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America's First Settlers, the Indians

With 34 Illustrations

MATTHEW W. STIRLING

When Red Men Ruled Our Forests

24 Paintings

W. LANGDON KIHN

Pearl Fishing in the Red Sea

With 25 Illustrations

HENRI DE MONFREID

Pilgrims' Progress to Mecca

22 Illustrations in Duotone

Keeping House on the Congo

With 29 Illustrations

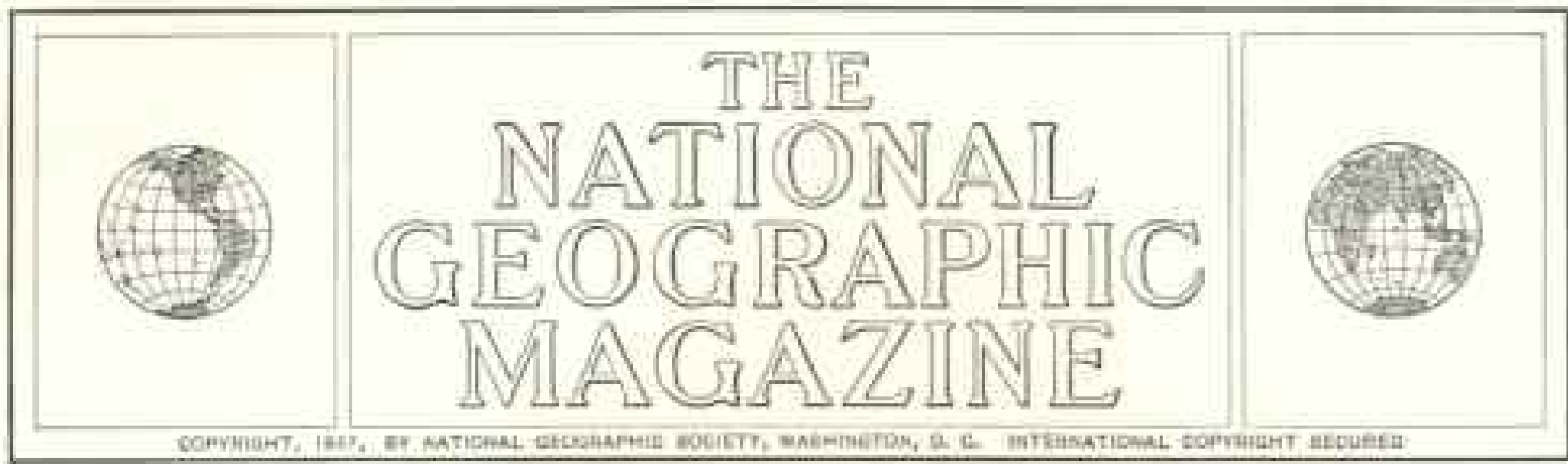
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AMERICA'S FIRST SETTLERS, THE INDIANS

BY MATTHEW W. STIRLING

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LIKE most major discoveries, the finding of America by its first settlers took place in easy stages. Shortly after the retreat of the last great ice sheet, some venturesome Asiatic wanderer, a prehistoric Columbus of name unknown, crossed the narrow strip of sea between East Cape, Siberia, and Alaska.

The crossing at that time could have been made on the ice, but it might also have been accomplished in skin boats or canoes, a feat not infrequently performed by Eskimos of today.

The first comers to North America trekked southward and their descendants penetrated into more hospitable climes and more productive lands. To roving hunters in quest of food, this vast, virgin territory must have seemed a paradise. With no human enemies to bar their way, the first thin ripple of this series of human waves probably spread with incredible rapidity.

MAMMOTH CHOPS AND CAMEL STEAKS

Game was abundant. The early hunters found most of the familiar animals we now know in America, and they also encountered creatures long since extinct.

The giant ground sloth with its sluggish habits must have proved an easy victim to his human enemies. The mighty mammoth and the American camel were hunted and used for food.

In Colorado, New Mexico, and Nevada, ingeniously flaked stone knives and projectile points have been found with the bones of these animals, and with those of a large, now extinct variety of bison.

The Americas were not populated entirely by descendants of these first dis-

coverers. It is likely that through many centuries Asiatic people, responding to population pressure from the south and west, found this natural route into the American continent, just as successive streams of European immigration later penetrated inland from the Atlantic seaboard.

Archeological evidence indicates that most of these migrants did not linger long in the far north but pushed southward along the coast in their canoes, or followed the interior valleys.

BOTH CONTINENTS PEOPLED

So completely did they establish themselves that, when the Europeans arrived, the two continents, and practically all of the adjacent islands as well, were occupied from the Arctic coast to the extremity of Tierra del Fuego.*

During the thousands of years that elapsed before the invasion of Europeans in the 16th century, the descendants of these early Asiatic hunters had succeeded in developing high civilizations. Without the aid of ideas from established culture centers, their attainments compared favorably with the best achieved in the Old World.

From the fur-clad Eskimo of the frozen Arctic coast, living in his ingenious snow house, to the naked savage of the steaming tropical jungles of the Amazon Basin, with his equally suitable palm-thatched home, the descendants of these first American immigrants demonstrated their adaptability in countless ways. Whatever his environment, the Indian learned the secrets of Nature

* Throughout this article place names are given in terms of present-day geography.

and found how he could best turn them to his ends.

Thus the wandering bands of primitive Shoshoni, living in the parched deserts of the Great Basin, found food in the sparse and spiny plants of the region. They knew the location of the scattered springs and how to capture edible grasshoppers and fly larvae from the lakes. They constructed nets to entrap the fleet jack rabbit and, for lack of better material, made their rude shelters of brush.

Among these simple bands, the only recognizable social unit was the family group.

THREE GREAT CIVILIZATIONS

While these and other primitive groups were wresting a bare existence, the great civilization of the Maya* developed and flourished for 1,500 years on the mountainous highlands of Guatemala, the tropical lowlands of the Motagua River, and among the thorny scrub of Yucatán.

The equally great Inca† culture of ancient Peru arose on the arid desert of the Pacific coast and in the bare and chilly highlands of the Andes.

The Aztecs,‡ shortly before the coming of the Spaniards, had succeeded in building up a mighty military nation in the temperate Valley of Mexico.

Wherever the early white explorers went, they found diversity in culture, adaptability to environment.

This variation is illustrated most strikingly by languages. North of Mexico alone, at the time of the conquest, there were more than 50 unrelated linguistic stocks, and 700 distinct dialects. These dialects differed from one another as English differs from German or French, and the linguistic

* See "Foremost Intellectual Achievement of Ancient America," "Chichen Itzá, an Ancient American Mecca," "Unearthing America's Ancient History," and "Yucatán, Home of the Gifted Maya," all by Sylvanus Griswold Morley, in *THE NATIONAL GEOGRAPHIC MAGAZINE* for February, 1922, January, 1925, July, 1931, and November, 1936, respectively; and "Preserving Ancient America's Finest Sculptures," by J. Alden Mason, November, 1935.

† See "In the Wonderland of Peru," "Story of Machu Picchu," and "Further Explorations in the Land of the Incas," all by Hiram Bingham, in *THE NATIONAL GEOGRAPHIC MAGAZINE* for April, 1913, February, 1915, and May, 1916, respectively; "Staircase Farms of the Ancients," by O. F. Cook, May, 1916, and "Air Adventures in Peru," by Robert Shippee, January, 1935.

‡ See "In the Empire of the Aztecs," by Frank H. H. Roberts, Jr., in *THE NATIONAL GEOGRAPHIC MAGAZINE*, June, 1937.

stocks have nothing in common in vocabulary or grammatical structure.

It is evident, therefore, that numerous peoples of different origin had been isolated for long periods.

Since phonetic writing was never developed in the New World, there was no means of stabilizing and holding together a language for any considerable time. Even though standardized by published grammars, dictionaries, and a vast printed literature, our own language has changed so much since the time of Chaucer that we would understand little of the English of that period were we to hear it spoken now.

All these native American languages were capable of expressing abstract thought and subtle shades of meaning. Their vocabularies were as complete as the experience of the speakers permitted, and the grammatical structure intricate and systematic.

EARLY AMERICAN LANGUAGES

The principal linguistic stocks north of Mexico are the Eskimauan, which includes the entire Arctic coast from Alaska to Greenland; Athapascan, which includes Alaska and most of the interior of Canada west of Hudson Bay, and reappears in Arizona, New Mexico, and western Texas; Algonquian, which stretches across southern Canada from the Rocky Mountains to the Atlantic, thrusting south of the Great Lakes to Tennessee; the Iroquoian, which includes the valley of the St. Lawrence River and the regions around Lake Erie and Lake Ontario, south to northern Georgia.

The Shoshonean stock includes the Great Basin region and northern Texas; the Siouan takes in most of the Great Plains and parts of the Carolinas and Virginia.

The Muskogean stock covers most of the States of Mississippi, Alabama, Georgia, and Florida.

There are many lesser stocks dotted here and there on the map of North America, the region of the Pacific coast being astonishingly diverse in this respect. The groups above mentioned, however, cover the large bulk of the area north of Mexico.

The varieties in physical type among the Indians were not so great nor so striking as the cultural differences.

All American Indians can be classified generally as belonging to the Mongoloid stock, to which the people of eastern Asia also belong. All have straight or slightly wavy black hair, brown eyes, and dark



© Roland W. Reed

WITH A BIRCH-BARK LOUD-SPEAKER, THE SWARTHY HUNTER BROADCASTS A "MOOSE CODE" MESSAGE TO LURE BIG GAME

Hearing this simulated mating call of its species, one of the animals may walk down to the shore to investigate, giving the Chippewa brave a chance to shoot it. Indians cleverly mimicked the calls of many wild creatures, usually without using megaphones or other instruments.



Photograph by Harrison Howell Walker

TALL WIGWAMS RISE ON LOWER MANHATTAN WHERE A FLAGPOLE, COMMEMORATES HISTORY'S MOST AMAZING REAL ESTATE DEAL.

With \$24 worth of colored cloth, bright beads, and other trinkets, Peter Minuit, Director General of New Netherlands, bought the world's richest island of its size from the Indians in 1626. The natives may not have understood that they were selling land, and thought they were receiving presents (page 575). The monument, showing Peter "paying up," marks the site of Fort Amsterdam, which he erected here. Towering to the right of the flagpole are the Standard Oil Building, on Broadway, and the Bank of Manhattan Company Building, in Wall Street.

complexions. This latter feature varies to a limited extent in different sections of the New World.

The principal differences are in physiognomy, head form, and stature. The Indians of the eastern United States and of the Great Plains area were usually tall and stalwart in build, frequently exhibiting the aquiline nose which we so commonly associate with the typical Indian face. Indians of this type also prevail

in western and southern South America.

On the other hand, the Indians of Mexico, Central America, and the Amazon Basin were considerably shorter in stature and darker in complexion, with broad and flatter noses.

"REDSKINS" NOT REALLY RED

Because most tribes were fond of painting themselves with red ocher or red vegetable paints, they were called "redskins"

by the early travelers, and this fact led to the erroneous idea that the skin of the Indian is naturally red, or copper colored.

There are six times as many people living in New York City today as occupied all of North America north of Mexico when Columbus arrived.

Ethnologists estimate the total population of this area at approximately 1,150,000. Of this number 846,000 were within the limits of the present United States, 220,000 were in Canada, 72,000 in Alaska, and 10,000 in Greenland.

The regions of greatest concentration were in the Southeastern States, east of the Mississippi River, and in California, areas which could support large populations because of mild climate and an abundant food supply.

During the many centuries that the Indians were peopling America, their progress was interrupted only by disputes among themselves. However, excepting locally, the various wars and conflicts produced no generally disturbing influences.

After these enterprising people had discovered America, populated it, and developed their interesting and diverse cultures, it remained for the Europeans to discover the Indians.

Indians of the Northeastern Woodlands were the first Americans to come in contact



Photograph by Harrison Howell Walker

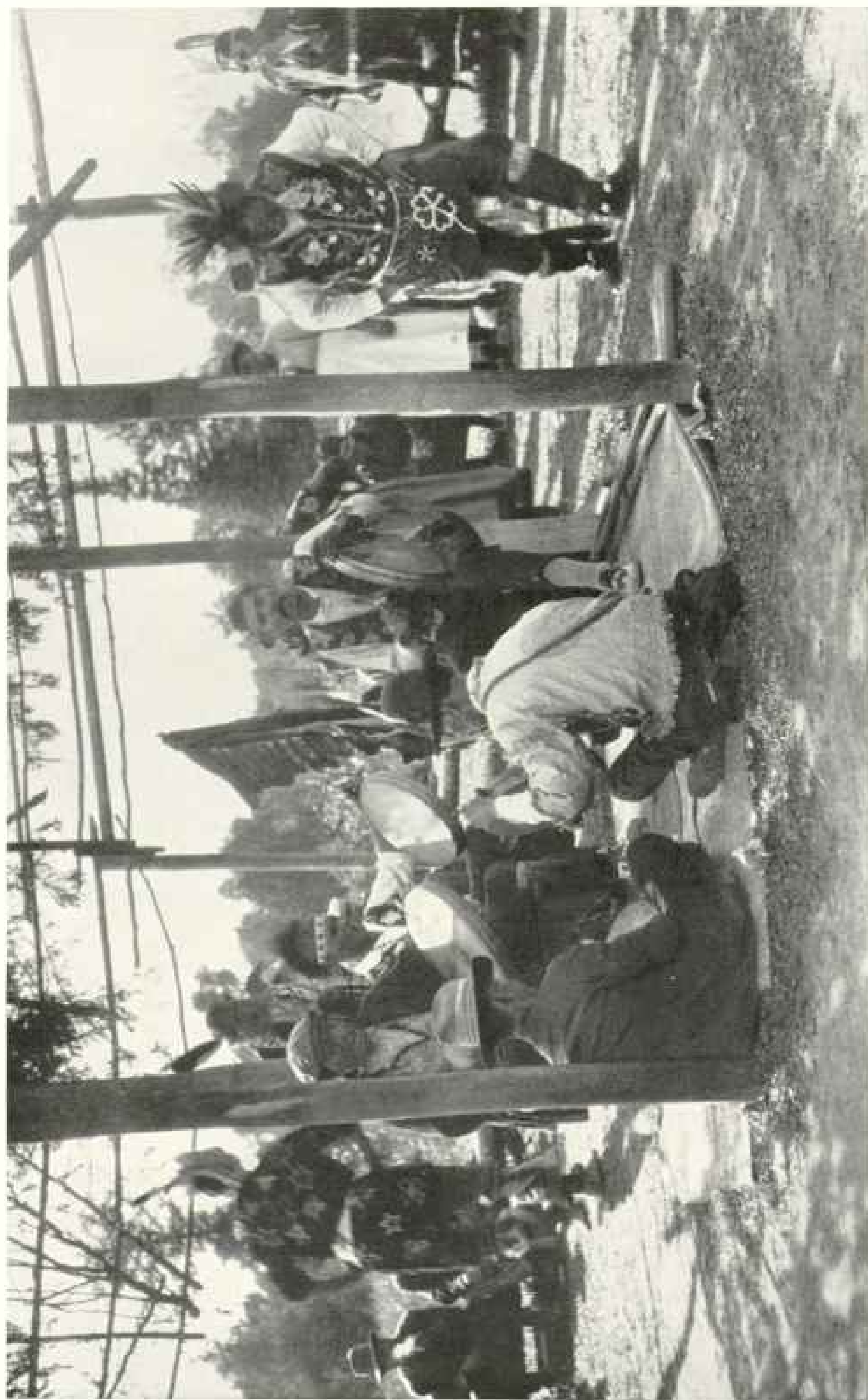
CHIEF LOUD VOICE WEARS A "GOOD WILL TREATY"
ON HIS TORSO

The moose-skin shirt of this Tuscarora sachem, whose American name is Clinton Rickard, tells the story of Sir William Johnson's message to Indians and English settlers in 1761. Johnson, friend of the red men, advised both races to hold fast to the Covenant Chain, symbol of peace. On the shirt, one end of the chain is held by a white hand (right), the other by an Indian. Six stars represent the six Iroquois nations (originally only five). Below, grouped around an American eagle, are 13 stars for the original States. The old wampum belt on the chief's lap symbolizes the Indians' refusal of Christianity, the Cross being set apart from the three human figures.

with the strange civilization of Europe.*

When Norsemen visited the New England coast during the first two decades of the 11th century, their all too brief

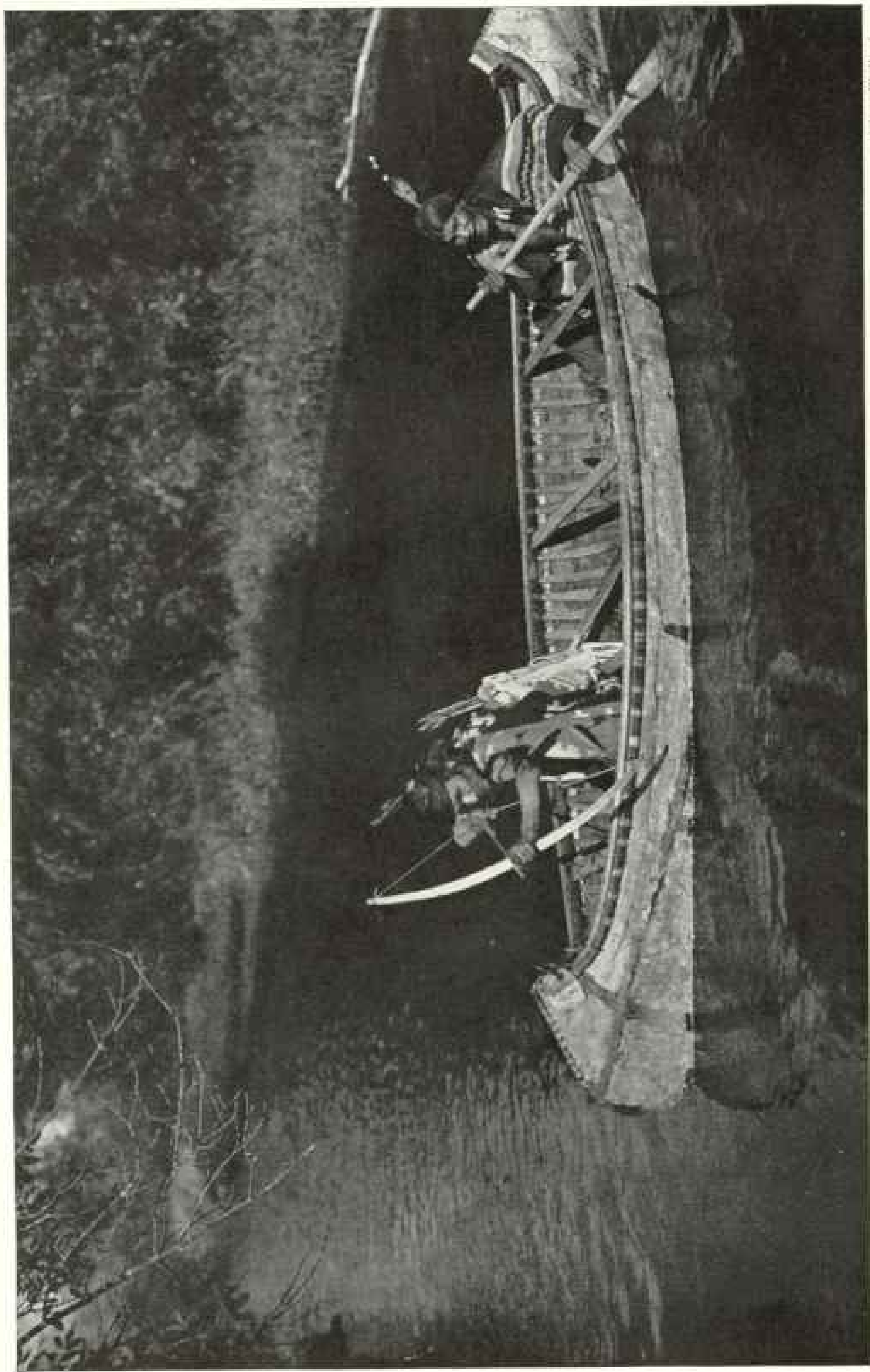
* Indians of the Northeastern Woodlands are pictured in their colonial environment in the 24 pages of color paintings by W. Langdon Kihn, accompanying this article. Other major groups will be described and portrayed in color in subsequent articles in The American Indian Series.



