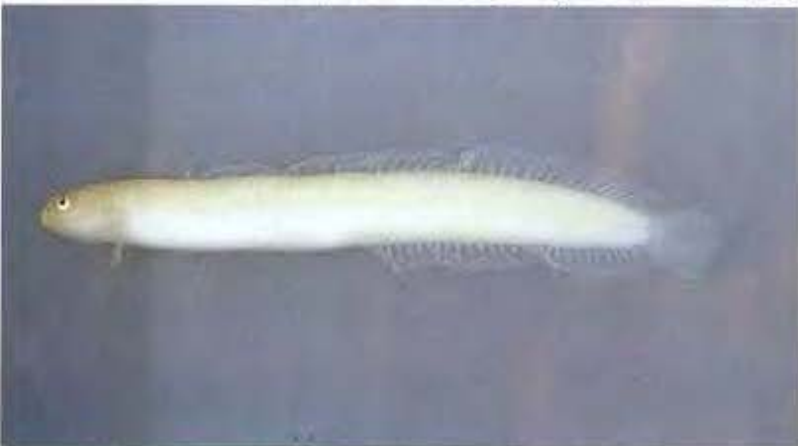
*Brachyamblyopus coecus* 404  
7 ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 7 cm 80L



*Gunnelichthys pleurotaenia* 407  
7 ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 6 cm 60L



*Gunnelichthys monostigma* 407  
7 ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 9 cm 100L



*Cerdale floridana* 407  
2 ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 5 cm 50L



*Gunnelichthys curiosus* 407  
6 ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 13 cm 150L





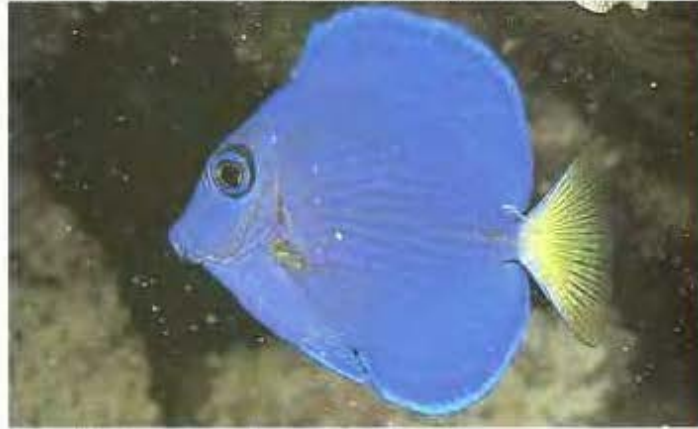
*Acanthurus chirurgus* 409  
2 ♀ ~ ♀ + ♀ ♀ ♀ ♀ 26°C sg: 1.022 25 cm 300L



*Acanthurus bahianus* 409  
2 ♀ ~ ♀ + ♀ ♀ ♀ ♀ 26°C sg: 1.022 30 cm 300L



*Acanthurus coeruleus* 409  
2 ♀ ~ ♀ + ♀ ♀ ♀ ♀ 26°C sg: 1.022 23 cm 300L



*Acanthurus coeruleus* 409  
2 ♀ ~ ♀ + ♀ ♀ ♀ ♀ 26°C sg: 1.022 23 cm 300L



*Acanthurus blochii* 409  
6-7, 9 ♀ ~ ♀ + ♀ ♀ ♀ ♀ 26°C sg: 1.022 42 cm 500L



*Acanthurus monroviae* 409  
13 ♀ ~ ♀ + ♀ ♀ ♀ ♀ 26°C sg: 1.022 24 cm 300L



*Acanthurus achilles* 409  
5-7 ♀ ~ ♀ + ♀ ♀ ♀ ♀ 26°C sg: 1.022 28 cm 300L



*Acanthurus japonicus* 409  
7 ♀ ~ ♀ + ♀ ♀ ♀ ♀ 26°C sg: 1.022 20 cm 200L









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*Acanthurus chronixis* 409  
7 ♀ ~ + ○ ♥ ♣ ☞ 26°C sg: 1.022 19 cm 200L

#500



*Acanthurus chronixis* 409  
7 ♀ ~ + ○ ♥ ♣ ☞ 26°C sg: 1.022 19 cm 200L



*Acanthurus pyroferus* 409  
6-7 ♀ ~ + ○ ♥ ♣ ☞ 26°C sg: 1.022 19 cm 200L



*Acanthurus pyroferus* 409  
6-7 ♀ ~ + ○ ♥ ♣ ☞ 26°C sg: 1.022 19 cm 200L



*Acanthurus dussumieri* 409  
6-9 ♀ ~ + ○ ♥ ♣ ☞ 26°C sg: 1.022 54 cm 600L



*Acanthurus bariene* 409  
7, 9 ♀ ~ + ○ ♥ ♣ ☞ 26°C sg: 1.022 30 cm 300L



*Acanthurus olivaceous* 409  
6-7 ♀ ~ + ○ ♥ ♣ ☞ 26°C sg: 1.022 25 cm 300L



*Acanthurus mata* 409  
6-9 ♀ ~ + ○ ♥ ♣ ☞ 26°C sg: 1.022 50 cm 500L



588



*Prionurus punctatus* (juv.) 409  
3 ♀ ~ ♀ + ♀ ♀ ♀ ♀ 26°C sg: 1.022 60 cm 600L



*Prionurus laticlavatus* 409  
3 ♀ ~ ♀ + ♀ ♀ ♀ ♀ 26°C sg: 1.022 50 cm 500L



*Acanthurus leucopareius* 409  
6-7 ♀ ~ ♀ + ♀ ♀ ♀ ♀ 26°C sg: 1.022 20 cm 200L

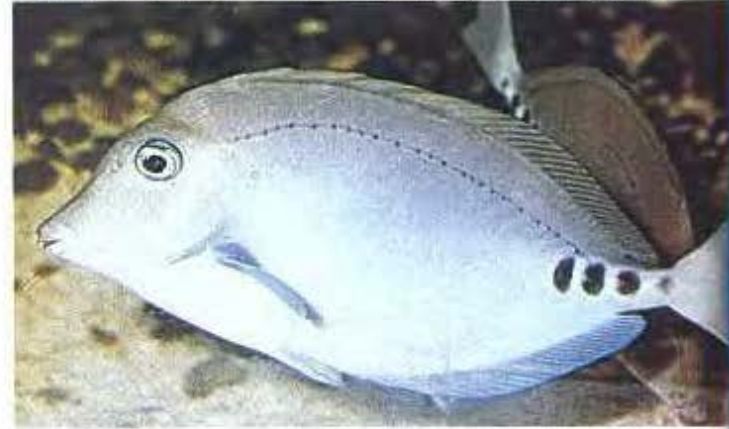


*Acanthurus nigroris* (juv.) 409  
6-7 ♀ ~ ♀ + ♀ ♀ ♀ ♀ 26°C sg: 1.022 20 cm 200L

#502



*Prionurus punctatus* 409  
3 ♀ ~ ♀ + ♀ ♀ ♀ ♀ 26°C sg: 1.022 60 cm 600L



*Prionurus scalprus* 409  
7 ♀ ~ ♀ + ♀ ♀ ♀ ♀ 26°C sg: 1.022 40 cm 400L



*Acanthurus triostegus* 409  
6-9 ♀ ~ ♀ + ♀ ♀ ♀ ♀ 26°C sg: 1.022 27 cm 300L



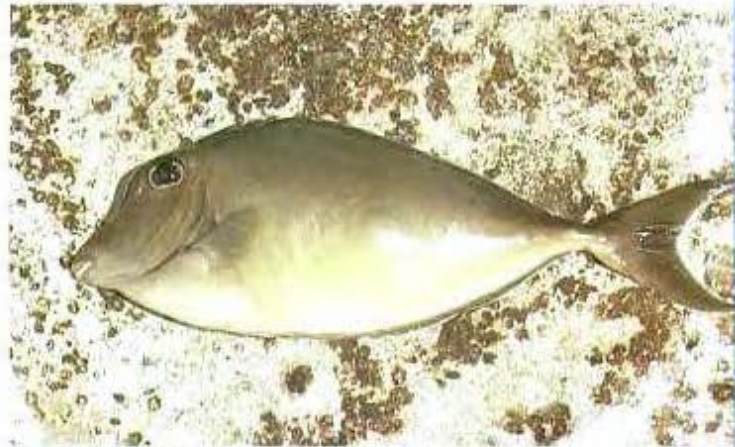
*Acanthurus nigroris* 409  
6-7 ♀ ~ ♀ + ♀ ♀ ♀ ♀ 26°C sg: 1.022 20 cm 200L







*Naso lopezi* 409  
6-7 ♀ ~ ♀ + ♀ ♀ 26°C sg: 1.022 45 cm 500L



*Naso brachycentron* 409  
7-9 ♀ ~ ♀ + ♀ ♀ 26°C sg: 1.022 60 cm 600L



*Naso brevirostris* (juv.) 409  
6-10 ♀ ~ ♀ + ♀ ♀ 26°C sg: 1.022 60 cm 600L



*Naso hexacanthus* 409  
7-10 ♀ ~ ♀ + ♀ ♀ 26°C sg: 1.022 75 cm 800L



*Naso lituratus* (juv.) 409  
6-10 ♀ ~ ♀ + ♀ ♀ 26°C sg: 1.022 45 cm 500L



*Naso lituratus* 409  
♀ ~ ♀ + ♀ ♀ 26°C sg: 1.022 45 cm 500L



*Naso unicornis* (juv.) 409  
6-10 ♀ ~ ♀ + ♀ ♀ 26°C sg: 1.022 70 cm 700L



*Naso unicornis* 409  
6-10 ♀ ~ ♀ + ♀ ♀ 26°C sg: 1.022 70 cm 700L













*Lo magnificentus* 410

9 ♀ ~ \* ○ ♥ 🏠 📧 26°C sg: 1.022 18 cm 200L



*Lo vulpinus* 410  
6-7 ♀ ~ ♀ ♂ ♀ ♀ ♀ 26°C sg: 1.022 19 cm 200L



*Lo vulpinus* 410  
6-7 ♀ ~ ♀ ♂ ♀ ♀ ♀ 26°C sg: 1.022 19 cm 200L



*Lo vulpinus* (juv.) 410  
6-7 ♀ ~ ♀ ♂ ♀ ♀ ♀ 26°C sg: 1.022 19 cm 200L



*Lo uspi* 410  
6 ♀ ~ ♀ ♂ ♀ ♀ ♀ 26°C sg: 1.022 18 cm 200L



*Siganus argenteus* 410  
6-10 ♀ ~ ♀ ♂ ♀ ♀ ♀ 26°C sg: 1.022 35 cm 400L



*Siganus canaliculatus* 410  
7, 9 ♀ ~ ♀ ♂ ♀ ♀ ♀ 26°C sg: 1.022 30 cm 300L



*Siganus fuscescens* 410  
7, 9 ♀ ~ ♀ ♂ ♀ ♀ ♀ 26°C sg: 1.022 30 cm 300L



*Siganus canaliculatus* 410  
7, 9 ♀ ~ ♀ ♂ ♀ ♀ ♀ 26°C sg: 1.022 30 cm 300L



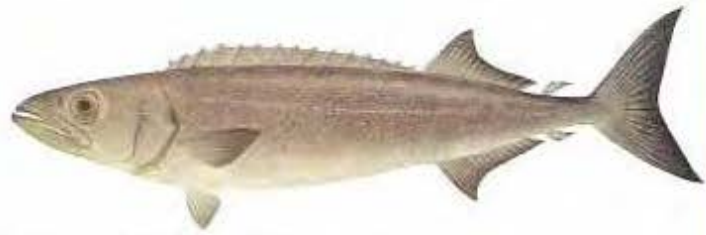








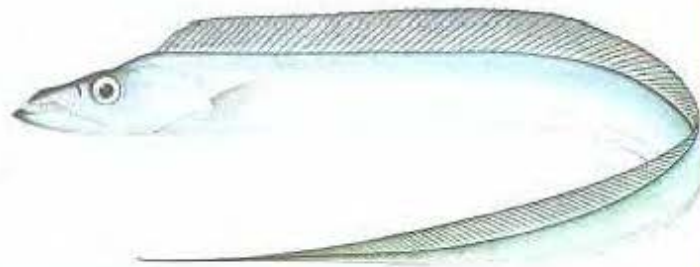
*Promethichthys prometheus* 412  
Circumtrop. ↘ ○ ✖ ≡ 26°C sg: 1.022 60 cm 600L



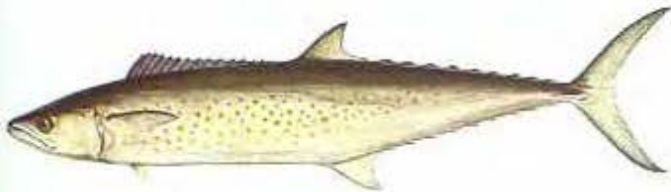
*Ruvettus pretiosus* 412  
Circumtrop. ↘ ○ ✖ ≡ 26°C sg: 1.022 300 cm 3000L



*Gempylus serpens* 412  
Circumtrop. ↘ ○ ✖ ≡ 26°C sg: 1.022 100 cm



*Trichiurus lepturus* 413  
Circumtrop. ↘ ○ ✖ ≡ 26°C sg: 1.022 120 cm 1200L



*Scomberomorus sierra* 414  
3 ↘ ○ ✖ ≡ 26°C sg: 1.022 81 cm 800L



*Scomberomorus maculatus* 414  
1-2 ↘ ○ ✖ ≡ 26°C sg: 1.022 70 cm 800L



*Scomber australasicus* 414  
8, 12 ↘ ○ ✖ ≡ 25°C sg: 1.022 40 cm 400L



*Thunnus thynnus* 414  
Circumglobal ↘ ○ ✖ ≡ 300 cm 3000L



*Auxis thazard* 414



*Euthynnus affinis* 414



*Katsuwonus pelamis* 414



*Cybiosarda elegans* 414



*Thunnus alalunga* 414



*Thunnus albacares* 414



*Thunnus maccoyii* 414



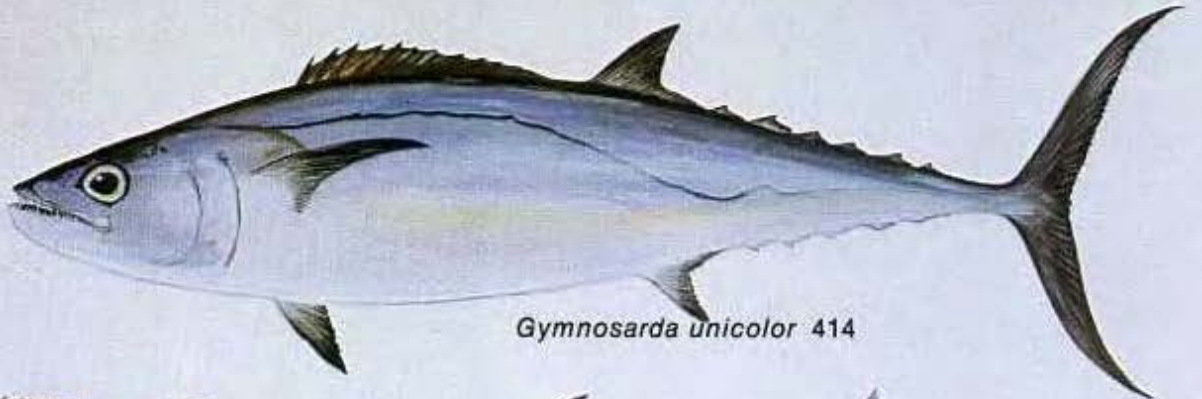
*Thunnus obesus* 414



*Thunnus tonggol* 414



*Acanthocybium solandri* 414



*Gymnosarda unicolor* 414



*Grammatocynus bicarinatus* 414



*Rastrelliger kanagurta* 414



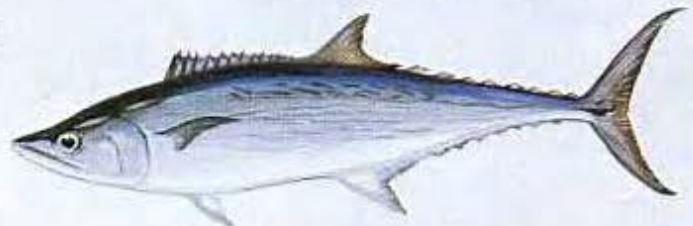
*Sarda orientalis* 414



*Scomber japonicus* 414



*Scomberomorus commerson* 414



*Scomberomorus lineolatus* 414



*Scomberomorus guttatus* 414



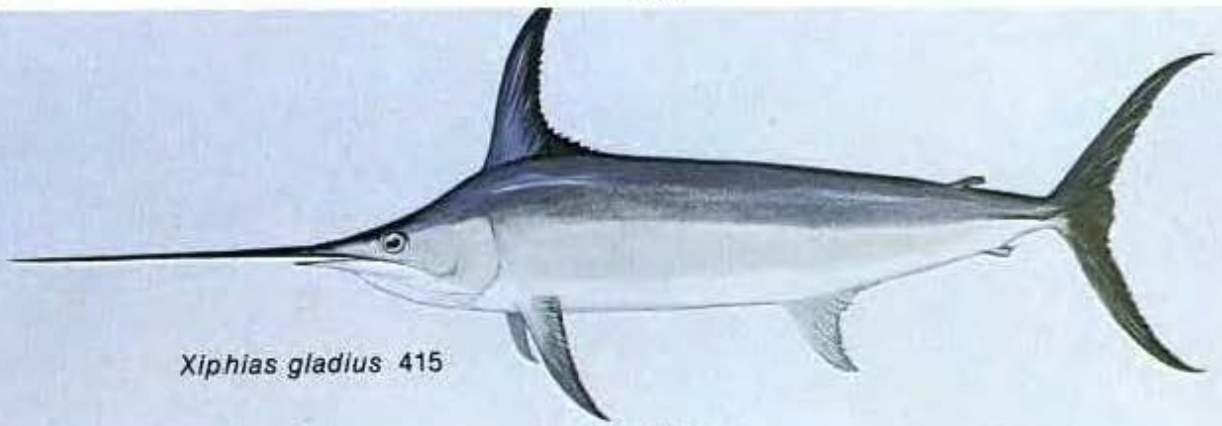
*Scomberomorus queenslandicus* 414



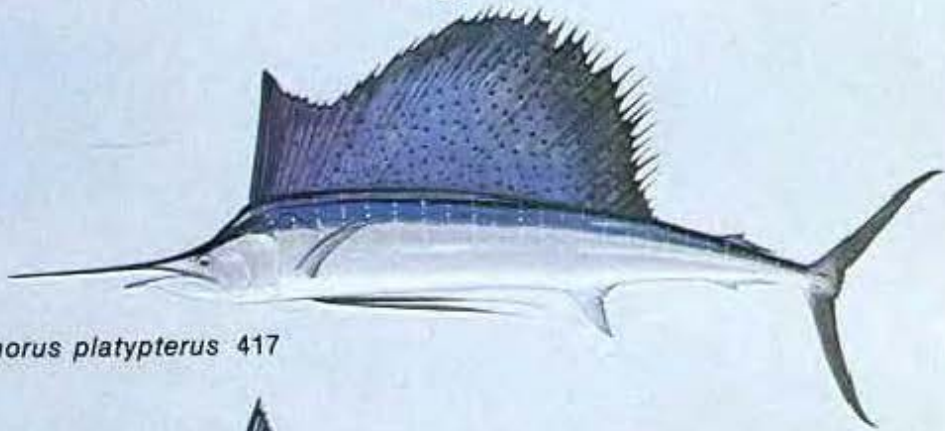
*Scomberomorus semifasciatus* 414



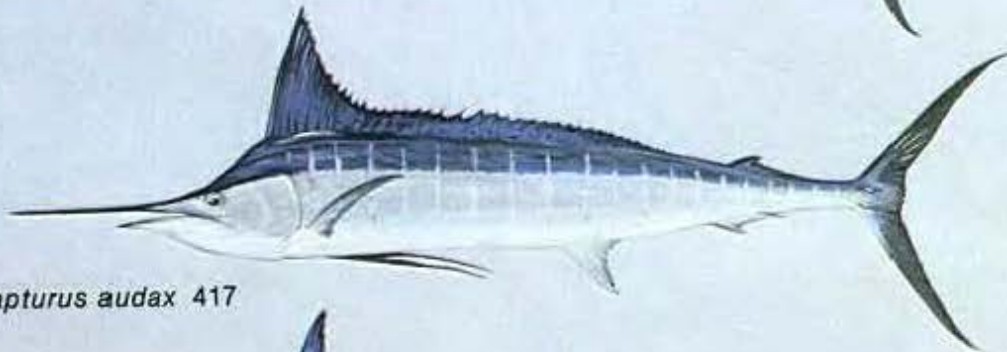
*Scomberomorus niphonius* 414



*Xiphias gladius* 415



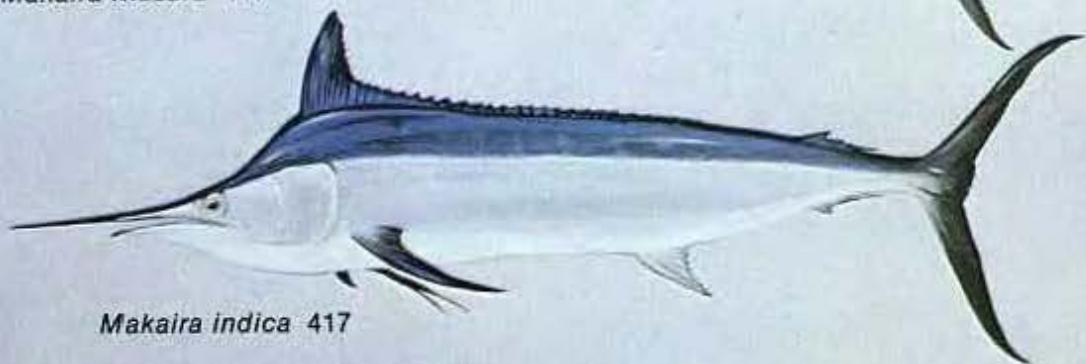
*Istiophorus platypterus* 417



*Tetrapturus audax* 417



*Makaira mazura* 417



*Makaira indica* 417



*Coryphaena hippurus* 308



*Tetrapturus angustirostris* 417

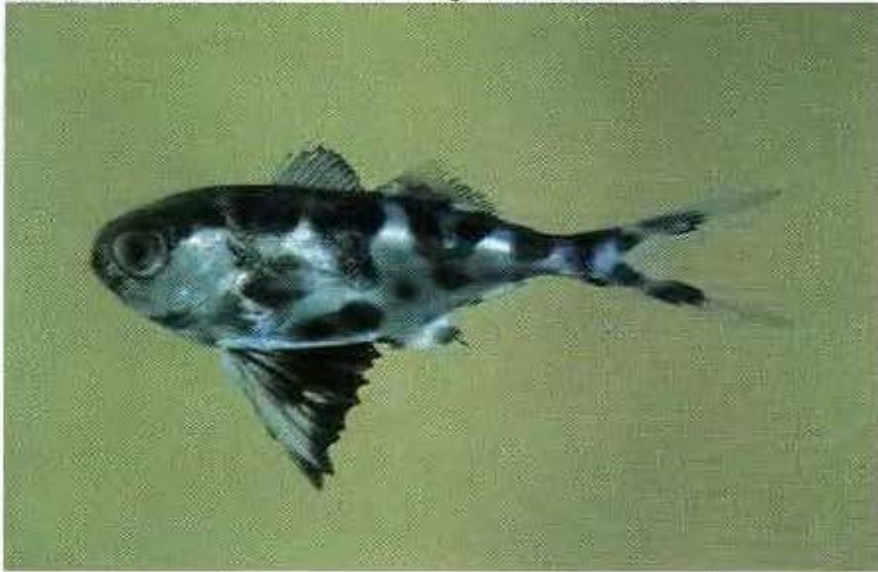
#517A

*Makaira* sp. 417

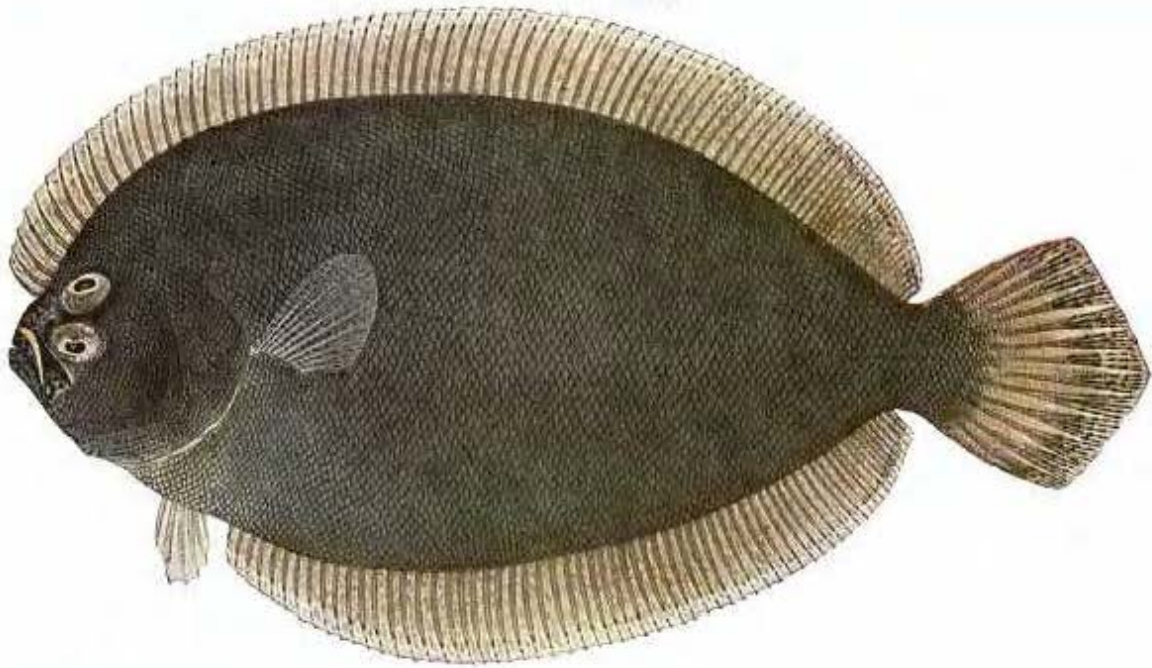
7-10 ~ C \* ☒ ☒ 26°CX sg: 1.022 4500 cm &gt;5000L

*Nomeus gronovii* 420

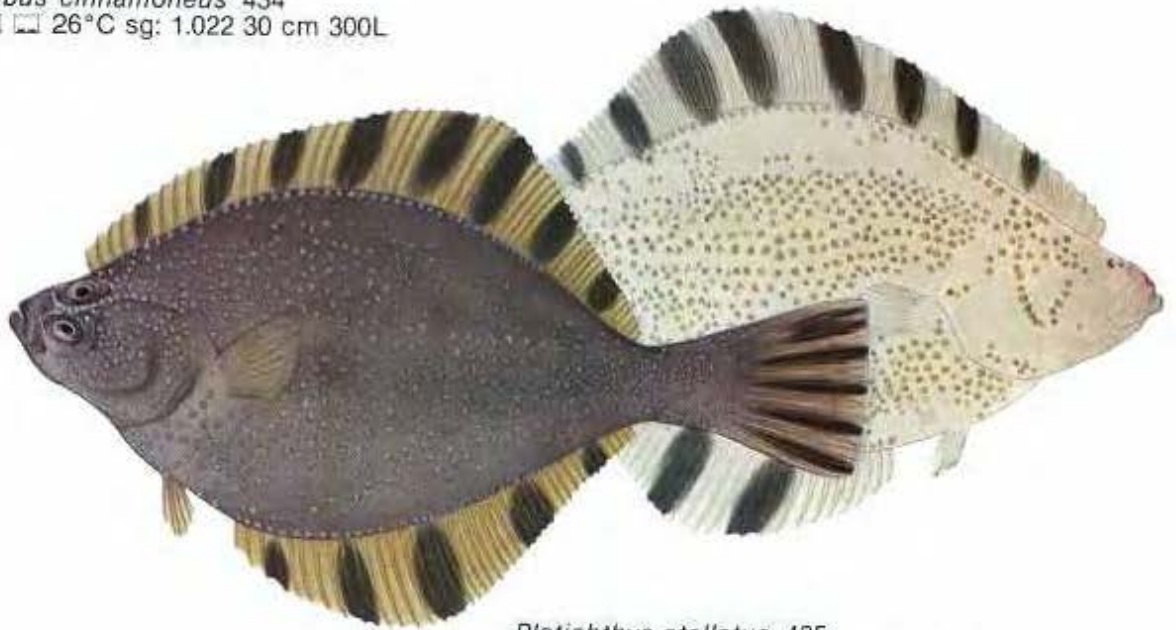
Circumtrop. ~ C \* ☒ ☒ 26°C sg: 1.022 39 cm 400L