Photograph by Frances Dunsinger

AT DRESS REHEARSAL, MEMONIEE SONG-AND-DANCE MEN GO INTO THEIR ACTS WHILE MUSICIANS PLAY

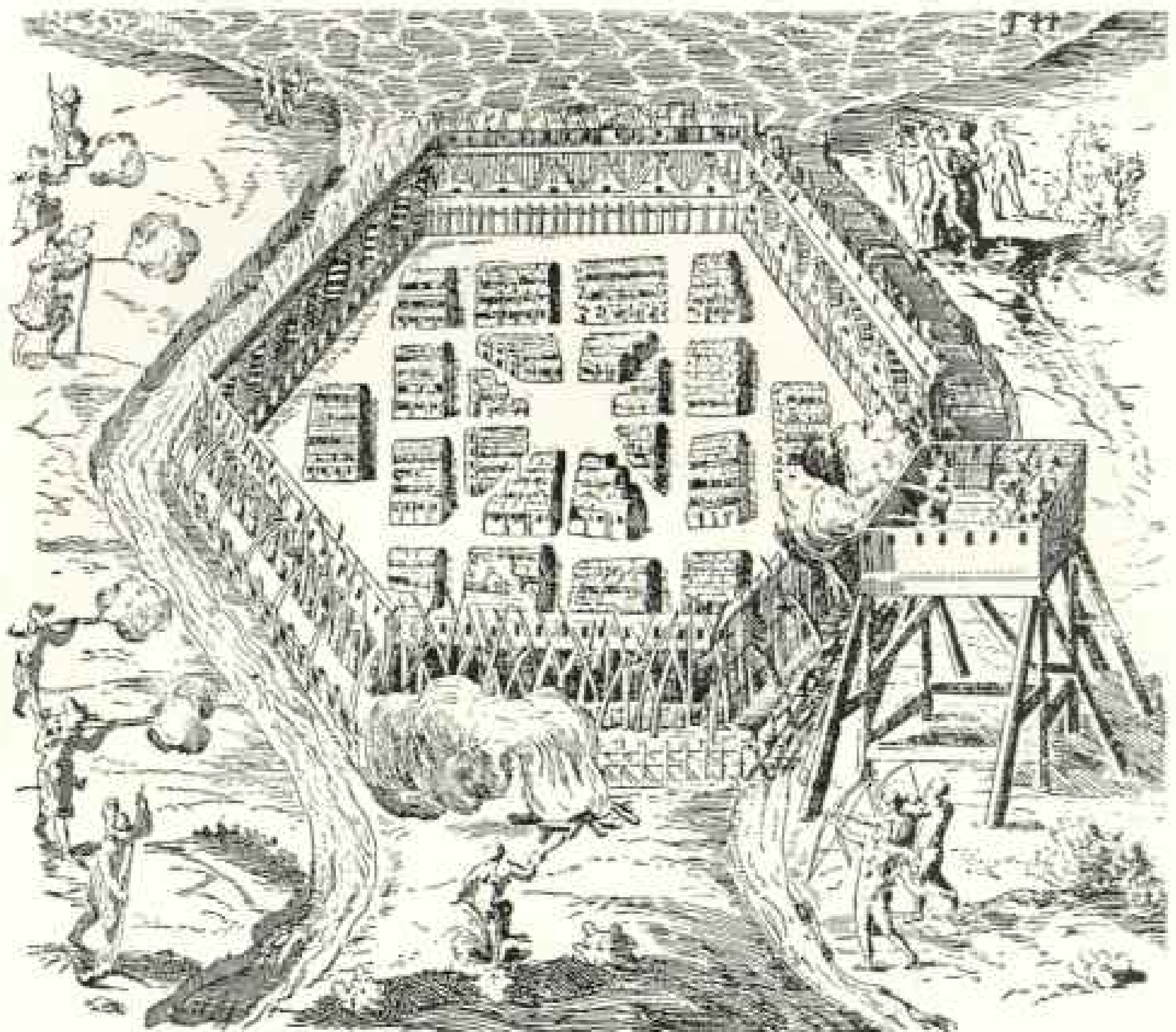
While enquiring about the "orchestra" in the center of the dance lodge, performers learn the words of their ritual songs by heart before staging the actual ceremony. This dance is connected with the "drum religion" of the Memoniee, a sort of compromise between aboriginal beliefs and the doctrines of Christianity. The ceremony is a continuous performance, and, like most Indian religious observances, lasts for several days.



© Roland W. Bend

PADDLING SOFTLY, HUNTERS GLIDE STEALTHILY TOWARD A DEER OR MOOSE FEEDING IN A STREAM

The archer's aim may mean the difference between feast and famine. Chippewa maneuvered their birch-bark canoes to shoot the prey while it was swimming, for the large animals move much more slowly in water than on land. If unable to approach within range of the game, the hunters landed their canoe and stalked it on foot.



Drawing from Matthew W. Stirling

CHAMPLAIN ATTACKS AN INDIAN VILLAGE: A 17TH-CENTURY "NEWS PICTURE"

The French explorer of Canada, with a war party of Algonquian allies, came south into what is now New York State and stormed this fortified Onondaga town in 1615. In the illustration, which accompanied Champlain's account of his adventures, Frenchmen aim their blunderbusses from a wooden tower (right), while musketeers and Indian archers close in on the palisaded village. One warrior lays a fire to burn the stockade. Inside, a scaffolding supports a narrow runway where defenders can stand and shoot arrows through loopholes. Streams provide a moat for the fort.

descriptions of the savages, or "skraelings," indicate that the latter were an Algonquian people whose customs changed but little during the next few centuries.

EUROPEANS "DISCOVER" THE INDIANS

The Norsemen described the Indians they saw as swarthy, ferocious in aspect, with ugly hair, big eyes, and broad cheeks.

They were clad in skin clothing, armed with bows and arrows, and used stone axes. They navigated the rivers in birch-bark canoes and eagerly traded their furs for strips of red flannel to bind about their heads. They expressed keen surprise at the iron tools of the Vikings and were terror-stricken at the bellow of Thorfinn's bull, brought over for breeding.

The Norsemen also described "self-sown wheat fields," but it is impossible to say whether these were fields of cultivated maize or of wild rice.

No records have been preserved of subsequent visits to America by the Norsemen, but it is possible that the Basques, Normans, and Bretons had explored this region by the middle of the 15th century in search of fishing grounds. At any rate, it was not long after the first voyage of Columbus that the short route of the Norsemen was again in use.

In 1497 John Cabot sighted Cape Breton, and before the 16th century was under way a permanent fishing settlement of Basques, Normans, and Bretons was established on Newfoundland.



Photograph by Willard R. Culver

ARROWS FLY, CABINS FLAME, INDIANS SCALP SETTLERS—ALL IN BRONZE

The graphic relief stands as a memorial to those who died in the Pigeon Roost Massacre, near the present town of Underwood, Indiana. A band of Shawnee Indians, during the War of 1812, attacked the little settlement one day at sunset, when most of the men were away, and killed one man, five women, and 16 children. One mother hid with her two youngsters in a cornfield and escaped. The town's name indicates that it was a favorite roosting place for wild pigeons.

By 1578 as many as 150 French vessels were trading with the coastal Indians from Newfoundland to the mouth of the Potomac River.

By this time the Spaniards had established themselves in Florida and were casting covetous eyes on the fur trade of the northern Atlantic coast, although they took no important part in it.

In 1565 Pedro Menéndez de Avilés wrote from St. Augustine, Florida, that more than 2,000 buffalo skins had been brought down the Potomac in canoes by the Indians to Chesapeake Bay, and there traded to the French. Other adventurers and explorers from time to time skirted the coast.

SETTLEMENTS UPSET TRIBAL DOMAINS

Thus, when the colonists arrived at Jamestown and Plymouth, the whites were already a familiar story to Indians of the Atlantic seaboard.

The first European settlements in the northeast were included in a comparatively narrow strip of land along the Atlantic seaboard, but effects of their presence were felt

by the tribes of the interior long before the white man made his personal appearance.

The pressure created by the arrival of the French, the English, and the Dutch forced the withdrawal of the contact tribes to the westward. This brought about conflicts with those whose territory was invaded. When these people were forced back in turn, established tribal territory again was dislocated.

Finally the Siouan tribes living in the western Great Lakes region were pushed out from the shade of their native woodlands into the sunlight of the open plains. There their mode of existence changed with their new environment.

The later history of the Indians and of the territorial conquest of North America was determined by a series of accidents.

The conquest of the New World by the Spaniards is a story of the quest for gold. The conquest of northeastern North America is a story of the rivalry of the French, the English, and the Dutch for control of the fur trade.

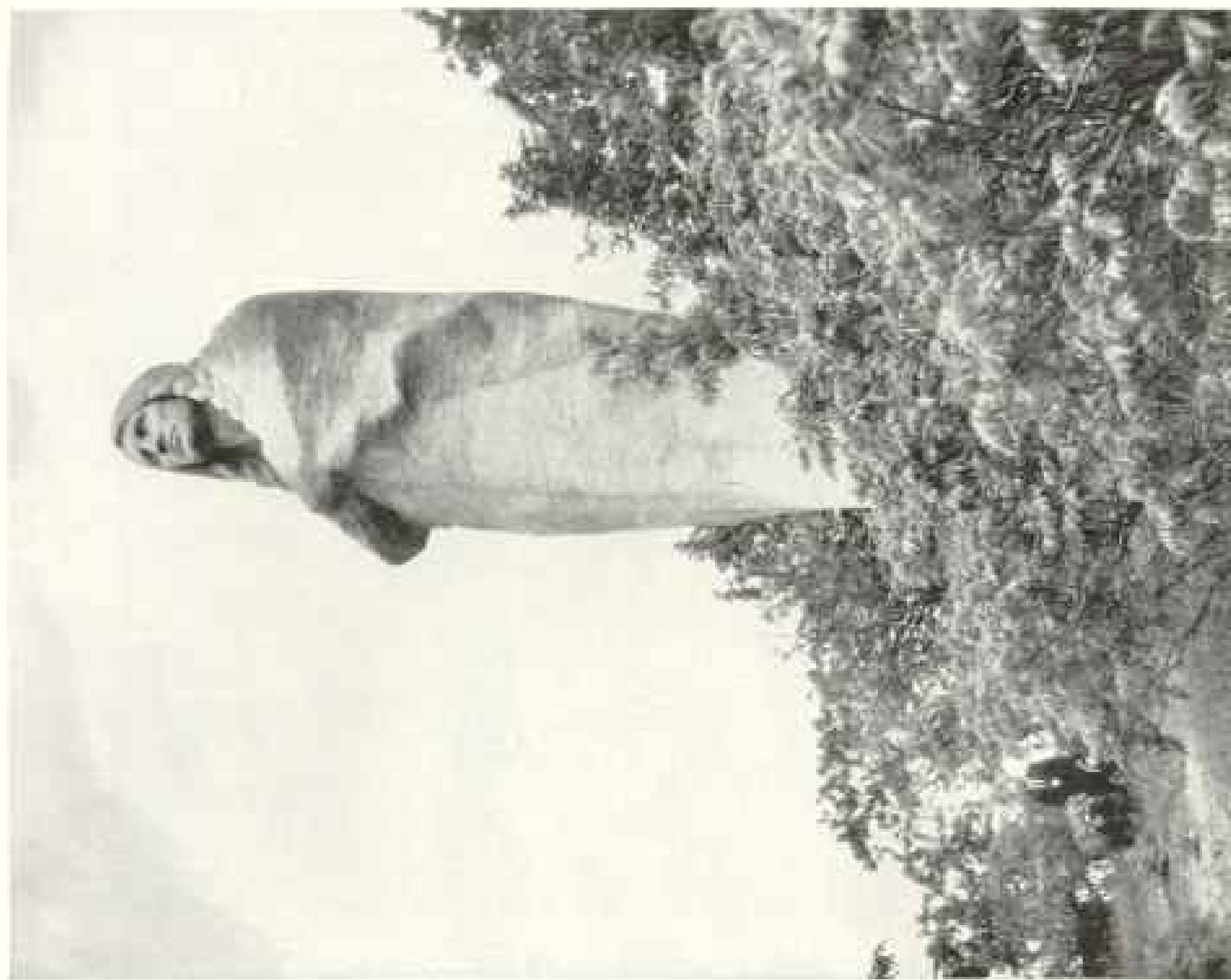
Since furs were to be obtained only



Photograph by Clifton Adams

A VANISHING AMERICAN—THE CIGAR-STORE INDIAN

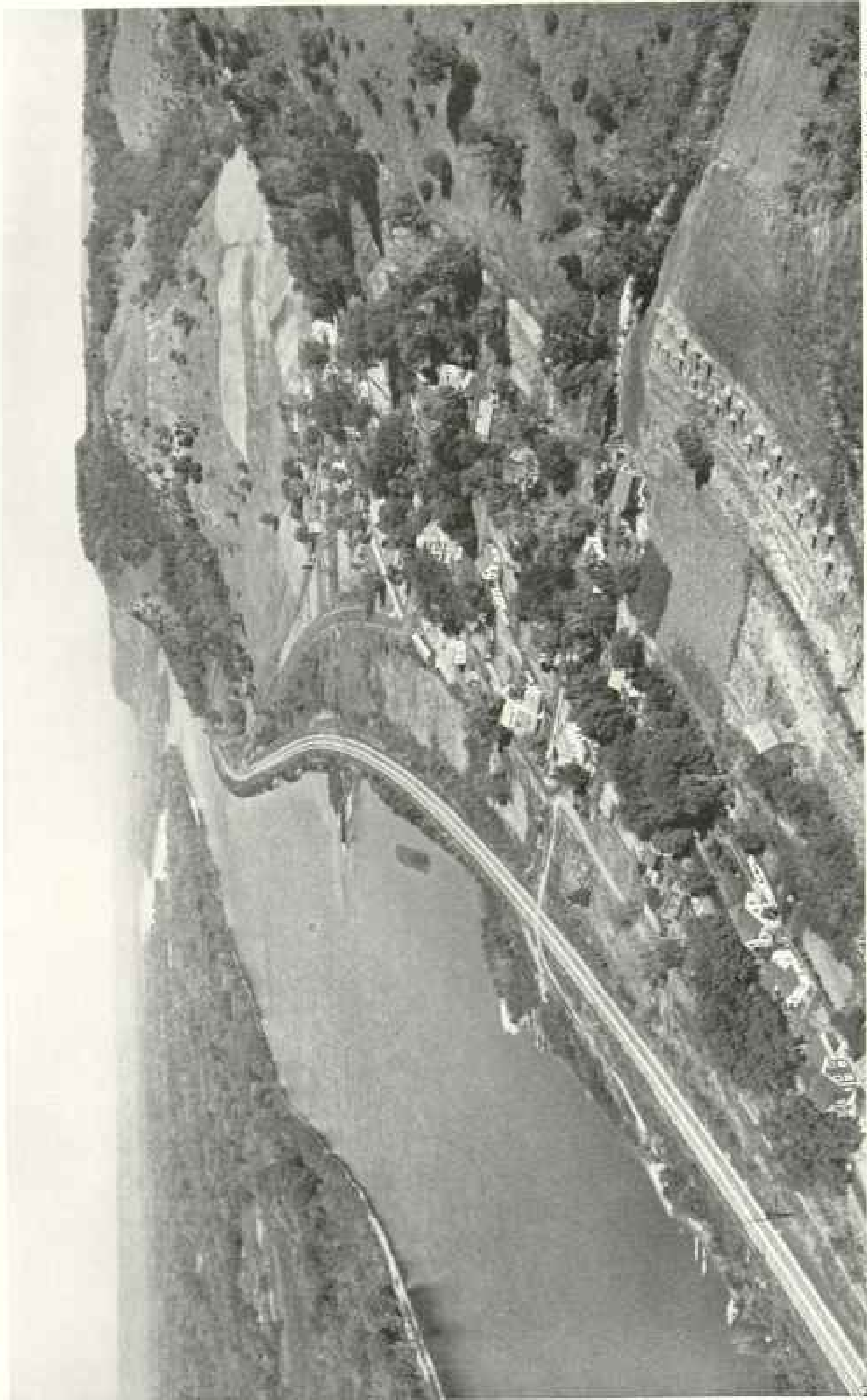
A veteran of some fourscore years is this figure at Danbury, Connecticut, whose long life may be attributed to regular doses of linseed oil, taken internally to prevent the wood from cracking. Though incorrectly garbed, such statues were appropriate, for tobacco was an Indian contribution to modern life. From North America it spread around the world and back again when, late in the 18th century, Russians from Siberia taught the Eskimos to smoke.



Photograph by John W. Weber

BLACK HAWK STILL GUARDS HIS TRIBAL HUNTING GROUNDS

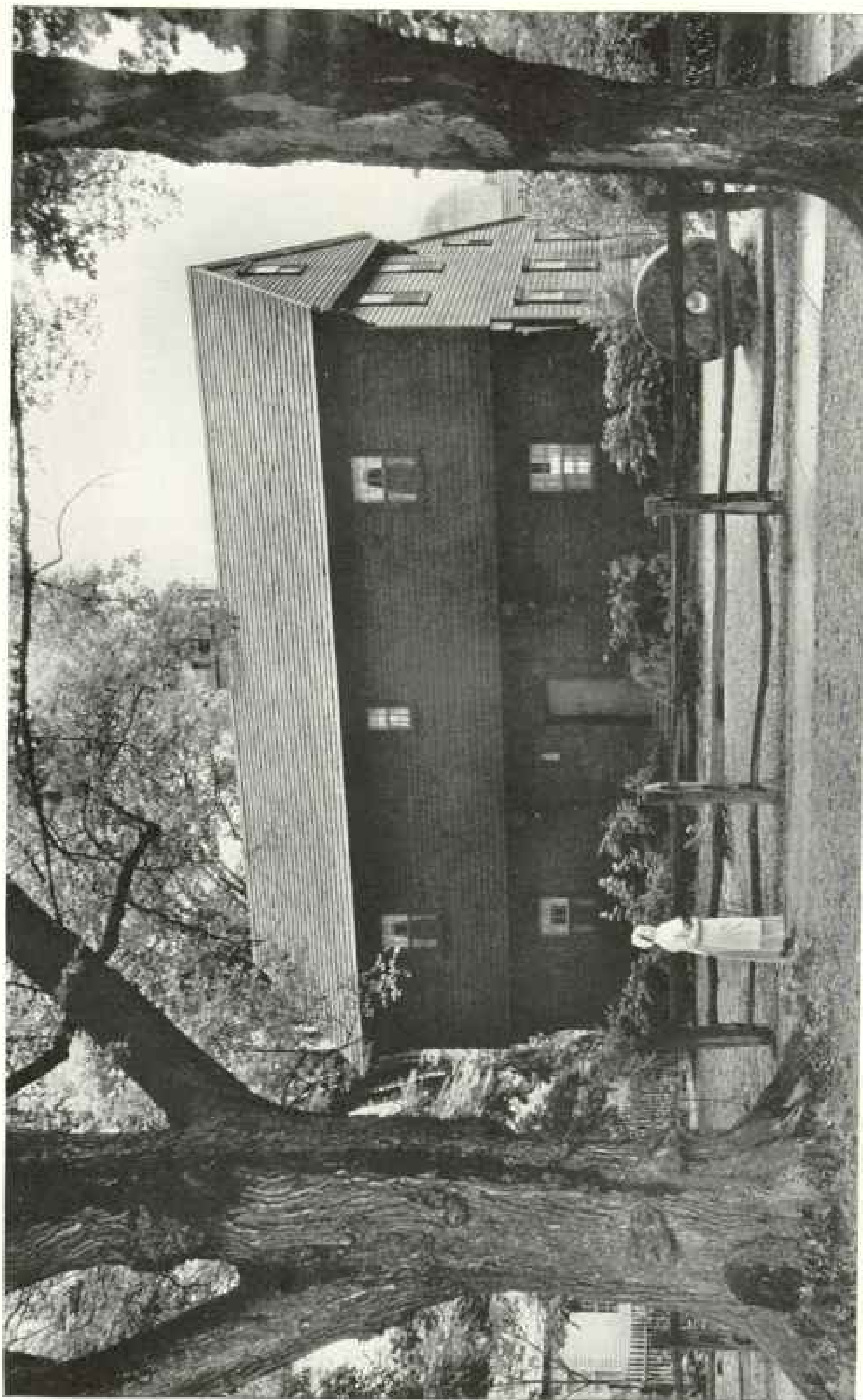
Near Oregon, Illinois, this colossal statue by Lorado Taft gazes out over the Rock River, where the stern old Indian warrior roamed with his Sauk and Fox tribesmen more than a century ago. Feeling that his people had been robbed of their lands, he took the warpath against the American settlers (page 545). He won a victory near here in 1832, when he and 40 braves stampeded 275 Illinois militiamen under Major Stillman.