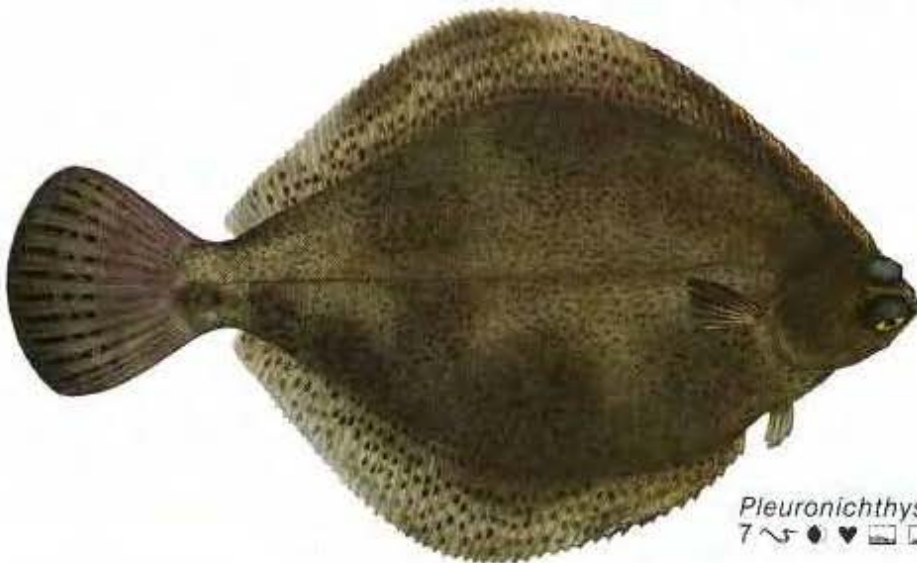




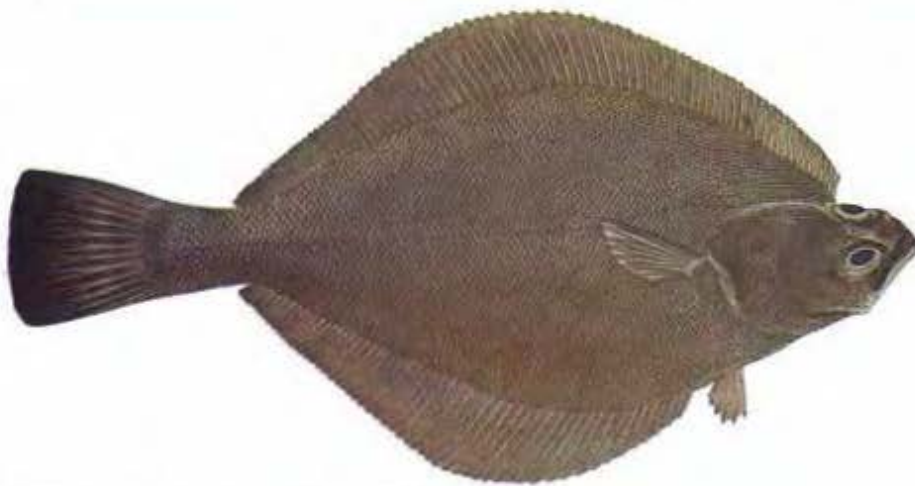
*Pseudorhombus cinnamomeus* 434  
 7 ~ ● ♥ ☞ ☞ 26°C sg: 1.022 30 cm 300L



*Platichthys stellatus* 435  
 4-5 ~ ~ ● ✕ ☞ ☞ 24°C sg: 1.023 91 cm 1000L



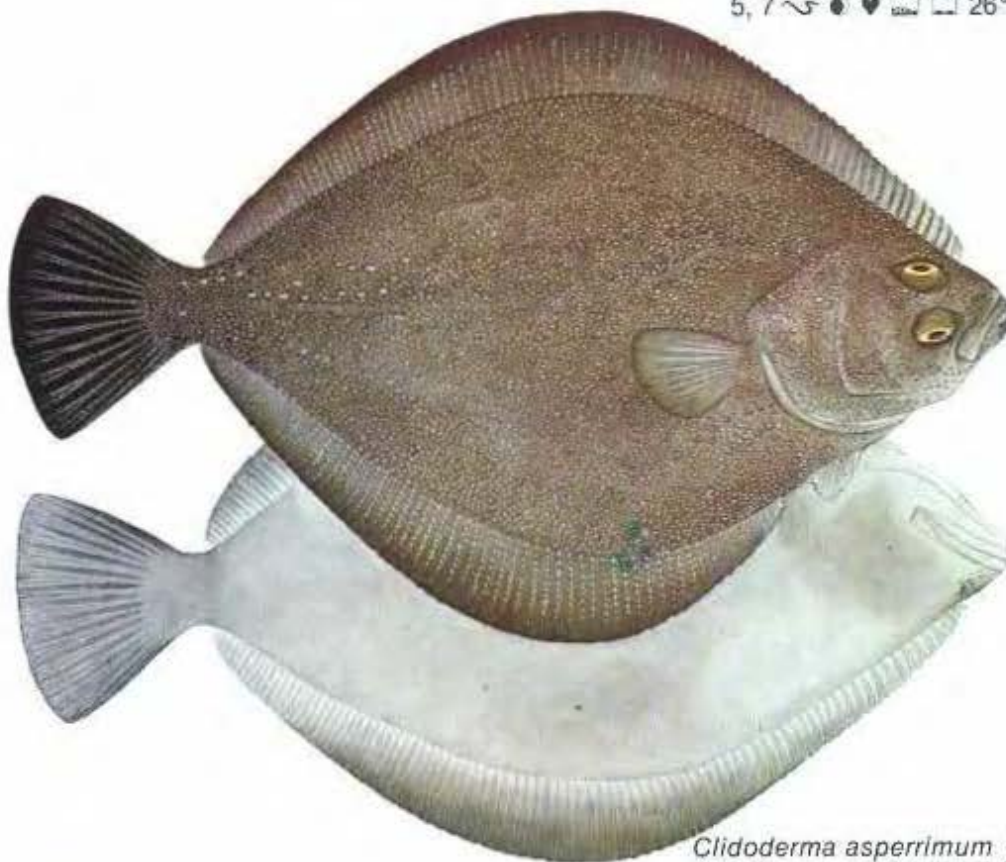
*Pleuronichthys cornutus* 435  
 7 ~ ● ♥ ☞ ☞ 26°C sg: 1.022 30 cm 300L



*Cleisthenes pinetorum herzensteini* 435  
5, 7 ~ ~ ● ✂ ~ ~ 26°C sg: 1.022 45 cm 500L



*Eopsetta grigorjewi* 435  
5, 7 ~ ~ ● ♥ ~ ~ 26°C sg: 1.022 40 cm 400L

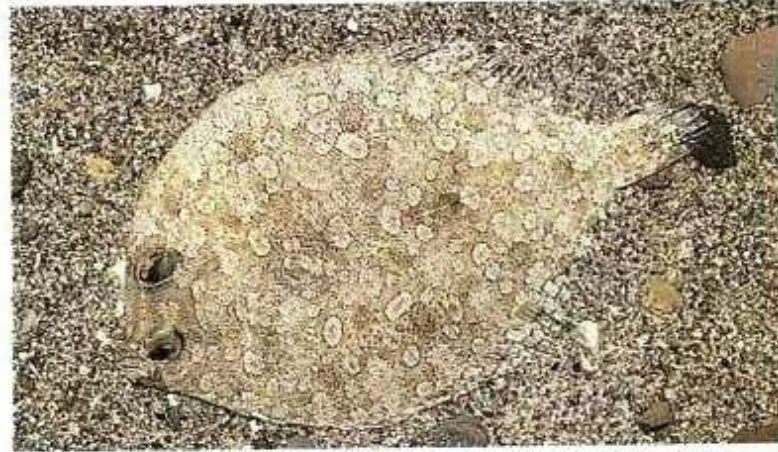


*Clidoderma asperrimum* 435  
4, 5, 7 ~ ~ ● ✂ ~ ~ 26°C sg: 1.022 55 cm 600L

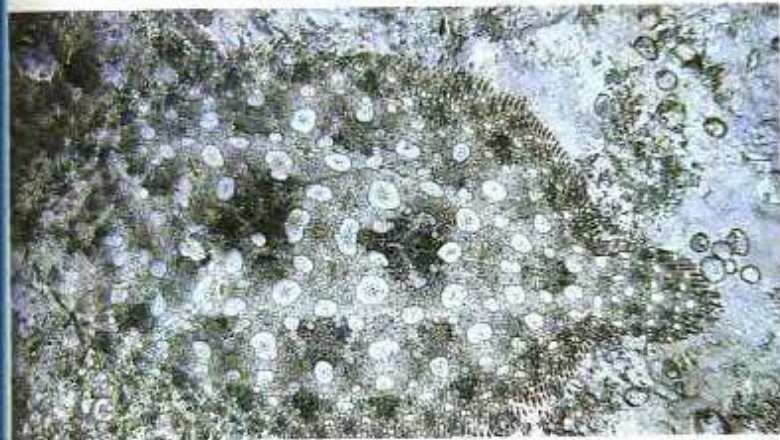




*Psettodes erumei* 432  
7-10 ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 60 cm 600L



*Bothus leopardus* 434  
3 ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 20 cm 200L



*Bothus pantherinus* 434  
6-10 ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 30 cm 300L



*Bothus pantherinus* 434  
6-10 ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 30 cm 300L



*Bothus ocellatus* 434  
1-2 ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 15 cm 150L



*Bothus lunatus* 434  
2 ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 45 cm 500L



*Citharichthys gilberti* 434  
3 ~ ♀ ♀ ♀ ♀ ♀ 25°C sg: 1.022 20 cm 200L



*Citharichthys stigmaeus* 434  
4 ~ ♀ ♀ ♀ ♀ ♀ 23°C sg: 1.024 17 cm 200L

610



*Paralichthys olivaceus* 434  
7 ~ ● ♥ ◻ ◻ 26°C sg: 1.022 80 cm 1000L

#520



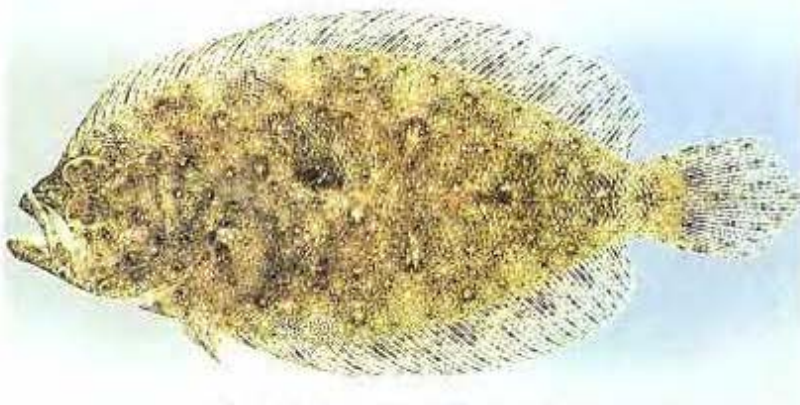
*Paralichthys woolmani* 434  
3 ~ ● ♥ ◻ ◻ 26°C sg: 1.022 80 cm 1000L



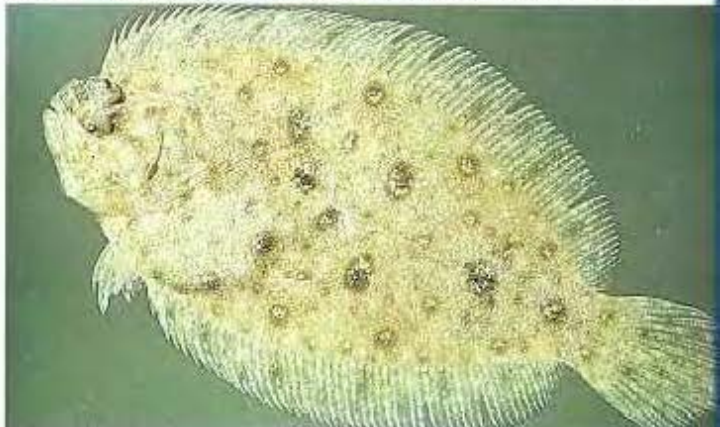
*Paralichthys dentatus* 434  
1 ~ ~ ● ✂ ◻ ◻ 23°C sg: 1.024 94 cm 1000L



*Xystreurys liolepis* 434  
3-4 ~ ~ ● ✂ ◻ ◻ 26°C sg: 1.022 53 cm 500L



*Pseudorhombus cinnamoneus* 434  
7 ~ ● ♥ ◻ ◻ 26°C sg: 1.022 30 cm 300L



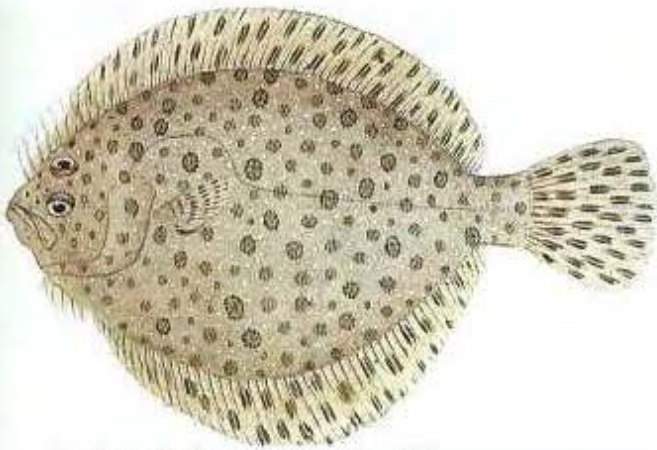
*Pseudorhombus jenynsii* 434  
7 ~ ● ♥ ◻ ◻ 26°C sg: 1.022 27 cm 300L



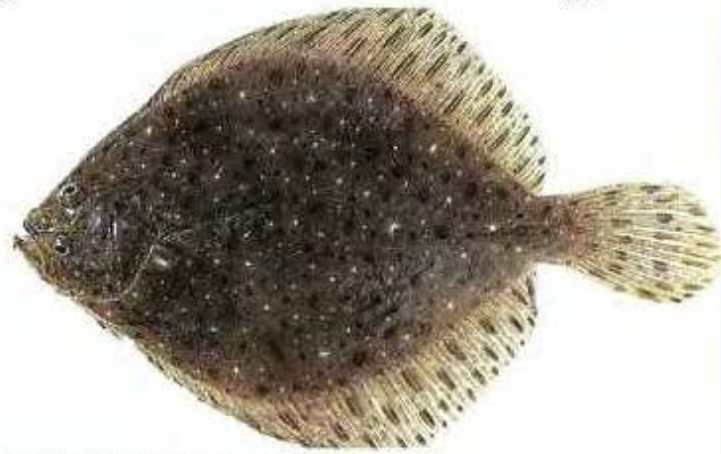
*Pseudorhombus* sp. 434  
7 ~ ● ♥ ◻ ◻ 26°C sg: 1.022 30 cm 300L



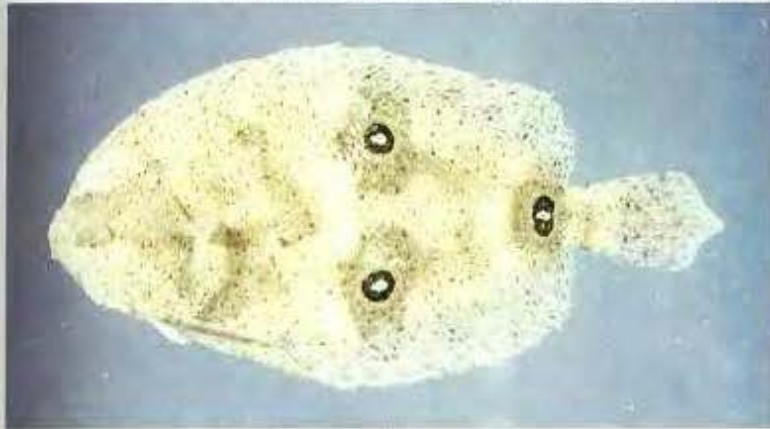
*Zeugopterus punctatus* 434  
14 ~ ● ♥ ◻ ◻ 20°C sg: 1.024 25 cm 300L



*Scopthalmus aquosus* 434  
1 ~ ♀ ♂ ✕ ☐ ☐ 23°C sg: 1.023 45 cm 500L



*Scopthalmus aquosus* 434  
1 ~ ♀ ♂ ✕ ☐ ☐ 23°C sg: 1.023 45 cm 500L



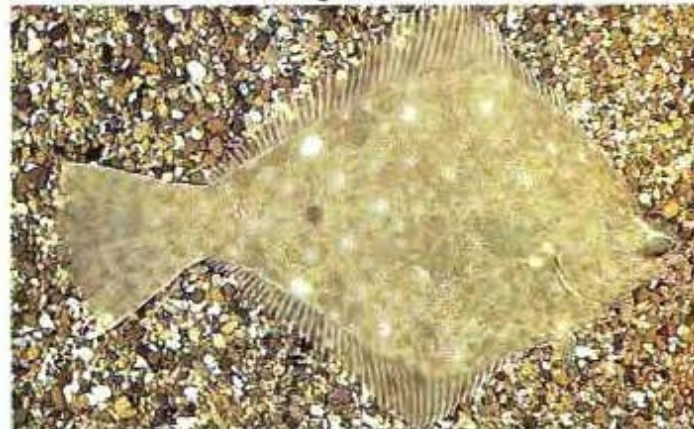
*Ancylopsetta dilecta* 434  
2 ~ ♀ ♥ ☐ ☐ 26°C sg: 1.022 25 cm 300L



*Scopthalmus rhombus* 434  
14 ~ ♀ ♂ ✕ ☐ ☐ 16°C sg: 1.024 61 cm 600L



*Pseudopleuronectes americanus* 435  
1 ~ ♀ ♂ ✕ ☐ ☐ 10°C sg: 1.024 64 cm 600L



*Hypsopsetta guttulata* 435  
3 ~ ♀ ♥ ☐ ☐ 26°C sg: 1.022 46 cm 500L



*Lepidopsetta bilineata* 435  
3 ~ ♀ ♂ ✕ ☐ ☐ 26°C sg: 1.022 60 cm 600L



*Eopsetta grigorjewi* 435  
5, 7 ~ ♀ ♥ ☐ ☐ 26°C sg: 1.022 40 cm 400L



*Platichthys stellatus* 435  
4-5 ♀ ♂ ♀ ♂ ♀ ♂ 24°C sg: 1.023 91 cm 1000L



*Platichthys flesus* 435  
14 ♀ ♂ ♀ ♂ ♀ ♂ 16°C sg: 1.024 51 cm 500L



*Pleuronichthys cornutus* 435  
7 ♀ ♂ ♀ ♂ ♀ ♂ 26°C sg: 1.022 30 cm 300L



*Pleuronichthys ocellatus* 435  
3 ♀ ♂ ♀ ♂ ♀ ♂ 26°C sg: 1.022 30 cm 300L



*Pleuronectes platessa* 435  
14 ♀ ♂ ♀ ♂ ♀ ♂ 25°C sg: 1.022 71 cm 800L



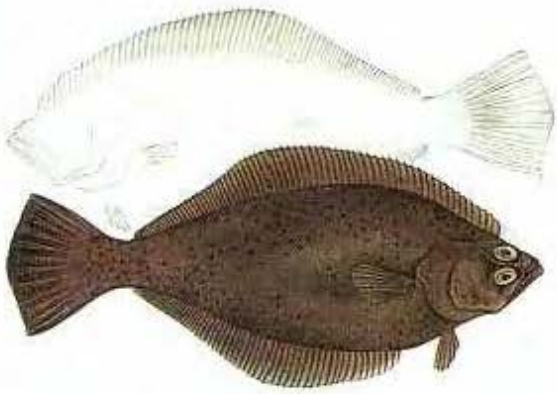
*Psettichthys melanostictus* 435  
4 ♀ ♂ ♀ ♂ ♀ ♂ 22°C sg: 1.024 63 cm 600L



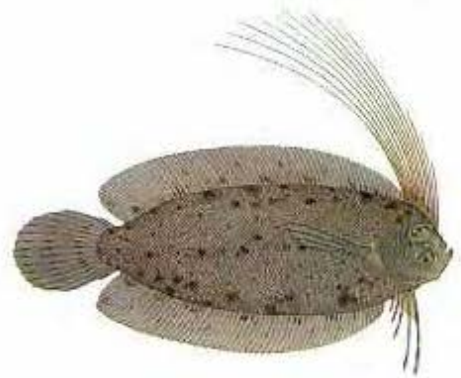
*Pleuronichthys coenosus* 435  
4 ♀ ♂ ♀ ♂ ♀ ♂ 22°C sg: 1.024 36 cm 400L



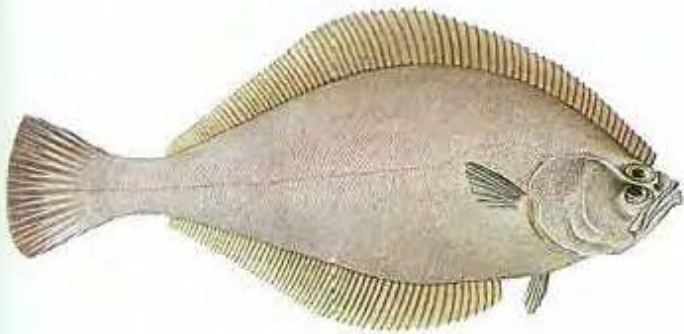
*Pleuronichthys verticalis* 435  
3 ♀ ♂ ♀ ♂ ♀ ♂ 26°C sg: 1.022 37 cm 400L



*Hippoglossoides robustus* 435  
5 ~ ♀ ♥ 📏 📏 26°C sg: 1.022 30 cm 300L



*Samaris cristatus* 435  
7-10 ~ ♀ ♥ 📏 📏 26°C sg: 1.022 17 cm 200L



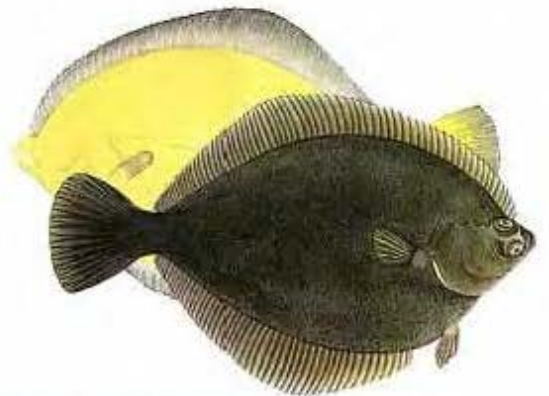
*Hippoglossoides dubius* 435  
5 ~ ♀ ♥ ✂ 📏 📏 26°C sg: 1.022 45 cm 500L



*Hippoglossus stenolepis* 435  
5 ~ ♀ ♥ ✂ 📏 📏 26°C sg: 1.022 250 cm 3000L



*Kareius bicoloratus* 435  
5 ~ ♀ ♥ ✂ 📏 📏 26°C sg: 1.022 50 cm 500L



*Pleuronectes pallasii* 435  
7 ~ ♀ ♥ 📏 📏 26°C sg: 1.022 25 cm 300L

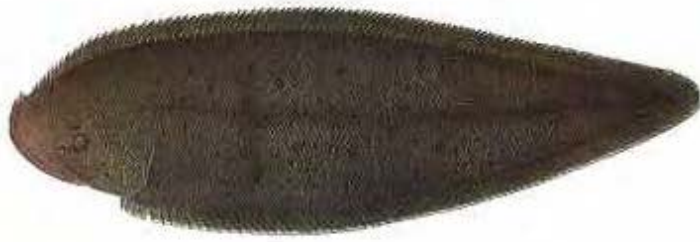


*Limanda schrenki* 435  
5 ~ ♀ ♥ ✂ 📏 📏 26°C sg: 1.022 50 cm 500L



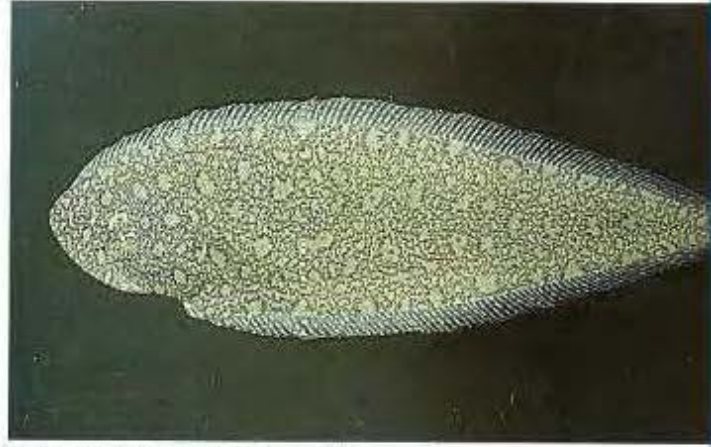
*Verasper variegatus* 435  
5 ~ ♀ ♥ ✂ 📏 📏 26°C sg: 1.022 60 cm 600L

614

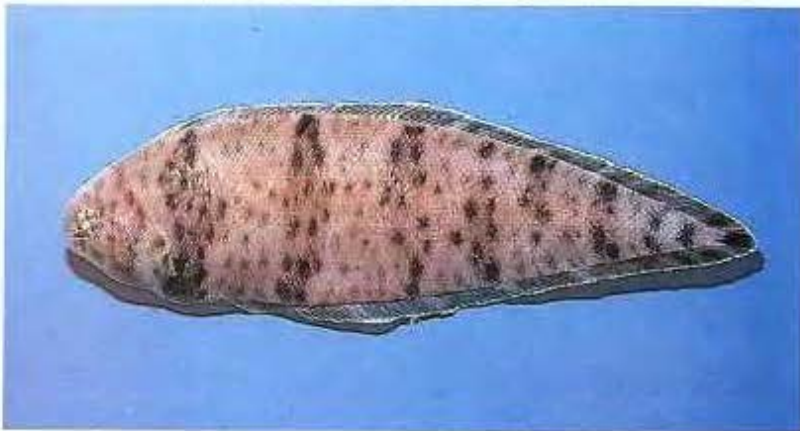


*Paraplagusia japonica* 436  
7 ~ ● ♥ ◻ ◻ 26°C sg: 1.022 35 cm 400L

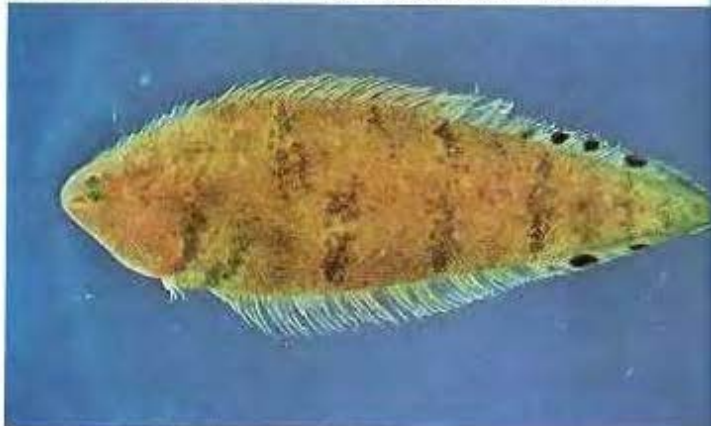
#524



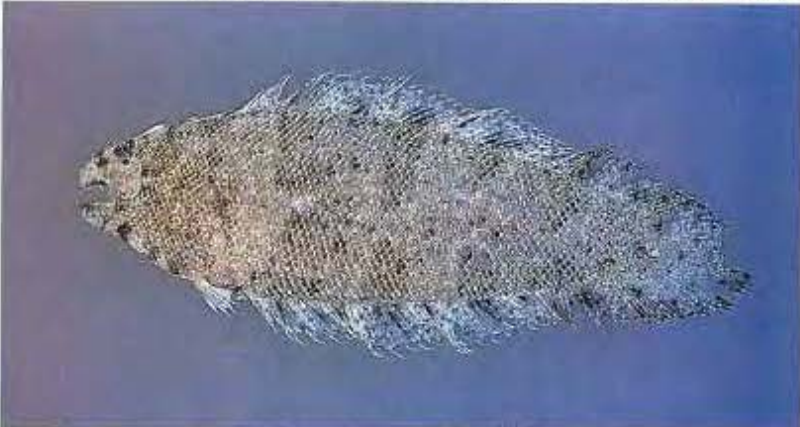
*Paraplagusia bilineata* 436  
7-9 ~ ● ♥ ◻ ◻ 26°C sg: 1.022 30 cm 300L



*Symphurus elongatus* 436  
3 ~ ● ♥ ◻ ◻ 26°C sg: 1.022 22.5 cm 300L



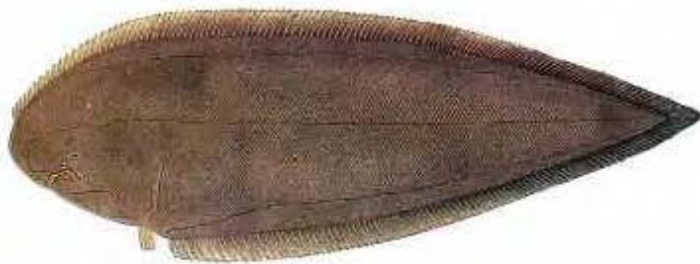
*Symphurus fasciolaris* 436  
3 ~ ● ♥ ◻ ◻ 26°C sg: 1.022 25 cm 300L



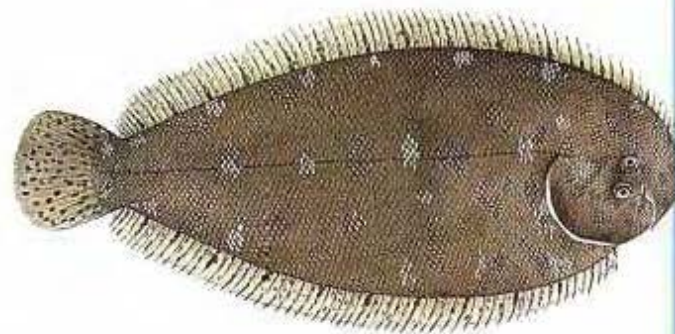
*Symphurus arawak* 436  
2 ~ ● ♥ ◻ ◻ 26°C sg: 1.022 51 cm 300L



*Symphurus arawak* 436  
2 ~ ● ♥ ◻ ◻ 26°C sg: 1.022 51 cm 500L



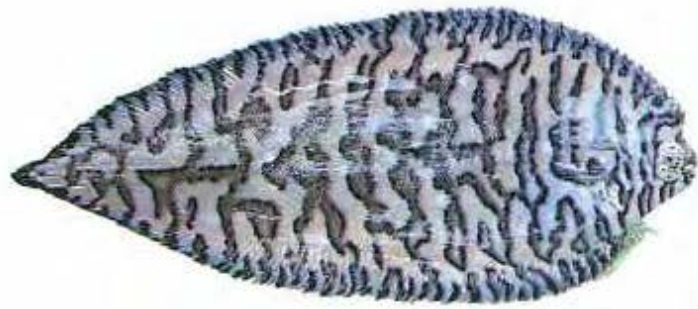
*Cynoglossus joyneri* 436  
5, 7 ~ ● ♥ ◻ ◻ 26°C sg: 1.022 35 cm 400L