Photograph by B. Anthony Stewart

THE "FATHER OF WATERS" FLOWED RED WHEN INDIAN FAMILIES WERE MASSACRED HERE BY AMERICAN TROOPS

Black Hawk, with 400 warriors and encumbered by starving children, women, and old men, eluded a United States army of several thousand until, reaching the Mississippi, the Indians tried to cross over and take refuge with the Chippewa. Here, just below the mouth of the Bad Axe River, near Victory, Wisconsin, General Atkinson and his soldiers caught up with the fugitives, drove them into the water, and mowed them down with artillery. One young mother seized her baby's neck in her teeth and swam the river safely. Black Hawk was captured and taken to Washington, D. C., where President Jackson received him more as a hero than a prisoner.



Photograph by Harrison Howell Walker

SAVAGE WAR WHOOPS WAKE SLEEPING VILLAGERS WHEN FRENCH AND INDIANS ASSAILED THE ORIGINAL OF THIS DEERFIELD STRONGHOLD

"With painted faces and hideous exclamations," raiders from Canada burst into Deerfield, isolated outpost of New England, just before dawn on February 29, 1724. There was no time for the surprised settlers to flee to the garrison house, of which the present building is a reproduction. Many were killed; some were made captive and carried north (Color Plate VI). One prisoner, Eunice Williams, seven-year-old daughter of the minister, grew up with her captors, married a Mohawk warrior, forgot how to speak English, and lived as an Indian the rest of her life. Other captives were released and sent home from Canada months after the massacre.



A BATTLE-SCARRIED SURVIVOR OF THE BEEFIELD MASSACRE

Firmly bolted, this door barred the attackers' entry into the garrison house (page 246), but Indians gashed a hole in it with their tomahawks (center), poked a musket through and fired at random, killing Ensign John Sheldon's wife. Later they entered through a back door. The powder horn (upper right) is a relic of the massacre. Beside it is a portrait of the Sieur Hertel de Rouville, leader of the attacking forces.



Photographs by Harrison Howell Walker

AN EARLY REAL ESTATE SCANDAL IS MARKED BY THIS STONE

The "Indian Walk" occurred in 1737, near Wrightstown, Pennsylvania, when Thomas Penn, son of William, contracted with the Indians for purchase of a vast area of land. One boundary was to extend as far as a man could walk in a day and a ball. The Indians claimed that Penn's walkers ran. A native said, "No sit down to smoke, no shoot a squirrel, but run, run, run, all day long." In 18 hours about 66½ miles were covered by the fastest "walker."



Photograph by Harrison Howell Walker

A PUP AND A KITTEN ARE THE MODERN "HIAWATHA'S BROTHERS"

"Of all beasts he learned the language,
Learned their names and all their secrets, . . .
Talked with them whene'er he met them,
Called them 'Hiawatha's Brothers.'"

These Seneca children live on the Allegany Indian Reservation near Quaker Bridge, New York.

through friendly alliance with the natives, the three European rivals were not long in aligning themselves in accordance with the natural enmities among the Indians.

IROQUOIS HELD BALANCE OF POWER

When Champlain undertook the colonization of the St. Lawrence region early in the 17th century, it was only natural that he made friends with the Algonquians who then occupied that territory.

This alliance inevitably brought the French into conflict with the Iroquois, the

hereditary enemies of the Algonquians.

What Champlain had no means of knowing was that the agricultural and semi-sedentary Iroquois possessed a genius for political and military organization, which, combined with their warlike traditions, was destined to give them the upper hand in conflict with native rivals.

When the English undertook to aid the Iroquois in their struggle, they allied themselves with the side that represented the balance of power.

So it came about that North America is now English instead of French.

The English did not indulge extensively in missionary activities, but with the Roman Catholic French the desire to convert the natives to Christianity was a leading factor in stimulating exploration.

In 1615 Champlain thought the time was ripe to send missionaries into the territory of the St. Lawrence. This work

was begun by the Récollets, a Franciscan order. But in 1625 the Jesuits came, pursuing their calling under almost unbelievably difficult conditions, with an unselfish courage and perseverance unsurpassed in the history of religion (Color Plate III).

Because the Jesuits made a particular point of studying the natives and recording their customs, we have for the region of the St. Lawrence and the Great Lakes a thorough knowledge of the aboriginal tribes before they had become greatly altered by contact with the Europeans.

They amassed a fund of information concerning the Algonquian and Iroquoian tribes that has proved a veritable Rosetta Stone in interpreting the remnants of culture found by modern ethnologists.

Of all the North American tribes none were fiercer, more intelligent, more independent, than the Iroquois (Plates I, II, and IX). Surrounded by Algonquian enemies, they lived in their palisaded villages east and south of Lake Erie and Lake Ontario, where they controlled the region lying between the Hudson and Ohio rivers.

THE "LONG HOUSE" CONFEDERATION

At the beginning of American history, they were only a weak remnant on the verge of extermination by their Algonquian neighbors. But at this critical juncture they were furnished with firearms by the Dutch and with superior equipment, and so were able to hold their own.

Increasing their strength still further under the leadership of Dekanawida and Hiawatha, an Iroquois confederation was established between the Mohawk, the Onondaga, the Seneca, the Oneida, and the Cayuga. This confederation was known to the French as the "Long House" and to the English as the "Five Nations." Typical in many ways of Eastern Woodland culture were the customs and beliefs of this group.

The good Fathers found the Indians difficult subjects for conversion. The entire



Photograph by Clifton Adams

HE TOLD LONGFELLOW LEGENDS OF "HIAWATHA," INDIANS SAY

The poem was largely based on the folklore of the Chippewa, the tribe to which this aged chief belongs. Photographed near Payment, Sugar Island, Michigan, in 1923, he holds in his hand the rattle of a medicine man (Color Plate XIII). The turkey feather headdress is copied after the eagle feather war bonnets of the tribe's traditional enemies, the Sioux. Formerly these were worn only by Plains Indians. Nowadays many eastern tribes, probably influenced by Wild West movies, have adopted these bonnets that their ancestors never knew.

background and philosophy of the Christian religion differed fundamentally from the native beliefs of the Indians.

The basic idea of Christianity—immortality, with conduct during life determining the reward or punishment of the soul—was incomprehensible to the aborigines, who had but little thought for the hereafter and did not mix their ethics with their religion. Moral principles of good and evil were not sharply defined and the ideas of any such spirit abode as a "happy hunting

ground," or an Indian hell, were foreign to native thought until the idea was implanted in some sections by missionaries.

Dreams or visions, induced by fasting or drugs, wherein he regularly saw and spoke with individuals known to be dead, were ample proof to the Indian of the existence of a soul and an afterlife. Offerings placed with the dead were a manifestation of this belief.

The souls of the dead, however, were usually feared and frequently extreme measures were taken in attempts to prevent their return.

Neither did Indians clearly comprehend the idea of a personified ruling deity. The loosely organized democratic tribes of America were unacquainted with a highly centralized type of government. Therefore the political analogy of a ruling god was not easy for them to comprehend.

IN RELIGION THE INDIAN DEMANDED IMMEDIATE RESULTS

The religion of the Indian was entirely practical and was designed to help him, not in the future, but in the immediate present.

Thus when the Indian thought himself plagued by an evil spirit, the obvious way to rid himself of his difficulty was to propitiate that spirit with offerings. His attention thus was fixed equally upon friendly and unfriendly forces.

The missionaries, of course, interpreted this attitude as a worship of the Devil.

Underlying all this was the somewhat mystic conception of an impersonal supernatural force which permeates all Nature and animates all phenomena which control the destiny of man.

This force is called Manito by the Algonquian, Pokunt by the Shoshoni, and Orenda by the Iroquois. It might be described as akin to the life principle.

Early white travelers, not comprehending the real nature of this idea, usually translated it as "The Great Spirit."

CEREMONIES FOR THE DEPARTED

In some instances, elaborate ceremonies were held in connection with the dead.

Among the Huron, the body of the departed was placed in a flexed position in a bark coffin erected upon a scaffolding in the woods near the village, along with many offerings of food and ornaments.

Every 12 years, at the great feast of the dead, all of the bodies of members of the

tribe who had died during the intervening period were removed from their original burial scaffolds by their relatives. The bones were cleaned and cared for with demonstrations of affection. They were wrapped and covered with the finest robes and then conveyed to the village where they were displayed for a short time, together with a new array of valuable offerings.

From here the bones were carried by the relatives to a huge common burial pit in which on the designated day all of the bones of the tribal dead were deposited with great ceremony (Color Plate XVII).

Brébeuf, a Jesuit who observed this ceremony, gives a detailed description of it:

"In the midst of a clearing was a great pit, about ten feet deep and five brasses wide. All around it was a scaffold, a sort of staging very well made, nine to ten brasses in width, and from nine to ten feet high; above this staging there were a number of poles laid across, and well arranged, with cross-poles to which these packages of souls were hung and bound. The whole bodies of those who had died more recently were placed on the bottom of the pit stretched upon bark or mats."

After assembling the offerings, which consisted of enormous piles of rich robes and ornaments, the ceremony continued.

He relates: "At seven o'clock, they let down the whole bodies into the pit. We had the greatest difficulty in getting near: nothing has ever better pictured for me the confusion there is among the damned.

"On all sides you could have seen them letting down half-decayed bodies; and on all sides was heard a horrible din of confused voices of persons, who spoke and did not listen; ten or twelve were in the pit and were arranging the bodies all around it, one after another.

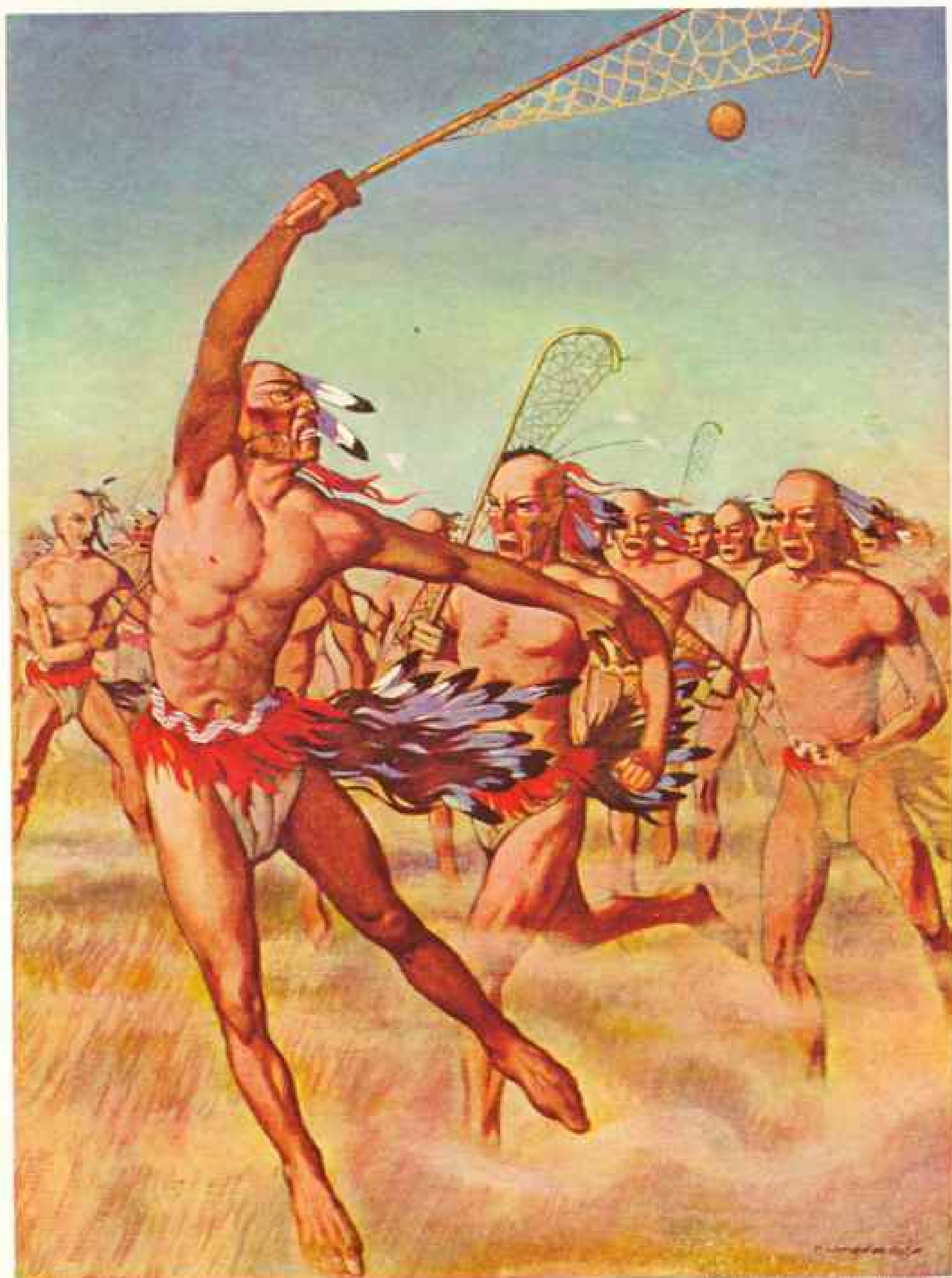
"They put in the middle of the pit three large kettles, which could only be of use for souls; one had a large hole through it, another had no handle, and the third was of scarcely more value."

Later in the night the remaining bundles of bones were thrown into the pit indiscriminately.

After fires had been lighted and many voices lifted in lugubrious songs, baskets of corn were scattered over the remains and the entire deposit covered with fur robes.

When the burial had been completed, extravagant gifts were made to all of the visitors not directly concerned in the cere-

WHEN RED MEN RULED OUR FORESTS



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Painting by W. Langdon Kilin

IROQUOIS BRAVES CHARGE DOWN THE FIELD IN THEIR FAVORITE GAME, LACROSSE

A player leaps high to catch the stuffed deerskin ball, which he will try to hurl across the opposing team's goal line. He may carry the ball in the racket but must not touch it with his hands. Lacrosse was as much the national game of the Indians east of the Mississippi as baseball is with modern Americans. Villages or tribes were often matched against each other. College youths in the United States and Canada play virtually the same game today.

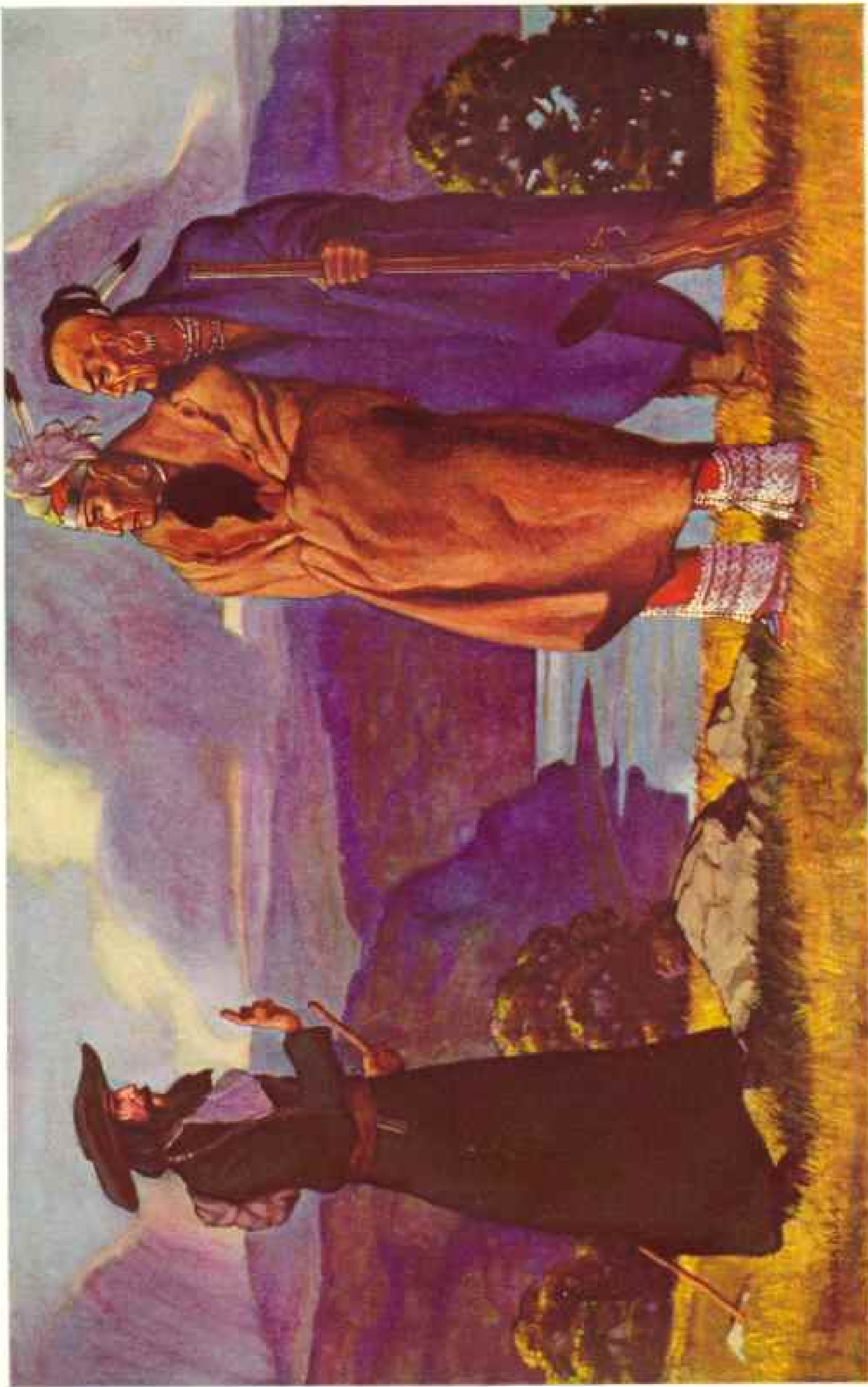


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“MY CHILDREN, I ADVISE AGAINST WAR: LET US ACCEPT OUR ENEMY'S PEACE OFFERING, WHICH I HOLD IN MY HAND”

Thus might the stately old chief address the war council of the Iroquois, where tribal representatives in regalia gather before the council fire. Fiercer individuals, like the brave seated in the center, could be counted on to present eloquent demands for war. One woman has brought her baby to the meeting (Plate VIII). The Iroquois Confederacy, a union of five tribes, was a representative government similar to that later adopted by the American colonists. There is reason to believe that the framers of our Constitution were inspired in some degree by the League of the Five Nations.

Painting by W. Langdon Kihn

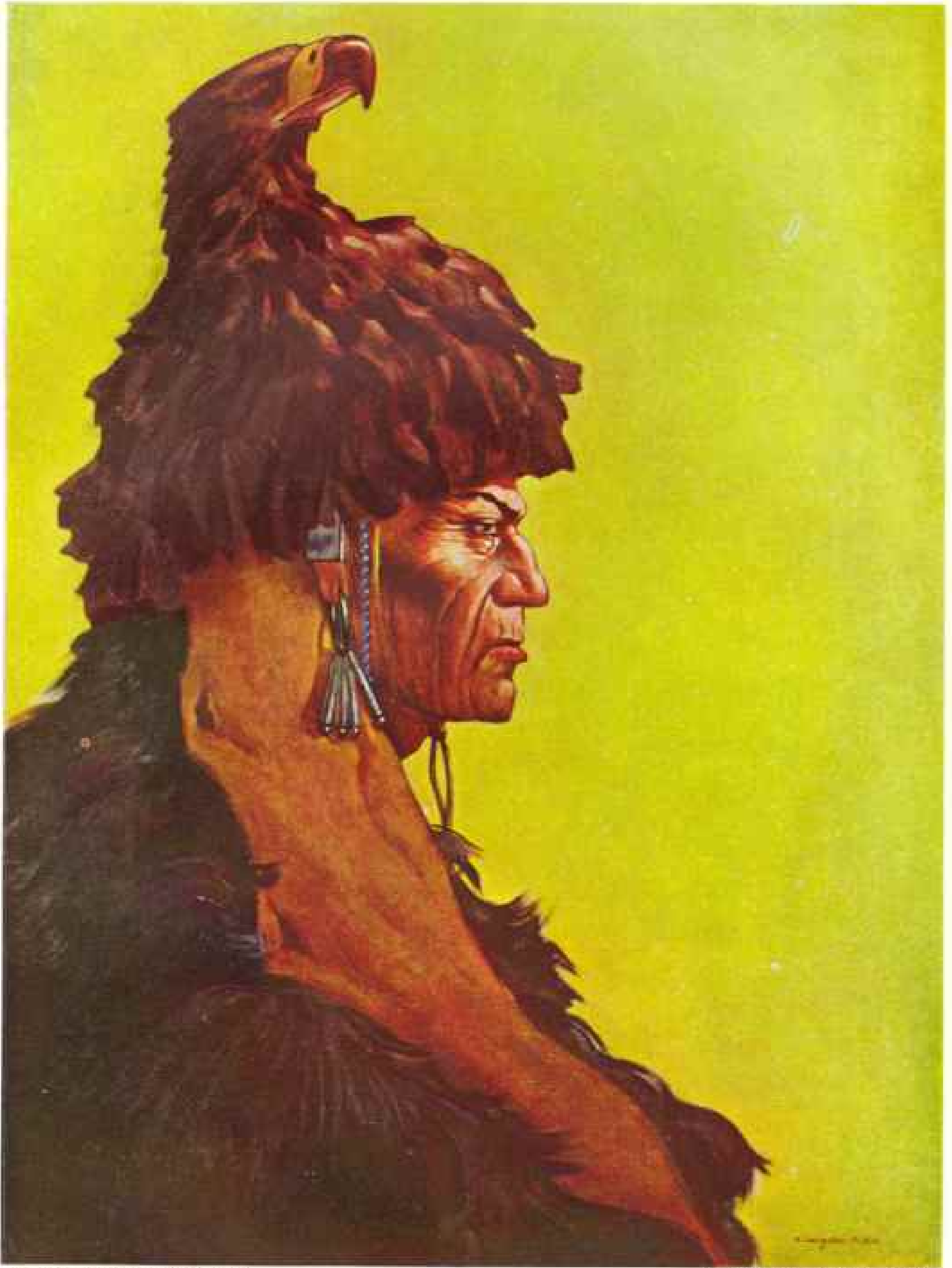


Painting by W. Langdon Kuhn.

ALONE AND UNARMED, A JESUIT MISSIONARY GREETES HOSTILE IROQUOIS WARRIORS

The Jesuits' attempt to convert to Christianity the fierce tribes of the northeastern woodlands is a heroic chapter in American history. Unspeakable tortures were inflicted on many a pioneer priest, for the Indians resented the advent of the new religion. To convert them, the Jesuits felt that they must learn the natives' own beliefs. Thus they set about doing systematically, and despite every hardship their missionary activities did not diminish until after more than a century, when a measure of European civilization came to the region.

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A MOHAWK "EAGLE" CHIEF WEARS SILVER EARRINGS OBTAINED FROM DUTCH TRADERS

The headdress, donned only on formal occasions, shows that he belongs to the Eagle Clan and is a member of the Federal Council of the Iroquois. The Mohawk, inhabiting central and western New York State, were given firearms by the Dutch about 1614, so that they might gather furs for the traders. Possession of these weapons helped the tribe's rapid rise to power. More than a thousand Mohawk survive today, living on three reservations in Ontario, Canada.

WHEN RED MEN RULED OUR FORESTS

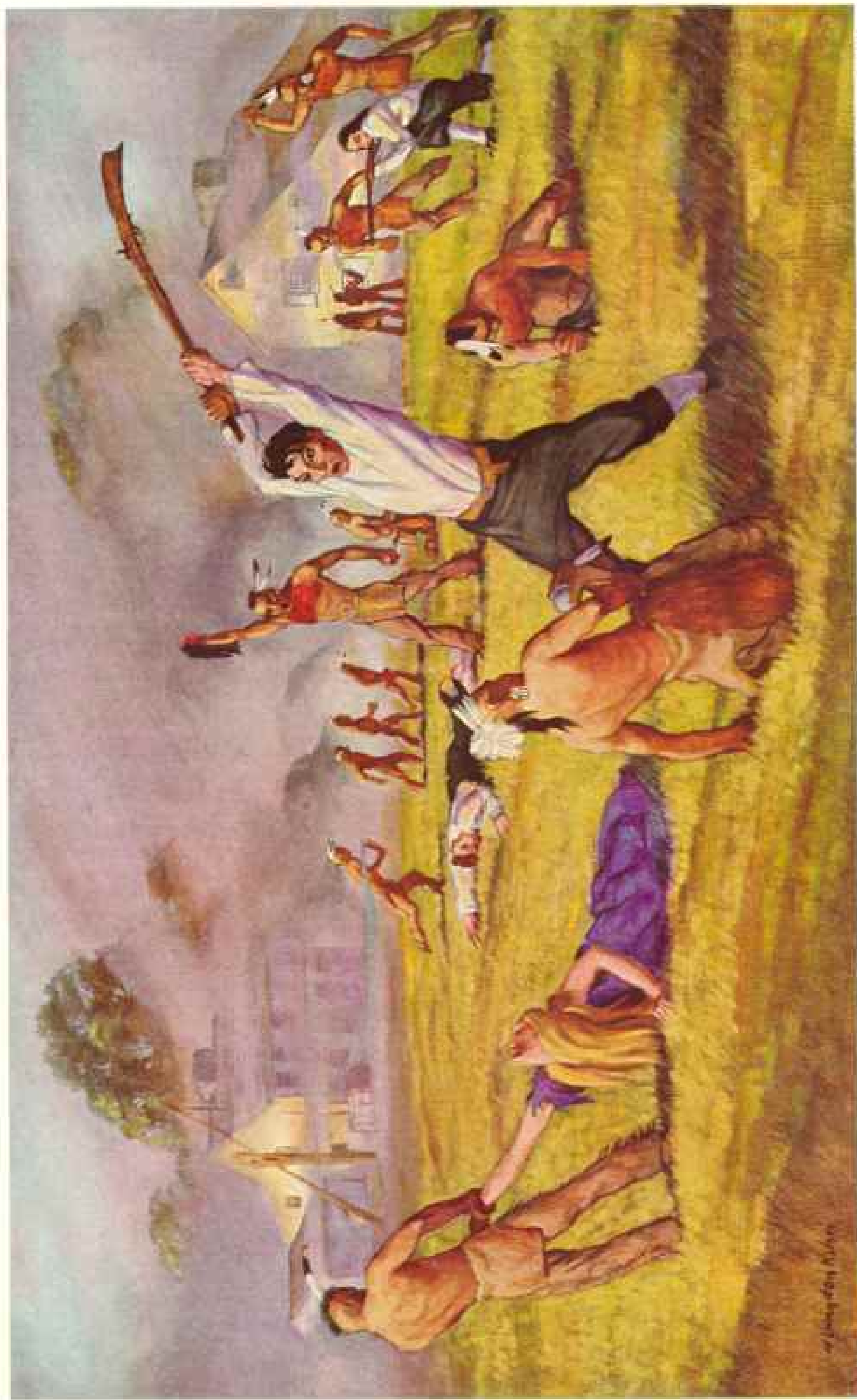


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Painting by W. Langdon Kihn

STERN AND DIGNIFIED, THIS SENECA SUGGESTS A FENIMORE COOPER CHARACTER.

The Indians of the Eastern Woodlands, together with many tribes of the northern plains, were fine physical specimens. The metal blade on this warrior's club and the silver band around his head were received from white men, probably in exchange for furs such as adorn his garments. The Seneca formed the most populous nation of the Iroquois Confederacy. Today some 3,000 tribesmen dwell on reservations in New York State.



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PAINTED SAVAGES ATTACK COLONISTS IN A LITTLE NEW ENGLAND SETTLEMENT

Painting by W. Langdon Kilin

Such a tragic scene as this was enacted early February 29, 1704, when Indians and their French allies surprised and burned the town of Deerfield, Massachusetts, killing 49 people and taking 111 back to Canada with them as captives. The warrior in the center holds aloft his battle trophy, a scalp. Another drags away a woman, whose husband (right) barely has time to level his musket at the captor before being struck down from behind. Many massacres perpetrated by Indians were in revenge for attacks made upon them.



Painting by W. Langdon-Khan

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WITH HIS LAST ARROW, A HUNTER TAKES AIM AT THE MOOSE HE HAS TRILLED THROUGH THE SNOW

Wearing snowshoes, the Penobscot Indian followed his wounded quarry through the forest until it became exhausted from wounds and from plowing through the heavy drifts. Now, with the moose bogged down, the hunter approaches close enough for the final shot. His bow is reinforced with an extra piece of wood, a device used to give added strength when first-class bow wood was not available. The Indians occupying the valley of the Penobscot River, in Maine, lived near the sea during the summer, but in winter they moved inland to hunt game.



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Painting by W. Langdon Kihn

WOMEN HAD POWER OF NOMINATION AND VETO AMONG THE IROQUOIS

This baby, in a cradle embroidered with dyed moose hair, could not grow up to be a chief unless his mother approved his candidacy for the position. All descent was reckoned through the female line, and women had the right to select from their sons candidates for the chieftaincy of the clan and tribe. A mother could even forbid her son to go on the warpath, an authority often utilized by cool-headed chiefs to prevent hostilities.

mony itself. Whereupon the entire affair concluded with a feast.

The fabric of the Indian's religion was woven about his intimate observations of Nature. Each day he saw the sun rise in the east and set in the west, obliterating the stars which guarded the heavens at night.

He noticed the regularity of the waxing and waning of the moon. He watched the procession of the equinoxes with the accompanying complex phenomena of the seasons.

With the seasons were correlated the regular migrations of animals, birds, and fish, and the annual cycles in the growth of plants and trees. With the seasons came heat and cold, rain and sunshine, lightning, wind, and snow.

At times Nature was lavish with her favors; frequently she denied man his wants. Now and then disease struck with unseen weapons and laid him low.

All of these things required explanation so that man might know how to produce more favors from Nature and render his existence more tolerable.

Lacking knowledge of physics, astronomy, and meteorology, the Indian gave anthropomorphic existence to the various striking features of Nature.

The adventures of these supernatural beings with Indian culture heroes form the intricate substance of a rich mythology wherein are explained, often in allegorical language, all things about which the Indian has pondered.

Apparently all American Indians observed the solstices and used them as a basis for dividing the year. The alternation of day and night and the changes of the moon were noticed and employed as units for measurement of time.

The year was separated into seasons in accordance with conspicuous natural phenomena or seasonal developments which were significant to the Indian and which affected his manner of life.

A FIVE-SEASON CALENDAR

A typical time division among eastern tribes was to separate the year into five units marked by the budding of spring, the maturing of maize, the summer, or "high sun" time, leaf-falling time, and winter, the time of snow and cold.

Among the Iroquois, the alternation of the seasons symbolized the perpetual strug-

gle between the Life God and "Stony Coat," the god of ice and winter, whose function was to destroy.

The division of the seasons naturally differed with the latitude and the mode of life of the Indians. Agricultural tribes stressed different phenomena from those that the hunting or gathering tribes did.

Even among agricultural people the environment largely determined which aspects of Nature were most important. Rain was much more significant to the Pueblo Indians of arid Arizona and New Mexico than it was to the Iroquois.

The sprouting of seed; the growth and death of annual plants; the blossoming, leafing, fruiting, and shedding of trees; the migrations and mating periods of animals, birds, and fish—all were used to mark the march of the seasons.

Temporal conceptions were steeped in religion, the various seasons were associated with particular deities, and these in turn frequently were associated with the four directions, or six directions in the case of many groups who added "up" and "down" to the cardinal points.

FACES WHICH KILL OR CURE

Among the American aborigines were many secret societies and groups which appeared in public only in elaborate masks and costumes in which they represented various deities, some of the powers of which they were supposed to acquire by virtue of this sacred paraphernalia.

A characteristic organization among the Iroquois, frequently mentioned by early travelers, was the Society of Faces, which is still active (Color Plate XII).

The imagination of the Indian peopled the forest and the lakes with strange beings.

Hunters having experiences which seemed odd to them attributed the events to encounters with weird semihuman "faces," which occasionally appeared to them in dreams.

These faces were supposed to possess the power of curing various diseases. The man who dreamed of a face was instructed in his dream to carve a likeness of it to be worn as a mask, thus making him a healer while wearing it and singing the proper curing songs.

If the faces were not treated respectfully and given occasional offerings of tobacco and ashes, they would produce the diseases they could cure.



Photograph by Clifton Adams

"THE INDIAN HUNTER" MARKS THE SITE WHERE COOPER
WROTE HIS IMMORTAL TALES OF REDSKINS

At Otsego Hall, Cooperstown, New York, lived James Fenimore Cooper, author of *The Last of the Mohicans*, *The Pathfinder*, *The Deerslayer*, and other novels that made the "noble red man" of North America a familiar and romantic figure throughout the world. The boy with the baseball glove is on his way to Doubleday Field, where General Abner Doubleday, of Civil War fame, is credited with having originated our national game of baseball in 1859.

The variety of faces is very large. One, frequently shown with a broken and twisted nose, had a mountain fall on his face. Others owe their misshapen features to the fact that, being disease spirits, they were in constant conflict with the Life God, who bested them in these encounters.

Faces vary in appearance as seen by each individual in his dreams and they differ in nature and function. Some are black; some are red; some are white; some are

young, and some are old. Most are deformed and twisted.

In the spring and fall, when sickness is considered most common, the Society of Faces, wearing their likenesses, go en masse through all of the houses of the community, shaking their turtle-shell rattles, making weird cries, and talking with a curious nasal twang. Thus they frighten away the invading disease spirits.

LONG NOSE,
THE KIDNAPPER

In former times these strange and impressive processions proceeded through the community on foot. Now the houses of the Iroquois are widely scattered and the members of the Society, costumed as of old, go from house to house in open automobiles.

Both the Iroquois and the Algonquians believe in a masked cannibal called "Long Nose," who kidnaps children. Youngsters are never disciplined by corporal punishment. Fear that Long Nose will kidnap them and carry them off in his huge pack basket is usually sufficient to insure good behavior in the very young.

Since the Indians considered that the coming of each kind of food was brought about by supernatural causes, it was the custom to offer the first of each type ob-

tained to the particular spirit supposed to control it.

A joyous occasion was the annual gathering of the sap from the budding maple trees in early March (Plate XIV).

With the rigors of winter behind them and the full prospects of spring and summer ahead, this was the season of happiness — the time of renewed activity, the "commencement" season.

A MYTH OF MAPLE SUGAR

The Menominee have a charming legend which explains the story of maple sugar.

When man was new he did not know how to obtain the sap. One day the old grandmother, Nokomis, showed Manabusha, the great culture hero and friend of man, how to tap the trees and collect the sap. But the sap came out in the form of pure, thick syrup.

"This," thought the wise Manabusha, "is bad. The people will not have enough work if sugar is made so easily. It must be more difficult, to keep them occupied so they will not fall into idleness."

So Manabusha climbed to the top of the highest tree. With his hand he sprinkled water like rain over the trees, dissolving and diluting the syrup so that it would flow from the trees in a watery sap.



Photograph by Harrison Howell Walker

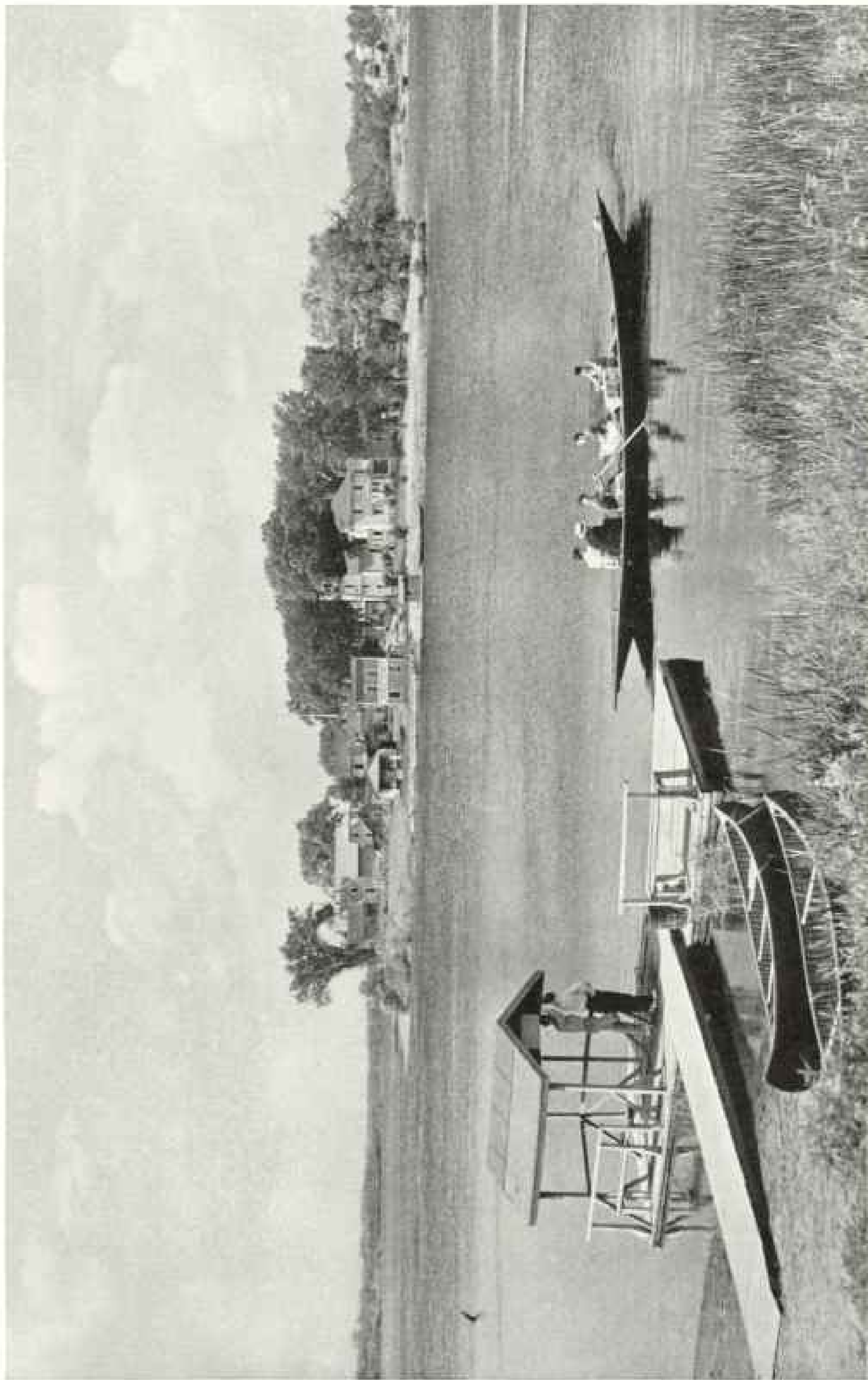
A CANADIAN CHIEF IN WAR BONNET "INVADES" THE U. S. A.

Not on the warpath, but to pay a neighborly visit. Chief William Saulls led his Malecite tribesmen down from Victoria County, New Brunswick, to the Passamaquoddy Reservation near Eastport, Maine (page 593). The chief, who wears a necklace of eagle claws, belongs to an Algonquian group which received the explorer Champlain with friendly hospitality more than 300 years ago. The "war bonnet" is a modern design borrowed from the West.

Thereafter the Indians had to work hard to make sugar. Wood must be cut, bark vessels must be made, and the sap collected and boiled for several nights to reduce it to usable form.

The Indians taught the French how to collect and reduce the sap, but the French, by introducing the iron kettle, showed the Indians how to improve their process.

Before the coming of the whites, it is probable that the Indians only partly reduced the sap, using it in the form of a



Photograph by Harrison Howell Walker

INDIAN ISLAND IS THE HOME OF SOME 300 PENOBSCOT TRIBE PEOPLE

The compact little community, with its church (center), basket store, and roomy houses, provides an odd contrast with the primitive village of long ago (Color Plate X and page 542). A rubbish ferry brings passengers across the Penobscot River to Old Town, Maine, where many of the Indians work in the canoe factory (page 565).



Photograph by William Dow Doughtwell

"I DARE YOU TO STEP ON UNITED STATES SOIL!"

After more than a century of peace along the international border, a playful fist is poked northward into Canada. The frontier "incident" is staged by two young Iroquois braves from the reservation here at St. Regis, Quebec, where the boundary between the two nations meets the St. Lawrence River.



Photograph from White World

HER SON DIED ON THE WARPATH, FOR UNCLE SAM

Mrs. Kate Mike, 74, a Winnebago Indian from Wisconsin, waves the Stars and Stripes and a tobacco pouch as she is about to sail from New York with 112 other Gold Star Mothers to visit their sons' graves in France. About 12,000 American Indians served overseas during the World War.