*Heteromycteris japonicus* 437  
7 ~ ● ♥ ◻ ◻ 26°C sg: 1.022 13.5 cm 150L



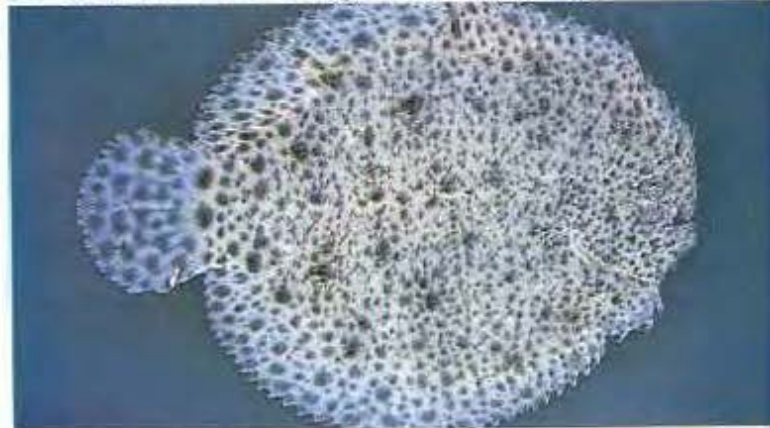
*Zebrias zebra* 437  
7-8 ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 19 cm 200L



*Soleichthys heterorhinos* 437  
6-9 ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 11 cm 100L



*Pardachirus pavoninus* 437  
6-9 ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 25 cm 300L



*Achirus lineatus* 437  
2 ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 10 cm 100L



*Trinectes maculatus* 437  
2 ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 20 cm 200L



*Trinectes maculatus* 437  
2 ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 20 cm 200L



*Trinectes maculatus?* 437  
2 ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 20 cm 200L



*Trinectes maculatus?* 437  
2 ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 20 cm 200L





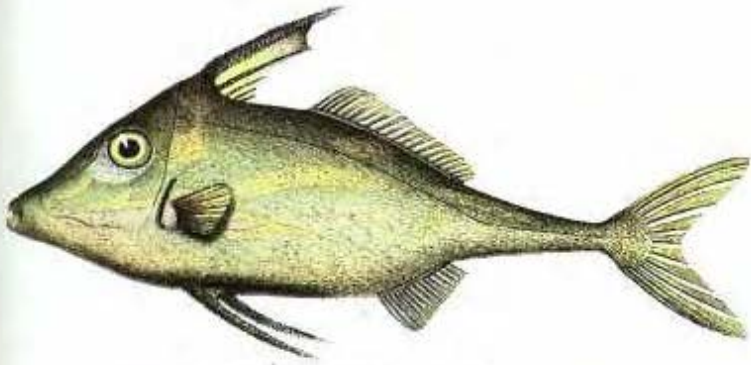




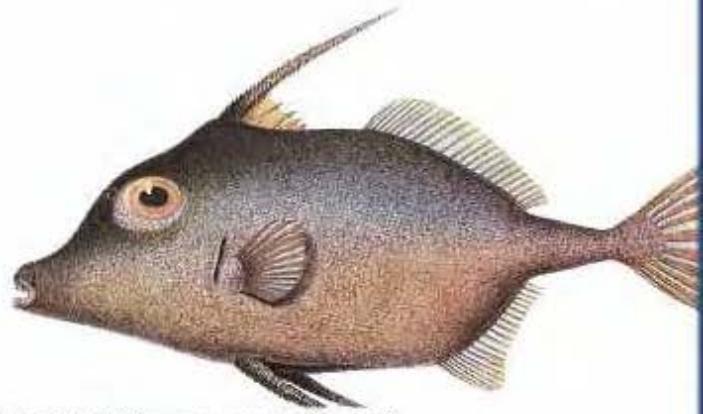
*Canthigaster amboinensis* 443  
6-9 ~ ~ ~ ~ ~ 26°C sg: 1.022 15 cm 150L

*Diodon Hystrix* 444  
Circumtrop. ♀ ~ ~ ~ ~ ~ 26°C sg: 1.022 60 cm 600L

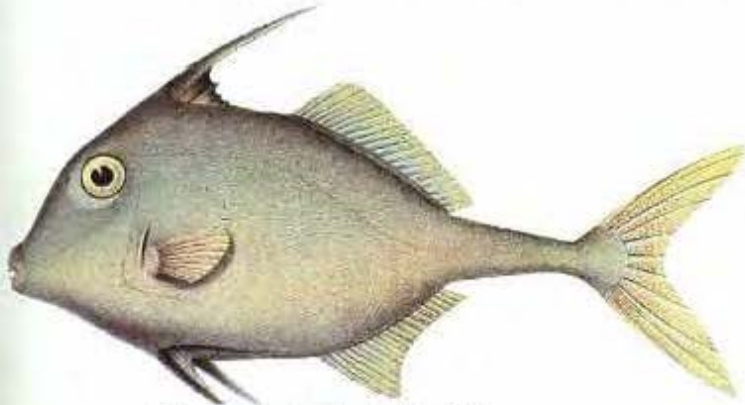




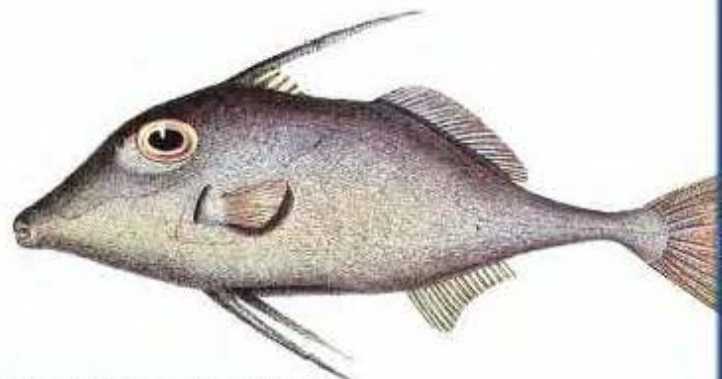
*Tripodichthys strigilifer* 439  
7, 9 ~ ♀ ♥ 📺 26°C sg: 1.022 20 cm 200L



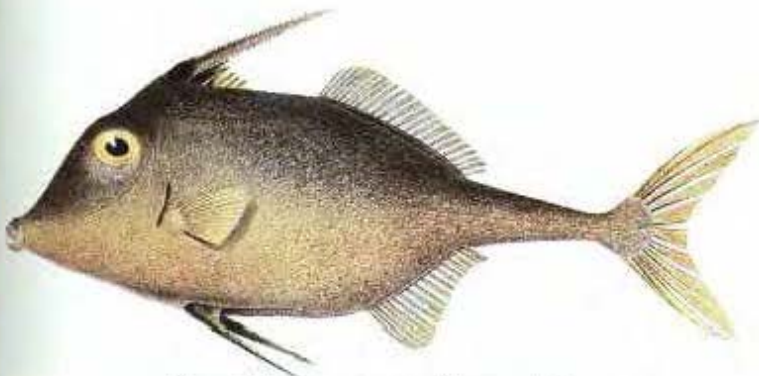
*Tripodichthys oxycephalus* 439  
7, 9 ~ ♀ ♥ 📺 26°C sg: 1.022 15 cm 150L



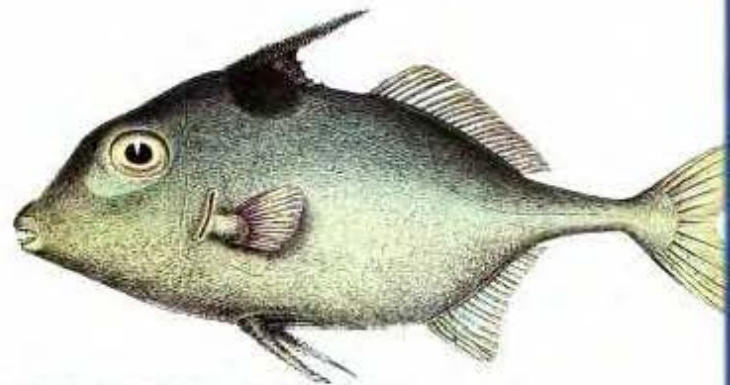
*Triacanthus nieuhofi* 439  
7 ~ ♀ ♥ 📺 26°C sg: 1.022 14 cm 150L



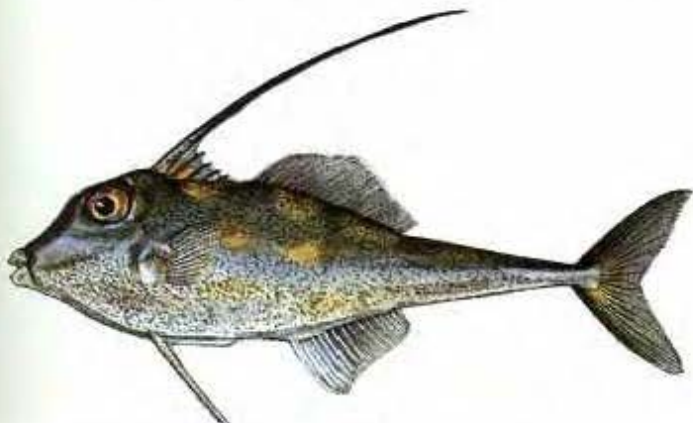
*Tripodichthys blochii* 439  
7, 9 ~ ♀ ♥ 📺 26°C sg: 1.024 15 cm 150L



*Tripodichthys angustifrons* 439  
7, 12 ~ ♀ ♥ 📺 24°C sg: 1.024 18 cm 200L



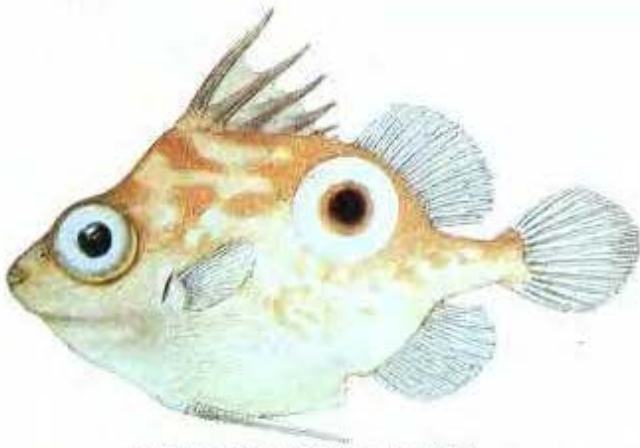
*Triacanthus biaculeatus* 439  
7-9 ~ ♀ ♥ 📺 26°C sg: 1.024 24 cm 250L



*Tripodichthys* sp. 439  
27 ~ ♀ ♥ 📺 24°C sg: 1.024 15 cm 150L



*Trixiphichthys weberi?* 439  
7 ~ ♀ ♥ 📺 26°C sg: 1.022 16 cm 200L



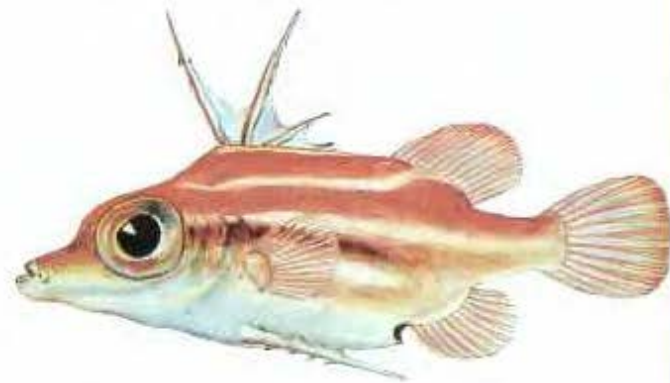
*Johnsonina eriomma* 438  
2~ ♀♥♣♠ 26°C sg: 1.022 13 cm 150L



*Halimochirurgus alcocki* 438  
7~ ♀♥♣♠ 26°C sg: 1.022 17 cm 200L



*Triacanthodes anomalus* 438  
7~ ♀♥♣♠ 26°C sg: 1.022 10 cm 100L



*Paratriacanthodes retrospinis* 438  
7, 9~ ♀♥♣♠ 26°C sg: 1.022 9 cm 100L



*Tripodichthys blochii* 439  
7, 9~ ♀♥♣♠ 26°C sg: 1.022 15 cm 150L



*Tripodichthys strigillifer* 439  
7, 9~ ♀♥♣♠ 26°C sg: 1.022 20 cm 200L



*Tripodichthys blochii* 439  
7, 9~ ♀♥♣♠ 26°C sg: 1.022 15 cm 150L



*Tripodichthys strigillifer* 439  
7, 9~ ♀♥♣♠ 26°C sg: 1.022 20 cm 200L



*Balistoides conspicillum* 440  
7-9 ♀ ~ ~ ~ ~ ~ 26°C sg: 1.022 50 cm 500L

622



*Pseudobalistes flavimarginatus* 440  
6-10 ♀ ♂ ~ ✖ ☑ 26°C sg: 1.022 60 cm 600L

#529



*Balistoides conspicillum* 440  
7-9 ♀ ♂ ~ ✖ ☑ 26°C sg: 1.022 50 cm 500L



*Melichthys niger* 440  
Circumtrop. ♀ ♂ ~ ✖ ☑ 26°C sg: 1.022 35 cm 400L



*Melichthys niger* (var.) 440  
Circumtrop. ♀ ♂ ~ ✖ ☑ 26°C sg: 1.022 35 cm 400L



*Melichthys vidua* 440  
6-10 ♀ ♂ ~ ✖ ☑ 26°C sg: 1.022 40 cm 400L



*Melichthys indicus* 440  
9 ♀ ♂ ~ ✖ ☑ 26°C sg: 1.022 25 cm 300L



*Pseudobalistes flavimarginatus* 440  
6-10 ♀ ♂ ~ ✖ ☑ 26°C sg: 1.022 60 cm 600L



*Pseudobalistes naufragum* 440  
3 ♀ ♂ ~ ✖ ☑ 26°C sg: 1.022 40 cm 400L



*Abalistes stellatus* 440  
7-10 ♀ ~ ~ ~ 0 \* ☒ ☒ 26°C sg: 1.022 60 cm 600L



*Balistapus undulatus* 440  
7-10 ♀ ~ ~ ~ 0 \* ☒ ☒ 26°C sg: 1.022 30 cm 300L



*Balistoides conspicillum* 440  
7-9 ♀ ~ ~ ~ 0 \* ☒ ☒ 26°C sg: 1.022 50 cm 500L



*Melichthys vidua* 440  
6-10 ♀ ~ ~ ~ 0 \* ☒ ☒ 26°C sg: 1.022 40 cm 400L



*Melichthys indicus* 440  
9 ♀ ~ ~ ~ 0 \* ☒ ☒ 26°C sg: 1.022 25 cm 300L



*Melichthys indicus* 440  
9 ♀ ~ ~ ~ 0 \* ☒ ☒ 26°C sg: 1.022 25 cm 300L



*Xanthichthys auromarginatus* 440  
6-9 ♀ ~ ~ ~ 0 \* ☒ ☒ 26°C sg: 1.022 20 cm 200L



*Xanthichthys auromarginatus* 440  
6-9 ♀ ~ ~ ~ 0 \* ☒ ☒ 26°C sg: 1.022 20 cm 200L

624



*Xanthichthys ringens* 440  
2 ♀ ~ ~ ~ ♂ \* ☒ ☒ 26°C sg: 1.022 25 cm 300L

#531



*Xanthichthys ringens* 440  
2 ♀ ~ ~ ~ ♂ \* ☒ ☒ 26°C sg: 1.022 25 cm 300L



*Sufflamen* 440  
7, 9 ♀ ~ ~ ~ ♂ \* ☒ ☒ 26°C sg: 1.022 25 cm 300L



*Xanthichthys mento* 440  
3, 6-7 ♀ ~ ~ ~ ♂ \* ☒ ☒ 26°C sg: 1.022 30 cm 300L



*Sufflamen albicaudatus* 440  
10 ♀ ~ ~ ~ ♂ \* ☒ ☒ 26°C sg: 1.022 30 cm 300L



*Sufflamen chrysopterus* (juv.) 440  
7-9 ♀ ~ ~ ~ ♂ \* ☒ ☒ 26°C sg: 1.022 30 cm 300L



*Sufflamen bursa* 440  
7-9 ♀ ~ ~ ~ ♂ \* ☒ ☒ 26°C sg: 1.022 25 cm 300L



*Sufflamen fraenatus* 440  
7-9 ♀ ~ ~ ~ ♂ \* ☒ ☒ 26°C sg: 1.022 40 cm 400L







*Pseudobalistes fuscus* 440  
7-10 ♀ ~ ~ ~ ~ ~ 26°C sg: 1.022 55 cm 500L



*Balistoides viridescens* 440  
7-10 ♀ ~ ~ ~ ~ ~ 26°C sg: 1.022 70 cm 700L



*Rhinecanthus assasi* 440  
7-10 ♀ ~ ~ ~ ~ ~ 26°C sg: 1.022 30 cm 300L



*Pseudobalistes fuscus* (juv.) 440  
7-10 ♀ ~ ~ ~ ~ ~ 26°C sg: 1.022 55 cm 500L



*Pseudobalistes fuscus* 440  
7-10 ♀ ~ ~ ~ ~ ~ 26°C sg: 1.022 55 cm 500L



*Rhinecanthus aculeatus* 440  
7-9 ♀ ~ ~ ~ ~ ~ 26°C sg: 1.022 30 cm 300L



*Rhinecanthus rectangularus* 440  
7-9 ♀ ~ ~ ~ ~ ~ 26°C sg: 1.022 30 cm 300L



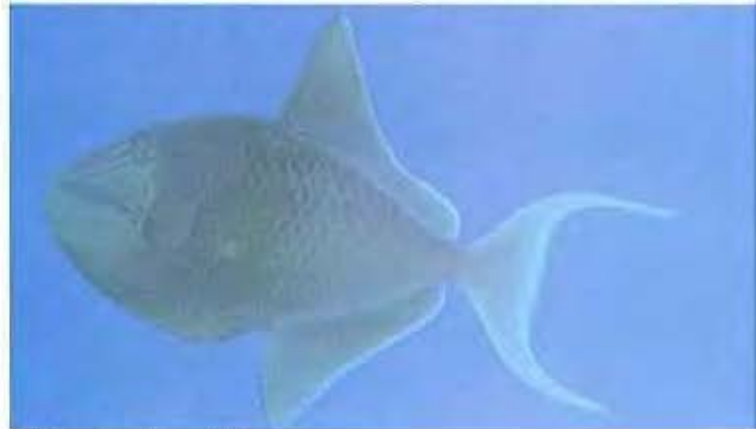
*Sufflamen bursa* 440  
7-9 ♀ ~ ~ ~ ♂ ✖ 📺 26°C sg: 1.022 25 cm 300L



*Sufflamen chrysopterus* 440  
7-9 ♀ ~ ~ ~ ♂ ✖ 📺 26°C sg: 1.022 30 cm 300L



*Sufflamen fraenatus* 440  
7-9 ♀ ~ ~ ~ ♂ ✖ 📺 26°C sg: 1.022 40 cm 400L



*Odonus niger* 440  
7-10 ♀ ~ ~ ~ ♂ ✖ 📺 26°C sg: 1.022 50 cm 500L



*Amanses scopas* 440  
7-10 ♀ ~ ~ ~ ♂ ✖ 📺 26°C sg: 1.022 20 cm 200L



*Cantherhines pardalis* 440  
7-10 ♀ ~ ~ ~ ♂ ✖ 📺 26°C sg: 1.022 27 cm 300L



*Cantherhines dumerili* 440  
7-9 ♀ ~ ~ ~ ♂ ✖ 📺 26°C sg: 1.022 35 cm 400L



*Cantherhines dumerili* 440  
7-9 ♀ ~ ~ ~ ♂ ✖ 📺 26°C sg: 1.022 35 cm 400L



*Rhinecanthus lunula* 440  
6-8 ♀ ~ ~ ~ ♂ \* ☒ ☒ 26°C sg: 1.022 19.4 cm 200L



*Rhinecanthus verrucosus* 440  
7 ♀ ~ ~ ~ ♂ \* ☒ ☒ 26°C sg: 1.022 30 cm 300L



*Monacanthus tuckeri* 440  
2 ♀ ~ ~ ~ ♂ \* ☒ ☒ 26°C sg: 1.022 9 cm 100L



*Monacanthus tuckeri* 440  
2 ♀ ~ ~ ~ ♂ \* ☒ ☒ 26°C sg: 1.022 9 cm 100L



*Monacanthus ciliatus* 440  
2, 13 ♀ ~ ~ ~ ♂ \* ☒ ☒ 26°C sg: 1.022 20 cm 200L



*Monacanthus ciliatus* 440  
2, 13 ♀ ~ ~ ~ ♂ \* ☒ ☒ 26°C sg: 1.022 20 cm 200L



*Monacanthus hispidus* 440  
2, 13 ♀ ~ ~ ~ ♂ \* ☒ ☒ 26°C sg: 1.022 25 cm 300L



*Monacanthus hispidus* 440  
2, 13 ♀ ~ ~ ~ ♂ \* ☒ ☒ 26°C sg: 1.022 25 cm 300L



*Monacanthus chinensis* 440  
7, 8 ♀ ~ ♀ ♀ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 25 cm 300L



*Monacanthus chinensis* 440  
7-8 ♀ ~ ♀ ♀ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 25 cm 300L



*Monacanthus filicauda* 440  
7-8 ♀ ~ ♀ ♀ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 25 cm 250L



*Cantherhines pullus* 440  
1-2 ♀ ~ ♀ ♀ ♀ ♀ ♀ ♀ ♀ 24°C sg: 1.023 20 cm 200L



*Cantherhines sandwichensis* 440  
6 ♀ ~ ♀ ♀ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 13 cm 150L



*Monacanthus chinensis* 440  
7-8 ♀ ~ ♀ ♀ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 25 cm 300L



*Cantherhines macroceros* 440  
1-2 ♀ ~ ♀ ♀ ♀ ♀ ♀ ♀ ♀ 24°C sg: 1.023 46 cm 500L



*Cantherhines macroceros* 440  
1-2 ♀ ~ ♀ ♀ ♀ ♀ ♀ ♀ ♀ 24°C sg: 1.023 46 cm 500L

630



*Meuschenia flavolineata* 440  
12 ♀ ~ ♀ + ♀ ♀ ♀ ♀ 23°C sg: 1.024 20 cm 200L

#537



*Meuschenia galii* 440  
12 ♀ ~ ♀ + ♀ ♀ ♀ ♀ 24°C sg: 1.022 23 cm 300L



*Meuschenia hippocrepis* 440  
12 ♀ ~ ♀ + ♀ ♀ ♀ ♀ 24°C sg: 1.023 50 cm 500L



*Oxymonacanthus longirostris* 440  
6-10 ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 7 cm 80L



*Pervagor melanocephalus* 440  
7-10 ♀ ~ ♀ + ♀ ♀ ♀ ♀ 26°C sg: 1.022 16 cm 200L



*Scobinichthys granulatus* 440  
8, 12 ♀ ~ ♀ + ♀ ♀ ♀ ♀ 24°C sg: 1.022 25 cm 300L



*Chaetodermis penicilligerus* 440  
5, 7-9 ♀ ~ ♀ + ♀ ♀ ♀ ♀ 26°C sg: 1.022 18 cm 200L



*Aluterus scriptus* 440  
Circumtrop. ♀ ~ ♀ + ♀ ♀ ♀ ♀ 26°C sg: 1.022 100 cm 1000L





*Stephanolepis cirrhifer* 440  
5, 7-9 ♀ ~ ♀ + ♀ ♀ ♀ ♀ 26°C sg: 1.022 40 cm 400L



*Cantherhines howensis* 440  
8 ♀ ~ ♀ + ♀ ♀ ♀ ♀ 26°C sg: 1.022 20 cm 200L



*Cantherhines verrucundus* 440  
6 ♀ ~ ♀ + ♀ ♀ ♀ ♀ 26°C sg: 1.022 12.5 cm 150L



*Cantherhines fronticinctus* 440  
7-9 ♀ ~ ♀ + ♀ ♀ ♀ ♀ 26°C sg: 1.022 14 cm 150L



? *Paramonacanthus japonicus* 440  
5, 7 ♀ ~ ♀ + ♀ ♀ ♀ ♀ 25°C sg: 1.022 16 cm 200L



*Meuschenia flavolineata* 440  
12 ♀ ~ ♀ + ♀ ♀ ♀ ♀ 24°C sg: 1.023 20 cm 200L



*Meuschenia hippocrepis* 440  
12 ♀ ~ ♀ + ♀ ♀ ♀ ♀ 24°C sg: 1.023 50 cm 500L



*Meuschenia venusta* 440  
12 ♀ ~ ♀ + ♀ ♀ ♀ ♀ 24°C sg: 1.023 18 cm 200L





*Pervagor melanocephalus* 440  
7-9 ♀ ~ ♀ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 16 cm 200L



*Pervagor melanocephalus* 440  
7-9 ♀ ~ ♀ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 16 cm 200L



*Pervagor aspricaudus* 440  
6 ♀ ~ ♀ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 15 cm 150L



*Pervagor spilosoma* 440  
6 ♀ ~ ♀ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 13 cm 150L



*Rudarius ercodes* 440  
5, 7 ♀ ~ ♀ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 10 cm 100L



*Acreichthys tomentosus* 440  
6-7 ♀ ~ ♀ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 9 cm 100L



*Pseudomonacanthus garretti* 440  
6 ♀ ~ ♀ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 9.4 cm 100L



*Rudarius minutus* 440 ♀  
8 ♀ ~ ♀ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 5 cm 50L

634

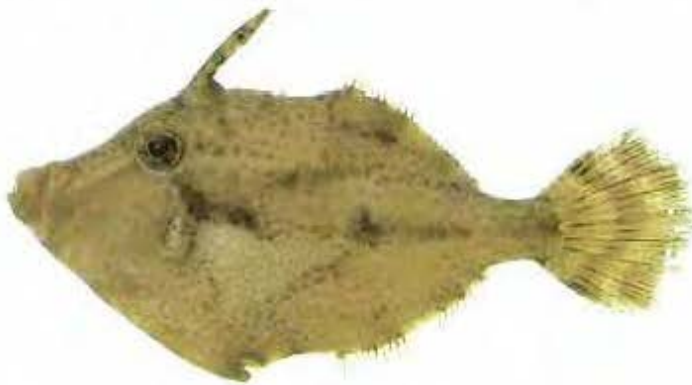


*Paramonacanthus oblongus* 440  
5, 7, 9 ♀ ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 16 cm 200L

#541



*Pencipelta vittiger* 440  
12 ♀ ~ ♀ ♀ ♀ ♀ ♀ 24°C sg: 1.023 10 cm 100L



*Paramonacanthus barnardi* 440  
9 ♀ ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 9 cm 100L



? *Paramonacanthus* sp. 440  
7-8 ♀ ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 20 cm 200L



*Chaetodermis pencilligerus* 440  
5, 7-9 ♀ ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 25 cm 250L



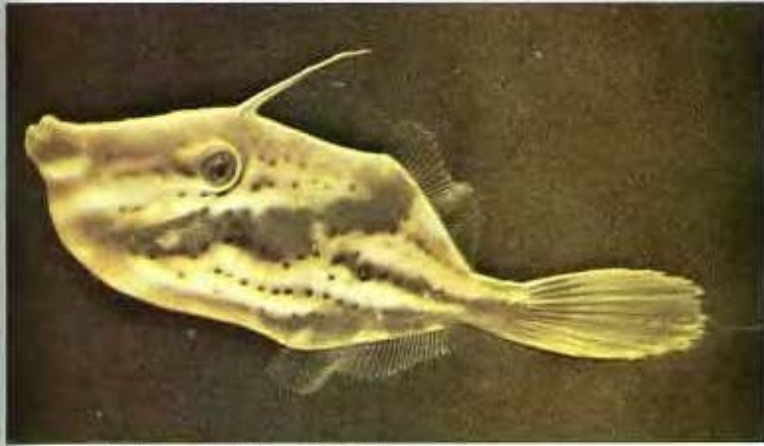
*Scobinichthys granulatus* 440  
8, 12 ♀ ~ ♀ ♀ ♀ ♀ ♀ 24°C sg: 1.022 25 cm 300L



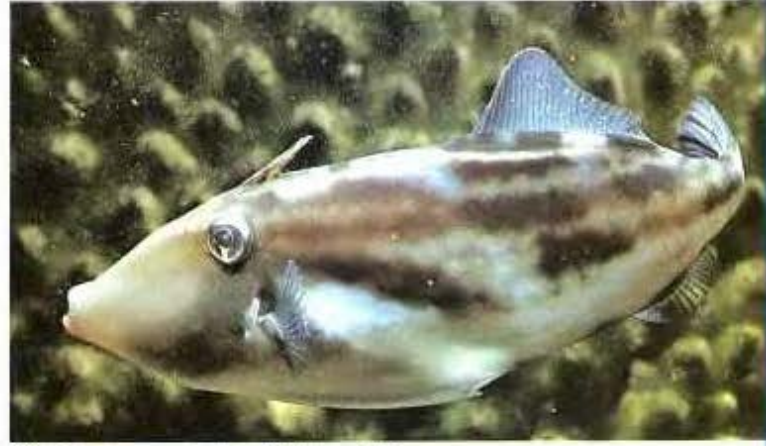
*Eubalichthys mosaicus* 440  
12 ♀ ~ ♀ ♀ ♀ ♀ ♀ 24°C sg: 1.023 30 cm 300L



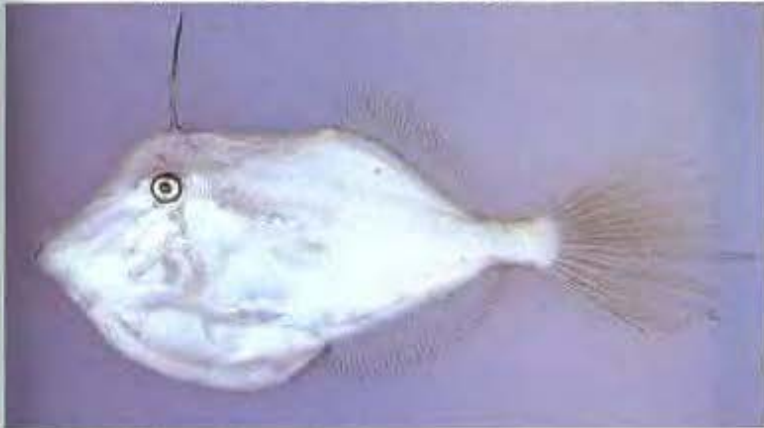
*Brachaluteres jacksonianus* 440  
12 ♀ ~ ♀ ♀ ♀ ♀ ♀ 24°C sg: 1.022 10 cm 100L