Photograph by Harrison Howell Walker

AT 14, AN IROQUOIS JOINED WAR PARTIES

This lad of today, like other young Americans, goes to school and studies the doughty deeds of his ancestors in textbooks. Many Indians on the Onondaga Reservation, near Syracuse, still speak their aboriginal language among themselves; with outsiders they converse in English.

sweet liquid, which was regarded as a beneficial medicine.

The *Jesuit Relations* tell how an early Father, hearing that a pagan Indian was near death, visited his wigwam to administer the rites of the Church. After baptizing him from a bark vessel standing in the room, he inquired of the wife what medicine the patient had been taking.

A BAPTISM OF MAPLE SYRUP

The woman pointed to the vessel, and the priest discovered that he had performed the baptism with sweet maple sap.

"Fortunately," wrote the good Father, "I was able to secure water and perform the ceremony over again before the patient died."

Now maple sugar is made by pouring the reduced thick syrup into a granulating receptacle where it is worked with the hands or a wooden paddle until it crystallizes. It is made into "candy" by pouring the heavy syrup into birch-bark moulds, usually small cones. Indians use the sugar to season food, and eat it as a sweet. By dissolving some of the sugar in water, it becomes a drink.

Within tribal boundaries certain groups of sugar maples were regarded as the property of particular families and the use of these trees was carried down from generation to generation.

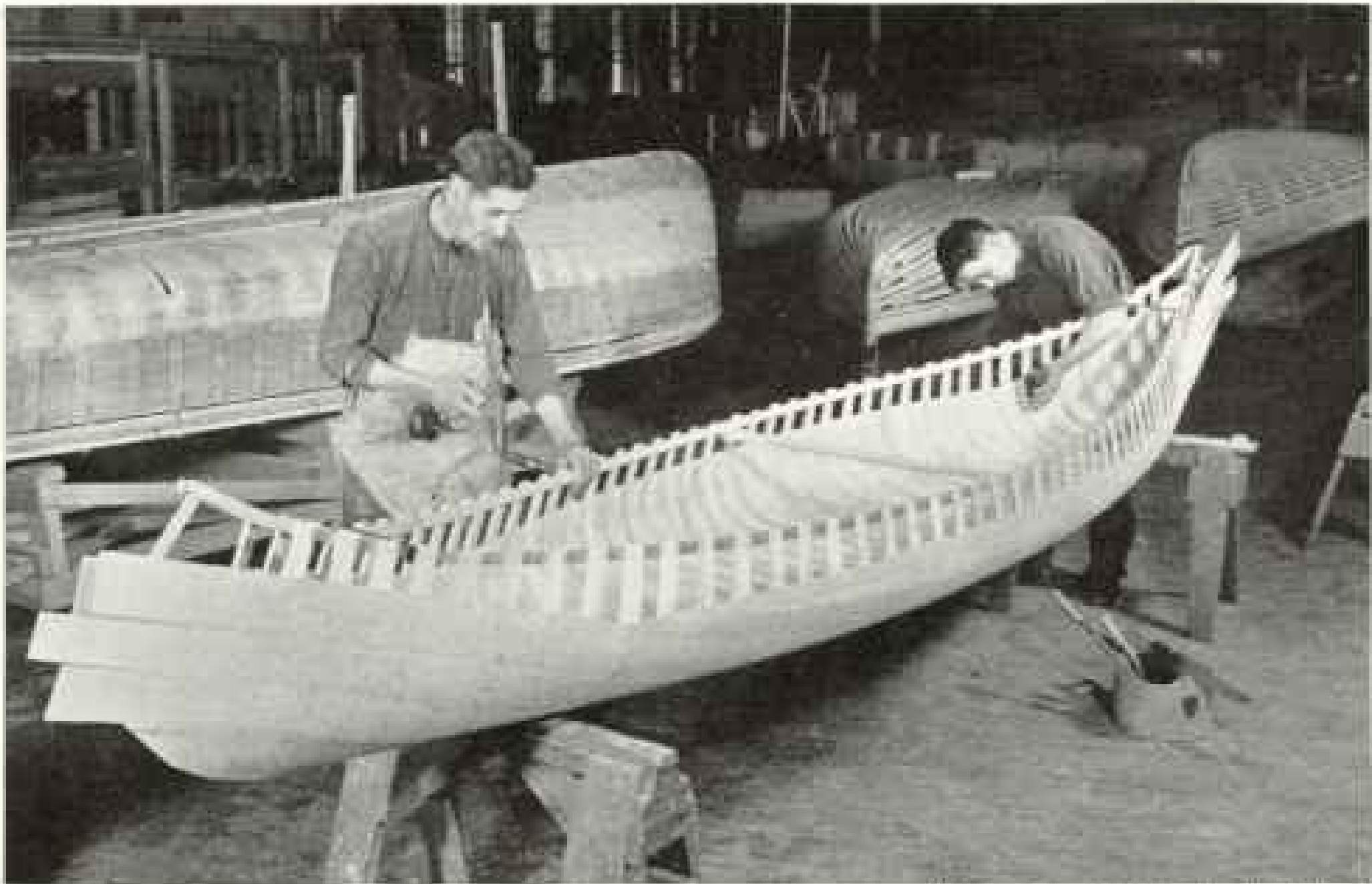
By ingenuity the Indian learned to overcome the rigors of severe winters.

The snowshoe, which enabled him to travel and hunt game over heavy snow, was one of his most essential adjuncts (Plate VII).

THE SNOWSHOE EXPRESS AND CANOE LIMITED

Several types of snowshoe were in use, all constructed on the same principle. A strip of ash was steamed and bent into the proper shape and webbed with a netting of rawhide strips, moose intestine, twine, or sinew.

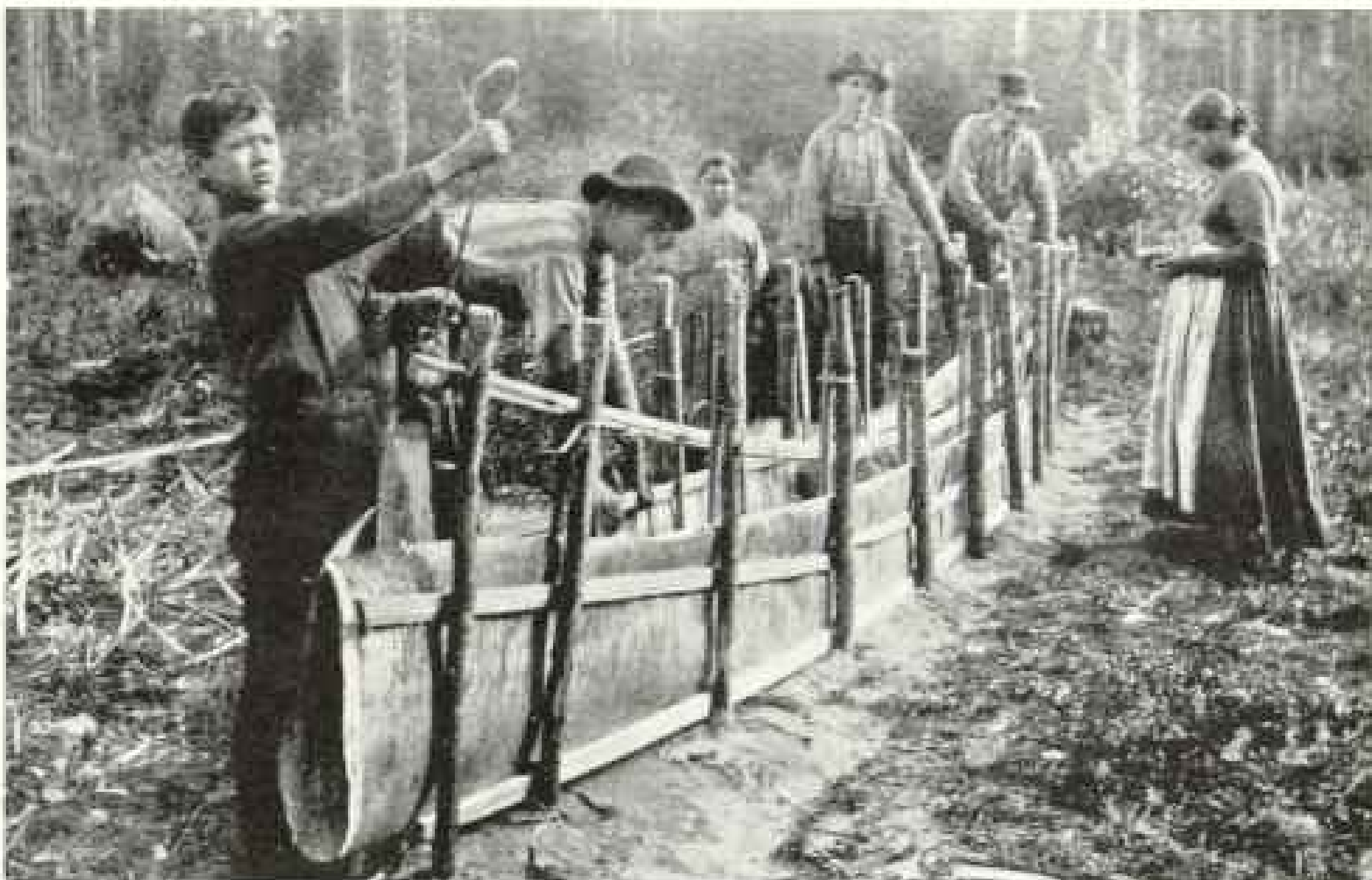
Snowshoes varied in form and construction, depending upon whether they were



Photograph by Harrison Bowell Walker

PENOBSCOT BRAVES STILL MAKE CANOES—BUT OF WOOD, NOT BIRCH BARK

From 10 to 20 per cent of the employees of the Old Town Canoe Company are Indians living on the island reservation (page 562). At work here on the white man's adaptation of their ancestors' craft, the man at the left drills holes for screws which the other inserts as he fastens strips of red cedar to the ribs. Canvas, in place of birch bark, will be stretched tightly over the hull.



Photograph by Ingersoll

"I A LIGHT CANOE WILL BUILD ME . . . THAT SHALL FLOAT UPON THE RIVER,
LIKE A YELLOW LEAF IN AUTUMN, LIKE A YELLOW WATER-LILY!"

"Thus aloud cried Hiawatha in the solitary forest," Menominee set up a birch-bark canoe in the age-old way (Color Plate XXI), outlining the shape of the craft with rows of stakes. Today, as in aboriginal times, expert canoe makers hold a high place among northeastern Indians.

to be used in the woods or open snow, on hard or soft snow. When caught by a sudden snowstorm, the Indian was able quickly to make himself an emergency pair by bending a frame of green willow or other twigs and constructing the webbing of bark strips.

Among the most useful inventions of the Woodland Indians was the birch-bark canoe, the principal means of summer travel. The Eastern Woodlands was a region of lakes and rivers, and transportation was principally by these waterways. The dugout, hollowed from a log by fire and stone adzes, was used by most of the tribes south of the St. Lawrence River (Plate XI).

A much more ingenious and practical craft was the portable bark-covered canoe, widespread in the Woodlands region. Birch, spruce, or elm bark covered a light cedar frame, and occasionally moose hide was substituted for bark. Birch bark is the more satisfactory material, being light and pliable, and the birch tree can be peeled at any season of the year (Plate XXI, and pages 537, 541, 562, 565).

The completed craft is somewhat fragile, but it is so light that it can be carried easily by one man across even a long portage. This fact greatly extended its use and made it possible to voyage by canoe to distant parts of the country.

EXPLORERS USED BIRCH-BARK CANOES

Early explorers adopted the birch-bark canoe and with it penetrated to all parts of the northeastern forests.

The general method of construction was the same throughout the area, but details varied from tribe to tribe, so that one can tell from the shape of a canoe its approximate place of origin.

Birch bark was sewed over the frame by perforating the edges and using strings made from spruce roots. Spruce gum was applied to make the seams watertight. Repairs could be made easily by the same methods. The Indian was as skillful in handling this craft as he was clever in manufacturing it.

The birch-bark canoe was as necessary to the Woodlands Indian as the automobile is to the city dweller of today. The nomadic Algonquian tribes continually transported themselves and their equipment by this means. These wandering groups, seeking food, established themselves at different places as the seasons varied.

Among the Algonquian tribes of the northeast, hunting, fishing, and seed-gathering were the principal means of obtaining food. In a region where game still is relatively abundant, it was much more so before the coming of the white man and his firearms. Deer, moose, and caribou were plentiful; geese, ducks, and swans abounded, as did many other forms of bird life.

Yet the Indian was often hard pressed to obtain sufficient food throughout the year. The bow and arrow were his principal weapons.

In summer he found it difficult, with his stone-headed arrows, to stalk and deal a mortal wound to the larger animals. When opportunity afforded, moose, deer, and caribou were driven into the water and shot from canoes while they swam (page 541).

In the winter, hunters with snowshoes ran down the heavy beasts floundering through the snow (Color Plate VII). It was also easier then to track down rabbits and other small game.

Fishing was highly important to a people living in a region of rivers and lakes. Quantities of fish were obtained through the construction of weirs and fish traps set across the streams, particularly when the salmon were migrating in the coastal rivers, and in the spring when the sturgeon moved from the lakes into the rivers. Spearing, shooting with bow and arrow, and jigging with lures and barbless hooks were also practiced.

In winter, holes were cut through the ice and shelters were erected over them (Color Plate XVI). The fish were attracted by artificial lures manipulated by the patient fisherman who waited, spear in hand.

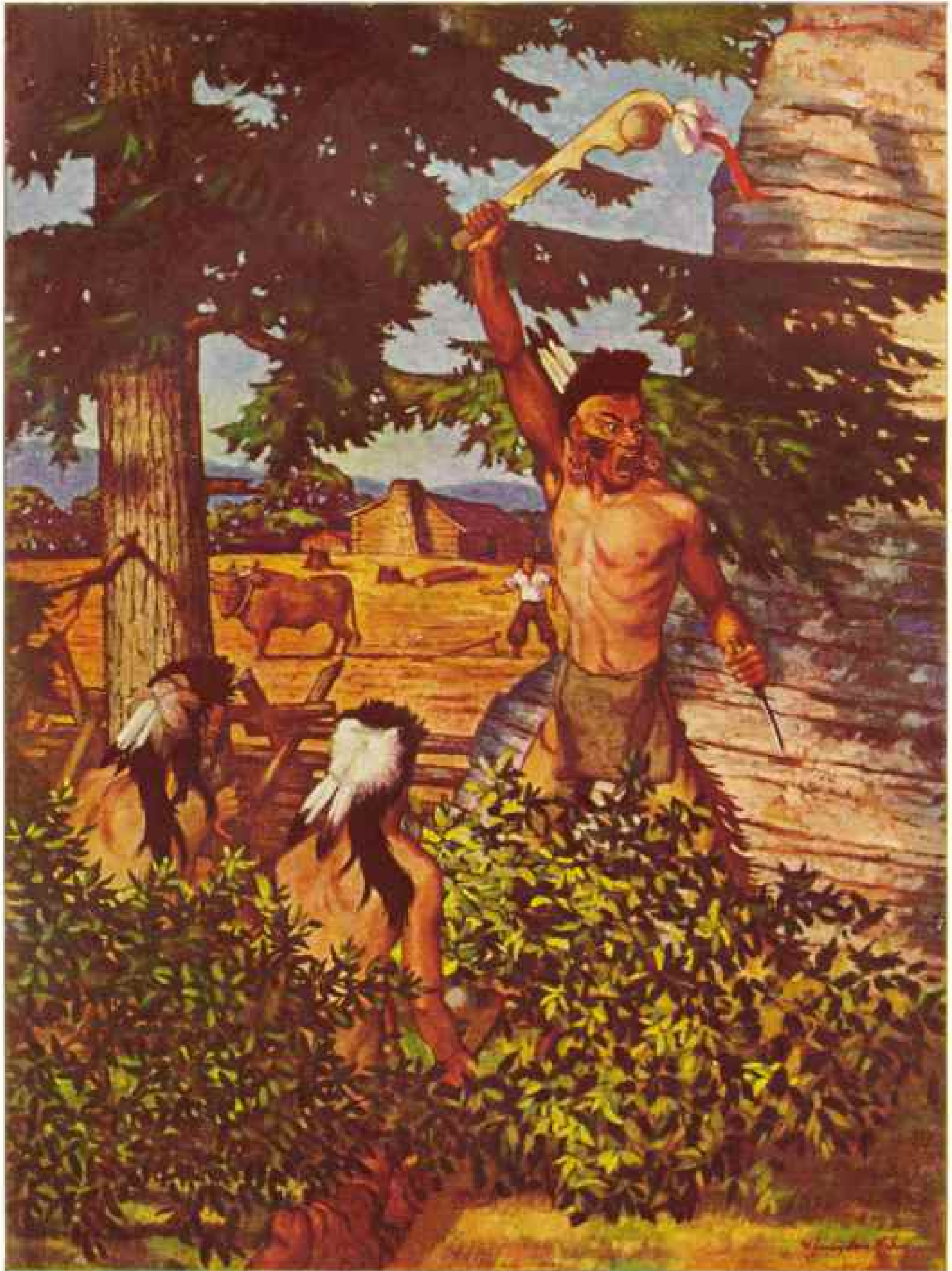
SPEARING FISH BY TORCHLIGHT

The usual method of spearing fish in summer was for two men to go out in a canoe at night. A bark torch was lighted in the bow of the canoe. While the man in the stern paddled the canoe, the other in the bow speared the fish attracted by the light. Fish were preserved by smoking and drying.

The prestige enjoyed by a man in his tribe was determined principally by his skill as a hunter and fisher, and by his standing as a warrior.

Probably no misunderstanding brought about so much ill feeling and bloodshed between the Indians and whites as the

WHEN RED MEN RULED OUR FORESTS

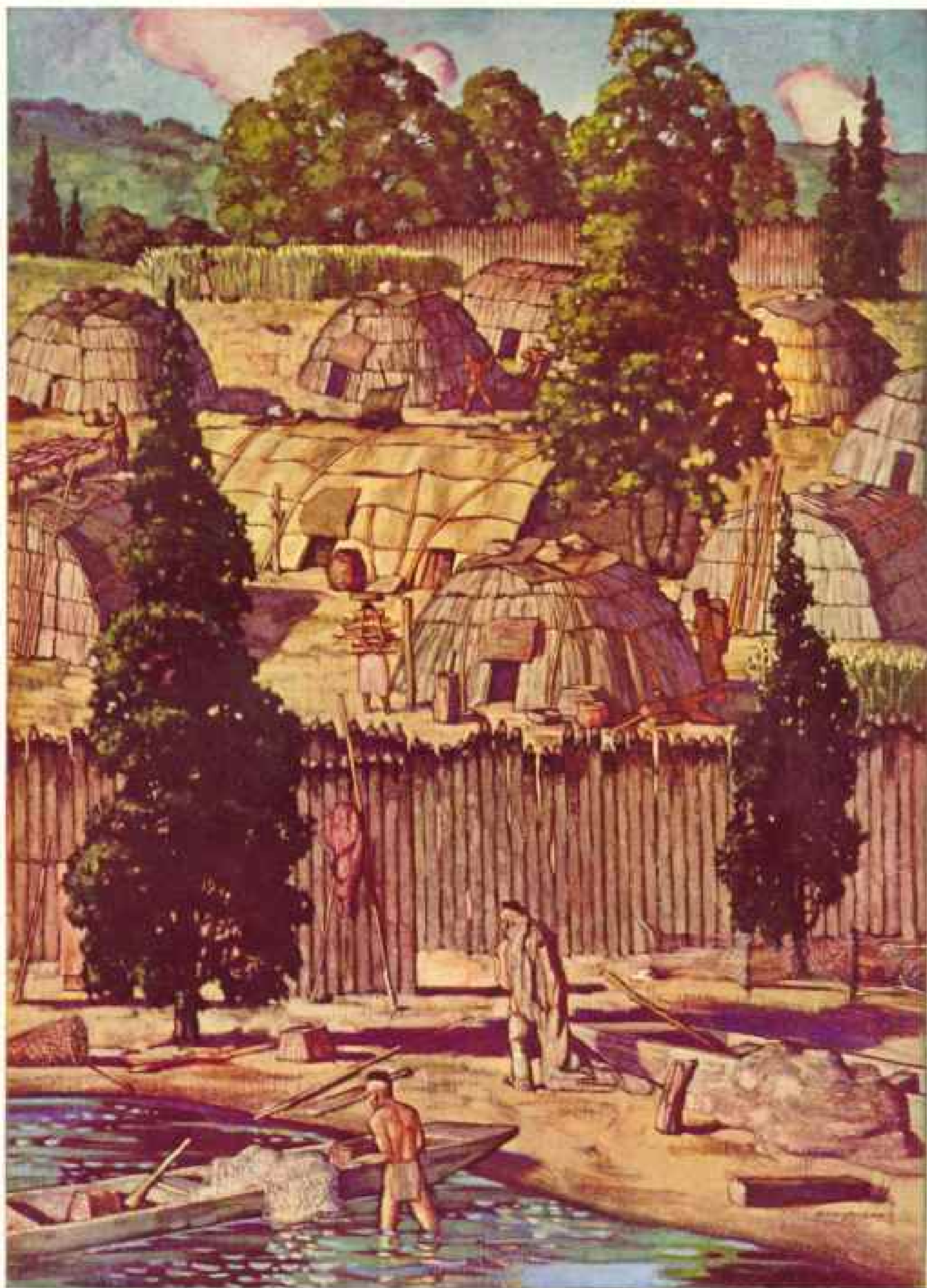


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Painting by W. Langdon Kihn

A WAR WHOOP RINGS OUT, AND THE FARMER DROPS HIS PLOW TO RUN FOR A GUN

The Iroquois leader, hideous in war paint, signals his raiding party to advance on the isolated farmhouse. Seldom could the settler and his family escape the surprise attack. The colonial era was not one of continuous border warfare but of periodic outbreaks. Sometimes, after years of peace, the Indians went on the warpath to defend their lands against the whites or to take scalps and thus gain prestige.



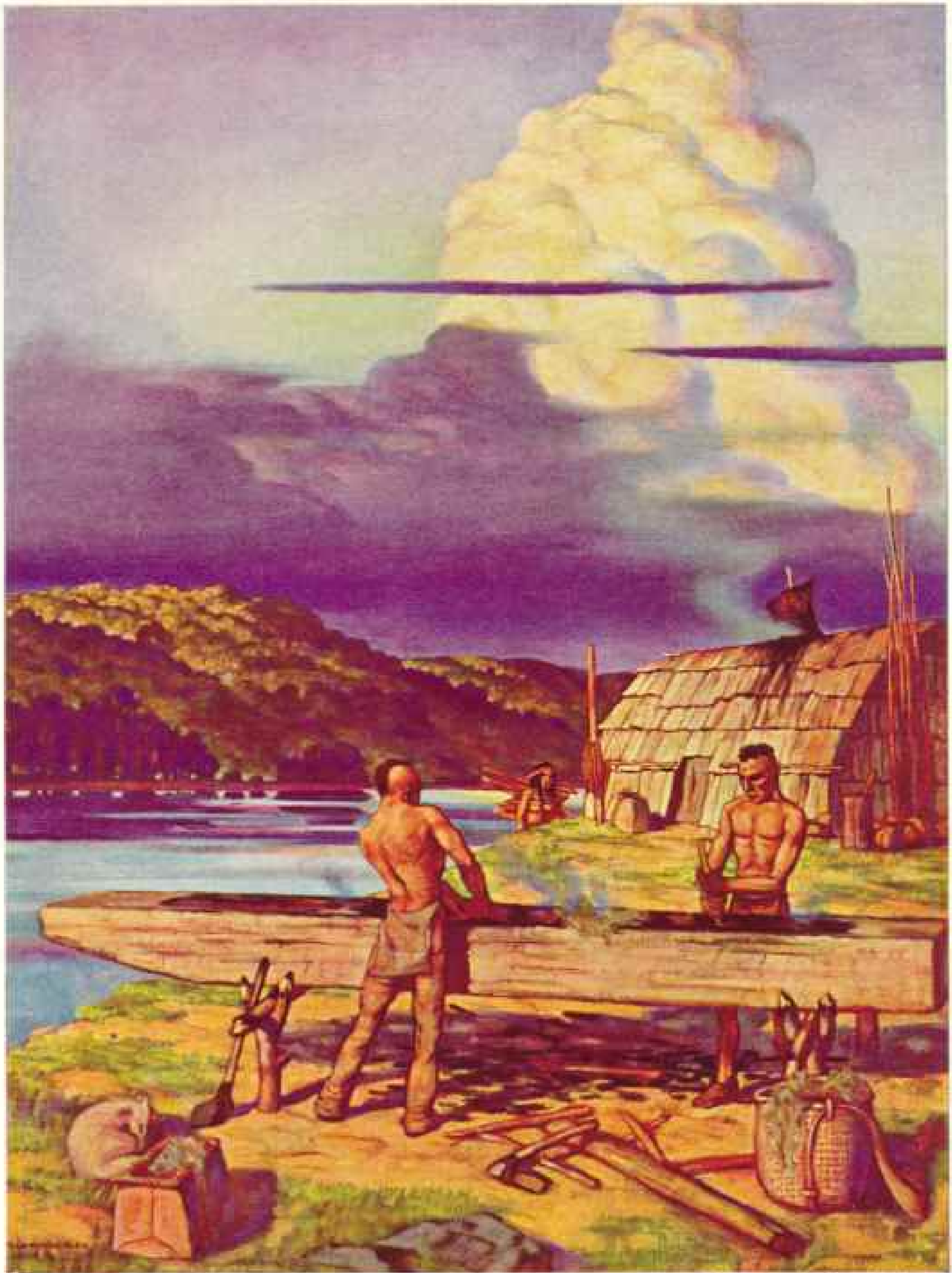
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Painting by W. Langdon Kihn

PEQUOT HOUSES CLUSTER INSIDE A STOCKADE AGAINST ENEMY ATTACK

The typical New England aboriginal village consisted of dome-shaped or semicylindrical huts covered with bark or grass. The long house, in the center, was the public gathering place. Near a garden patch (right) walks a woman with a child on her back, while on the riverbank men bring fish nets ashore to dry. In 1637 English colonists burned the principal Pequot stronghold on the Mystic River, in Connecticut, and virtually annihilated the tribe.

WHEN RED MEN RULED OUR FORESTS



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Painting by W. Langdon Kilin

WITH FIRE AND STONE ADZES, MASSACHUSETTS INDIANS SHAPE A DUGOUT CANOE

South of the limit of available birch, where bark canoes could not be built, the heavier and clumsier dugout was almost universally used. Natives shaped the craft entirely by eye measurements. So skillful were they that little alteration was necessary to make the canoe float truly in the water. These were the Indians the Pilgrims met at Plymouth. Soon afterwards they were virtually wiped out by the white man's smallpox.



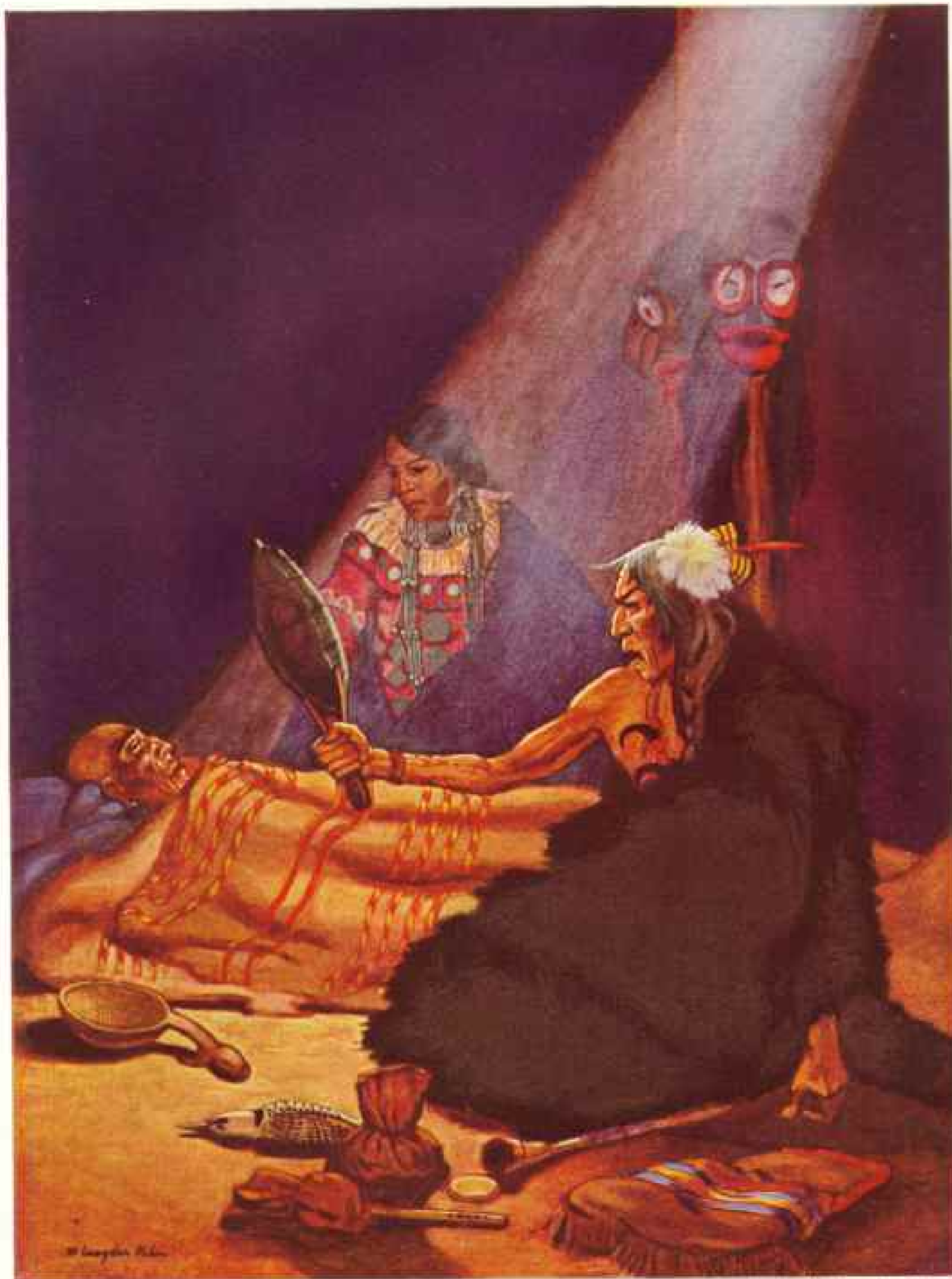
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Painting by W. Langdon Kihn.

DREAMS SUGGESTED THESE MASKS, WORN BY DANCERS TO SCARE AWAY EVIL SPIRITS

Men of the Iroquois False Face Society carved these wooden masks to represent supernatural beings which they had seen in nightmares. Shaking huge rattles made of turtle shells, members of the secret organization danced through the village to drive out the demons of disease. Today the Society still flourishes. When modern Iroquois don the grotesque masks and go from house to house scaring away spirits, they ride in automobiles!

WHEN RED MEN RULED OUR FORESTS



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Painting by W. Langdon Kihn

"O LIFE GOD, SAVE THIS DYING WARRIOR, WHOSE WIFE GRIEVES BY HIS BEDSIDE"

A beam of sunlight, coming through the smoke hole in the top of the lodge, illumines the patient's face as the Iroquois medicine man shakes a shell rattle and chants a curing song. Ritualistic paraphernalia litter the floor, and masks are set on the pole to frighten away the spirits responsible for the disease. The medicine man was a powerful tribal dignitary, and one of the foremost obstacles encountered by the missionaries in their efforts to convert the Indians.



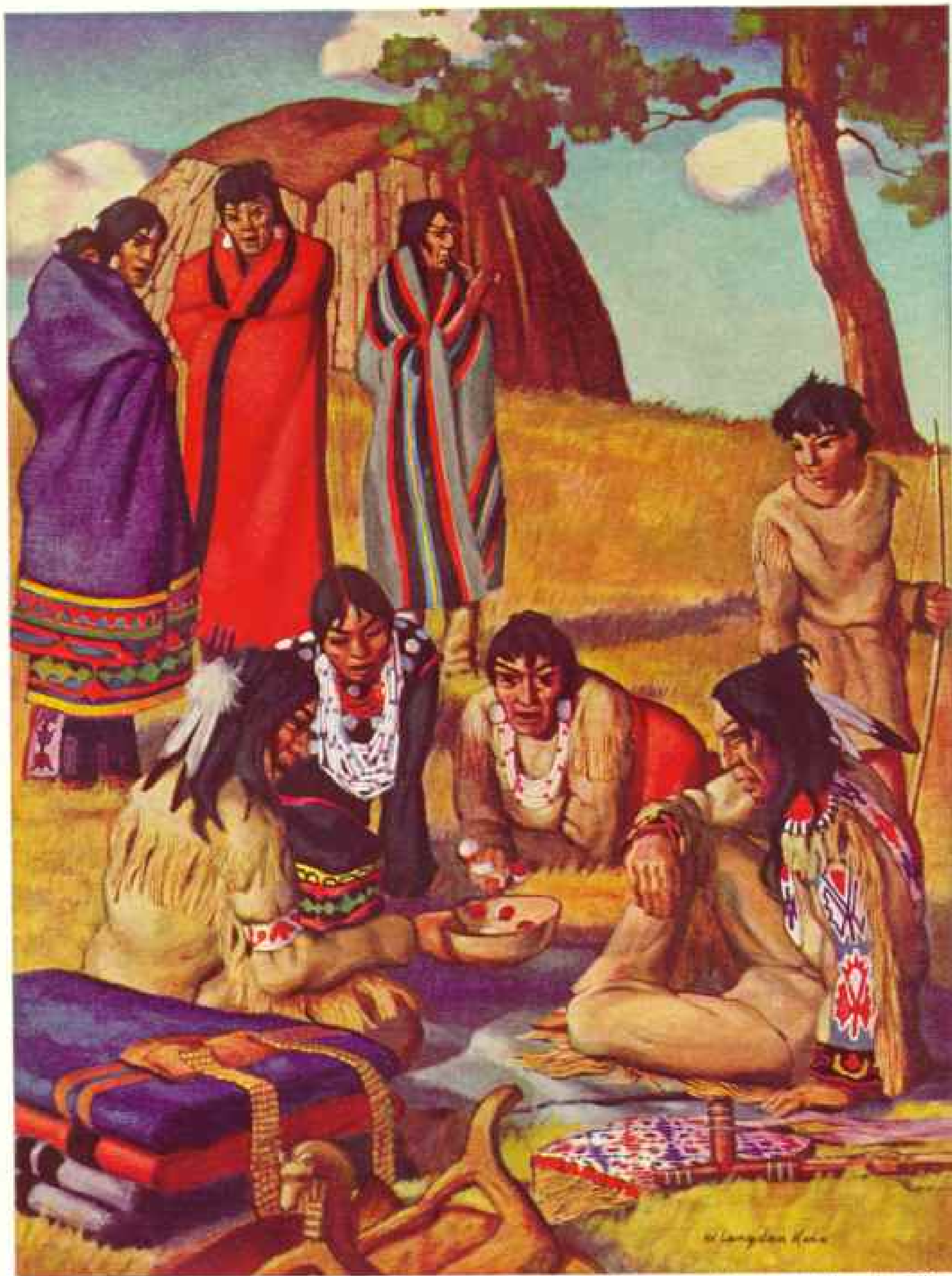
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Painting by W. Langdon Kihn

WHEN THE MAPLE SAP RAN, WOODLAND INDIANS ENJOYED A HOLIDAY

Early spring was the time for maple-syrup making. Trees were tapped and the sap was collected and brought to a large trough. Women then dipped up the liquid in kettles made of green birch bark. These were hung over embers to reduce the sap to a thick, sweet syrup, which was poured into molds to harden. Later, when Europeans introduced metal kettles, more heat could be applied and the sap was boiled down to make sugar.

WHEN RED MEN RULED OUR FORESTS

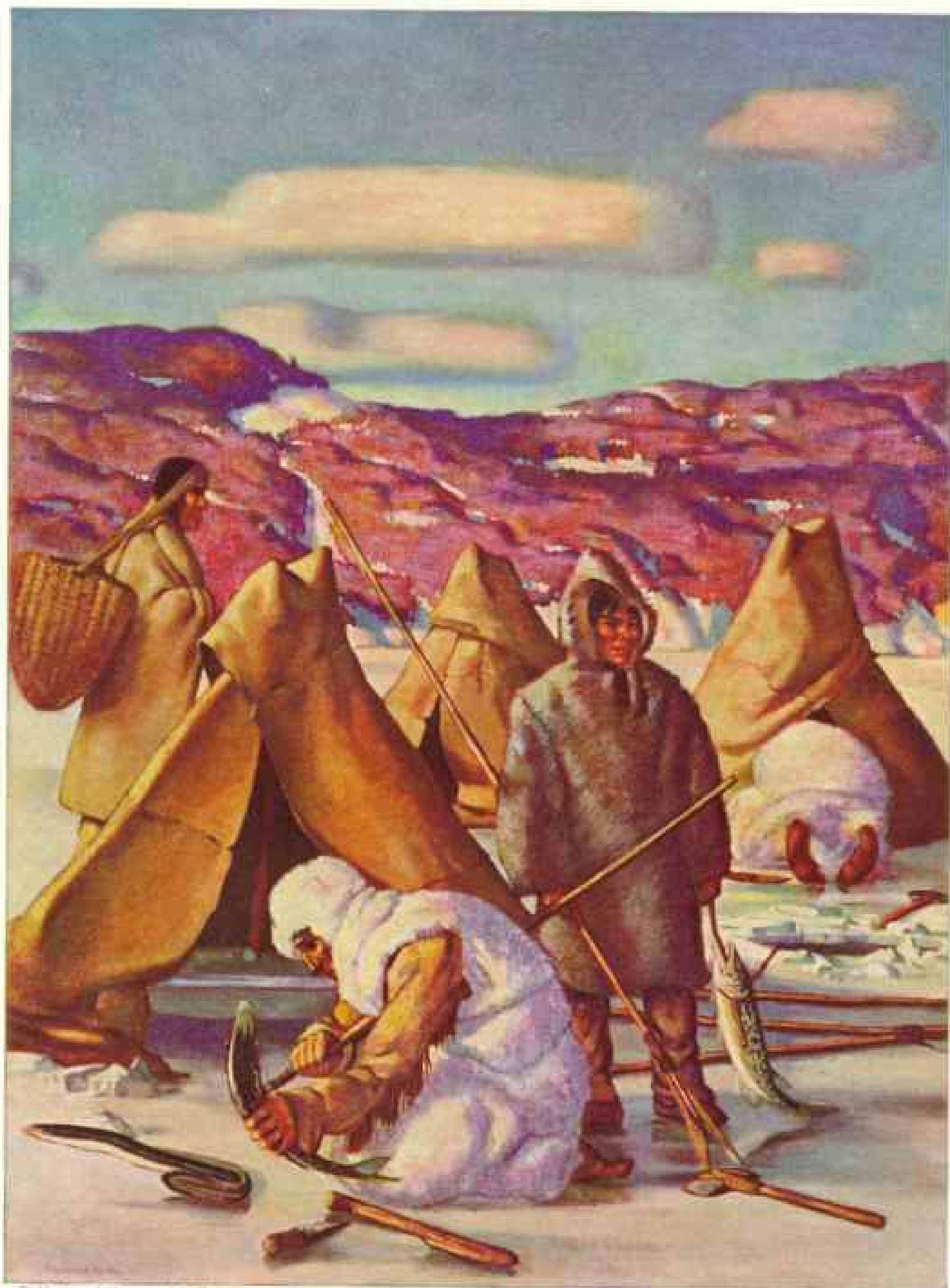


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Painting by W. Langdon Kihn

SINGING GAMBLERS STAKE BLANKETS, PIPES—EVEN WIVES—ON A THROW OF THE DICE

Bets are made, then the man who is to "shoot" first begins a song, in which the other Menominee join. Suddenly the player strikes the bowl, causing the dice to fly upward. These are red on one side, white on the other. The combination of colors made by the dice when they fall determines how many of the small wooden counters the player wins on the throw. He who finally wins all the counters takes the stakes, including the saddle (foreground) and perhaps even the watching wife.



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Painting by W. Langdon Kinn

GREAT LAKES INDIANS SPEAR FISH THROUGH HOLES IN THE ICE

Bundled up in Eskimolike furs, the red men chopped wide openings in the ice with their stone hatchets and erected shelters over them which made it easier to see into the water. The man crouching under the tent (right) dangles a lure with one hand and waits patiently with a spear in the other, ready to strike when prey swims near. A woman with a basket makes the rounds of the holes, collecting the catch.

difference in their concepts concerning the ownership of land.