*Aluterus schoepfli* 440  
1-2 ♀ ~ ♀ ♀ ♀ ♀ ♀ ♀ 24°C sg: 1.023 60 cm 600L



*Thamnaconus modestus* 440  
5, 7-9 ♀ ~ ♀ ♀ ♀ ♀ ♀ 24°C sg: 1.023 30 cm 300L



*Aluterus monoceros* 440  
Circumtrop. ~ ♀ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 75 cm 800L



*Aluterus monoceros* 440  
Circumtrop. ~ ♀ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 75 cm 800L



?*Aluterus* sp. 440  
8 ♀ ~ ♀ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 40 cm 400L



*Pseudalutarius nasicornis* 440  
7-9 ♀ ~ ♀ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 18 cm 200L



*Acanthaluterus spilomelanura* 440  
12 ♀ ~ ♀ ♀ ♀ ♀ ♀ ♀ 24°C sg: 1.022 8 cm 80L



*Amanses scopas* 440  
7-10 ♀ ~ ♀ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 30 cm 300L





638



*Ostracion cubicus* 441  
7-10 ♀ ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 45 cm 500L

#545



*Ostracion cubicus* 441  
7-10 ♀ ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 45 cm 500L



*Ostracion meleagris meleagris* 441 ♂  
7-9 ♀ ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 14 cm 150L



*Ostracion meleagris meleagris* 441 ♀  
7-9 ♀ ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 15 cm 150L



*Ostracion trachys* 441  
7, 9 ♀ ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 15 cm 150L



*Tetrosomus gibbosus* 441  
7-10 ♀ ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 30 cm 300L



*Lactoria fornasini* 441  
5 ♀ ~ ♀ ♀ ♀ ♀ ♀ 23°C sg: 1.024 40 cm 400L



*Lactoria diaphanus* 441  
6-9 ♀ ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 25 cm 300L



*Kentrocapros aculeatus* 441  
5, 7 ♀ ~ ♀ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 13 cm 150L



*Strophurichthys robustus* 441  
12 ♀ ~ ♀ ♀ ♀ ♀ ♀ ♀ 24°C sg: 1.023 25 cm 300L



*Lactoria cornuta* 441  
8, 12 ♀ ~ ♀ ♀ ♀ ♀ ♀ ♀ 25°C sg: 1.023 50 cm 500L



*Ostracion immaculatus* 441  
6-10 ♀ ~ ♀ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 45 cm 500L



*Ostracion cubicus* 441  
7-10 ♀ ~ ♀ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 45 cm 500L



*Ostracion cubicus?* 441  
7-10 ♀ ~ ♀ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 45 cm 500L



*Ostracion cubicus* 441 (juv.)  
7-10 ♀ ~ ♀ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 45 cm 500L



*Ostracion solorensis* (juv.) 441  
 7 ♀ ~ ♀ ♂ ♥ 📏 📏 26°C sg: 1.022 15 cm 200L



*Ostracion solorensis* 441 ♂  
 7 ♀ ~ ♀ ♂ ♥ 📏 📏 26°C sg: 1.022 15 cm 200L



*Ostracion whitleyi* 441 ♀  
 6 ♀ ~ ♀ ♂ ♥ 📏 📏 26°C sg: 1.022 13 cm 150L



*Ostracion whitleyi* 441 ♂  
 6 ♀ ~ ♀ ♂ ♥ 📏 📏 26°C sg: 1.022 13 cm 150L



*Ostracion meleagris camurum* 441 ♀  
 6 ♀ ~ ♀ ♂ ♥ 📏 📏 26°C sg: 1.022 14 cm 150L



*Ostracion meleagris camurum* 441 ♂  
 6 ♀ ~ ♀ ♂ ♥ 📏 📏 26°C sg: 1.022 14 cm 150L



*Ostracion cyanurus* 441  
 9-10 ♀ ~ ♀ ♂ ♥ 📏 📏 26°C sg: 1.022 15 cm 150L



*Ostracion cyanurus* 441  
 9-10 ♀ ~ ♀ ♂ ♥ 📏 📏 26°C sg: 1.022 15 cm 150L





*Lactophrys quadricornis* 441  
 2 ♀ ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 43 cm 500L



*Lactophrys quadricornis* 441  
 2 ♀ ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 43 cm 500L



*Lactophrys polygonia* 441  
 2 ♀ ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 48 cm 500L



*Lactophrys polygonia* 441  
 2 ♀ ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 48 cm 500L



*Lactophrys bicaudalis* (juv.) 441  
 2 ♀ ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 43 cm 500L



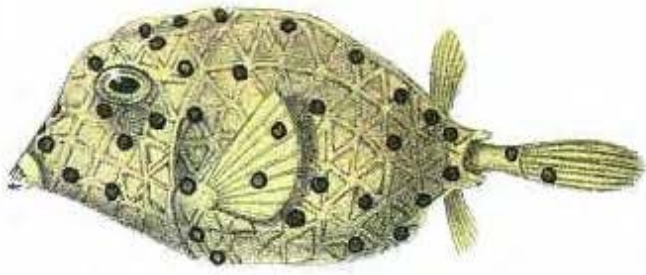
*Lactophrys bicaudalis* 441  
 2 ♀ ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 43 cm 500L



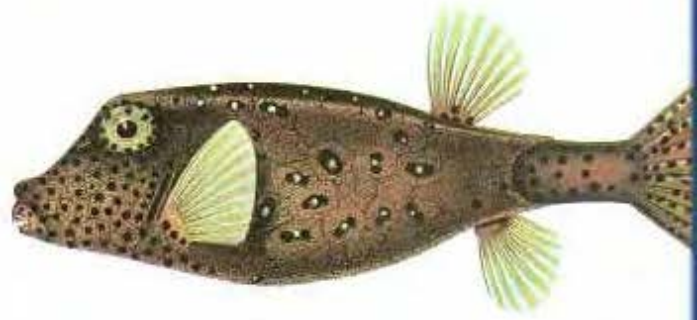
*Lactophrys trigonus* 441  
 2 ♀ ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 45 cm 500L



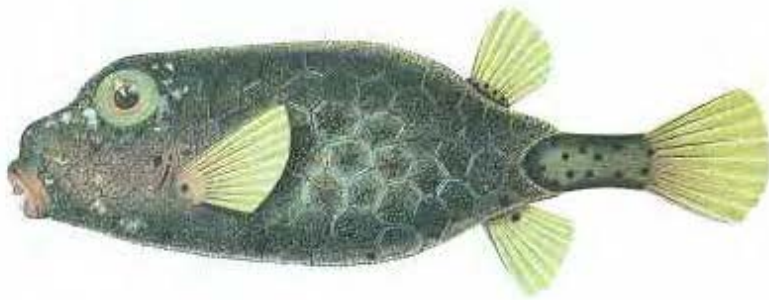
*Lactophrys triqueter* 441  
 2 ♀ ~ ♀ ♀ ♀ ♀ ♀ 26°C sg: 1.022 28 cm 300L



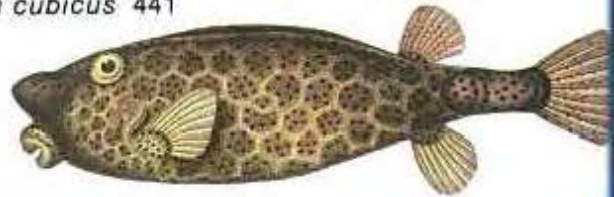
*Ostracion cubicus* 441



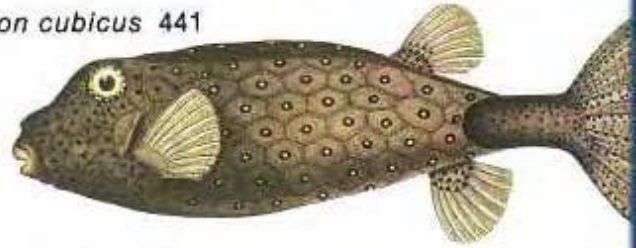
*Ostracion cubicus* 441



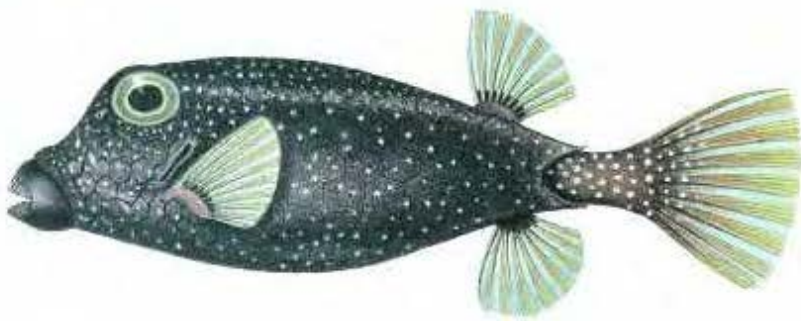
*Ostracion cubicus* 441



*Ostracion cubicus* 441



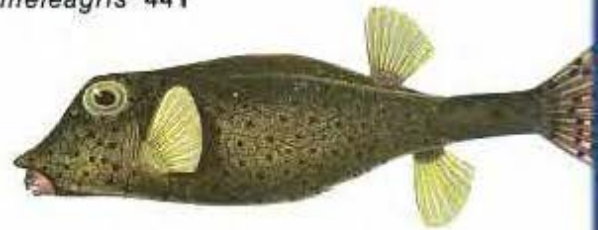
*Ostracion cubicus* 441



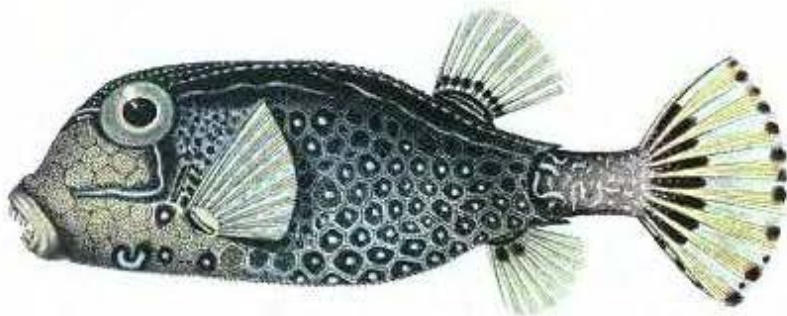
*Ostracion meleagris* 441



*Ostracion meleagris* 441



*Ostracion cubicus* 441



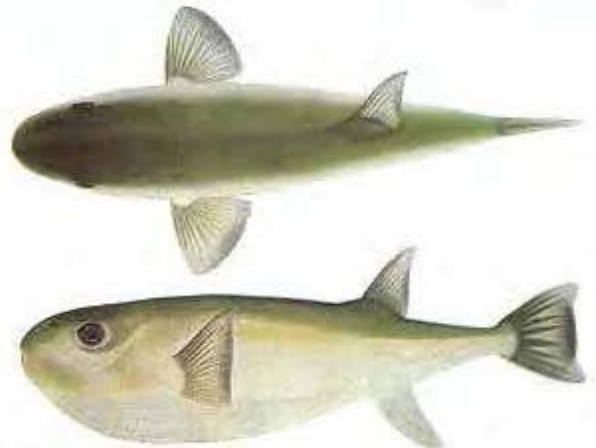
*Ostracion solorensis* 441



*Ostracion solorensis* 441



*Triodon macropterus* 442  
5, 7, 9 ~ ♀ ♂ ♀ ♂ ♀ ♂ 26°C sg: 1.022 50 cm 500L



*Lagocephalus gloveri* 443  
7-10 ~ ♀ ♂ ♀ ♂ ♀ ♂ 26°C sg: 1.022 40 cm 400L



*Amblyrhynchotes honckenii* 443  
5, 7, 9 ~ ♀ ♂ ♀ ♂ ♀ ♂ 26°C sg: 1.022 30 cm 300L



*Amblyrhynchotes* sp. 443  
7 ~ ♀ ♂ ♀ ♂ ♀ ♂ 26°C sg: 1.022 25 cm 300L



*Torquigener pleurogramma* 443  
12 ~ ♀ ♂ ♀ ♂ ♀ ♂ 24°C sg: 1.022 15 cm 200L



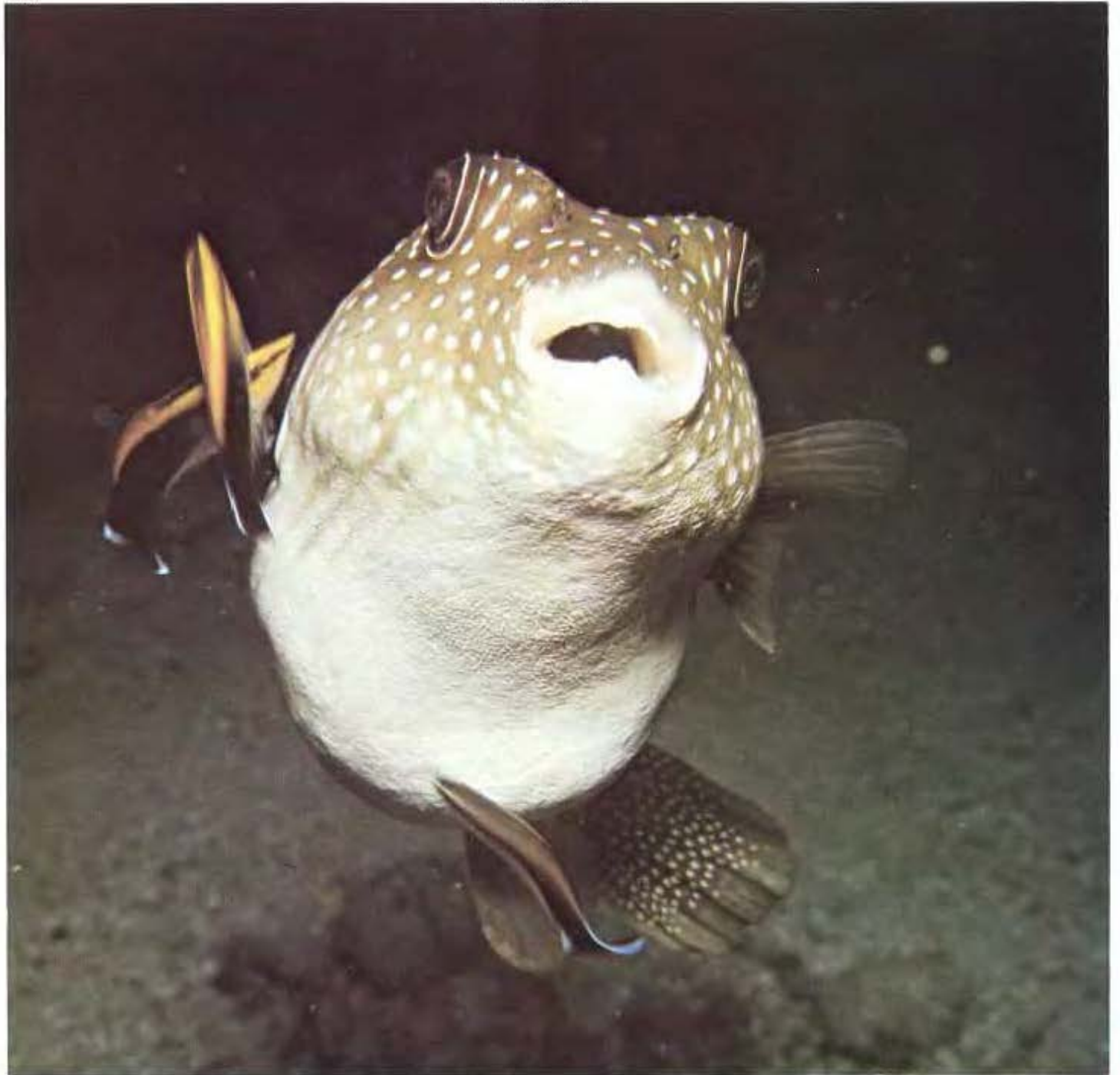
*Amblyrhynchotes hypselogenion* 443  
6-10 ~ ♀ ♂ ♀ ♂ ♀ ♂ 26°C sg: 1.022 18 cm 200L



*Omegophora* sp. 443  
12 ~ ♀ ♂ ♀ ♂ ♀ ♂ 24°C sg: 1.022 15 cm 200L



*Omegophora armilla* 443  
12 ~ ♀ ♂ ♀ ♂ ♀ ♂ 26°C sg: 1.022 14 cm 150L



*Arothron hispidus* 443

7-10 ~ ~ ~ ~ ~ 26°C sg: 1.022 50 cm 500L



*Arothron meleagris* 443  
3, 6-9 ~ ~ ~ ~ ~ 26°C sg: 1.022 15 cm 200L



*Arothron meleagris* 443  
3, 6-9 ~ ~ ~ ~ ~ 26°C sg: 1.022 15 cm 200L



*Arothron meleagris* (yellow phase) 443  
3, 6-9 ~ ~ ~ ~ ~ 26°C sg: 1.022 15 cm 200L



*Arothron meleagris* (black phase) 443  
3, 6-9 ~ ~ ~ ~ ~ 26°C sg: 1.022 15 cm 200L



*Arothron nigropunctatus* (gray) 443  
7-9 ~ ~ ~ ~ ~ 26°C sg: 1.022 40 cm 400L



*Arothron nigropunctatus* (1/2 yellow) 443  
7-9 ~ ~ ~ ~ ~ 26°C sg: 1.022 40 cm 400L



*Arothron hispidus* 443  
7-10 ~ ~ ~ ~ ~ 26°C sg: 1.022 50 cm 500L



*Arothron hispidus* (var) 443  
7-10 ~ ~ ~ ~ ~ 26°C sg: 1.022 50 cm 500L



*Arothron hispidus* 443  
7-10 ~ ~ ~ ☉ ✖ 🏠 📏 26°C sg: 1.022 50 cm 500L



*Arothron meleagris* 443  
3, 6-9 ~ ~ ~ ☉ ✖ 🏠 📏 26°C sg: 1.022 15 cm 200L



*Arothron nigropunctatus* 443  
7-9 ~ ~ ~ ☉ ✖ 🏠 📏 26°C sg: 1.022 40 cm 400L



*Arothron nigropunctatus* 443  
7-9 ~ ~ ~ ☉ ✖ 🏠 📏 26°C sg: 1.022 40 cm 400L



*Arothron stellatus* 443  
7-10 ~ ~ ~ ☉ ✖ 🏠 📏 26°C sg: 1.022 100 cm 1000L



*Arothron inconditus* 443  
9 ~ ~ ~ ☉ ✖ 🏠 📏 26°C sg: 1.022 40 cm 400L



*Omegophora cyanopunctata* 443  
12 ~ ~ ~ ☉ ✖ 🏠 📏 24°C sg: 1.022 12 cm 150L



*Amblyrhynchotes hypselogenion* 443  
6-10 ~ ~ ~ ☉ ✖ 🏠 📏 26°C sg: 1.022 18 cm 200L



*Arothron diadematus* 443  
6-10 ~ ~ ~ 26°C sg: 1.022 30 cm 300L



*Arothron mappa* 443  
7, 9 ~ ~ ~ 26°C sg: 1.022 70 cm 700L



*Arothron stellatus* 443  
6-10 ~ ~ ~ 26°C sg: 1.022 90 cm 1000L



*Arothron stellatus* 443  
6-10 ~ ~ ~ 26°C sg: 1.022 90 cm 1000L



*Arothron stellatus* (adult) 443  
6-10 ~ ~ ~ 26°C sg: 1.022 90 cm 1000L



*Arothron reticularis* 443  
7, 9 ~ ~ ~ 26°C sg: 1.022 35 cm 400L



*Canthigaster leopardus* 443  
7 ~ ~ ~ 26°C sg: 1.022 5 cm 50L



*Canthigaster tyleri* 443  
7, 9 ~ ~ ~ 26°C sg: 1.022 7 cm 80L



*Arothron manilensis* 443  
6-9 ♀ ~ ♂ ✱ ☞ 26°C sg: 1.022 50 cm 500L



*Arothron manilensis* 443  
6-9 ♀ ~ ♂ ✱ ☞ 26°C sg: 1.022 50 cm 500L



*Takifugu rubripes* 443  
5, 7 ♀ ~ ♂ ✱ ☞ 26°C sg: 1.022 80 cm 800L



*Arothron immaculatus* 443  
7-10 ♀ ~ ♂ ✱ ☞ 26°C sg: 1.022 30 cm 300L



*Takifugu pardalis* 443  
5, 7 ♀ ~ ♂ ✱ ☞ 26°C sg: 1.022 35 cm 400L



*Takifugu pardalis* 443  
5, 7 ♀ ~ ♂ ✱ ☞ 26°C sg: 1.022 35 cm 400L



*Takifugu niphobles* 443  
5 ♀ ~ ♂ ✱ ☞ 24°C sg: 1.023 20 cm 200L

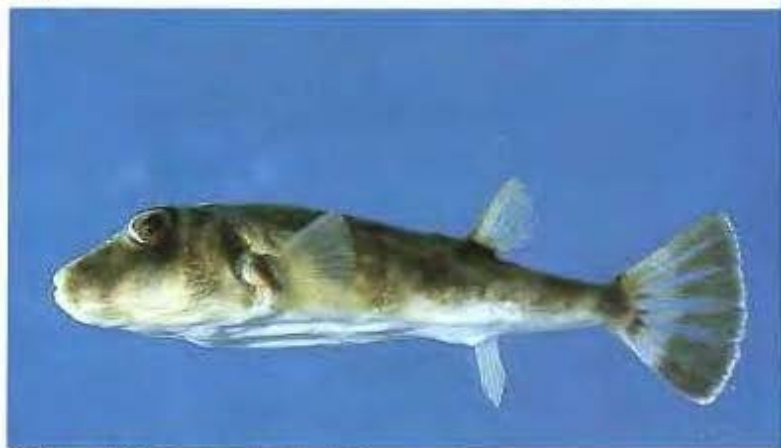


*Takifugu stictonotus* 443  
5, 7 ♀ ~ ♂ ✱ ☞ 26°C sg: 1.022 35 cm 350L





*Sphoeroides* sp. 443  
3 ♀ ~ ◯ ✱ ☒ 26°C sg: 1.022 20 cm 200L



*Sphoeroides annulatus* 443  
3 ~ ~ ◯ ✱ ☒ 26°C sg: 1.022 10 cm 100L



*Sphoeroides marmoratus* 443  
13 ♀ ~ ◯ ✱ ☒ 26°C sg: 1.022 30 cm 300L



*Sphoeroides erythrotaenia* 443  
7 ~ ~ ◯ ✱ ☒ 26°C sg: 1.022 9 cm 100L



*Sphoeroides spengleri* 443  
1, 2 ♀ ~ ◯ ✱ ☒ 24°C sg: 1.022 20 cm 200L



?*Chelonodon laticeps* 443  
9 ~ ~ ◯ ✱ ☒ 26°C sg: 1.022 20 cm 200L



*Sphoeroides hamiltoni* 443  
8 ♀ ~ ◯ ✱ ☒ 26°C sg: 1.018 12.5 cm 150L



?*Takifugu oblongus* 443  
7 ~ ~ ◯ ✱ ☒ 26°C sg: 1.022 20 cm 200L



*Canthigaster ambionensis* 443  
6-9 ~ ~ ~ ~ ~ 26°C sg: 1.022 15 cm 150L



*Canthigaster amboinensis* 443  
6-9 ~ ~ ~ ~ ~ 26°C sg: 1.022 15 cm 150L



*Canthigaster bennetti* 443  
7, 9 ~ ~ ~ ~ ~ 26°C sg: 1.022 10 cm 100L



*Canthigaster coronata* 443  
6-10 ~ ~ ~ ~ ~ 26°C sg: 1.022 13 cm 150L



*Canthigaster epilamprus* 443  
6-8 ~ ~ ~ ~ ~ 26°C sg: 1.022 7 cm 80L



*Canthigaster janthinoptera* 443  
7, 9 ~ ~ ~ ~ ~ 26°C sg: 1.022 9 cm 100L



*Canthigaster leopardus* 443  
7 ~ ~ ~ ~ ~ 26°C sg: 1.022 5 cm 50L



*Canthigaster smithae* 443  
7, 9 ~ ~ ~ ~ ~ 26°C sg: 1.022 13 cm 150L



*Canthigaster punctatissimus* 443  
3 ~ ♀ ♂ \* 📏 📐 26°C sg: 1.022 7.5 cm 100L



*Canthigaster jactator* 443  
5, 6-7 ~ ♀ ♂ \* 📏 📐 26°C sg: 1.022 8 cm 100L



*Canthigaster compressus* 443  
7 ~ ♀ ♂ \* 📏 📐 26°C sg: 1.022 10 cm 100L



*Canthigaster callisterna* 443  
12 ~ ♀ ♂ \* 📏 📐 24°C sg: 1.024 23 cm 250L



*Canthigaster bennetti* 443  
7, 9 ~ ♀ ♂ \* 📏 📐 26°C sg: 1.022 10 cm 100L



*Canthigaster rostrata* 443  
2, 13 ~ ♀ ♂ \* 📏 📐 26°C sg: 1.022 11 cm 100L



*Canthigaster coronata* 443  
6-10 ~ ♀ ♂ \* 📏 📐 26°C sg: 1.022 13 cm 150L



*Canthigaster valentini* 443  
7-9 ~ ♀ ♂ \* 📏 📐 26°C sg: 1.022 20 cm 200L





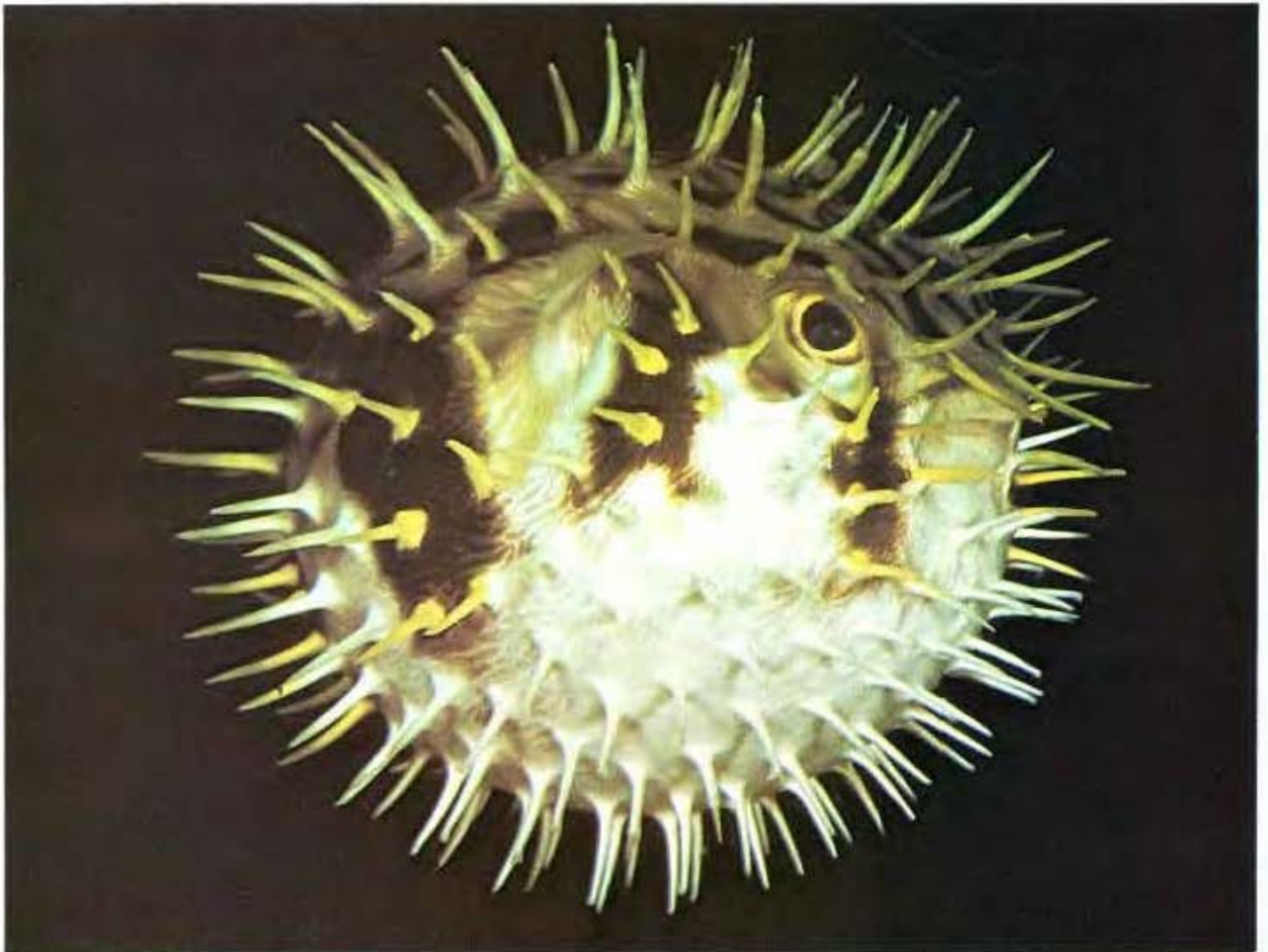


*Diodon hystrix* 444

Circumtrop. ♀ ♂ ♀ ♂ ♀ ♂ ♀ ♂ 26°C sg: 1.022 60 cm 600L

*Diodon nicthemerus* 444

12 ♀ ♂ ♀ ♂ ♀ ♂ ♀ ♂ 24°C sg: 1.023 28 cm 300L





*Chilomycterus antillarum* 444  
2 ~ ♀ ♂ ♀ ♂ ♀ ♂ 26°C sg: 1.022 25 cm 300L



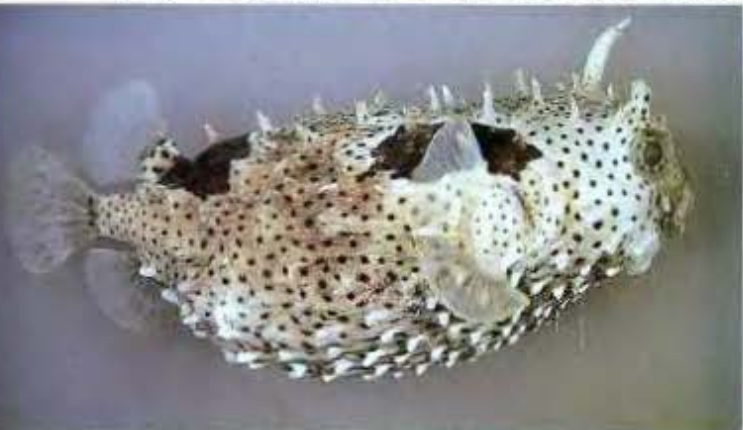
*Chilomycterus schoepfli* 444  
2 ~ ♀ ♂ ♀ ♂ ♀ ♂ 26°C sg: 1.022 25 cm 300L



*Chilomycterus schoepfli* 444  
2 ~ ♀ ♂ ♀ ♂ ♀ ♂ 26°C sg: 1.022 25 cm 300L



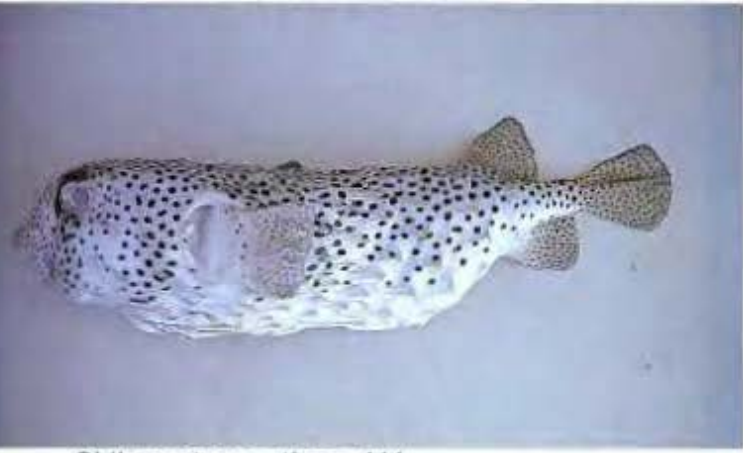
*Chilomycterus schoepfli* 444  
2 ~ ♀ ♂ ♀ ♂ ♀ ♂ 26°C sg: 1.022 25 cm 300L



*Chilomycterus antennatus* 444  
2, 13 ~ ♀ ♂ ♀ ♂ ♀ ♂ 26°C sg: 1.022 23 cm 250L



*Chilomycterus antennatus* 444  
2, 13 ~ ♀ ♂ ♀ ♂ ♀ ♂ 26°C sg: 1.022 23 cm 250L



*Chilomycterus atinga* 444  
1-2, 13 ~ ♀ ♂ ♀ ♂ ♀ ♂ 26°C sg: 1.022 46 cm 500L



*Chilomycterus spilostylus* 444  
7, 9-10 ~ ♀ ♂ ♀ ♂ ♀ ♂ 26°C sg: 1.022 34 cm 400L



*Diodon holacanthus* 444  
Circumtrop. ㄣ ㄣ ㊦ ㊦ ㊦ 26°C sg: 1.022 50 cm 500L



*Diodon holacanthus* 444  
Circumtrop. ㄣ ㄣ ㊦ ㊦ ㊦ 26°C sg: 1.022 50 cm 500L



*Lophodiodon calori* 444  
7-9 ㄣ ㄣ ㊦ ㊦ ㊦ 26°C sg: 1.022 20 cm 200L



*Diodon liturosus* 444  
5-9 ㄣ ㄣ ㊦ ㊦ ㊦ 26°C sg: 1.022 50 cm 500L



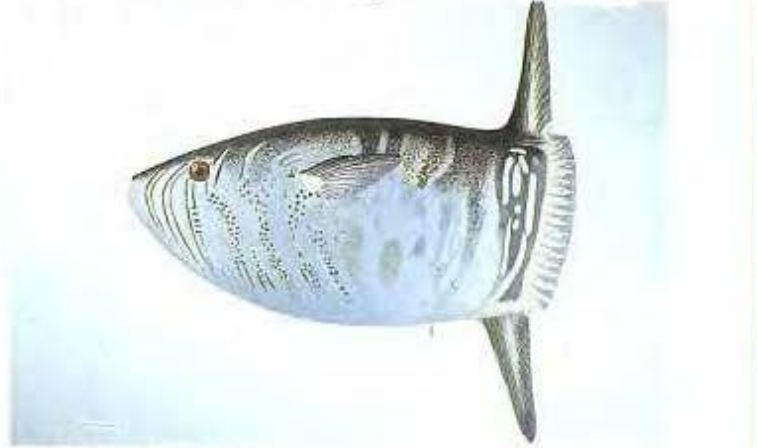
*Diodon hystrix* 444  
Circumtrop. ㄣ ㄣ ㊦ ㊦ ㊦ 26°C sg: 1.022 50 cm 500L



*Diodon myersi* 444  
8 ㄣ ㄣ ㊦ ㊦ ㊦ 26°C sg: 1.022 41 cm 400L



*Mola mola* 444  
Circumtrop. ㄣ ㄣ ㊦ ㊦ ㊦ 26°C sg: 1.022 300 cm 3000L



*Ranzania laevis* 445  
Circumtrop. ㄣ ㄣ ㊦ ㊦ ㊦ 26°C sg: 1.022 81 cm 800L





*Gymnothorax miliaris*, Peppered Moray. Family Muraenidae (54)

*Heteroconger hassi*, Spotted Garden Eel. Family Congridae (62)





*Dinematichthys riukuensis*, Yellow Brotula. Family Bythitidae (179)

*Halophryne queenslandiae*, Queensland Toadfish. Family Batrachoididae (181)





*Lophius piscatorius*, Bigeye Goosefish. Family Lophiidae (182)  
*Zeus faber*, Bigspot Dory. Family Zeidae (245)





*Trigloporus lastoviza*, Hardy Sea Robin. Family Triglididae (268)

*Clinocottus embryum*, Calico Sculpin. Family Cottidae (276)





*Epinephelus guaza*, Green Grouper. Family Serranidae (284)

*Epinephelus ongus*, White-dappled Grouper. Family Serranidae (284)





*Cephalopholis formosa*, Bluestripe Grouper. Family Serranidae (284)

*Pseudanthias bimaculatus*, Bluetip Anthias. Family Serranidae (284)





*Pseudanthias cooperi*, Cooper's Anthias. Family Serranidae (284)

*Pseudochromis polynemis*, Whitetail Dottyback. Family Pseudochromidae (286)





*Pseudochromis splendens*, Bandit Dottyback. Family Pseudochromidae (286)

*Pterapogon kauderni*, Banggai Cardinalfish. Family Apogonidae (297)







*Hoplolatilus luteus*, Yellow Tilefish. Family Malacanthidae (300)

*Centropyge woodheadi*, Woodhead's Dwarf Angelfish. Family Pomacanthidae (339)





*Centropyge aurantiacus*, Velvet Dwarf Angelfish. Family Pomacanthidae (339)

*Holacanthus limbaughi*, Limbaugh's Angelfish. Family Pomacanthidae (339)





*Chaetodontoplus coeruleopunctatus*, Yellowtail Angelfish. Family Pomacanthidae (339)

*Gomphosus tricolor*, Blue-tail Bird Wrasse. Family Labridae (358)





*Cheilinus abudjubbe*, Parrot Wrasse. Family Labridae (358)  
*Scarus bowersi*, Bowers's Parrotfish. Family Scaridae (360)





*Valenciennesa wardi*, Ward's Glider. Family Gobiidae (403)

*Cryptocentrus pavononoides*, Speckled Shrimp Goby. Family Gobiidae (403)





*Amblygobius rainfordi*, Rainford's Goby. Family Gobiidae (403)

*Siganus unimaculatus*, Bigspot Spinefoot. Family Siganidae (410)





*Bothus mancus*, Scribbled Flounder. Family Bothidae (434)

*Aracana ornata*, Ornate Cowfish, male. Family Ostracionidae (441)





*Aracana ornata*, Ornate Cowfish, female. Family Ostracionidae (441)

*Canthigaster papua*, Papuan Puffer. Family Tetraodontidae (443)





## ***Family Discussions***

The following discussions of families of fishes portrayed in this book are provided in order to give some additional information about the families and to act as an introduction to them. The discussions are necessarily brief, and for more information it is suggested that Nelson's book *Fishes of the World* be sought out.

Plate numbers referred to in the text appear (preceded by the number symbol, #) at center top of photo pages.

## Jawless Fishes (Plates 1 & 2)

The hagfishes (class Myxini, family Myxinidae) are jawless cartilaginous fishes, eel-like or worm-like in general shape, that are voracious scavengers feeding on the internal tissues and organs of dead or dying invertebrates and fishes. Commercial fishermen examining their catch, whether it is haddock, cod, mackerel, flatfishes, etc., may sometimes discover that some of the fishes are virtually hollow. The hagfish has bored its way into the fish with a set of rasp-like teeth. Polychaete worms may form a part of their diet in some areas.

Although not usually kept as aquarium fishes by home aquarists, hagfishes may sometimes be seen in public aquariums. They are cool- to cold-water fishes that become distressed if the water temperature rises to more than 10-13° C. The water should be marine in character, hagfishes usually not surviving well in fresh or brackish conditions. They are commonly found almost completely buried in soft mud or clay bottoms.

Although both male and female sex organs are contained in the same individual, only one or the other functions at one time (i.e., they are not synchronous hermaphrodites). There is no particular spawning season, and as many as 30 eggs can be laid by a single female in any month of the year. The eggs are large (up to 2.5 cm in diameter), yolky, and covered with a horny material. Unlike the lampreys, which have a distinct larval stage, the hagfishes do not undergo a metamorphosis.

Aquarists should be warned that the name "slime eel" is well earned as they can turn an aquarium into a slimy mess if suitably disturbed. Under the confined conditions of the aquarium the slime can have poisonous qualities.

## Sharks, Rays, and Chimaeras (Plates 1-16)

The sharks, rays, and chimaeras are all grouped into the class Chondrichthys, commonly called the cartilaginous fishes (although as noted above the hagfishes and lampreys are also cartilaginous fishes). They are divided into two main evolutionary lines, the subclass Holocephali (chimaeras) and subclass Elasmobranchii (sharks and rays), with the former being the most primitive.

The chimaeras are grouped into 1-3 families, the divisions usually based on the shape of the snout (plownose, shortnose, and longnose chimaeras). There are usually two dorsal fins, the first being preceded by a spine that in some cases has a poison gland associated with it.

The males have paired claspers used for internal fertilization. They also may have an accessory clasper-like structure in front of the eyes, the function of which is still not well known. The eggs are encased in brown horny capsules.

Most chimaeras are found in cool to cold deep marine waters. They grow to fairly large sizes (normally to 1 m but up to 1.5 m) and do not take to handling very well. All this causes difficulties to those wishing to keep any in captivity. They normally do not last more than a few months in public aquariums although one has been kept alive for more than two years by University of Washington aquarists. These rather poor swimmers eat small invertebrates and fishes and are sometimes caught on hook and line, perishing quickly once removed from the water.

Sharks are a fairly large (approximately 250 species) and highly diversified (about 13 families in the superorder Selachimorpha) group. Most people are familiar with some sharks, particularly since the popular motion picture *Jaws* and its sequels were released. Almost every public aquarium or oceanarium keeps their share of sharks in large tanks that are preferably circular or doughnut-shaped so that the larger free-swimming species can be in constant motion, a requirement for such species. Even with such facilities many sharks fare quite poorly in captivity, ceasing to feed and often almost blindly ramming into the sides of the tank. Certain sharks do well in captivity, and exhibitions of their feeding draw considerable crowds. Home aquarists are more limited in their selection and normally must choose small, bottom-dwelling sharks for their aquaria.

Almost all sharks are marine. There are a few species that are able to ascend rivers into pure fresh water; the almost land-locked shark of Lake Nicaragua is quite well known. They are found around the world, mostly in tropical and subtropical waters with fewer numbers in the temperate regions and practically none in the cold polar waters. They vary considerably in size from those barely 46 cm long to giants 15-20 m long.

Shark reproduction involves internal fertilization. Males are provided with claspers on the

inner edges of the pelvic fins. Development in most cases is ovoviviparous, while in others it may be oviparous or viviparous. In those that deposit eggs, the eggs are encased in horny capsules, sometimes highly ornamented, with long tendrils at the ends that become entangled (and thus anchored) with objects on the ocean floor. Some of the egg capsules have been successfully hatched in captivity.

Sharks are, without exception, carnivorous. Many are provided with very sharp, often serrated teeth that can do considerable damage to objects a lot harder than human flesh. Most sharks feed primarily on fishes, while others are scavengers feeding on whatever becomes available. Still others have teeth modified to feed on hard-shelled molluscs or crustaceans. The huge whale shark and basking shark, on the other hand, feed on small planktonic forms, primarily crustaceans. As for attacks on man, these are usually few and far between. Even then, in many cases the shark was provoked or it was a case of mistaken identity, the human victim appearing to the shark as its more natural prey (ex. seals).

Aquarists should be warned that even the small sharks that are kept in home aquaria have the potential of inflicting a severe bite on anyone foolish enough to become careless when handling them. These sharks are surprisingly strong and often are able to twist enough to bite at anything close enough, usually an arm. They are also quite adept at getting tangled in nets and slashing at the fingers that are freeing it from the mesh.

The two families of the order Hexanchiformes (frill sharks, *Chlamydoselachidae*, and cow sharks, *Hexanchidae*) have a single, spineless dorsal fin and six or seven gill slits. The Frill Shark (*Chlamydoselachus anguineus*) is snake-like in appearance and lives in deep water where it feeds mainly on squids. Of the cow sharks, the one most likely to be seen is the Sevengill Shark (*Notorynchus maculatus*), which is common in California bays as well as in the western Pacific. Sharks of both families are ovoviviparous.

The single family in the order Heterodontiformes, *Heterodontidae*, contains species that find their way into marine aquarists' tanks. *Heterodontus portusjacksoni*, the Port Jackson Shark, is one of these. It is also called the oyster-crusher because of its feeding habits. Aquarists should be wary of the sharp spines preceding each of its two dorsal fins. Horny egg cases with spiral flanges are laid by members of this family.

The order Lamniformes (with about seven families) contains most of the sharks. There are two spineless dorsal fins, an anal fin, and five gill slits. Some of the sharks in this order are small and very colorful or have interesting patterns and so are of interest to aquarists. Some of the carpet or nurse sharks, for example, are generally available to aquarists. First among these is probably the Atlantic Nurse Shark (*Ginglymostoma cirratum*), although it soon outgrows the tank in which it is housed. It is not very colorful but is quite docile, comparatively speaking. The carpet sharks are very colorful and in addition have fringes or lappets that add to their appeal. Most of these sharks also outgrow their tanks quite rapidly.

The family Scyliorhinidae (cat sharks) is by far the most important family of sharks to aquarists. It contains the smaller, more colorful species that do well in captivity. Almost all are bottom-dwellers feeding on the invertebrates and small fishes that are found there. Aquarists should be aware that some species grow large (over a yard) and many are from temperate regions, requiring cooler tank water. Most of the species kept in aquaria are from the Indo-West Pacific. Included in this family are the swell sharks that can fill their stomachs with air if they are removed from the water, much like a pufferfish. The species are ovoviviparous. No special care is needed for these small sharks other than a suitably large tank, plenty of good food, and perhaps an open area of sand.

Other members of the Lamniformes include the whale shark (family *Rhincodontidae*), the sand tigers (family *Odontaspidae*), the thresher, basking, and mackerel sharks (family *Lamnidae*), the hammerhead sharks (family *Sphyrnidae*), and the smooth dogfishes and requiem sharks (family *Carcharhinidae*). Almost all of these are too large for private tanks, and only a few are regularly seen in public aquariums. Among the better known sharks in this group are the Whale Shark, a monster that is said to reach as much as 15 m in length, the Gray Nurse Shark (perhaps responsible for many of the shark attacks in Australian waters), the thresher sharks with their unusually elongate upper tail lobes, the Great White Shark ("Jaws"), the Mako, and of course the Tiger Shark with its tiger-like stripes and reputation to match. Stomachs of Tiger Sharks have contained a wide variety of items from indigestible, inanimate garbage items to human body parts. With such a reputation many public aquariums have tried (mostly unsuccessfully) to keep them alive. Among the more unusual sharks can be included the hammerheads, so-called because of the bizarre development of their heads, with the eyes on the end of lateral extensions.

The order Squaliformes contains sharks with two dorsal fins (with or without spines), no anal fin, and five gill slits. Three families are currently included, the dogfish sharks (family

Squalidae), the saw sharks (family Pristiophoridae), and the angel sharks (family Squatinidae). Only some of the smaller squalids are kept in home aquaria, such as species of *Squalus* and *Cephaloscyllium*, and it is *Squalus acanthias* that is the shark commonly used in comparative anatomy labs. The smallest shark, *Squaliolus laticaudus*, which grows to about 25 cm, belongs to the Squalidae. The saw sharks should not be confused with the sawfishes (family Pristidae), which are rays, although the saw sharks have many ray-like characters and have a great superficial similarity to those fishes. The saw sharks have laterally positioned gill slits while those of the sawfishes are ventrally located. The angel sharks also are somewhat ray-like but they also have the gill slits laterally positioned. The angel sharks are also called monkfish. As their flattened body might lead one to guess, they live on or close to the bottom, often partially hidden in the sand.

The superorder Batidoidimorpha, Order Rajiformes, contains the rays (in the broad sense including the sawfishes, guitarfishes, skates, etc.). Only a few colorful species are kept by marine aquarists. All of these fishes are characterized in part by having the gill slits opening on the underside of the body.

Small members of the sawfishes (family Pristidae) are sometimes kept in home aquaria and commonly in public aquariums. They should be handled with care as the elongate snout provided with rows of sharp teeth (actually modified scales) along each side can cause considerable damage. Many an unlucky person who thought it was safe to hold one by the tail has scars to prove the fallacy of this idea. Normally the saw is used to slash through schools of fishes (mulletts, etc.), impaling some on the saw teeth. Sawfishes are found around the world in shallow tropical waters. They may stray into brackish or even fresh water, and, like a shark cousin, one species has become almost land-locked in Lake Nicaragua. The guitarfishes (family Rhinobatidae) are similar in shape to the sawfishes but are without the saw. They are too big for home aquarists but may find their way into public aquariums. More fascinating to aquarists are the electric rays (family Torpedinidae). These ovoviviparous fishes can generate electrical charges, some quite intense, and should be handled with great care. Most encounters are by swimmers or waders who inadvertently step on one on a sandy bottom. These rays are poor swimmers and rely mostly on their shocking ability rather than flight for protection. Some of the species are quite colorful and, regardless of the risk, are kept in home tanks. Their food is mainly bottom invertebrates or fishes. The eagle rays (family Myliobatidae) and manta rays (family Mobulidae) are much too large for home aquaria, but some smaller ones are kept in oceanariums. They always attract attention with their graceful "flying" motions. Both eagle and manta rays are noted for their ability to leap from the water and come down with a resounding crash. The two most speciose families are the skates (family Rajidae) and stingrays (family Dasyatidae), and it is from these families, particularly the latter, that aquarium species are selected. Most skates and rays live inshore on the bottom, feeding on shellfish and/or crustaceans. Skates prefer more temperate waters and in many areas are fished for commercially. Males have long claspers for use in internal fertilization. They lay eggs encased in horny capsules that have tendrils or projections that help anchor them to objects on the bottom. Many are washed up on shore and have been given the names sailor's purse and mermaid's purse. Stingrays are more tropical fishes, spending much of their time almost completely buried in the sand or soft bottom material. In addition to the crustaceans and molluscs, they will readily feed on worms when available. Stingrays have the base of their tail armed with one or more spines provided with venom-producing tissue. Perhaps the most commonly kept stingray is *Taeniura lymma*, a colorful species with blue spots scattered over its upper surface.

The remaining fishes all belong to the bony fishes (class Osteichthys), which have skeletons composed, at least in part, of true bone.

## The Coelacanth (Plate 17)

The Comoro Islands Coelacanth (order Coelacanthiformes, family Latimeriidae, *Latimeria chalumnae*) is the only known survivor of the crossopterygians, fishes usually considered to be ancestors to the entire lineage of present-day vertebrates. All the Coelacanths have been collected in relatively deep water (to 360 m) where there is a rocky bottom. Their large scales are mostly a deep metallic blue. They feed exclusively on other fishes. What makes them very unique is their lobed fins. The second dorsal, pectoral, and pelvic fins are supported by fleshy stalk-like structures earning them the common name of lobefins. Most public aquariums and oceanariums would love to have a living Coelacanth on display, but they have not been very successful in their endeavors. Obviously a rare 1.2-1.5-m fish reaching a weight of 72 kilos would not be available to private aquarists. These ovoviviparous fishes were found to contain eggs up to 9.1 cm in diameter and young in the oviduct with a length of up to 33.5 cm total length.

## Tarpons, Ladyfish, and Bonefish (Plate 17)

The tarpons (Megalopidae), ladyfishes (Elopidae), and bonefishes (Albulidae) are all included in the order Elopiformes where the pelvic fins are abdominal, the tail is deeply forked, and all have a fork-tailed leptocephalus-like larva. None are of great interest to aquarists, although all are sought after avidly by fishermen. Often called the silver king, the Atlantic Tarpon (*Megalops atlanticus*) grows the largest, attaining up to 2.4 m in length and a weight of 135 kilos. Once hooked, the tarpon puts up a tremendous battle (especially on relatively light tackle) with spectacular leaps, giving the fisherman the time of his life. The bony mouth makes it hard to set the hook and many fish are lost. Even when landed, however, this fish is often released, partly in respect for the pleasure it has just given. Bonefish (*Albula vulpes*) are smaller and instead of leaping make powerful runs stripping line from the reel at a fast clip. Like the others just mentioned, the Atlantic Ladyfish (*Elops saurus*) is a game fish. It resembles the tarpon more in appearance and fighting characteristics but averages closer to 2.25 kilos. It also lacks the filamentous last ray characterizing the tarpon. Most of these species are found in shallow inshore waters where they feed on small fishes and invertebrates. There is a deep-water genus of bonefish (*Pterothrissus*) with a long dorsal fin.

## Eels (Plates 18-29)

All the true eels, comprising about 20 families, are included in the order Anguilliformes. The body is elongate, and the dorsal and anal fins are usually connected to the caudal fin, while the pelvic fins (occasionally also the pectoral fins) are absent. There is a leptocephalus larva (elongate, very flattened, and almost transparent) but, contrary to that of the Elopiformes, it has a tail tapering to a point rather than a forked one. The elongate form of the eels has been suggested as being an adaptation for moving through small openings and in some cases there are further adaptations for burrowing. Although most eels are bottom-dwellers, there are at least some adapted to a bathypelagic mode of life.

Of the many eel families, only a few contribute species to the marine aquarium on a regular basis. Others may be kept as curiosities as the occasion allows. Freshwater eels (which usually spend much of their life in fully marine waters) of the family Anguillidae are collected occasionally and may find their way to home aquaria of marine enthusiasts but are then usually released again when the novelty wears off. The freshwater eels generally spawn far out in the open ocean where as many as 20 million eggs are released by each female. After spawning the adults die. The leptocephali then travel back to the continental shores (this trip may be up to several thousand kilometers) where they ultimately metamorphose into young eels called elvers that move toward fresh water. The snake eels (family Ophichthidae) are burrowers, the tails of some genera being modified into a hard, fleshy point without fins. Burrowing is done tail-first. Several species from this family, especially the colorful members of the genus *Myrichthys*, are regularly kept in marine aquaria. The worm or spaghetti eels (family Moringuidae) are extremely thread-like, without or with only feeble pecto-

ral fins, and with eyes that are small and covered with skin.

The conger eels (family Congridae) are distinguishable from the moray eels by possessing pectoral fins. The larger species are usually passed over by aquarists, but several members of the garden eels (subfamily Heterocongrinae) make interesting aquarium inhabitants and are seen from time to time. Garden eels are found in nature usually in rather large colonies (gardens) where there are many burrows. The garden eels will be seen hovering just above the burrows feeding on small organisms that are carried to them in the current. At the approach of some threat the eels will retreat tail-first into their burrows only to appear again slowly when the danger is past.

The moray eels (family Muraenidae) lack pectoral fins, have small, restricted lateral gill openings, and most have long, fang-like teeth. Most live on tropical and subtropical reefs in relatively shallow water and are quite colorful. Most are large, generally up to a meter in length, with others reaching a length of over two meters. Divers frequently encounter morays that are in holes in the reef with only their heads sticking out. As they respire the mouth opens and closes exhibiting the formidable teeth. Although this deters any diver from messing with them, unfortunate divers have been bitten when they stuck a hand into a hole after a fish or shell and were unaware that it was occupied by a moray eel. Normal food of morays includes small fishes and some invertebrates. Apparently squid are a delicacy for most morays, and aquarists able to supply such food should do so. Morays of the genus *Echidna* generally have teeth modified for crushing the shells and carapaces of crustaceans and molluscs. Some morays even feed on sea urchins. Even with such a bad reputation (or possibly because of it) aquarists keep many species of morays (mostly from the genus *Gymnothorax*) in their home tanks. Public aquariums almost always have several species on exhibit as well.

## Herrings and Herring-like Fishes (Plates 30-32)

The herrings and herring-like fishes (order Clupeiformes) are among the most important food fishes in the world, both for human consumption and as an important link in the food chain of many fishes. They occur in vast schools that may extend for kilometers. Thus the various predators (other fishes, birds, marine mammals, etc.) can usually take their fill without seriously depleting the population. Only man, with his high-tech equipment, can seriously threaten the species as a whole. The fishes, in turn, feed on planktonic organisms that they strain out by means of their numerous long gill rakers. The herrings (family Clupeidae) are usually silvery fishes that possess abdominal scutes. Besides the herrings themselves, such well-known fishes as shad, sardines, and menhaden are included. Spawning is usually in relatively shallow water where each female may shed many thousands of eggs into the open water. The eggs are demersal (sinking to the bottom) and are coated with mucus so that they stick to objects when they reach the bottom.

The anchovies (family Engraulidae) are also commercially important food fishes. They are generally recognizable by the snout overhanging the mouth and the silvery stripe along the side. They also strain planktonic organisms with their numerous slender gill rakers, occur in massive schools, and are mostly found in tropical or temperate waters.

The wolf herrings (family Chirocentridae) grow much larger than their cousins, attaining an average length of about 1.5 m. They are voracious predators with large fang-like teeth.

None of the clupeiform fishes are generally kept by aquarists. Indeed, anchovies are so fragile they usually die if touched or taken out of the water even for a second. Add to this their lack of color, and they have little if anything to make them appealing to aquarists. Public aquariums will keep them mainly as food for the larger fishes.

## Milkfish (Plate 32)

A member of the order Gonorynchiformes, *Chanos chanos* (family Chanidae) looks somewhat like the ladyfish or bonefish discussed previously but possesses a suprabranchial organ (lateral pouches in the posterior part of the branchial chamber). It is a very important food fish in Southeast Asia and the subject of intense aquaculture (particularly in the Philip-

pinas, Taiwan, and Indonesia). The fry are collected along the shore and removed to growing-out ponds until they reach marketable size. Those seeking higher returns on their investment by raising the Milkfish to a larger size may often lose most of their fish in typhoons (causing flooding and/or destruction of the ponds) if they are unlucky.

### Smelts and Noddlefishes (Plate 33)

The smelts (family Osmeridae) and noddlefishes (family Salangidae) have very little in common other than they both belong to the order Salmoniformes. As such the maxilla is included in the gape of the mouth and they possess an adipose fin between the dorsal fin and the tail. The smelts are small and silvery like herrings but, like salmon, make spawning runs into freshwater streams. They are cooler water fishes occurring in the Northern Hemisphere in both the Atlantic and Pacific Oceans. Most of the species are commercially important food fishes; none are usually kept as aquarium fishes. The icefishes or noddlefishes have almost scaleless, transparent bodies with a strongly depressed head. They are found from Sakhalin to China and perhaps even further south.

### Deep-sea Bristlemouths and Viperfishes (Plate 33)

The deep-sea order Stomiiformes contains about nine families of fishes. These normally possess luminescent organs in the form of photophores. In some groups there is a chin barbel that is often used in specific identification. The mouth is usually well provided with teeth and the dominant color is usually black or brown, although there are silvery forms. Most are deep-sea fishes living in areas of perpetual darkness while some approach upper water layers at night, retreating to the darker regions with the approach of dawn. Many attempts have been made to keep species of this group alive as they make spectacular displays in public aquariums, but they are difficult to bring up to the surface alive or to keep alive once captured.

### Lizardfishes and Their Relatives (Plates 34-37)

The sailfin lizardfishes (family Aulopodidae) and the lizardfishes (family Synodontidae) are only two of the dozen families of the order Aulopiformes, which is characterized by a specialization in the gill arches involving the second pharyngobranchial. These two families (plus a third, Chlorophthalmidae) are benthic, the others pelagic. An adipose fin is commonly present.

The sailfin lizardfishes resemble the typical lizardfishes but have larger dorsal fins that earned them their common name. They are found in tropical and subtropical waters and are predators on small fishes and invertebrates. Although attractive species that would be welcome in hobbyists' tanks, they are only rarely seen offered. Far more common are the members of the family Synodontidae. These fishes spend a great deal of time sitting on the bottom propped up by the ventral fins waiting for prey to come within reach. This might be small fishes or invertebrates that they dispatch quite easily as one might guess by noting the rows of sharp teeth in the jaws and the rather large mouth. Some species blend well with the sandy bottom upon which they sit while others go a step further and partially bury themselves in the substrate, making themselves almost invisible to the approaching prey. Most of the aquarium species are selected from the subfamily Synodontinae; the remaining subfamily, Harpadontinae, contains the Bombay ducks, genera *Saurida* and *Harpadon*.