In America, the land within the tribal boundaries was regarded as belonging to the tribe. Neither the Indian individual nor the family possessed vested rights in land, although each family might appropriate or have assigned to it, for cultivation or gathering, as much as they might require for their own needs.

Therefore it was impossible for any chief, family, or any section of a tribe legally to sell or give away any part of the tribal holdings.

Naturally any such documents or purchases had no significance to the early Indians. The first white settlers either were not aware of this fact or found it convenient to ignore it.

IDEAS OF TREATIES AND CASTE VAGUE

It was inevitable that, despite any negotiations carried on by individuals, the Indians considered themselves ousted when the whites took possession of their lands.

The idea of treaties and legal transfer of rights was imparted by the white man to the Indian. Previously the Indian obtained use of any particular area through occupancy or conquest, and to hold these rights he had to defend them against his enemies.

Typical of the Indian attitude was the speech Toohulhulote, a member of the Nez Percé tribe, made when the whites were trying to force the Indians to leave their ancient home in the Wallowa valley, to be placed on a distant reservation.

"The earth," he said, "is our mother, and her body should not be disturbed by the hoe or the plow. Men should subsist by the spontaneous productions of Nature. The sovereignty of the earth cannot be sold or given away. We never have made any trade. Part of the Indians have given up their land. I never did. The earth is part of my body, and I never gave up the earth. So long as the earth will keep me, I wish to be let alone."

Early explorers, accustomed to European ideas of regal descent and individual political power, applied such terms as king, queen, or princess to members of the simply organized democratic village tribes of eastern America. This was absurd.

The idea of a legal executive head was entirely foreign to these Indians, but was fostered by the colonists because of the aid

it gave in the transaction of business, particularly in regard to the sale of land.

The idea of inherited rank also was alien, for the most part. Even the so-called "chief" among many tribes was recognized as leader only because of his personal exploits or generally recognized ability. Such a leader had no actual authority, his rule being purely advisory but backed by custom.

In certain groups, such as the Iroquois and some Pueblo tribes, it was the rule to select chieftaincies from a particular clan, although in practice such offices were usually elective.

Probably the only example of a despotism was to be found among the Natchez and neighboring tribes of the lower Mississippi. However, in this instance, submission to the will of the chief was apparently voluntary and based upon religion.

Ideas of caste usually were entirely lacking, as were ideas of individual wealth. On the northwest coast of America a caste distinction did arise, based on property holdings, and among the Natchez a caste system developed based on lines of heredity. The idea of individual wealth was rare among the American Indians.

The organized confederacy of the Iroquoian tribes, with a representative form of government, was a unique experiment among American Indians. There is good evidence that the League of the Iroquois strongly influenced our own democratic type of government.

HIGH ACHIEVEMENTS, FROM CALENDAR TO CORN CULTIVATION

The substantial achievements of the aboriginal American are not generally realized. Considering the amazing inventive ingenuity of the primitive Eskimo, or the feats in social and political organization of the advanced Inca or the Aztecs, we are compelled to tender them a profound respect.

What unnamed Burbank conceived the idea of domesticating and improving the wild *teocentli* grass until it became the maize that is now one of the world's staple food plants? (Page 592.)

What mathematical genius performed the astonishing mental feat of inventing the abstract concept of the zero, making possible the intricate astronomical calculations of the Maya and the continuous calendar?

What great statesman, in a short period,



Photograph by Harrison Howell Walker

MASSASOIT OFFERS THE PEACE PIPE TO A YOUNG DESCENDANT OF THE PILGRIMS

Meeting the colonists near Plymouth Rock (surrounded by columns, right), the chief of the Wampanoag Indians accepted from Governor Carver a "great draught" of whiskey that "made him sweat all the while after"; then he concluded a treaty of peace with the whites. Until his death in 1661 Massasoit remained such a constant friend of the English that he has become known as the "Protector and Preserver of the Pilgrims."

made possible the organization of the barbaric tribes in the Valley of Mexico who became the Aztecs and who, like the ancient Romans, conquered a vast territory, enabling them to live from the tribute collected from their conquered neighbors?

Many of these events took place in the remote past; others may be dimly seen emerging from the dawn of early recorded history. Semi-legendary figures stand forth, such as Dekanawida, organizer of the Iroquois and founder of the League, one of the most successful examples of a democratic confederacy.

During the waning days of Indian domination, great and valiant heroes emerge in the full light of history.

Many of them foresaw that the encroachment of the white man, if allowed to continue, meant the disruption of the native manner of living and the eventual extermination of the Indian.

The Eastern Woodlands area had its share of such men. Their reaction took two forms. Some, like Cornplanter, famous Seneca chief, believed that the Indian should make friends with the whites, save himself by imitating the Europeans, and subsist in open competition with them (page 579). In his old age Cornplanter regretted having taken this course.

Others believed that it was impossible for the Indian to make such basic changes, and that his only salvation was to resist



Photograph by Harrison Howell Watson

WILLIAM PENN AND INDIANS VOWED FRIENDSHIP HERE

The monument in Kensington, now part of Philadelphia, marks the site of a huge elm tree where, in 1682, Penn made a treaty of good will with the Delaware tribes. Responding to the white leader's speech, the chief sachem said: "Brother, your words are fine . . . we are ready to sell you land . . . the Great Spirit sees our hearts, that they are not like foxes and snakes, but like *brothers*." The tree that saw the birth of Pennsylvania was blown down more than a century later, and its wood was made into furniture.

and repel the advances of the invader.

Among the famous exponents of the latter theory was Metacom, known to the English as King Philip. He was a Wampanoag, the son of Massasoit, whose friendly acts made possible the success of the Plymouth Colony (opposite page). He was probably the most remarkable character among all the New England Indians of the colonial period.

For ten years Metacom quietly organized the Indians of New England and, in 1675,



Photograph by Maynard Owen Williams

WELL-PRESERVED FORT MACKINAC GIVES MODERN AMERICANS A GLIMPSE OF LIFE IN AN OLD FRONTIER OUTPOST

These stockaded walls and log blockhouses, with loopholes for muskets, were built by the British in 1780, when Mackinac Island, at the northern tip of the Michigan peninsula, was becoming an important rendezvous for Great Lakes trappers, fur traders, soldiers, and missionaries. United States troops took possession in 1796—one of the last events of the Revolution. A British force recaptured the fort in 1812 by surprising the American garrison, who had not heard that war was declared. Later returned to Uncle Sam, the island has become a popular summer resort, and is one of the few places remaining where automobiles are not allowed.



Photograph by Harrison Howard Walker

HOME FROM HIS CORNFIELD AT SUNSET WALKS A STALWART OLD IROQUOIS, HIS WIFE AND DOG BESIDE HIM

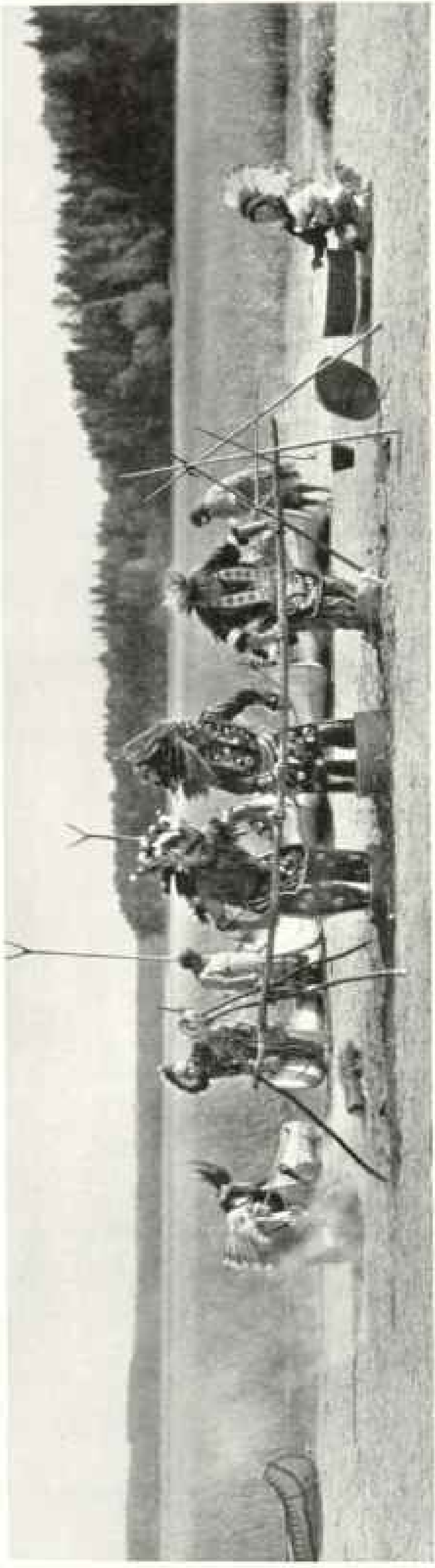
When his forefathers roamed the wilderness, farming was women's work; the men hunted (page 594). The Cornplanter Reservation here in Warren County, Pennsylvania, is named for the famed Seneca chief, Cornplanter (page 577), son of a trader named John O'Ball. Allied with the French, Cornplanter helped defeat General Braddock in 1755. Later he became a friend of the whites and an enthusiastic temperance lecturer among his tribespeople. One of his principal strongholds was on land now included in this reservation.



Photograph by Clifton Adams

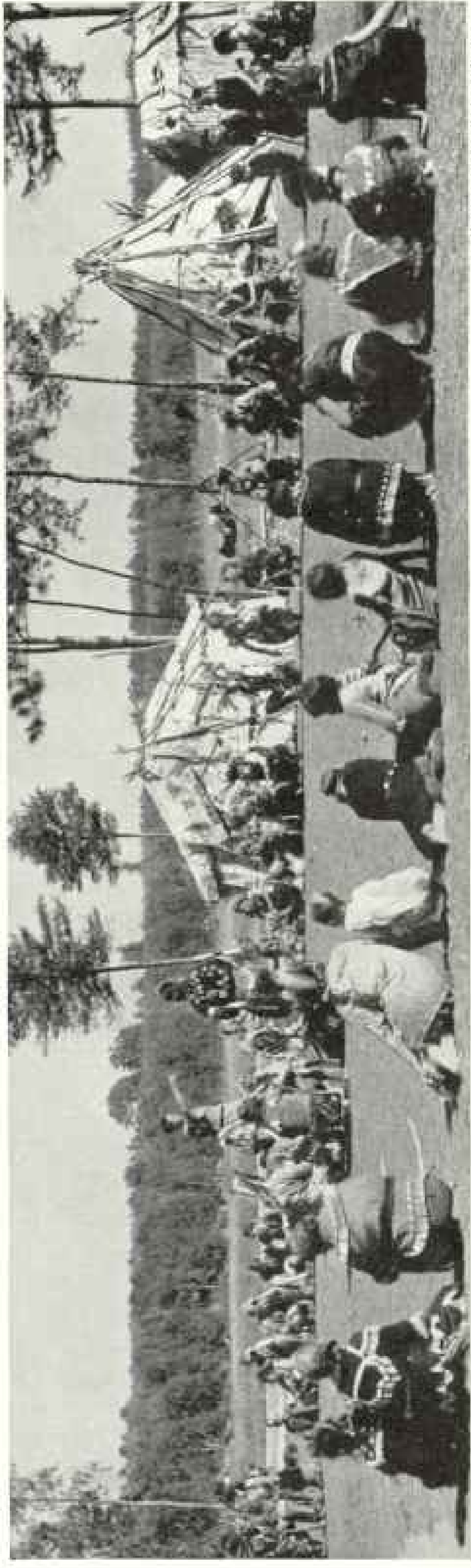
HARVEST CREWS, DRESSED AS IF FOR A DANCE, FLOAT THROUGH WILD RICE FIELDS AT LASCA STATE PARK, MINNESOTA

A man standing in the bow of each canoe poles it through the thickly growing plants, while the woman in the stern uses her two "rice sticks" to whack off the grain from the stems into the bottom of the craft. (Color Plate XIX). The canoe at the left has just paddled out from shore through a narrow channel where the growth is not so thick. Wild rice was a popular food among the Chippewa and other tribes that had access to such watery "plantations" (opposite page).



STAMPING THEIR FEET IN TIME WITH THE DRUM, CHIPPEWA IN CEREMONIAL ATTIRE DEHULL WILD RICE

They grasp the bat to keep balance as they tramp on the grain in big buckets sunk in the ground. A "substitute," smoking an elongated pipe, warms up by the fire (left). On the shore of Lake Itasca, birch-bark canoes arrive laden with rice. The long forked sticks are used to pole the craft through the water.



Photographs by Clifton Adams

A CENTURY AFTER AN EXPLORER'S VISIT, CHIPPEWA TRIBESMEN RE-ENACT THE RECEPTION THEIR ANCESTORS GAVE HIM

On his journey here in 1832, Henry Rowe Schoolcraft concluded that Lake Itasca was the source of the Mississippi River. The distinguished explorer and ethnologist, famed for his voluminous writings on American Indians, married a quarter-blood Chippewa girl who had been educated in Europe.

declared war upon the whites. During the ensuing year 52 of 90 English towns were attacked, and 12 completely destroyed.

Had it not been for the treachery of some of his followers, there seems little doubt that Metacom would have succeeded in driving the Europeans from New England. His forces were finally defeated and Metacom himself killed in the famous swamp fight in Rhode Island on August 12, 1676.

TECUMSEH, THE HUMANE WARRIOR

More than a century later the final desperate stand of the Indians against the whites in the northeastern United States was made under the leadership of Tecumseh, who, in the opinion of many historians, was the greatest figure developed during historic times among all of the Indians of the United States (Color Plate XXIV).

One of the ablest of all Indian warriors, he became noted for his humane character. Among other acts, he persuaded his tribe, the Shawnee, to abandon the practice of torturing prisoners, a basic custom of Indian warfare at the time.

Tecumseh vigorously opposed the advance of the white man and denied the right of the Government to purchase land from a single tribe on the grounds that the vast woodland hunting territory belonged to all tribes as common property (p. 575).

When the Government refused to recognize his contention, he formed a great confederacy of practically all of the Indians east of the Mississippi in hope of making the Ohio River the permanent boundary line between the two races.

With chosen agents he visited every tribe from Florida to the Missouri River, persuading them to join in his movement. Because of precipitant action by some of his followers, the Battle of Tippecanoe took place in 1811, before the plans of organization were complete, and Tecumseh's purpose was defeated.

The warrior then allied himself with the British against the Americans and was given a commission in the regular British Army as a brigadier general, having 2,000 Indian allies under his personal command.

In 1813 he protected Proctor's retreat, following Perry's victory at Lake Erie, forcing Proctor to make a stand against the Americans near Chatham, Ontario. In the battle that followed, the Americans under Harrison were victorious and Tecumseh was killed.

He had a premonition of this disaster and laid aside his uniform of a British general, dressing himself in native costume for the fight. With the death of Tecumseh, the last serious obstacle in the path of white expansion was removed and the doom of native life in the eastern United States was sealed.

Another noted Indian whose career somewhat paralleled that of Tecumseh was Thayendanega, known to the whites as Joseph Brant.

He was one of the first prominent Indians to learn to read and write English. He was a Mohawk chief, born in 1742, who took an active part in the border wars against the whites during the 18th century.

As he was a Mohawk, he fought with the British in Pontiac's war of 1763 against the American colonists. He was given the commission of a British colonel and, with his native troops, took an active part in a number of famous raids against American settlements in 1779. His sister became the wife of Sir William Johnson (page 539).

As with many other peoples, most noted Indians owe their prominence to military activities. This should not, however, produce an unbalanced picture of Indian life. Warfare against the whites was inevitable because of the pressure of white expansion.

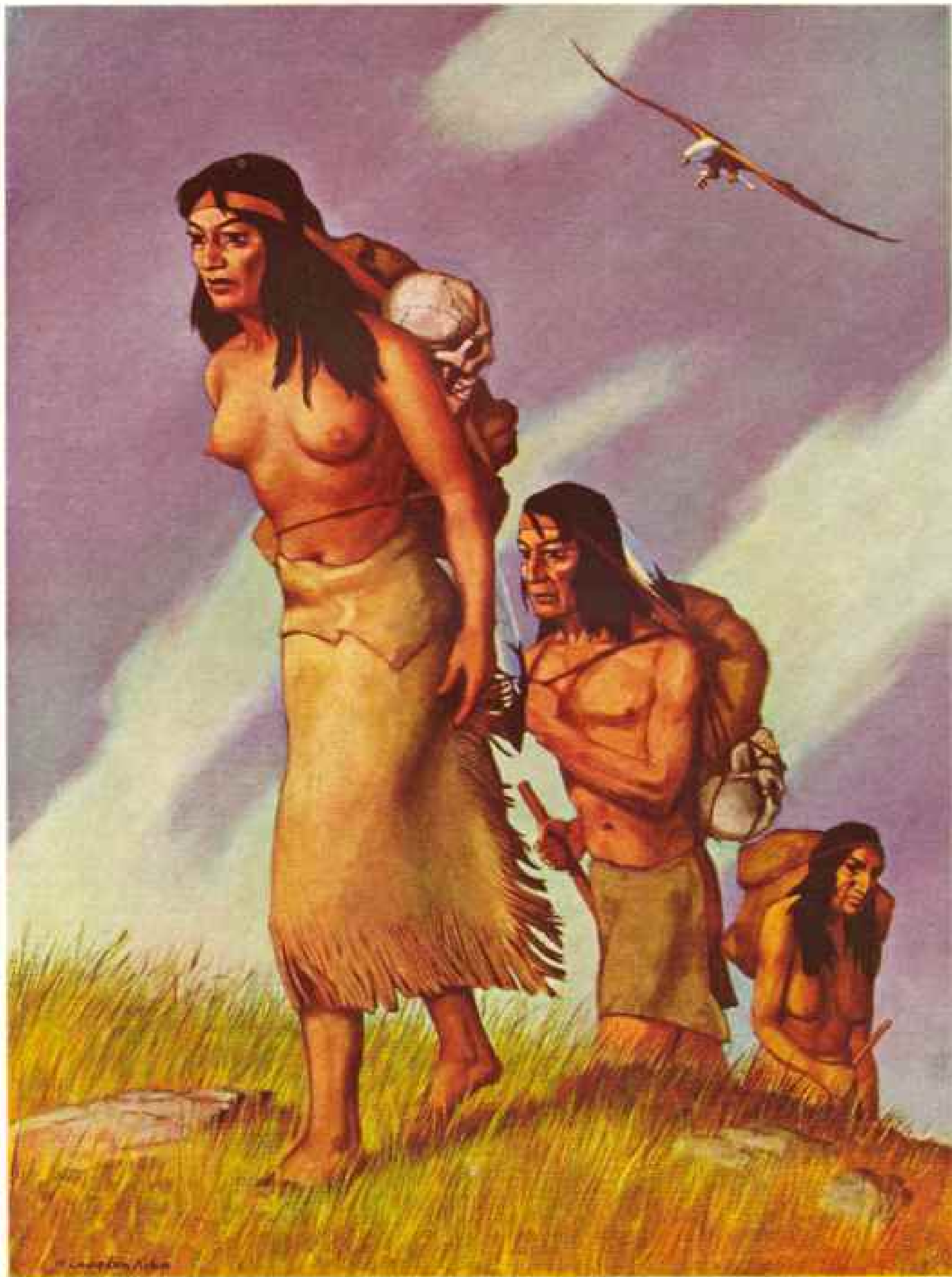
The Indian's method of fighting differed considerably from the mass activities of the Europeans. The Indian technique was to scatter forces, placing emphasis upon concealment, surprise, and ambush. Not until the colonists adopted Indian methods of fighting could they cope with him.

Two practices connected with warfare in the Eastern Woodlands area have been prominent in literature. One was the torturing of prisoners; the other was the taking of scalps. Both of these customs appear to have been aboriginal with the Iroquois and to have spread from them, after the coming of the whites, over a much wider territory.

THE SPREAD OF SCALP TAKING

Taking scalps was encouraged by the European rivals in the northeast, who offered bounties to their Indian allies for scalps of their enemies, Indian or white. With this stimulus, the practice of scalping spread rapidly and widely.

Bounties for the scalps of hostile Indians in the West were offered as late as the middle of the last century.