The lancetfishes (family Alepisauridae) may grow to a length of almost two meters and are slender pelagic fishes with a large sail-like dorsal fin. The mouth is large and provided with well-developed teeth.

### Lanternfishes (Plate 37)

The order Myctophiformes includes only two families, the lanternfishes (family Myctophidae) and the family Neoscopelidae. The lanternfishes are so-called because of the presence of groups and rows of photophores on the head and body. They live in the twilight to dark regions of the open oceans but make vertical migrations daily to the surface at night (where

they are often taken by dip-netting). They are small fishes less than 15 cm in length and may be black, brown, silvery, blue, etc., some with iridescent reflections. They are very common and occasionally are caught for public aquarium displays. Private aquarists rarely encounter them unless they collect them themselves.

### Codfishes and Rattails (Plates 38 & 39)

The order Gadiformes contains seven families of fishes including the codfishes (family Gadidae) and the grenadiers or rattails (family Macrouridae). These fishes have thoracic or jugular pelvic fins that contain up to 17 rays. There are no true spines in the fins.

The codfishes, which also include the hakes, haddock, and burbot, are cold-water fishes of the Northern Hemisphere. They are very important commercial food fishes, most of the catch nowadays being processed as frozen fillets. They are generally bottom feeders preying on small fishes, worms, crustaceans, and molluscs. A very large number of eggs are produced, a 9-kilo female Cod releasing up to 5 million eggs per season. The eggs and larvae are pelagic. These fishes are not readily available to marine aquarists and there is practically no interest in them anyway. Most public aquariums, especially those in the colder regions of the United States and Europe, have displays of these important food fishes.

The family Moridae (morid cods) includes quite variable fishes with one to three dorsal fins and one or two anal fins. The chin barbels present in many cods may or may not be present in members of this family. Most of the species are deep-water fishes and rarely available for aquaria, private or public.

The grenadiers or rattails are deep-water fishes rarely found at less than 185 m depth and often in water greater than 750 m deep. The body tapers posteriorly to a point, and the second dorsal and anal fins are many-rayed and continuous with the long tail; a chin barbel is usually present. The eyes are usually large for vision in the low-light depths they inhabit. Special conditions are needed to keep these fishes in captivity (cold water, low light levels, etc.) and few, if any, are ever seen even in public aquariums.

### Cusk Eels, Pearlfishes, and Their Relatives (Plates 40 & 41)

The cusk eels, pearlfishes, etc. (order Ophidiiformes) have many-rayed dorsal and anal fins extending to the caudal fin and often united with it. The pelvic fins are usually well forward, even ventral or jugular in position, and are composed of only one or two rays.

The cusk eels and brotulas (family Ophidiidae) inhabit tropical and temperate waters where they live on the bottom or even burrow into it. The far anterior pelvic fins are used as sensory "barbels" to search the bottom for food. These brotulas are egg-layers. Brotulas may be found in shallow to very deep water, with some even extending down in the oceanic trenches in excess of 7000 m. Those living in deep waters usually have small eyes. The pearlfishes (family Carapidae) are mostly tropical shallow-water fishes of small size. They have very interesting symbiotic relationships with assorted invertebrate animals. The most publicized of these associations is the one in which the pearlfish lives in the gut or respiratory organs of sea cucumbers, but they also find refuge in other animals such as giant clams and sea squirts. At least one species, *Onuxodon margaritiferae*, shelters only in pearl oysters. Pearlfishes feed at night outside their host and find their way back by following a chemical scent. Because of these strange actions, pearlfishes are often sought out (with their hosts) for home aquaria.

The viviparous brotulas (family Bythitidae) are, as the common name implies, fishes that give birth to living young. Some species are well known to serious aquarists, such as the Black Widow (*Stygnobrotula latebricola*) and various species of *Ogilbia* and *Dinematichthys*. The family includes mostly fishes that inhabit shallow waters and even move into brackish or fresh waters. There are some species that are cave-dwellers. Because these brotulas give birth to living young, some are sought for home aquaria, where they do reasonably well on a diet of mixed bottom invertebrates.

### Toadfishes and Anglerfishes (Plates 42-51)

The toadfishes (family Batrachoididae) and the anglerfishes—some 16 families including the goosefishes (family Lophiidae), frogfishes (family Antennariidae), and batfishes (family Ogcocephalidae)—are generally grouped into the order Batrachoidiformes, although some



workers use another order, Lophiiformes, for the families of anglerfishes, which are characterized by the first ray of the spinous dorsal fin being transformed into an illicium, a lure-bearing spine.

The toadfishes are bottom dwelling coastal fishes that commonly bury themselves in the soft substrate in wait for prey. Many are able to produce rather loud croaking noises (during courtship, when disturbed, etc.) that have earned them their common name. Some can enter brackish waters, and a few are confined to purely fresh water. Several species have turned up in the marine aquarium trade as curiosities, but almost all, save the reef-dwelling brightly patterned *Sanopus*, are drably colored. Some midshipmans possess photophores. Members of the subfamily Thalassophryninae have two dorsal spines and an opercular spine connected to venom glands, so aquarists beware. *Opsanus tau* can be very pugnacious, especially during breeding season. The eggs usually are laid on solid objects on the bottom (rocks, shells, even tin cans) and are vigorously defended by the male toadfish for about a month.

The goosefishes (Lophiidae) have a broad, flattened head with a big mouth and the characteristic "fishing pole" used to attract prey. They are large fishes found in cold to Arctic waters and are not kept in home aquaria. The frogfishes (Antennariidae), on the other hand, have many representatives in the marine aquarium trade. They are quite rounded, almost balloon-shaped, in contrast to the goosefishes and are most commonly encountered around coral reefs or rocky areas. Most are relatively small. The "fishing pole" and "lure" of frogfishes are well developed and used as a means of identification. The pectoral and pelvic fins are somewhat stalked and are moved as if they were tiny hands and feet as they move around obstacles over the bottom. Many colorful species are available and provide hours of entertainment for their owners as they "fish" for their prey. This is captured in a surprisingly rapid movement when the prey animal comes close to investigate the "bait." One of the most popular antennariids is the Sargassumfish (*Histrio histrio*). This species lives in sargassum weed as it floats in the open ocean waters. It "crawls" about on its floating home looking for fishes or crustaceans. Its pattern resembles the sargassum weed so closely that it is extremely hard to detect. Their appetites are prodigious and they can and will swallow animals that are quite large, comparatively speaking. Any fishes kept with any of the frogfishes should be larger than the frogfishes for safety. It is often said that a tankful of Sargassumfish will be reduced to one large contented Sargassumfish in a very short time.

The batfishes (Ogcocephalidae) have a very depressed, hard, and usually rough-textured body. Their pectoral fins are used to "walk" over the soft bottom on which they live. Like the frogfishes they can swim, but only awkwardly. The illicium is relatively short and is thrust from beneath the snout when the batfish is fishing for prey. Most batfishes, although quite appealing fishes, are usually passed over for more colorful reef-dwelling species.

## Clingfishes (Plates 52-54)

The clingfishes share the order Gobiesociformes with only one other family, the singleslits (family Alabetidae). This latter family is restricted to Australia (primarily the southern parts), including Tasmania, and lacks the sucking disc of the clingfishes. It is a small family of four species grouped into a single genus (*Alabes*) with reduced or absent pelvic fins and no dorsal or anal fin rays.

The clingfishes (family Gobiesocidae) contain over 100 species distributed in warm to temperate waters around the world. Their common name is derived from the modified pelvic fins that form a characteristic sucking disc that is used to anchor them to objects in a strong current. Almost all of them are less than 10 cm in length, but a few species grow larger and one attains a length of almost 30 cm in length. The most common shape is somewhat teardrop-like with a large head and tapering tail. However, there are many modifications on this theme, particularly in the length of the snout. Eggs are usually laid on a firm substrate (rocks, etc.) and guarded by the parent(s?). The diet includes small invertebrates for the most part. One species, *Sicyases sanguineus*, commonly leaves the water while foraging for food, which consists of a variety of items including algae and small molluscs. Although there are a number of quite colorful species and the size is small, these fishes have not found favor with marine aquarists, with few exceptions. Clingfishes that live among the feathery arms of crinoids have been kept, but the difficulty of keeping the crinoid itself places severe restrictions on setting up a truly natural situation.

## Flyingfishes, Halfbeaks, and Needlefishes (Plates 55 & 56)

The order Cyprinodontiformes contains about 13 families grouped into three suborders. Only one suborder, Exocoetoidei, with four families, is mostly marine; the other two, Adrianihoidei and Cyprinodontoidei, contain mostly freshwater or brackish water fishes.

The flyingfishes (family Exocoetidae) are the most appealing to aquarists because of their ability to glide for some distance over the water's surface. This is accomplished mainly by means of enlarged pectoral fins and in some cases abetted by enlarged pelvic fins (the so-called four-winged species). The lower lobe of the caudal fin is also enlarged and aids in the flight by dipping into the water while vibrating rapidly almost like an outboard motor. A succession of flights can keep the fish out of water for a considerable distance, which may deter the predators that sent them into the flight panic in the first place. Juvenile flyingfishes are quite colorful and are sometimes kept by marine aquarists, but they are not very hardy (being open ocean fishes) and soon die.

The halfbeaks (family Hemiramphidae) usually have an elongated lower jaw and lack the enlarged pectoral (and pelvic) fins of flyingfishes. The lower caudal lobe is often elongated. Like the flyingfishes, they are tropical and travel in schools. They are more inclined to live in shallow water, and there are some halfbeaks that live entirely in fresh water. Only the freshwater species are commonly kept in captivity.

The needlefishes (family Belontiidae) have both jaws elongated and provided with numerous needle-like teeth. Like the above families they are surface fishes of tropical (and sometimes temperate) seas, but with representatives in brackish and pure fresh waters. They can also leap from the water like projectiles and, because they are attracted to light at night, have injured fishermen working with lanterns or other lights. Unlike the halfbeaks, which have most freshwater species restricted to the Indo-Australian region, the needlefishes have their freshwater representatives mostly in the Neotropical region. Only the freshwater species are generally kept by aquarists.

## Silversides and Their Relatives (Plate 57)

The silversides (family Atherinidae) belong to the order Atheriniformes along with four other families, including the Melanotaeniidae (rainbowfishes and their relatives). They are usually schooling fishes found in shallow waters of temperate and tropical seas, although some species are strictly freshwater fishes. The silversides normally have a broad silver band along the sides, two dorsal fins, and abdominal pelvic fins. The most famous silverside is the California Gunion (*Leuresthes tenuis*), which spawns at night on the beaches during the highest tides from March through August. Crowds gather to watch the millions of little fish go through their act—and to gather them for food. The precision of their timing is remarkable. The eggs incubate in the warm sand for two weeks, then hatch out as the tides reach another peak, washing the fry back out to sea. Although silversides are quite hardy, the marine representatives are not very colorful and are passed over by marine aquarists. Some of the freshwater species are kept.

A closely related family, the Isonidae, includes only two genera and six species.

## Opah and Related Fishes (Plate 58)

The Lampriformes contains 11 families of mostly oceanic or pelagic (some deep-water) fishes. Of these perhaps the best known are the Opah (*Lampris guttatus*, family Lampridae), the ribbonfishes (family Trachipteridae), and the oarfishes (family Regalecidae). The Opah is a very colorful deep-bodied fish that may grow to a weight of over 225 kilos. Ribbonfishes are deep-water fishes with a ribbon-like body and a many-rayed dorsal fin. The oarfishes are similar in shape but possess long, slender pelvic fins that are their "oars." The oarfishes, reaching lengths exceeding 3 m (unconfirmed reports to twice that), are probably responsible for some of the sightings of sea serpents.

## Squirrelfishes, Lanterneye Fishes, Pineconefishes, and Their Relatives (Plates 58-69)

Fourteen families comprise the order Beryciformes, including such diverse groups as the squirrelfishes (family Holocentridae), lanterneye fishes (family Anomalopidae), beardfishes (family Polymixiidae), and the pineconefishes (family Monocentrididae). The composition of this order is commonly in a state of flux as workers in the groups add or subtract families as they see fit.

The pineconefishes are well known to aquarists. They are encased in an armor composed of large, plate-like scales and possess phosphorescent light organs on the lower jaw. Although thought rare a few years back, they are being imported into the hobby almost regularly nowadays. Public aquariums seek out these fishes for displays, usually a darkened tank or one with periods of darkness when the light organs can be seen.

The lanterneye fishes have a light organ beneath each eye that is provided with a mechanism (in different species the organ can either be rotated or covered) to control the amount of light emitted. As for pineconefishes, public aquariums construct for these fishes tanks that are darkened. The lanterneyes are able to control their light, and the darkened tank looks like it is populated with fireflies blinking on and off.

The slimeheads (family Trachichthyidae) have a preopercular spine and a row of abdominal scutes. The mucous pores on the head are well developed (as is normal in the Beryciformes). Some species have luminescence. Few species of this family are available to aquarists. One, *Trachichthys australis*, is occasionally seen in shipments from Australia and makes an excellent aquarium subject.

The alfonosinos (family Berycidae) lack a notched dorsal fin and have a spine and 7-13 rays in each pelvic fin. Only eight species are included in the family, and only rarely are they seen in public aquariums.

The beardfishes (Polymixiidae) are so-called because of the pair of hyoid barbels. The pelvic fins are farther back (subabdominal) than in the other groups and have a spine and only six soft rays. They generally inhabit depths from 180 to 640 m.

One of the largest families of the order, the Holocentridae includes the squirrelfishes and soldierfishes. The dorsal fin has a spiny portion and a soft-rayed portion separated by a notch. The eyes and scales are large, and the color usually includes a great deal of red. These are nocturnal fishes hiding in caves or beneath coral heads during the daytime but moving out at night to forage for food. Unlike most other members of the order, these fishes are generally found in relatively shallow water (although there are some deeper water representatives) of the tropical and subtropical regions. Adults remain close to the bottom but produce a pelagic larva that aids in their dispersal. The family is readily divided into two large groups (subfamilies) generally called the squirrelfishes and the soldierfishes, the former possessing a large spine at the angle of the preoperculum. Both squirrelfishes and soldierfishes are well represented in the aquarium trade and do well in hobbyists' tanks. They feed on a variety of foods, especially crustaceans and small fishes.

## Dories and Boarfishes (Plate 70)

The dories (family Zeidae) and boarfishes (family Caproidae) along with four other families belong to the order Zeiformes. Most of the fishes of this order are deep-sea fishes, although the dories are more midwater.

The dories have small spines or bucklers at the bases of the dorsal and anal fin rays as well as eight or nine plates along the abdomen. The most well known species have a large black lateral spot ocellated with yellow and long filaments extending from the anterior dorsal fin spines. These fishes are only rarely seen in public aquariums.

The boarfishes include two genera, red-colored fishes with extremely deep bodies (*Antigonia*), and *Capros aper*, a species similar to the dories but without the abdominal plates. They live at depths of more than 240 m.

## Tubesnouts and Sticklebacks (Plate 70)

The tubesnouts (family Aulorhynchidae) and sticklebacks (family Gasterosteidae) belong to the order Gasterosteiformes along with an obscure family (Hypoptychidae) from Japan and Korea containing a single species. The tubesnouts are elongate, with lateral scutes and a series of 24-26 short, isolated dorsal spines. They are coastal fishes of the North Pacific that may appear in aquaria on the West Coast of the United States and possibly in Japan. The sticklebacks may or may not be elongate, may have lateral scutes or not, and have 3-16 well-developed isolated dorsal fin spines. They are small (maximum length 18 cm in the European *Spinachia spinachia*) marine, brackish, or pure freshwater fishes and have gained considerable fame from the behavioral studies conducted on them. Most aquarists tend to keep the brackish or freshwater species to observe the spawning antics. The sticklebacks are primarily inhabitants of cool northern waters throughout the Northern Hemisphere.

## Sea Moths (Plate 71)

Sea moths (family Pegasidae) are small fishes encased in bony plates. They have large, horizontal pectoral fins and a long, flattened rostrum. The mouth is tiny and located at the base of the rostrum. These bottom-fishes are welcomed by aquarists when they appear in the trade, but unfortunately this is not very often.

## Sea Horses, Pipefishes, and Their Relatives (Plates 71-82)

The order Syngnathiformes contains half a dozen families of very interesting and very unusual fishes. The trumpetfishes (family Aulostomidae) are elongate, compressed fishes with 8-12 isolated dorsal fin spines and a short barbel at the tip of the lower jaw. They occur around reefs in tropical seas where they are often seen swimming close (almost touching) to a larger fish or orienting themselves with some gorgonians (sometimes even vertically). Most people believe that this is a ruse to make them less noticeable so they can more easily attack their prey (mostly small fishes). The cornetfishes (family Fistulariidae) occur in tropical and subtropical waters. They resemble the trumpetfishes but have no dorsal fin spines, no barbel on the lower jaw, shorter dorsal and anal fin bases, and possess an elongate filament extending from the middle of the caudal fin. They can reach a length of 1.8 m, about double that of the trumpetfishes.

The snipefishes (family Macrorhamphosidae) are deep-bodied and compressed, usually possessing bony plates on each side of the back. The second dorsal spine is very long, as is the snout in some species. Orientation in the water is usually vertical, with the head pointing downward. The tiny mouth is used for selecting small planktonic prey. The shrimpfishes (family Centriscidae) are almost entirely encased in thin bony plates. They are very compressed, with a sharp ventral edge, and are also commonly referred to as razorfishes. All the unpaired fins are at the extreme end of the body, and the tail is actually at an angle to the body. Small groups of these fishes can be seen swimming vertically in the water (head down) among the coral or even among the spines of long-spined sea urchins. It is amazing how fast these fishes move. The small, toothless mouth is used for snatching up small planktonic animals.

The ghost pipefishes (family Solenostomidae) are also tropical and have large stellate bony plates. The dorsal fins are separate, the first comparatively large. The pelvic fins are large and the snout and caudal fin are elongate, creating an unusual shape that seems to be the rule for members of this order. Only a single genus with five species is included in this family.

All of the above families contribute members to the aquarium trade, but not to the extent of the family Syngnathidae. This family contains the sea horses and pipefishes, almost any of which may be kept by home aquarists. Certainly any sea horse is welcomed and many pipefishes are quite colorful, creating a demand for them as well. The body is elongate and encased in a series of bony rings; there are no pelvic fins. In the sea horses the head is bent at an angle to the body and the tail (which lacks a caudal fin) is prehensile. Both groups have tiny mouths and pick small animals from the plankton. In captivity newly hatched brine

shrimp are excellent for the smaller species. Most species are found in shallow tropical waters, although there are representatives that range into temperate seas. The breeding habits are unusual in that the female will lay her eggs in a brood pouch located on the male's abdomen. Some species of pipefishes lack a true pouch and have the eggs attached to the abdomen open to the surrounding water. The young hatch inside the pouch and emerge as miniature adults. It is best to keep sea horses by themselves or with similarly slow-moving fishes.

Some of the Australian forms (sea dragons, etc.) are quite bizarre in shape with numerous leafy appendages and/or gaudy coloration. These command a high price when they are available but usually are well worth it.

### Flying Gurnards (Plate 83)

The flying gurnards (order Dactyliformes, family Dactylopteridae) have large bony heads and large wing-like pectoral fins with free inner rays. They are bottom-fishes that use their pelvic fins alternately to "walk" along the sandy substrate. With a few vibrations of the tail they can gain momentum so they can glide through the water with the pectoral fins outspread. The hyomandibular bone is also used to produce sounds. Young flying gurnards are sometimes kept by marine aquarists.

### Scorpionfishes, Sea Robins, Sculpins, and Their Relatives (Plates 34, 83-114)

The Scorpaeniformes is a large order of fishes encompassing some twenty families and more than a thousand species. They are all characterized by a posterior extension of the third suborbital bone (suborbital stay) and are commonly called the mail-cheeked fishes. Many of the fishes are spiny, and often the spines have venom glands associated with them.

The scorpionfish or rockfish family (Scorpaenidae) is one of the largest families of this order with more than 300 species. The body is generally stocky and the head normally is supplied with ridges and spines. The dorsal, anal, and pelvic spines are usually supplied with venom glands. Fertilization is mostly internal. Among the unusual reproductive modes of these fishes are the production of a large gelatinous balloon bearing the eggs and the birth of living young. These bottom-living fishes are mostly found around reef or rocky areas in tropical to temperate waters. They are predators that lie in wait for their prey, pouncing on them with a swift motion combined with suction caused by the rapid opening of the large mouth. Although these fishes commonly are red or have a great deal of red color on them, many have patterns that effectively camouflage them against the substrate. This large family is divided into eight subfamilies in some classifications, while in others one or more of these groups are considered as full families. Among the more unusual are the Pteroidichthyinae, containing the genus *Rhinopias*, and the Tetraroginae with the genera *Ablabys*, *Paracentropogon*, *Tetraroge*, etc. The Sebastinae is one of the larger subfamilies, with one of its genera, *Sebastes*, having almost all of its 100 or so species occurring in the North Pacific, with California having a good representation of these. The Scorpaeninae is represented by the genera *Scorpaena*, *Scorpaenodes*, *Pontinus*, etc.

Of most interest to aquarists is the subfamily Pteroinae with *Pterois* and related genera. These turkeyfishes, lionfishes, zebrafishes, or whatever else they are known as in different areas are very attractive fishes with long filamentous extensions to the dorsal and pectoral fin rays and spines. The dorsal fin spines are still quite pungent and are provided with venom glands. The extent of the pain and suffering caused by a "sting" depends on the species involved, the amount of venom that gets into the bloodstream, the type of reaction a person has to the particular venom (similar to allergies to bee stings), and the type and speed of care given to the person who has come into contact with the spines. Treatment usually involves immersing the punctured foot or finger in water as hot as the person can stand. Severe reaction to a sting should be treated by a physician knowledgeable about such injuries. Most injuries occur when aquarists carelessly handle the fish (like trying to untangle one from a net) or when capturing the fish in the wild. Lionfishes are hardy and long-lived in captivity if provided with sufficient space and a variety of nutritious foods (small live fishes for example).

The stonefishes (family Synanceiidae, subfamily Synanceiinae) are seen mainly in public aquariums where they are handled only by experts, for the neurotoxin they possess is among the most deadly and can cause fatalities in humans. They are not very attractive and, indeed, look very much like a stone. This camouflage aids in their prey capturing but also is dangerous to people because waders in shallow water not recognizing the fish for what it is might step on it. Among the other genera in the subfamily are *Erosa* and *Dampierosa*. Other subfamilies of the stonefish family include Choridactylinae (with *Inimicus* and *Choridactylus*) and Minoinae (with *Minous*).

The orbicular velvetfishes (family Caracanthidae) have an oval, extremely compressed body that is covered with small papillae. This gives them the velvety appearance and has led to another common name that is quite descriptive—furry half dollars. These are attractive little fishes that only rarely are seen in the aquarium trade.

The velvetfishes (family Aploactinidae) are coastal fishes of the Indo-Pacific. The body is generally covered with modified prickly scales and the head is provided with knob-like lumps. The dorsal fin originates well forward.

The family Pataecidae is sometimes known as the prowfishes. Members of this exclusively Australian family are scaleless, but the body may have tubercles or papillae. The dorsal fin originates far forward over the eyes.

The racehorses or pigfishes (family Congiopodidae) are Southern Hemisphere fishes without scales and with a reduced gill opening. A South African species has been reported to shed its skin, like reptiles. (This also has been reported for members of the family Scorpaenidae, among others). Few members of these last three families enter the aquarium trade.

The sea robins (family Triglidae) have a boxy bony head, separate dorsal fins, and two or three free lower pectoral fin rays that are used for detecting food. The remaining pectoral rays form a large wing-like fin (though not quite so large as in the flying gurnards). Sea robins also "walk" on the bottom with their pelvic fins. They inhabit tropical and temperate seas, most commonly in deep water. All are carnivorous and most produce sounds. Two subfamilies include the unarmored sea robins (Triglinae) and the armored sea robins (Peristediinae). Few sea robins are kept by aquarists.

The flatheads (family Platycephalidae) have an elongate, cylindrical body and a flat head. The mouth is large, able to engulf small fishes and invertebrates. Flatheads are mostly marine fishes (some are brackish) that occur in the Indo-Pacific.

The sablefishes (family Anoplopomatidae) occur in the cool waters of the North Pacific. There are two dorsal fins, and the head is not provided with ridges, spines, or papillae. Only two species are included in this family.

The greenlings (family Hexagrammidae) are also endemic to the North Pacific, where most occur close to shore and among the kelp and rocks. The head is provided with cirri only, and the dorsal fin is single but provided with a notch between the spines and soft rays. Sexual dichromatism is seen at least in some of the better known species.

Combfishes of the family Zaniolepididae have a single dorsal fin with a notch. They have earned their common name by the elongate anterior dorsal fin spines (the second spine very elongate in *Zaniolepis latipinnis*). The two species often are placed with the greenlings as a subfamily.

There about 300 species of sculpins (family Cottidae) inhabiting marine (most species) and fresh waters of the Northern Hemisphere and New Zealand, with the greatest diversity in the North Pacific. The head is usually provided with spines and ridges, there are two dorsal fins, and the pectoral fins are usually very large, often wing-like. The eyes are large. Sculpins are bottom-fishes normally living close to shore, even entering tide-pools. There are some deep-water species as well. Most sculpins are carnivorous, preferring to remain in a camouflaged position until they can make a quick strike at some prey (small fishes and invertebrates). Although many have drab mottled coloration, some species are quite colorful (ex. *Leiocottus hirundo*). One of the most sought-after species of cottids for aquaria is the Grunt Sculpin (*Rhamphocottus richardsoni*). Not only is it very attractive, but it has an unusual shape. Unfortunately it is a cool-water species that cannot (or should not) be housed in a tropical reef tank.

The family Psychrolutidae has no common name and the species are commonly included with the Cottidae. Even so, these fishes are usually divided into two subfamilies, one with a rigid interorbital region and spiny heads and the other without head spines that because of their general shape are generally referred to as tadpole sculpins.

Poachers (family Agonidae) are elongate armored fishes from the cold waters of the North Pacific, North Atlantic, and southern South America. The depth range is considerable, as they occur in tide-pools and to depths of 610 m. One or two dorsal fins may be present.

Lumpfishes and snailfishes (family Cyclopteridae) have pelvic fins (when present) modified into a thoracic sucking disc. Lumpfishes, as their name suggests, have a globose, flabby body commonly covered with bumps or tubercles. There may be two dorsal fins or a single one that is deeply notched. *Cyclopterus lumpus* is one of the largest and best known lumpfishes, attaining a length of about 30 cm. The females may lay 20,000 or more adhesive demersal (sinking) eggs that are guarded by the male. Snailfishes are more elongate, some species having their flabby body covered with prickles. The dorsal fin is low and single, sometimes confluent with the caudal fin. Snailfishes are generally small and range in color from shades of brown to pink and red. Some species are well patterned with spots, blotches, or stripes. The snailfishes are sometimes placed in their own family, the Liparididae.

## THE ORDER PERCIFORMES

The order Perciformes contains about 150 families and more than 7,500 species (in both fresh and salt water) and is thus the largest and most diversified of any of the fish orders. The composition of this order will vary as controversial issues are settled and others arise. Among the largest families are the Cichlidae (fresh water), Gobiidae, Labridae, Serranidae, Blenniidae, Pomacentridae, and Apogonidae.

### Snooks and Glassfishes (Plates 115, 254)

The snooks (family Centropomidae) have the lateral line extending onto the tail, two dorsal fins or a single one deeply divided, and a scaly process in the pelvic axis. They are marine to brackish or even freshwater fishes of tropical waters. Most are well respected game fishes. Snooks are predators with a diet including other fishes and crustaceans. Inshore waters (including estuaries and especially mangrove areas) are nurseries for the young of many species. Because development of these areas by man is destroying the habitat, snooks are becoming more and more threatened.

The glassfishes (family Ambassidae) are similar in general appearance to the snooks and are commonly included in the same family. They are small fishes that have become popular in the aquarium trade, particularly with the recent ability of Southeast Asian fish farmers to brighten them up by artificially adding fluorescent color to them. However, these colors are temporary and they soon return to the nearly transparent state that earned them their common name. Some workers do not accept *Ambassis* as a full genus and consider the proper family name to be Chandidae.

### Groupers and Their Relatives (Plates 116–158)

The temperate basses (family Percichthyidae) occur in marine, brackish, and fresh waters in tropical and temperate regions of the world. They are very much like serranids and at one time were placed in that family. The opercle has two rounded spines, the caudal fin is usually forked, and the sexes are separate. Perhaps the best known member of the family is the Striped Bass (*Morone saxatilis*), a very valuable sport and commercial fish. These "stripers" move into fresh water to spawn, where large females may lay up to five million eggs. At an age of about two years the stripers move toward the sea. One of the largest members of the family is the Giant Sea Bass (*Stereolepis gigas*), which grows to more than 2 m in length and weighs a quarter ton.

Groupers and sea basses (family Serranidae) inhabit mostly marine waters in tropical and temperate regions. They have three opercular spines, the dorsal fin is single (sometimes notched), and the caudal fin is normally rounded to lunate. They are hermaphroditic with the two sexes not functioning simultaneously except in the genus *Serranus* and its immediate relatives. The 350 to 400 species are commonly divided into several subfamilies. Most of the species in the marine aquarium trade are brightly colored members of the subfamily Anthiinae. These are commonly sexually dimorphic, with the males usually more brightly colored and usually with one or more elongate anterior dorsal fin spines. Juvenile groupers of the genus *Epinephelus* are also kept as they are hardy and feed well. Unfortunately, these soon do so well they outgrow even the largest aquaria. Other colorful species kept belong to the

genus *Cephalopholis*, the dominant hue being red, often with blue spots or markings. The hamlets, *Hypoplectrus*, (whether a single polymorphic species or ten different species) commonly appear in the trade and are synchronously hermaphroditic (both sexes not only occurring in the same fish at the same time but both being functional at the same time). Species of the genus *Serranus* and *Liopropoma* are also welcome aquarium inhabitants, and *Cromileptes altivelis*, known to aquarists as the Leopard Grouper, has become a common sight in home aquaria.

The soapfishes (family Grammistidae) are grouper-like fishes with the opercle having three distinct spines, the dorsal with 2-9 spines, and the anal fin with 0-3 short spines. The lower jaw generally projects and is provided with a short, fleshy appendage. Members of the Grammistinae (one of the two subfamilies) secrete a body mucus that can turn into a sudsy froth when the fish is agitated or attacked. This mucus contains the toxin grammistin. Besides *Grammistes sexlineatus*, an attractively striped species, aquarists also keep members of the genus *Diploprion*, *Belonoperca chabanaudi*, and occasionally a blue fish with a bright yellow stripe down its back, *Aulacocephalus temmincki*. *Pogonoperca punctata* is called the Butterfly Grouper in the trade because of its beautiful coloration. It changes patterns with growth, but all of these patterns are attractive. The second subfamily (Pseudogrammatinae) contains the genus *Pseudogramma*, among others.

The dottybacks belong to the family Pseudochromidae. The dorsal and anal fins contain 1-3 often inconspicuous spines, with the dorsal rays numbering 21-37. Most species are small and colorful and well represented in the aquarium trade. The large genus *Pseudochromis* contains about 40 species displaying colors such as solid magenta, magenta and yellow, blue and yellow, etc. Members of the closely related genus *Labracinus* are also kept.

The basslets (family Grammidae) have an interrupted lateral line or it may be absent entirely. There are 11-13 spines in the dorsal fin. Contained in this family is the extremely popular Royal Gramma, *Gramma loreto*. This purple and yellow fish hails from the western Atlantic along with a few closely related species. A couple of other members of the family occur in Australia, and one (known only from the holotype) is from Hawaii.

The roundheads (family Plesiopidae) have 11-15 spines in the dorsal fin and include such well known species as *Callopleysiops altivelis* (Comet Grouper) and *Paraplesiops altivelis* (Blue-spotted Comet). Also included in this family are the lesser known genera *Assessor* and *Trachinops*.

Acanthoclinidae and Glaucosomatidae are small families (about five species each) of grouper-related fishes, the first very dottyback-like, the second more like serranids. Few if any of the species are kept by aquarists.

## Grunters or Tigerperches and Aholeholes (Plates 159-161)

The grunters and tigerperches (family Teraponidae) inhabit coastal marine, brackish, and freshwater areas of the Indo-West Pacific. Most of the freshwater species occur in Australia. The opercle has two spines and the dorsal fin has a notch; the spinous dorsal fin is depressible into a sheath composed of scales. The species most commonly kept in aquaria is *Terapon jarbua* (Three-striped Tigerfish). It attains a length of about 30 cm. Incidentally, the correct spelling is now considered to be *Terapon*, not *Therapon*. The grunters and tigerfishes have specially adapted muscles associated with the swim bladder for sound production, hence the common name grunter.

The aholholes (family Kuhliidae) are also marine, brackish, and freshwater fishes of the Indo-West Pacific. They also have a scaly sheath for the spiny portion of the notched dorsal fin but lack the specialized sound production mechanism of the teraponids. Of the two subfamilies contained in this family, the Nannopercinae includes brackish and freshwater fishes of southern Australia while the Kuhliinae includes the widely distributed genus *Kuhlia*. It is from this genus that aquarists obtain their specimens, particularly the Flagtail Aholehole, *Kuhlia taeniura*.

## Bigeyes (Plates 161-162)

Bigeyes (family Priacanthidae) occur in tropical and subtropical waters in all oceans. The eyes are large, the dorsal fin is continuous, and the inner ray of the pelvic fin is connected



to the body by a membrane. The large eyes and dominant red color of these fishes indicate their preference for low light levels and, indeed, they are nocturnal and found in relatively deep water. The large mouth indicates their predatory nature. The favorite species of aquarists is the Deep Bigeye, *Pristigenys alta*, which, when young, is quite attractive.

### Cardinalfishes (Plates 163–178, 254)

The cardinalfishes (family Apogonidae) have two separate dorsal fins, the anal fin has two spines, and the predominant color throughout the family is red, prompting the common name. Most are small reef dwellers, attaining lengths of 10 cm or less, from tropical and subtropical regions of the Atlantic, Pacific, and Indian Oceans. Most are relatively shallow-water species. Many cardinalfishes are mouthbrooders, with the male incubating the eggs in some species, the female in others, and in some instances the duties are shared. Some cardinalfishes enter into a symbiotic relationship with various invertebrates, primarily molluscs but in some cases sponges as well, where they gain shelter. One cardinalfish is named the Conchfish (*Astrapogon stellatus*) due to its association with conch. Almost any of the cardinalfishes can and do become aquarium residents, and of course the most colorful species are the ones most desired. One of particular popularity is the Pajama Cardinalfish (*Sphaeramia nematoptera*), which not only has an attractive pattern but also will remain out in the open tank, a feature not always present in the shy, nocturnal species. Of the almost 200 species in the family, most are included in the genus *Apogon*.

### Tilefishes and Smelt-whitings (Plates 179–181, 429)

The smelt-whitings (family Sillaginidae) have an elongate body, two dorsal fins, and two spines in the anal fin. They inhabit marine and brackish waters of the Indo-Pacific. They are almost never kept by marine aquarists but occasionally are seen in public aquariums.

Tilefishes (family Malacanthidae) have a long, continuous dorsal fin and a relatively long anal fin. There is only one opercular spine. Occurring in tropical to temperate waters of the Atlantic, Pacific, and Indian Oceans, the tilefishes are strictly marine. Most of the aquarium species come from the subfamily Malacanthinae, which includes the genera *Malacanthus* and *Hoplostethus*. Although members of both genera are kept in aquaria, those of *Hoplostethus* are more commonly maintained. One of the best known species, the western Atlantic Tilefish (*Lopholatilus chamaeleonticeps*), supports a sizable commercial fishery and is the object of a sports fishery. They live in deep water (to 370 m deep) and fishermen usually have to travel a fair distance to reach an area where they can be caught. Tilefish are bottom-fishes feeding on crustaceans and fishes.

### Jacks, Cobia, Remoras, Etc. (Plates 182–192, 194)

The Labracoglossidae has no common name for the five species (three genera) of this western and South Pacific family. They have a single dorsal fin and no canine teeth in the jaws. The false trevallies (family Lactariidae) from the Indo-Pacific have two dorsal fins, the soft-rayed portion of both dorsal and anal fins covered with scales. Two small canine teeth are present in each jaw. The single genus has up to two species. Neither of these families is commonly represented in the aquarium trade.

The bluefishes (family Pomatomidae) have two dorsal fins, the soft dorsal and anal fins covered with scales. The Bluefish (*Pomatomus saltatrix*) is quite famous as a sports fish. It is a schooling fish with the reputation of being vicious and bloodthirsty, killing just for the sake of killing. The schools of Bluefish trail schools of fishes such as herrings, menhadens, etc., charging into them violently enough to at times cause the water to boil with turbulence and usually killing more than they can consume. In the North Atlantic these schools migrate northward in the summer and southward when cooler temperatures arrive. Eggs are released into the water to develop as part of the plankton.

The Cobia (*Rachycentrum canadum*, family Rachycentridae) occurs in tropical waters around the world. It closely resembles the remoras, but instead of the sucking disc on top of

the head it has a normal dorsal fin of 6-9 short, free spines. It feeds on fishes and crustaceans near the bottom and has been given the common name Crab-eater in some locales.

The remoras (family Echeneididae) possess a sucking disc, a modification of the spinous dorsal fin that is used to attach themselves to larger fishes, turtles, or marine mammals. They thus hitch a ride and are able to feed off the scraps of their host's dinner. Suction is increased if the remora moves back "against the grain" of the laminae of the disc and released if the remora swims forward. This suction effect has been used to catch turtles. A remora is released into the water after a line has been attached to its tail. After a time the line and remora are hauled in with the remora hopefully attached to a turtle. The disc develops at an early age, for specimens as small as 2.5 cm or so have been found with fully formed discs.

The jacks and pompanos (family Carangidae) are generally streamlined, silvery, fast-moving fishes of temperate and tropical seas of the world. The body may be deep to fusiform, and there are usually two dorsal fins, the first with 3-9 sometimes very short, detached spines, and three anal spines, the first two usually detached from the rest of the fin. Commonly there are modified scales (scutes) along the posterior portion of the lateral line. The tail is forked and the caudal peduncle slender. A number of species are commonly in the aquarium trade and many more are normally present in public aquariums. One of the favorites is *Gnathanodon speciosus* with its golden color set off by black bars. Others include the deep-bodied members of the genera *Alectis* and *Selene*, some of which have long trailing filaments to the dorsal and anal fins. *Naucrates ductor* is called the Pilotfish as it is normally seen in company with large sharks — often swimming in the bow wave of the shark's snout. A number of carangids are also found under the bells of floating jellyfish, some of which possess tentacles armed with stinging nematocysts. Small carangids will also shelter next to floating debris and are able to travel across open pelagic waters in relative safety. Most carangids are considered sports fishes and anglers are usually provided with a good fight for their troubles. In addition, most species are good eating, the pompanos being exceptionally good eating and commanding considerably higher prices than most food fishes.

The Roosterfish (family Nematistidae) is the only member of its family. *Nematistius pectoralis* occurs in the tropical eastern Pacific and is distinctive by having the seven spines of the first dorsal fin elongate and filamentous. When folded back they fit into a groove. The Roosterfish is a good fighter and good to eat, thus making it a target for fishermen.

The dolphins (family Coryphaenidae) are more commonly being called dolphinfishes or even by the Hawaiian name mahimahis to help distinguish them from the porpoise-like mammals also called dolphins. The two species are very similar, with long, spineless dorsal and anal fins and a forked caudal fin. The males of the larger Dolphin (*Coryphaena hippurus*) develop a very high blunt forehead giving the fish a distinctive appearance. Mahimahis are excellent game fishes and excellent food fishes, so they are actively sought out by fishermen. They travel in small schools and once one is hooked others usually are also. Living fishes are quite beautiful, with blues, greens, and yellow predominating. Once landed, the fishes in their death throes change color, going through a rainbow of hues until they are dead and a dull silvery gray.

The family Apolectidae contains a single species, *Apolectus niger*, from the Indo-West Pacific. Formerly known under the name *Formio niger* (family Formionidae), individuals over 9.1 cm have no pelvic fins. The dorsal fin has 2-6 rudimentary spines and 41-46 rays. The scales are small and numerous, and a few enlarged scutes adorn the posterior end of the lateral line. Recently some authors have synonymized *Apolectus* with *Parastromateus* and have at the same time included the family Apolectidae in the Carangidae. It seems likely that these steps will be accepted.

### Moonfish and Slipmouths (Plate 193)

The Moonfish (*Mene maculata*, family Menidae) is very compressed with a sharp breast. The dorsal and anal fins are many-rayed (43-45 and 30-33 rays respectively) and have no spines.

Members of the family Leiognathidae are called by many names, the most common being ponyfishes, slipmouths, and slimys. They occur in marine and brackish waters of the Indo-West Pacific. The body is very compressed and the scales are small. The dorsal and anal fins are many-rayed, with spines, and fold back into scaly sheaths. Most species are small, the largest attaining a length of only a foot. They exude a slimy mucus when handled and the small mouths are highly protrusible, accounting for two of the common names. Although some of the species make interesting aquarium fishes, the basic silvery color places them low on the desirable list.

## Pomfrets (Plate 194)

Pomfrets (family Bramidae) are oceanic fishes from tropical oceans. Deep-bodied and with a single dorsal fin, the pomfrets are divided into two subfamilies. The Braminae contains *Brama*, *Taractes*, etc., while the Pteraclinae contains the genera *Pteraclis* and *Pterycombus*. Although the latter species are quite attractive (silvery body and long black sail-like dorsal and anal fins), they are never available.

## Australian Salmons (Plate 194)

The Australian salmons (family Arripidae) occur in southern Australia and New Zealand. Only a single genus and two species are known. They are not true salmon, but apparently arrived at the name through confusion of early settlers in Australia who likened them to the European salmon.

## Rovers, Snappers, and Fusiliers (Plates 195–209)

Rovers (family Emmelichthyidae) are warm-water fishes of most oceans. The dorsal fin may be continuous with but a shallow notch, so it appears to be in two separate parts but with the gap filled with short spines. The two lobes of the forked caudal fin fold in scissor-like fashion.

The snappers (family Lutjanidae) are quite well known, and a number of the almost 200 species are commonly kept in aquarists' tanks. Certainly snappers are well represented in public aquariums. The dorsal fin is continuous (some have a shallow notch), and most species have characteristic enlarged canine teeth on the jaws. They are important food fishes, and anglers consider some of them prize catches. Most are bottom-dwelling schooling fishes feeding on small fishes and invertebrates. The largest genus, *Lutjanus*, contains many species that are welcome in aquarists' tanks, especially the more colorful ones like the bright yellow species with blue stripes (mostly *Lutjanus kasmira* but others as well) and many juveniles. *Lutjanus sebae* has always been an aquarium favorite, as has the black and white patterned juvenile of *Macolor niger*. Although not common, juveniles of *Symphorus nematophorus* have filamentous dorsal fin rays and often are kept. The Yellowtail Snapper (*Ocyurus chrysurus*) has a yellow stripe that extends from the snout backward to include the entire tail. It differs behaviorally from other snappers by occurring solitarily and swimming higher in the water column.

Fusiliers (family Caesionidae) occur in the warm waters of the Indo-West Pacific. They are streamlined fishes with a deeply forked caudal fin and a small mouth. They are planktivorous (feeding on small drifting organisms) and commonly are seen in large schools over the reef. Only an occasional fusilier is seen in marine hobbyists' tanks, but they are more common in public aquariums.

## Tripletails (Plate 209)

Tripletails (family Lobotidae) occur in marine, brackish, and fresh waters of tropical seas. The name does not imply that they have three tails, but the posterior edges of the dorsal and anal fins plus the true tail give that appearance. Two genera are included in this family, the freshwater and brackish *Datnioides* that freshwater aquarists should know, and the marine *Lobotes*, the true Tripletail. Juvenile *Lobotes* are very good at pretending to be dead leaves or other floating material along the shoreline. They lie on their side and float among the debris until prey animals are encountered. Juveniles are mottled brown or dark brownish black, aiding in the illusion. These small fish are occasionally in the trade.

## Mojarras (Plates 210, 211)

Mojarras (family Gerreidae) occur in marine, brackish, and even some fresh waters in tropical and subtropical seas, the majority in American waters. They inhabit sandy shore areas. These relatively small (most less than 25 cm), silvery fishes have a highly protrusible mouth and sheaths that accept the dorsal and anal fins. The caudal fin is forked. The basic silver of these fishes may be complemented by dark markings and, in some species, yellow fins. Nevertheless, they are only occasionally present in the aquarium trade.

## Grunts, Porgies, and Their Relatives (Plates 212–242, 245)

The grunts (family Haemulidae) inhabit tropical and subtropical waters around the world, usually close to the bottom in reefy areas. Although most are strictly marine, some species occur in brackish water. The dorsal fin is continuous and the small mouth is normally provided with cardiform teeth. Two subfamilies are commonly employed, the Haemulinae (the true grunts) and Plectorhynchinae, the latter subfamily (common name sweetlips because of the thick, fleshy lips) sometimes being raised to family status. Grunts are predominantly an Atlantic group while sweetlips are more Indo-Pacific. The grunts get their name because of the grunting noise they make by grinding their pharyngeal teeth together and amplifying the sound with the swim bladder. They commonly school and may be seen on the reef in company with large schools of snappers. Juvenile Atlantic grunts are only occasionally offered for sale to hobbyists, but sweetlips are almost always available. Young sweetlips are usually brightly colored, and very small individuals move with a sort of sinuous motion. The most popular aquarium species are *Plectorhynchus chaetodonoides* (Clown Sweetlips) and *P. orientalis* in the Plectorhynchinae and *Anisotremus virginicus* (Porkfish) in the Haemulinae. This large family includes about 175 species.

The bonnetmouths (family Inermiidae) have the dorsal fin divided by a deep notch and the caudal fin is forked. The upper jaw is highly protrusible. Bonnetmouths are planktivorous, feeding on the small drifting organisms of the plankton. Only two monotypic genera are included.

Porgies (family Sparidae) are marine (rarely brackish or freshwater) fishes of tropical to occasionally temperate waters, the greatest proportion of the 100 or so species occurring in the Atlantic. They resemble grunts in having a continuous dorsal fin, but the maxilla is covered by a sheath when the mouth is closed. Habitats include reefs and rocky and sandy areas. Like the grunts, the porgies commonly aggregate into schools. Food items are varied in these omnivorous fishes, some species crushing molluscs with molar-like teeth. Few of the porgies are in the aquarium trade. They are mostly caught as food fishes both commercially and by sport fishermen.

The emperors (family Lethrinidae) inhabit coastal waters of the Indo-West Pacific and West Africa. They have a continuous dorsal fin and the eyes (at least in *Lethrinus*) are commonly set high on the head, the resulting elongate snout being used to dig into the sand for small invertebrates (sort of marine *Geophagus*). These are common food fishes that rarely are seen in the aquarium trade.

The threadfin breams (family Nemipteridae) are closely related to the emperors. They have a continuous dorsal fin and the caudal fin may have a filament extending from the upper lobe. Most of the three dozen species are quite colorful, with species of *Scolopsis* and *Pentapodus* appearing regularly in the hobby. The third genus of the family, *Nemipterus*, contains delicately colored species, but for some reason they do not enter the marine aquarium trade.

## Drums and Croakers (Plates 242–244)

There are over 200 species of drums and croakers included in the family Sciaenidae that inhabit marine, brackish, and fresh waters of the tropical to temperate zones of the world. The largest number of freshwater drums occur in South America. The dorsal fin is long and has a deep notch between the spinous and soft portions. The lateral line scales extend to the end of the caudal fin, and some species possess a barbel or barbels on the chin. Most drums

are found in shallow inshore waters over sandy bottoms. The common names are derived from their ability to make sounds using muscular contractions amplified by the swim bladder. Included in this family are such well known food and sports fishes as the weakfishes, Spotted Sea Trout, White Seabass, kingfishes, Corbina, and Black Drum. Aquarists keep the young of the genus *Equetus*, which often have the first dorsal and pelvic fins greatly elongated. These are the high-hats, cubbyus, and jackknife-fishes.

### Goatfishes (Plates 245–251)

Goatfishes (family Mullidae) are so-called because of their two long chin barbels that are used in detecting food as they move over the bottom substrate. They also have two widely separated dorsal fins and a forked tail. The dominant color is red with yellow, white, and black often providing contrast in various patterns. Goatfishes inhabit tropical seas usually near reefs, where they feed on the associated crustaceans and other invertebrates. They are important food fishes occurring occasionally in moderately large schools. Aquarists keep goatfishes not only for their coloration but also as a means of having the food on the bottom removed, much as do the catfishes in freshwater aquaria. The drawback is that they are so vigorous that at times the bottom is stirred up, causing a cloudy tank.

### Moonfishes (Plate 252, 344)

Moonfishes (family Monodactylidae) are marine and brackish water fishes (although they can exist in pure fresh water if necessary) from the Indo-West Pacific and West African coasts. The body is very deep and compressed, and the dorsal and anal fins are long-based and continuous, with graduated spines. These fins are covered with scales. The Common Moonfish (*Monodactylus argenteus*) is prized by both freshwater and marine aquarists, though most specimens are kept in brackish water with sea bass and other similar fishes.

### Sweepers (Plates 252–254)

Sweepers (family Pempheridae) are marine and brackish water fishes inhabiting the Indo-Pacific and the western Atlantic. The body is deep and compressed, and there is a single short-based dorsal fin and a long-based anal fin. These fishes normally are seen in large schools around reefs, commonly seeking shelter in caves or among the spines of sea urchins along with cardinalfishes and other small fishes. A few of the species are provided with luminescent organs. Sweepers are not usually seen in the aquarium trade.

### Butterflyfishes, Angelfishes, and Their Allies (Plates 255–296)

Sea chubs (family Kyphosidae) are marine fishes of tropical to temperate waters of the Atlantic, Pacific, and Indian Oceans. Most are compressed fishes with small mouths. The family is currently divided into three subfamilies, the Girellinae (nibblers), Kyphosinae (rudderfishes), and Scorpinae (halfmoons). The halfmoons are commonly placed in their own family. The rudderfishes obtained their common name through their habit of following ships at sea. The nibblers are inshore fishes perhaps most commonly known through one of our West Coast species, the Opaleye (*Girella nigricans*). The halfmoons contain some popular aquarium fishes, especially the Stripey (*Microcanthus strigatus*) and the Moonlighter (*Tilodon sexfasciatus*, formerly *Vinculum sexfasciatum*). Some of the Australian species are quite colorful but have not appeared very often in the aquarium trade.

Spadefishes (family Ehippididae) have a deep, laterally compressed body and a small mouth. The dorsal fin is continuous in *Platax* but notched between the spinous and soft-rayed portions in the other genera. They occur in tropical and subtropical oceans mostly around reefs. Young spadefishes commonly occur in inshore waters among the mangroves.

Young *Chaetodipterus*, for example, are great mimics of dead leaves floating along the shore. Although most ephippids grow quite large with respect to home aquaria, several species are commonly maintained. Species of batfishes (*Platax*) are the favorites and are almost always available. The three most common batfishes kept (as juveniles) range from easy to keep but not especially colorful (*Platax orbicularis*) to fairly difficult to maintain but quite pretty (*P. pinnatus*).

Scats (family Scatophagidae) inhabit marine and brackish inshore waters in tropical regions of the Indo-West Pacific. The body is deep and compressed and the dorsal fin is deeply notched; there are four anal fin spines. It has been reported that a toxin is associated with the spines of the dorsal fin, so these fishes should be handled with care. All scats, when available, are suitable fishes for the aquarium although *Scatophagus argus* is by far the most common species available. Most aquarists house them in brackish water tanks as these are most suitable for the young. Larger individuals do better in more marine environments and are seen in harbors feeding on excrement and other refuse from the ships that dock there, earning them the rather unflattering common name dung eaters.

The butterflyfishes (family Chaetodontidae) are tropical marine fishes mostly found in reef situations. They are compressed and deep-bodied with attractive colors and patterns. The dorsal fin is continuous, and a number of species have the snout produced to a greater or lesser extent. Common elements of the color pattern may include an eyeband and a false eyespot in the soft portion of the dorsal fin. A larval stage called the tholichthys is present. Butterflyfishes are among the most popular of aquarium fishes, and many species are always available where marine fishes are sold. Longevity in aquaria, however, is dependent almost entirely upon the species as some are very specific in their dietary requirements (needing live coral, for example) while others are omnivorous and will accept a variety of foods.

Angelfishes (family Pomacanthidae) inhabit tropical marine waters of the world, usually around reefs. The body is commonly deep and compressed, the dorsal fin is continuous, the soft portion often provided with a filament, and there is a characteristic spine at the angle of the preopercular bone. Most species are very colorful, some undergoing vast changes from juvenile to adult patterns and thereby confusing early workers in the group. Like butterflyfishes, they are extremely popular with marine aquarists and almost every species is a potential aquarium inhabitant. But also like butterflyfishes, certain angelfishes are more difficult to keep than others, mostly due to the inability of the aquarist to provide proper nourishment. The pygmy angelfishes of the genus *Centropyge* are best suited for home aquaria, while members of the genus *Pomacanthus* are best kept only when young as they grow quite large. The adults make excellent displays in public aquariums.

The Oldwife, *Enoplosus armatus* (family Enoplosidae), is a southern Australian species that is compressed and deep-bodied with a deeply notched dorsal fin, both portions being somewhat extended. It makes an excellent aquarium fish when available (which isn't very often).

The armorheads (family Pentacerotidae) are deep- to very deep-bodied, compressed fishes with the head usually encased in exposed, rough, striated bone. They occur in the Indo-Pacific and southwestern Atlantic oceans. They are rarely available to home aquarists and only occasionally may be seen in public aquariums.

## Knifejaws (Plate 297)

Knifejaws (family Oplegnathidae) are so-called because of the parrot-like beak of fused teeth with which they are capable of crushing molluscs and crustaceans. The spinous dorsal fin is continuous, and the scales are small (in the parrotfishes, the other major family with fused teeth, the scales are large). Knifejaws are marine fishes with an unusual distribution — Japan, southern Australia, Peru and the Galapagos, and South Africa. A single genus with half a dozen species comprises the family.

## Surfperches (Plates 297–298)

The surfperches (family Embiotocidae) are marine fishes (with one exception, *Hysterothorax traski*) inhabiting the coastal areas of the North Pacific. The dorsal fin is continuous and the scales are relatively small (35-75 in the lateral line). Surfperches are viviparous, giving birth to living young. The male impregnates the female by use of thickened anterior rays of

the anal fin. Few surfperches are kept by marine aquarists except perhaps on a local basis in California, where they are common. One of the drawbacks is their need for cooler temperatures. Surfperches are normally present in West Coast public aquariums.

## Damselfishes and Clownfishes (Plates 299–336)

Damselfishes and clownfishes or anemonefishes (family Pomacentridae) are mostly marine fishes from shallow tropical waters around the world. The nostril is single in most species and the mouth is small. The dorsal fin is continuous (somewhat notched in some anemonefishes) and the anal fin has two spines instead of the usual three of perciform fishes. Most species are small (usually less than 15 cm) and colorful (at least in the younger stages) with an aggressive, territorial nature. All these attributes endear them to marine aquarists, many of whom started in the hobby by keeping one or more species of damselfish or anemonefish. The anemonefishes (*Amphiprion* and *Premnas*) stand out from the rest of the family not only by their general appearance (most are white and orange or orange-red in color) but by their association with anemones. These fishes live unharmed among the stinging tentacles of anemones, thus receiving protection for themselves and their eggs. They are colorful fishes that beginners are able to keep for relatively long periods of time. Humbugs (members of the genus *Dascyllus*) have attractive black and white color patterns and are also quite popular with aquarists. Some species also are able to have a commensal association with anemones, but most simply shelter among the sharp branches of living coral. Of the rest of the family, almost any species would fare well in aquaria. Several favorites have emerged such as the Garibaldi (*Hypsypops rubicunda*), the Beaugregory (*Stegastes leucostictus*), the Jewelfish (*Microspathodon chrysurus*), and the Blue Devil (*Chrysiptera cyaneus*).

## Hawkfishes and Their Relatives (Plates 337–344)

Hawkfishes (family Cirrhitidae) occur in tropical regions of the world (although most are Indo-Pacific), usually in coral reef or rocky areas. They are usually small fishes with pleasing patterns, with reds predominating. The dorsal fin is continuous, and there sometimes are cirri on the interspinous membrane. The pectoral fins are large, the lower rays thickened and sometimes extended as sensory feelers. The name hawkfishes is derived from their habit of "perching" on the highest point of a coral head waiting for prey much as a hawk would do. Most common hawkfishes are kept by marine aquarists.

Kelpfishes (family Chironemidae) are marine fishes from the coastal waters of Australia and New Zealand. Only two genera with about four species are included in the family. The family Aplodactylidae (no common name) has three genera with five species. These fishes are coastal marine fishes with a disjunct distribution, southern Australia, New Zealand, Peru, and Chile. Both these families are similar in general aspect to the morwongs.

Morwongs (family Cheilodactylidae) are marine fishes of both the Southern Hemisphere (all oceans) and Northern Hemisphere (China, Japan, and the Hawaiian Islands). The dorsal fin is continuous but may be notched, and the lower four to seven pectoral fin rays are generally thickened, elongated, and detached in adults. The generic name *Cheilodactylus* is currently preferred to *Goniistius*. Morwongs are only occasionally seen in the aquarium hobby.

Trumpeters (family Latrididae) are similar fishes from the coastal areas of southern Australia, New Zealand, and Chile. There are three genera with a total of about 10 species.

## Bandfishes and Owstoniids (Plate 345)

The family Owstoniidae is a small one of about a dozen species. The body is elongate and compressed, the dorsal fin continuous, and the caudal fin somewhat elongate but not connected to the other vertical fins. The lateral line runs along the base of the dorsal fin. Bandfishes (family Cepolidae) are marine fishes of the eastern Atlantic and Indo-West Pacific. The body is elongate and tapers to the tail. The many-rayed dorsal and anal fins are connected with the caudal fin and are without spines. The predominant color in both families is red or pinkish. None of the seven species are regularly available to the marine aquarist, and it is even unusual to see one displayed at public aquariums.

## Mulletts, Barracudas, and Threadfins (Plates 345–347)

The mulletts (family Mugilidae) occur in all temperate and tropical seas in coastal marine and brackish waters. There are two separate dorsal fins, and the pelvic fins are subabdominal. The stomach is thick-walled and muscular and the intestine is very long. These are schooling fishes commonly found near the surface, and they are prone to leaping from the water only to fall back with an audible splat. Mud is picked up from the bottom and strained by the elongate gill rakers. Mulletts are not usually considered for home aquaria.

Barracudas (family Sphyraenidae) are elongate streamlined fishes with two widely separated dorsal fins. The lower jaw is projecting, and the mouth is provided with large, fang-like teeth earning these species a reputation of being ferocious predators that will even attack man. This reputation is enhanced by their habit of following swimmers and boats, perhaps attracted by the commotion and expecting to find something to eat. Most (but not all) reports of attacks on man by barracudas are untrue or greatly exaggerated. Barracudas are attracted by shining objects (like silvery bait fishes) and may inadvertently snap at a finger with a shiny ring on it if it is dangled from a boat in water of low visibility. Although most barracudas are relatively small, the great barracuda (*Sphyraena barracuda*) may attain a length of more than 1.8 m. Barracudas are kept by some marine aquarists as novelties and every public aquarium has a complement of them, especially if there is a large reef tank.

Threadfins (family Polynemidae) occur in marine and brackish waters of all tropical and subtropical areas. They have two separate dorsal fins, a subterminal mouth, and pectoral fins that are divided into two sections, the lower portion normally with 3-7 unattached, elongate rays that are used for detecting food.

## Wrasses, Parrotfishes, and Odacids (Plates 348–415)

The wrasses (family Labridae) are a highly diversified group of fishes found primarily in the warm tropical seas of the world. With some 500 species in about 57 genera, they run the gamut from deep-bodied and compressed to nearly terete, from species a few centimeters long to giants up to 3 m or more, and from drab colorless species to very gaudy fishes with a rainbow of colors. The mouth is protractile, the teeth are separate, some projecting outward, and the lips in some species are thick and blubbery. The dorsal fin is continuous, the soft rays of some species with long filaments. Behavioral patterns are often quite interesting. Many wrasses are parasite pickers (feeding on the ectoparasites of larger fishes) as juveniles, while members of one genus (*Labroides*) do it as a full-time job. Some wrasses dive into the sand to escape predators, and a number of species sleep under the sand at night. Still others build a cocoon around themselves for sleeping much as do some parrotfishes. The coloration of the wrasses is usually quite spectacular, endearing them to marine aquarists, and commonly changes from juvenile to adult. This change may be toward a less colorful adult but also may be from one gaudy pattern to another. For example, the Clown Wrasse (*Coris gaimard*) is bright orange with black-edged white markings. The adult is covered (particularly posteriorly) with brilliant blue spots. Sexual dichromatism is very common in the family, and this may reflect the two distinct spawning methods that may be present in the same species — a male-female one-on-one situation and group spawning. The single spawning male normally has a completely different livery. Many wrasses swim primarily by movement of their pectoral fins, giving them an odd sort of swimming motion. Many wrasses are in the aquarium trade.

The odacids (family Odacidae) are sometimes called weed whittings and have individual common names such as Herring Cale, Rainbowfish, and Tubemouth. The mouth is not protractile. The teeth in the jaws are fused into a parrot-like beak. The dorsal fin is continuous. Six genera with about a dozen species occur in the coastal marine waters of southern Australia and New Zealand. Mostly because of the long shipping distance and the cool water required, these fishes are not usually seen in the aquarium trade.

The parrotfishes (family Scaridae) are marine fishes of primarily tropical waters. The teeth are coalesced into a parrot-like beak (hence their common name) and the mouth is not protractile. The dorsal fin is continuous. There are about 75 species, but the exact number is not known because of confusion in parrotfish systematics. This is caused in large part by coloration changes from juvenile to adult, great coloration differences between the sexes, and by the very similar meristics of most of the species. Parrotfishes are herbivorous, com-



monly nibbling at living or dead coral to feed on the algae that is growing just below the surface layers or in the polyps themselves. Many are schooling fishes moving over the reef and stopping to graze as a unit as they go. Substantial amounts of calcareous material are ingested with the algae, broken down, and excreted back into the reef. Parrotfishes are thus considered one of the major factors in sediment production on the reef.

## Eelpouts, Pricklebacks, and Their Relatives (Plates 416–417)

Ronquils (family Bathymasteridae) are marine coastal fishes of the North Pacific. The dorsal fin is continuous and the large pectoral fins have a vertical base. Only three genera with seven species are included in this family. Normally these fishes are not seen in the aquarium trade.

Eelpouts (family Zoarcidae) are marine fishes of the cold waters of the Arctic and Antarctic. They have an elongate, tapering body with the long-based dorsal and anal fins confluent with the caudal fin. Pelvic fins are often lacking and when present are reduced and located far forward. Some members of the family are viviparous. Few aquarists can provide the cold water they need, although public aquariums on the West Coast of the U.S. usually have several representatives of this family on display. It is a fairly large family of 40 genera and 150 species.

Pricklebacks (family Stichaeidae) are marine fishes primarily of the North Pacific (plus a few in the North Atlantic). The dorsal and anal fins are long-based, the dorsal entirely spinous in most species (hence the common name). Among the better known species are the Monkeyface Prickleback (*Cebidichthys violaceus*) and Decorated Warbonnet (*Chirolophis polyactocephalus*) of the Pacific, and the Longsnout Prickleback (*Lumpenella longirostris*) of the Atlantic.

Gunnels (family Pholididae) are also marine fishes occurring in the shallow waters of the North Pacific and North Atlantic. The dorsal fin is about twice as long as the anal, with up to 100 spines. The pectoral fins may be absent, rudimentary, or small, while the pelvic fins may be rudimentary or absent. *Pholis gunnellus* is a representative species. The spawners take turns guarding the eggs, which are rolled into a ball by the curled bodies of the parents.

Wolffishes (family Anarhichadidae) are marine fishes of the North Atlantic and North Pacific. The dorsal fin contains only spines, the pectoral fins are large, and the pelvic fins are absent. The powerful jaws typically are provided with large molariform teeth for use in crushing the shells of molluscs and crustaceans and with large canine teeth, making them dangerous to handle. Only two genera with a total of seven species are included.

## Jawfishes, Stargazers, Sandperches, and Their Relatives (Plates 418–424)

Jawfishes (family Opistognathidae) inhabit tropical and subtropical waters. The dorsal and anal fins are long-based and continuous, and the lateral line is high on the body. The mouth is large and is used to excavate the burrows and to incubate the eggs (males are the oral incubators in this family). Most of the species are no larger than 15 cm in length. Some species of jawfishes are found in the aquarium trade, particularly the Yellowhead Jawfish (*Opistognathus aurifrons*) of the tropical western Atlantic. Aquarists must remember that a deep substrate is required for their well-being as they must be able to construct their burrows.

Eelblennies (family Congrogadidae) occur in the Indo-Pacific region. The body is elongate with long-based dorsal and anal fins confluent with the caudal fin. The pelvic fins may be present and located well forward (jugular) or absent. Eelblennies occur on mud and gravel bottoms and on coral reefs.

Only one genus with two species makes up the family Notograptidae of southern New Guinea and northern Australia. The body is elongate (eel-like) with long-based dorsal and anal fins that are confluent with the caudal fin. The pectoral fins are well developed, but the pelvics are reduced to a small spine and two rays. A mental barbel is present.

A single species, *Pholidichthys leucotaenia*, the Convict Blenny, comprises the family Pholidichthyidae. It occurs from the southwesternmost Philippines to the Solomon Islands. The body is eel-like, and the long-based dorsal and anal fins are confluent with the caudal fin.

Pectoral and pelvic fins are present, the latter with a slender spine and 2-3 soft rays. This species occasionally appears in the aquarium trade.

Sandfishes (family Trichodontidae) are marine fishes of the North Pacific. There are two dorsal fins and the pectoral fins are quite large. The mouth opens almost vertically and the lips are fringed. The two species of this family normally lie in wait for passing food while partially buried in the sand.

Weeverfishes (family Trachinidae) occur mostly in the Mediterranean but also in other parts of the eastern Atlantic, the Black Sea, and off Chile. There are two dorsal fins, the second dorsal and anal fins being long-based. Like the sandfishes, the weevers will lie on the bottom partially buried in the sand. They are dangerous because they are virtually invisible and thus are likely to be stepped upon, and there are venom glands associated with the spines of the first dorsal and the gill cover.

Stargazers (family Uranoscopidae) occur in temperate to tropical oceans. The mouth is nearly vertical and the lips are fringed. The eyes are dorsal or close to it, earning them their common name. There are two dorsal fins or the first may be absent; the second dorsal and anal have moderately long bases. Like the weeverfishes there are venom glands but these are associated with two large grooved spines just above the pectoral fins. Some stargazers also can produce an electrical shock of 50 volts or more. These fishes lie buried in the sand with just the anterior part of the head exposed. The mouth when opened reveals a worm-like filament on its floor used to entice prey.

Sanddivers (family Trichonotidae) occur in warm marine waters of the Indo-West Pacific. The dorsal and anal fins are long-based with the anterior rays of the dorsal fin often prolonged and filamentous.

The sandburrowers (family Creediidae) also occur in the warm to temperate waters of the Indo-West Pacific. The dorsal fin is continuous and the dorsal and anal fins are long-based. The fleshy snout projects beyond the lower jaw, which is bordered by a row of cirri.

Three species included in two genera comprise the family Leptoscopidae. The mouth is moderately oblique and the lips are fringed. The dorsal and anal fins are long-based and the eyes are dorsal in position like the stargazers. These fishes occur around Australia and New Zealand.

The sandperches (family Mugiloididae) occur on the Atlantic coasts of South America and Africa and throughout the Indo-Pacific. The dorsal fin is long-based, preceded by about four or five short spines that may or may not be separated from the soft rays by a notch. The pelvic fins are below and just anterior to the pectorals and are used to prop up the anterior end of the fish as it sits on the sand substrate. Of all the families of fishes discussed together here, the sandperches are the most likely to be seen in the aquarium trade.

## Blennies and Their Relatives (Plates 425–452)

People generally speak of blennies as if they were all included in a single family. The truth is that the suborder Blennioidei is composed of six families at present with some 675 species in about 127 genera. They are generally small, benthic fishes that often have cirri on their head. Many species are in the marine aquarium trade.

The triplefin blennies (family Tripterygiidae) are primarily tropical marine fishes of all oceans. The dorsal fin is divided into three distinct segments, the first two composed of spines, the third of soft rays. The pelvics are reduced and jugular in position, and there are no cirri on the nape. This family includes somewhat over 100 species in such genera as *Tripterygion* and *Enneanectes*.

The sand stargazers (family Dactyloscopidae) are warm temperate to tropical fishes from North and South America. The dorsal fin is continuous or divided and the jugular pelvic fins have a spine and three soft rays. The very oblique mouth usually has fringed lips, and the upper edge of the gill cover has finger-like elements. Sand stargazers commonly bury themselves in the sand bottom, breathing by means of a specialized branchiostegal pump.

Members of the family Labrisomidae (no common name as yet) are mostly tropical marine fishes from the Atlantic and Pacific Oceans. The dorsal fin is continuous (but with the rays longer than the spines) and has more spines than soft rays. Cirri are often present on the nape, nostrils, and above the eyes. Sixteen genera are included containing 100 or more species. Only *Xenomedeia* and some *Starksia* are viviparous.

The clinid blennies (family Clinidae) also have a continuous dorsal fin with more spines than soft rays, with all the rays being simple. Like the previous families of the suborder,

scales are present. About 75 species in 20 genera are divided into three tribes. The Ophiclinini from southern Australia are eel-shaped with a continuous dorsal fin that is united with the caudal fin as is the anal fin. They have many more spines than rays (36-84 and 1-4 respectively). They are mostly ovoviviparous, the males having an intromittent organ. The Myxodini are from temperate waters of the Western Hemisphere and the Mediterranean Sea. The continuous dorsal fin does not have the anterior few spines separated by a notch, and the anal fin is not attached to the caudal. Orbital and nasal cirri are present. The species are oviparous, the males lacking an intromittent organ. The Clinini are widespread mainly in the temperate Indo-West Pacific. The dorsal fin is continuous, but the anterior three spines are usually longer than the rest and separated from them by a small notch. The anal fin is rarely attached to the caudal. The species are ovoviviparous, the males having an intromittent organ.

Members of the family Chaenopsidae are commonly referred to by several common names, including pikeblennies, tubeblennies, and flagblennies. The body is naked (scaleless) and the dorsal fin is continuous (although some species have the anterior portion of the spinous dorsal fin much higher than the remainder of the fin). The dorsal and/or the anal fin may be united with the caudal, or all may be separate. The head is generally spiny or rough, and orbital and/or nasal cirri may be present or absent. These blennies are commonly known for their fierce territorial defense, displays with flag-like dorsal fins; at least one species has been shown to enter a symbiotic relationship with a stony coral.

The combtooth blennies (family Blenniidae) are what most people regard as "blennies." They are mostly marine (a few are brackish or freshwater species) fishes from tropical and subtropical waters around the world. They are naked or with modified scales. The dorsal fin is continuous, and the jaws are provided with comb-like teeth. About 300 species are divided into five tribes. The Salariini are mostly from the Indo-West Pacific. The caudal fin rays may or may not be branched. Some species are able to remain out of the water for considerable periods of time. About half the species of the Blenniidae are in the Salariini, including genera such as *Ecsenius*, *Istiblennius*, *Salarius*, *Entomacrodus*, etc. The Blenniini are mostly marine, and their caudal rays are branched. The 70 species are divided among fifteen genera, including *Blennius*, *Scartella*, and *Hypsoblennius*. The Omobranchini are also mostly marine, but their caudal fin rays are not branched. About 30 species are in this tribe. Phenablenniini includes the freshwater and brackish water *Phenablennius heyligeri* from Cambodia to Borneo. All the fin rays are unbranched. The tribe Nemophini includes the saber-toothed blennies. These occur in the Indian and Pacific Oceans, with one species, *Meiacanthus anema*, from brackish and fresh water. All fin rays are unbranched. These blennies are known for their more open-water existence and the habit of some of the species of mimicking more harmless fishes (such as cleaner wrasses) so that they can approach wary fishes that they then attack.

## Dragonets (Plates 453–456)

Dragonets (family Callionymidae) are marine benthic fishes from tropical waters around the world, although most occur in the Indo-West Pacific. There are two dorsal fins, the first usually composed of four spines. The mouth is generally small, the lips large, and the gill openings are reduced to a small aperture dorsally. The preoperculum is provided with a strong spine that commonly becomes entangled in nets. About 130 species are included in this family. Some of the species are regularly maintained in home aquaria, especially members of the genus *Synchiropus*. Sexual dimorphism in the form of the size and shape of the spinous dorsal fin and coloration is present.

## Gobies and Their Relatives (Plates 429, 457–495)

Seven families make up the suborder Gobioidi. These encompass some 263 genera that include almost 2,000 species, making it one of the most speciose groups of fishes. Some workers are of the opinion that the gobies should have full ordinal status; others relegate some of the families to subfamilies of the family Gobiidae. These are benthic fishes that usually are quite small, although some species reach 30 cm in length.

The sleepers (family Eleotrididae) are gobies of marine, brackish, and fresh waters of most

tropical and subtropical areas. The pelvic fins are separate and do not form a sucking disc. However, the bases of these fins may be united and the variation in degree of fusion encountered leaves a question as to the advisability of keeping the sleepers separate from the "true" gobies. This discussion will probably go on for some time. There are two dorsal fins, the first with up to 8 spines. The mouth is never inferior in position. Only about 150 species are included in this family, including such genera as *Dormitator* and *Eleotris*. Some species are kept in captivity, although most are not very colorful.

The true gobies (family Gobiidae) are tropical to subtropical fishes of marine, fresh, and brackish waters around the world. The pelvic fins are united, forming a sucking disc. There are two separate dorsal fins, the first composed of up to 8 flexible spines. About 1,500 species in 200 genera make this the most speciose family of marine fishes. Most species are less than 10 cm long, although some may grow to 50 cm. Gobies have insinuated themselves into many different niches and may be seen in virtually every habitat. Some are able to live for extended periods out of water, returning only to wet down their gill chambers. Others are parasite-pickers, the most well-known of these being the Neon Goby, *Gobiosoma oceanops*. Still others have developed symbiotic relationships with various invertebrate animals, among which are sponges, corals, sea urchins, and of course the burrowing shrimp. Coloration ranges from drab, cryptic patterns to brilliant, almost unbelievable colors such as the red-orange and electric blue Catalina Goby, *Lythrypnus dalli*, from our West Coast and members of the genera *Nemateleotris* and *Ptereleotris* from the Indo-Pacific.

The eel-like gobies (family Gobioididae) occur in marine, fresh, and brackish waters of the Indo-Pacific, tropical America, and the tropical West African coast. The body is eel-like, the dorsal and anal fins confluent or nearly so with the caudal. The pelvic fins usually form an adhesive disc.

The burrowing gobies (family Trypauchenidae) are marine, brackish, and freshwater fishes from the Indo-Pacific region. They have an eel-like body with the continuous dorsal and anal fins confluent or nearly so with the caudal. The pelvic fins usually form an adhesive disc. The eyes are very small. These shallow-water gobies burrow into the soft muddy substrate.

The wormfishes (family Microdesmidae) occur in marine tropical waters. The body is very elongate to eel-like with small, embedded scales. The lower jaw is protruding. The dorsal fin is continuous but not united with the caudal fin. Occasional individuals of *Microdesmus* and *Gunnelichthys* turn up in the aquarium trade.

## Surgeonfishes (Plates 496–509)

The surgeonfishes (family Acanthuridae) are strictly marine fishes from all tropical seas. They are compressed, usually deep-bodied fishes with a continuous dorsal fin. Two subfamilies are currently recognized. The Acanthurinae contains all the species in the family save one. They are normally characterized by one or more spines or scalpel-like blades along the caudal peduncle that gave rise to their common name. Most species are found in reef habitats where they form aggregations browsing on the surface of the corals, substrate, or whatever. Many species are quite colorful, and several species are commonly found in the aquarium trade. Species of *Acanthurus*, *Paracanthurus*, and *Zebbrasoma* are popular members of the disc-shaped group, while some species of *Naso* with their protuberances on the frontal region are also popular. The second subfamily, Zanclinae, the Moorish Idol, has commonly been regarded as a separate family (and many ichthyologists still regard the single species included—*Zanclus canescens*—as such). This species not only has an attractive color pattern but a pleasing shape as well and frequently has been used (along with the seahorse) as a decorative motif.

## Rabbitfishes (Plates 510–513)

The rabbitfishes (family Siganidae) are marine fishes from the Indo-Pacific region. The body is compressed and generally oval in shape. The dorsal fin is continuous and provided with 13 strong spines and ten soft rays; the anal fin has seven spines and nine soft rays, and the pelvic fins each have two spines (very unusual) and three soft rays. All the spines are grooved and associated with venom glands so that stab wounds are very painful and slow to heal. Of the two genera, *Lo* provides the aquarium trade with just about as many species as *Siganus* even though it is a much smaller genus.

## Tunas, Mackerels, Billfishes, and Their Relatives (Plates 514–517)

Seven families make up the suborder Scombroidei, which includes some of the world's fastest swimming fishes. Most are pelagic species, and some are found in deep oceanic waters. Altogether there are about 100 species included in 45 genera. None of the species are regularly in the aquarium trade, although many are seen in public aquariums in the larger tanks.

The snake mackerels (family Gempylidae) are tropical to temperate marine fishes often found at depths to 2,000 feet or more. The body is elongate and compressed, and the dorsal and anal fins are usually followed by isolated finlets. A forked caudal fin is present, but the pelvics are reduced or absent. Strong teeth are usually present in the jaws. About 22 species comprise this family.

The cutlassfishes (family Trichiuridae) also have a very elongate, very compressed body. The caudal fin may be small or absent and the pelvic fins are reduced. No finlets are present. The jaws are usually provided with fang-like teeth. About 17 species are included in this family. Cutlassfishes are good swimmers that usually stay near the bottom.

The largest family by far is the Scombridae, which includes the mackerels and tunas. About fifteen genera contain about 50 species. These streamlined fishes have two dorsal fins and detached finlets behind both the dorsal and anal fins. The caudal peduncle is tapering and is provided with two keels. The tunas and mackerels are fast swimming fishes that are highly regarded as food and sport fishes around the world. They are mainly schooling fishes of the open seas. Most are bluish to greenish on the back shading to silvery or white ventrally, making them very difficult to see.

The Swordfish (*Xiphias gladius*, family Xiphiidae) has the premaxillae and nasal bones prolonged to form the "sword." The pelvic fins and girdle are absent, and there is a single median keel on the peduncle of adults. The dorsal fin is short-based but high, and there is a single finlet posteriorly above and below on the caudal peduncle. Scales and jaw teeth are absent.

The billfishes (family Istiophoridae) are similar in aspect to the Swordfish but have scales and jaw teeth as well as pelvic fins. The caudal peduncle has two keels on each side. The dorsal fin is long-based and in the sailfishes is sail-shaped and higher than the body depth. In the spearfishes it is not sail-like and is about as high as the body depth while, in the marlins it is not sail-like and is not so high as the body depth. All these fishes are big-game fishes of sportsmen, their fighting abilities legendary.

## Driftfishes, Butterfishes, and Medusafishes (Plate 518)

Medusafishes (family Centrolophidae) are marine fishes of tropical and temperate seas. The dorsal fin is continuous, the spines weakly developed and graduating into the soft rays or stout and noticeably shorter than the soft rays. Seven genera are included with about 22 species.

The driftfishes (family Nomeidae) are marine fishes of tropical and subtropical seas. There are two dorsal fins and well developed pelvic fins. Most notable of the 15 species of this family is the small brightly colored Man-o'-war Fish (*Nomeus gronovii*), which can be seen swimming unharmed among the stinging tentacles of the jellyfish-like Man-o'-war (*Physalia*). Attempts to keep both the fish and the invertebrate in aquaria have usually met with failure.

The butterfishes (family Stromateidae) are marine coastal fishes of North and South America, western Africa, and southern Asia. The dorsal fin is continuous, usually taller anteriorly, and the body is deep and compressed. Adults lack pelvic fins. Only three genera with about a dozen species are included in this family. These schooling fishes are good eating and larger ones are harvested commercially.

## Flatfishes (Plates 519–525)

The six families of flatfishes are included in the order Pleuronectiformes. All of these fishes are quite distinctive in that the eyes both migrate to one side of the head and only that side becomes fully pigmented. The fishes lie on their uncolored side on the bottom substrate, usually nearly invisible by virtue of their coloration and pattern (which can be modi-

fied within limits) and because they partially cover themselves with the substrate. The pelagic larvae are bilaterally symmetrical and colorless. One eye (which one depends upon the species involved) migrates toward the one on the opposite side by either going around the edge of the fish or in some cases passing through it. As this is happening the colors start to become evident on one side and the fish takes up a bottom-living existence. Most flatfishes are carnivorous, their camouflage hiding them from potential prey animals. Many species are commercially valuable, for example the halibuts that may attain lengths of up to 3 m. The flatfishes include such well known fishes as the flounders, soles, halibuts, plaice, and tonguefishes.

The family Psettodidae is a small family of only one genus with two species from the Indo-Pacific and West Africa. The eyes may be either sinistral (left-sided) or dextral (right-sided). The pelvic fins are symmetrical, and the mouth is large. This family is by itself in a suborder because the dorsal fin does not extend onto the head, the anterior dorsal rays are spinous, and the palatine is toothed. The pelvic fins are nearly symmetrical and are each provided with a spine and five soft rays.

In the suborder Pleuronectoidei the dorsal fin extends onto the head at least to the eyes, the dorsal and anal fins are without spines, and the palatine is toothless. Three families, Citharidae, Bothidae, and Pleuronectidae, are included.

The Citharidae is a small family of five species included in four genera occurring in the Indo-West Pacific and the Mediterranean. The pelvic fins have a spine and five soft rays and their bases are short; the branchiostegal membranes are separated from each other. In one subfamily the eyes are sinistral while in the other they are dextral.

The lefteye flounders (family Bothidae) occur in the Atlantic, Pacific, and Indian Oceans. The eyes are sinistral and the pelvic fins are spineless. The eggs have a single oil globule in the yolk. The family is relatively large, with 37 genera and more than 200 species. Three subfamilies are presently admitted based partly on whether the pelvic fin bases are elongate (Scophthalminae), short and nearly symmetrical (Paralichthyinae), or the blind side base is shorter than that of the eyed side (Bothinae).

The righteye flounders (family Pleuronectidae) occur in the Arctic, Atlantic, and Pacific Oceans mostly in marine waters. No oil globule is seen in the yolk of the eggs. The 41 genera include some 100 species in four subfamilies. In the Poecilopsettinae the dorsal fin origin is above the eyes, the pelvic fins are symmetrical, and the lateral line of the blind side is rudimentary. In the Samarinae the dorsal fin origin is in front of the eyes, the pelvic fins are symmetrical, and the lateral lines are well developed or rudimentary. The Rhombosoleinae have asymmetrical pelvic fins and the lateral lines are equally developed on blind and eyed sides. The Pleuronectinae have the dorsal fin origin above the eyes, symmetrical pelvic fins, and the lateral lines well developed on both sides.

The suborder Soleoidei contains only two families (Cynoglossidae, Soleidae) where the pelvic fins are usually absent in the adults (the right one may be developed in some species), the mouth is small, and the jaws on the blind side are strongly curved and toothed.

The tonguefishes (family Cynoglossidae) are mostly marine fishes from tropical and subtropical seas. The eyes are sinistral, the dorsal and anal fins are confluent with the pointed caudal fin, and normally only the left pelvic fin is developed. The pectoral fins are absent. The mouth is asymmetrical, and the eyes are normally very small and close together. More than 100 species are included in three genera. Two subfamilies are recognized in which the snout may be hooked (Cynoglossinae) or not (Symphurinae).

The soles (family Soleidae) are mostly marine fishes of tropical to temperate seas. The eyes are dextral. Some 117 species are included in 31 genera. Two subfamilies are recognized, the Achirinae and the Soleinae. The Achirinae are American in distribution and provide the freshwater soles of the aquarium trade. The dorsal and anal fins are free from the caudal and the right pelvic fin is joined to the anal fin. The Soleinae are mostly found from Europe to Japan and Australia. The dorsal and anal fins are free from or united with the caudal fin and the pelvic fins are free from the anal fin.

## Puffers, Triggerfishes, Boxfishes, and Their Relatives (Plates 526–563)

The order Tetraodontiformes includes eight families of sometimes rather unusual fishes. The scales are often modified into spines, plates, or shields, and the gill openings are restricted. Most species are able to produce sounds by use of the swim bladder or by grinding their jaws or pharyngeal teeth. Tetraodontiforms (sometimes also called plectognaths) are divided into eight families that include more than 300 species.

The spikefishes (family Triacanthodidae) are deep-water benthic fishes from the tropical and subtropical western Atlantic and Indo-Pacific regions. They have a relatively normal

dorsal fin divided into spines and soft rays, and the caudal fin is rounded to truncate.

The very similar triplespines (family Triacanthidae) are more shallow-water benthic fishes from the Indo-Pacific. They are readily distinguished from the species of the previous family by their forked caudal fin and higher number of dorsal and anal fin rays. There are only about 20 species of spikefishes and seven species of triplespines. Only one or two species are occasionally seen in the marine aquarium trade.

The leatherjackets (including the triggerfishes and filefishes) are members of the family Balistidae. These are marine fishes found around the world in tropical and subtropical waters. The body is covered with heavy scales giving them a leathery or very rough texture. The pelvic fins are absent and the first dorsal fin is provided with a trigger or locking mechanism. The upper jaw has two rows of protruding incisor-like teeth that can be formidable weapons in some species. The soft dorsal and anal fins are usually long-based. The 135 species are generally included in 42 genera. Two subfamilies (often regarded as separate families) are currently recognized. The triggerfishes (subfamily Balistinae) have three dorsal fin spines, plate-like scales in regular series, and all soft fins with branched rays. The jaw teeth are heavy and strong, more developed for crushing than for nibbling. Many aquarium fishes are found in this subfamily including perhaps the most prized marine species of all — the Clown Triggerfish (*Balistoides conspicillum*). The filefishes (subfamily Monacanthinae) usually have only two dorsal spines, the second very small or even absent. The scales are small and in regular series but rough, giving the skin a prickly or furry feel. The soft dorsal, anal, and pectoral rays are all unbranched. The teeth in the jaws (three outer and two inner as compared with the four outer and three inner of the triggerfishes) are more developed for nibbling than for crushing. Many species of this subfamily have also found their way into the aquarium trade. One of the favorites is the Long-nosed Filefish, *Oxymonacanthus longirostris*, with its orange spots on a bluish to greenish background.

The boxfishes (including the trunkfishes and cowfishes) belong to the family Ostraciidae. These are marine fishes from the tropical oceans of the world. The body is enclosed in a bony carapace that is commonly box-shaped but may be very angular and provided with sharp edges and long spines. There is no spinous dorsal fin. The fins stick out from openings in the carapace to provide the meager propulsion for these fishes. Some species are so slow they can be easily caught by hand. Some species are dangerous in marine tanks, for when they are upset they exude a toxic substance that can kill any living thing in the tank including themselves. Even so several species have become standard importations for home aquaria. One of the most popular is *Ostracion cubicus*, which, when young, is bright yellow with black spots.

The Three-toothed Puffer (family Triodontidae) is called that by virtue of the three fused teeth in the jaws. There is a small spiny dorsal fin in most specimens, and the dorsal and anal fins each have 11 rays. The single species occurs in the Indo-West Pacific.

The puffers (family Tetraodontidae) are mostly marine fishes (some freshwater species are known in the aquarium trade) of tropical and subtropical waters of the world. The body is without scales or with some prickles in the belly area. There are four fused teeth in the jaws. Some species of puffers produce toxic substances that are dangerous if eaten. Instances of death caused by improperly prepared puffers are reported each year in Japan, where they regularly are eaten. The puffers have the ability to inflate themselves (with water or air depending on where they are) into a balloon-like shape when disturbed, a defense mechanism apparently helping to prevent them from being eaten. When left to their own devices they eventually return to their previous shape and beat a hasty retreat. Most of the aquarium puffers come from the genus *Canthigaster*. Several of these sharpnose puffers may be seen in any well stocked marine aquarium store.

The porcupinefishes (family Diodontidae) are also distributed worldwide in tropical seas. No freshwater or brackish water species are known. They are similar to the puffers but the body is covered with well developed spines. In some species the spines are permanently erected, in other they become erect only when the fish is inflated. There are two fused teeth in the jaws. Porcupinefishes are not as popular as the puffers but may occasionally be seen in dealers' tanks.

Finally, the molas (family Molidae) are marine tropical and subtropical fishes from around the world. They are sometimes called headfish as they seem to be composed almost entirely of a very large head. There is no swim bladder, no pelvic fins, no caudal peduncle, and the caudal fin may be absent as well. There are two fused teeth in the jaws. The dorsal and anal fins are set well back and provide the locomotory thrust. The young swim upright like most fishes, but the giant adults are more apt to spend their time floating or feebly swimming on their side. The largest species, *Mola mola*, may grow to 3 m and 270 kilos. It is also very fecund, producing up to 300 million eggs.

## 3rd Edition Supplemental Index

This index contains only those entries referable to the species added to the Second Edition to make this current edition, the Third Edition. As in the main index immediately following, entries are listed by both common and scientific names, with scientific names listed under both generic and specific names.

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