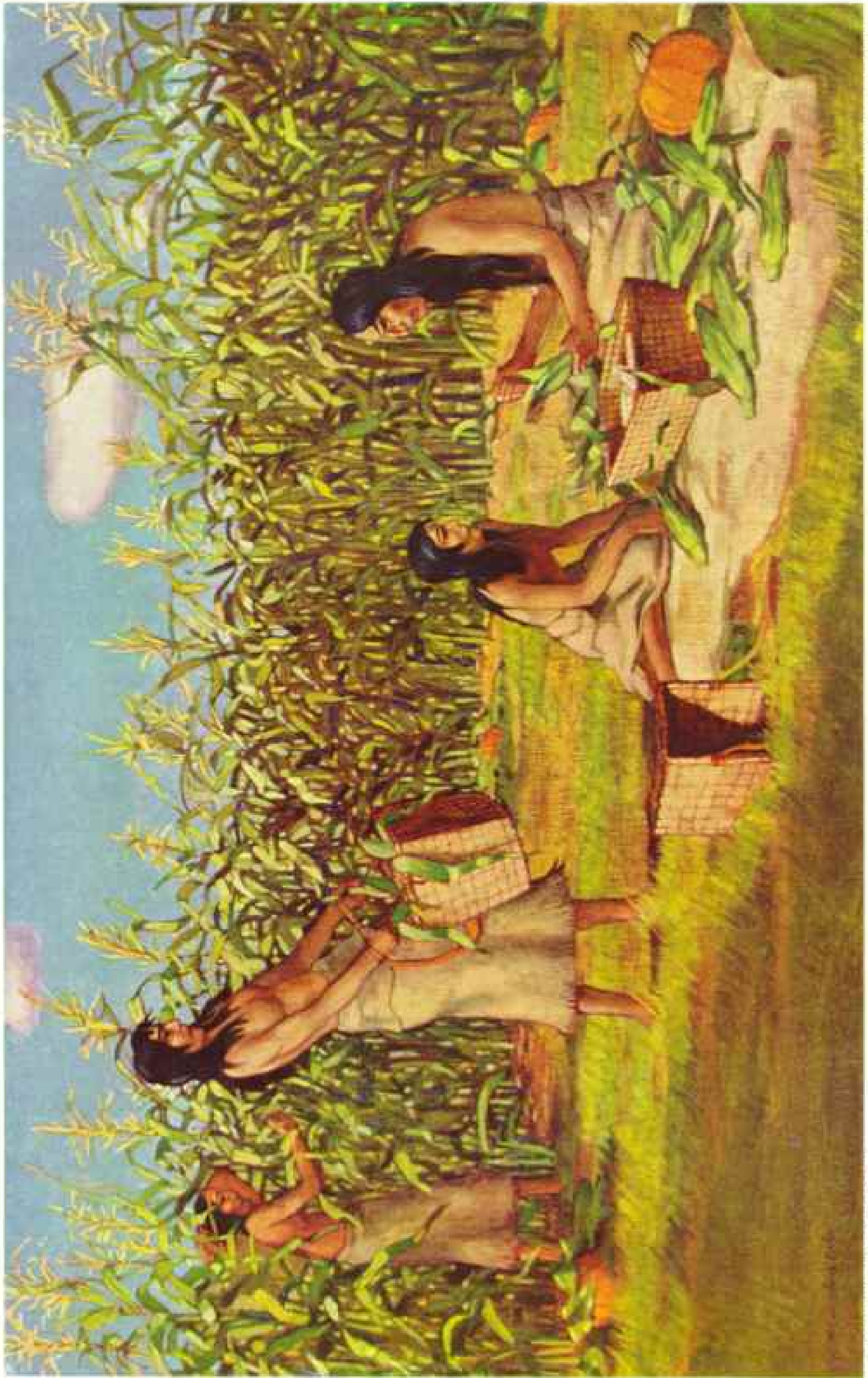


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Painting by W. Langdon Kihn

A HURON FAMILY BURIES ITS LOVED ONES

Respect for the dead was one of the outstanding characteristics of this tribe, which inhabited the region southeast of Georgian Bay, Ontario, Canada. When a relative died, he was given temporary burial on a scaffold near the village. About every 12 years a great feast of the dead was held, in which the entire Huron nation participated. The bodies of all who had passed away during the period were carried by their families, often many miles, to a common burial pit lined with furs and other costly offerings.

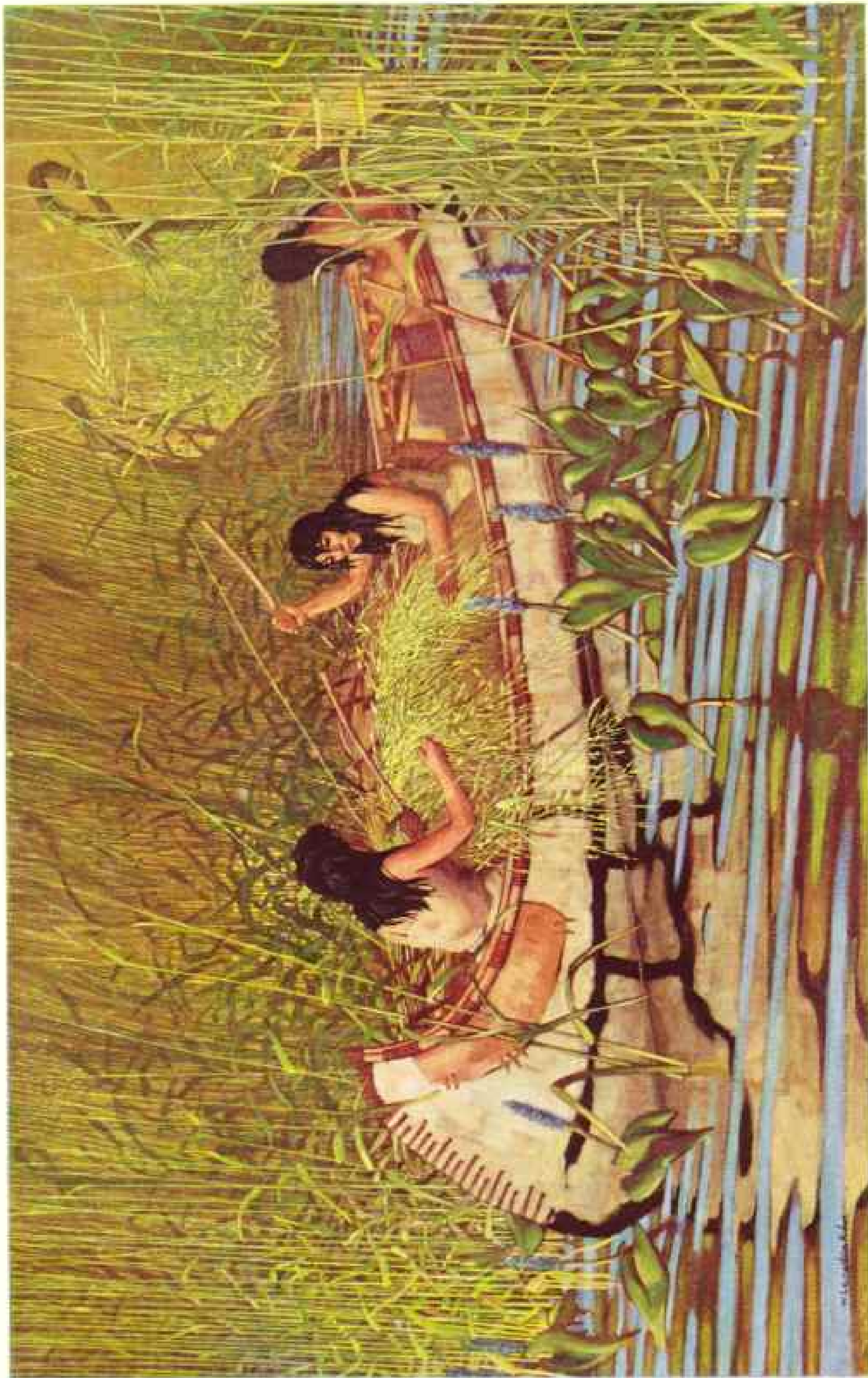


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CORN, THE INDIAN'S STAFF OF LIFE, WAS HARVESTED BY WOMEN

Among the tall stalks walk Iroquois wives, picking the ears and tossing them over the shoulder into a small basket carried on the back. The seated women husk the ears. Often corn was roasted or boiled when green, or parched and pounded into a light meal. Mush and corn dumplings were popular, as were hominy, corn soup, and succotash. Popcorn, too, was grown; the Indians popped it in earthenware vessels.

Painting by W. Langdon Kihn

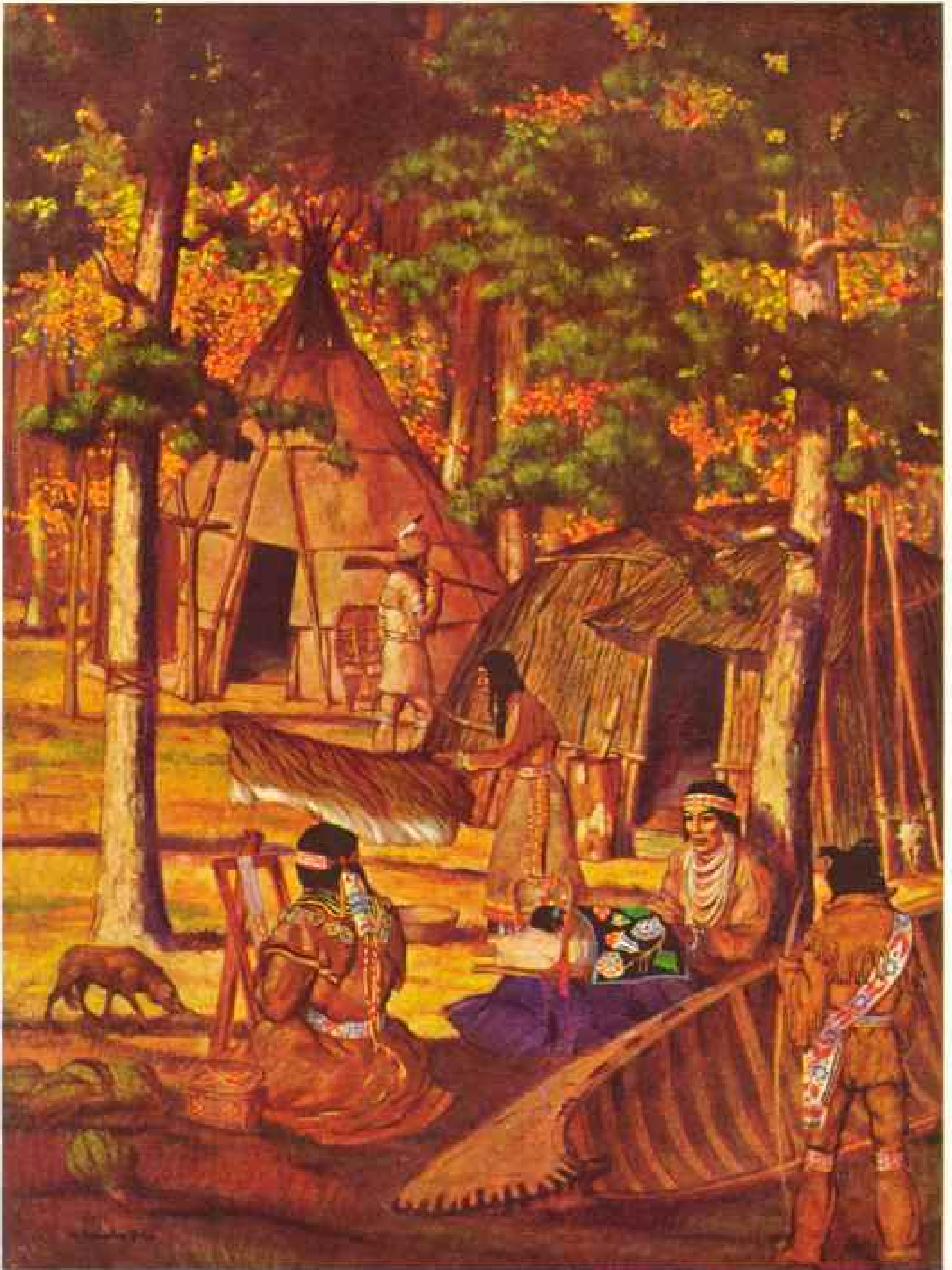


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A WATER-BORNE "REAPING MACHINE" FLOATS THROUGH WILD-RICE FIELDS

Painting by W. Lamond Kibb

Chippewa women reach out with sticks, pull the stalks over into their laps, and flail the grain-bearing heads, beating off the kernels of rice into the bottom of the canoe. When the craft has a full cargo it will be paddled back to camp, where the grain will be dried and dehulled. Tribes in the Lake Superior region were the most extensive users of wild rice (*Zizania aquatica*), which grows in water several feet deep. Just before the grain ripened, women cruised through the fields in canoes to tie the stalks into small bundles with looped ends. This protected it from rain, wind, and birds.

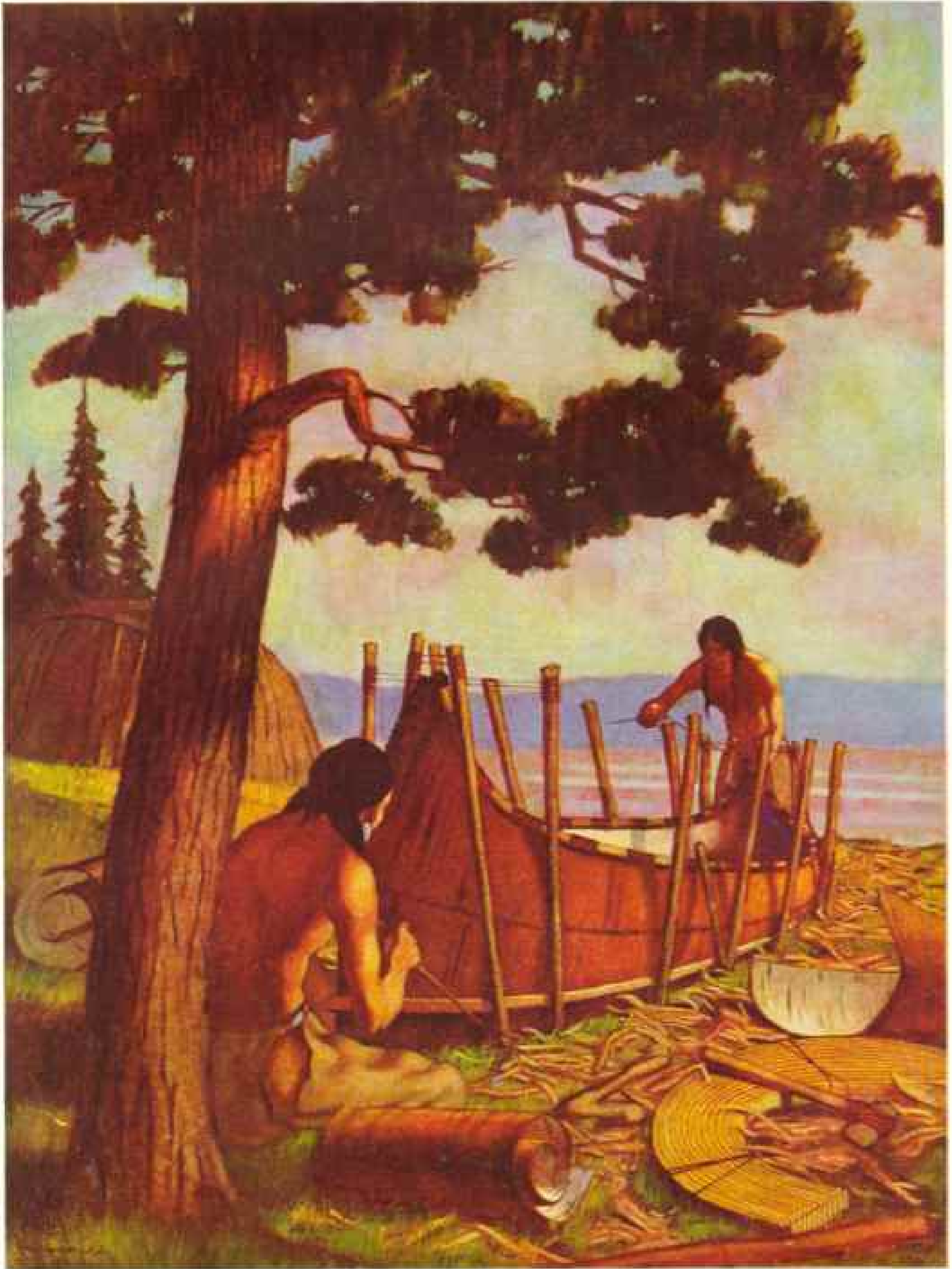


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Painting by W. Langdon Kille

IN GALA DRESS, CHIPPEWA WOMEN PREPARE FOR TRIBAL FESTIVITIES

Corn and squash have been harvested, and summer camp is about to be broken up. One woman dresses a skin to make winter clothes, another weaves a belt of beads, and the hunter has brought out his snowshoes to repair. Their conical bark-covered tepee was the ancestor of the skin-covered tent used later on the western plains. Missionaries introduced the floral design. The Chippewa were once the largest Indian tribe north of Mexico. Their territory extended from Lake Huron to the Dakotas.



© National Geographic Society

Painting by W. Langdon Kilin.

CANOE MAKERS WERE MASTER CRAFTSMEN OF THE CHIPPEWA

These builders have set stakes in the ground to outline roughly the shape of the craft. Thick sheets of birch bark, cut to the proper size, are placed inside the framework and their edges are bent upwards and fastened to the wooden gunwales. Ribs of cedar (on the ground at the right) are put in position as shown in the craft on the opposite plate. Thwarts are then fastened in place, bracing the canoe, after which the birch bark is sewn together.



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DRUMS BEAT AND PAINTED BRAVES CHANT WAR SONGS AS THEY DANCE AFTER SMOKING THE "PIPE OF BATTLE"

Painting by W. Lamifton Kilhn

The leader carries a war banner made of eagle feathers sewed on a strip of cloth and fastened to a pole. A scalp, attached to a hoop, adorns the lance of the third man. Among the Chippewa any individual could instigate a raid by sending a messenger with tobacco to ask warriors to join the party. All who were willing smoked the pipe. Then they reported to the leader, who gave them a feast. Dances were held every night until the eve of departure, when a dog-meat feast closed the festivities. Most Chippewa wars were against their hereditary enemies, the Sioux.



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"I TOOK FOUR SCALPS THE LAST TIME ON WARPATH!"

The Indian considered military prowess his highest achievement. Little credit was given for merely killing an enemy. Reaching out and touching a foe with a finger or stick while engaging him in hand-to-hand combat was the warrior's bravest feat. Honors were given for taking scalps, capturing prisoners, and stealing horses. Combinations of eagle feathers were worn in the hair as military "medals." The warriors shown here belong to the Sauk and Fox tribe, which opposed the whites in the Black Hawk War, in which Abraham Lincoln served as captain of volunteers.

Painting by W. Langdon Kuhn



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Painting by W. Langdon Kihn

TECUMSEH, WAR CHIEF OF THE SHAWNEE, DISCARDS HIS BRITISH UNIFORM AND MEDAL.

The Indian leader, one of the most remarkable men of his race, was commissioned a brigadier general in the British army during the War of 1812. When his white allies retreated before the Americans under William Henry Harrison, Tecumseh accused them of cowardice. This and a premonition of death made him discard the foreign regalia. After persuading the British to fight Harrison on the Thames River, Ontario, Canada, the Shawnee chief perished in battle on October 5, 1813.

In more peaceful occupations, however, the Indian was much greater than as a military strategist. Apart from hunting and fishing, he was skilled in the higher arts. He was an excellent orator and dramatist. Many speeches are models of powerful and poetic expression.

The relative effects of group response to a rational appeal versus an emotional appeal were about the same among the Indians as they would be among moderns.

This is illustrated by two speeches given a century ago at a council of the Assiniboin called by Edwin Denig, the white agent, in an attempt to dissuade them from going to war against the Crows, who had massacred the occupants of an Assiniboin camp on the Yellowstone River.

After the gathering had assembled in the lodge and the purpose of the meeting was explained, the leading chief spoke thus:

"My children, I am a mild man. For upward of 20 years I have herded you together like a band of horses. If it had not been for me, you would long ago have been scattered like wolves over the prairies. Good men and wise men are scarce; and, being so, they should be listened to, loved, and obeyed.

"My tongue has been worn thin and my teeth loosened in giving you advice and instruction. I am aware I speak to men as wise as myself, many braver, but none older or of more experience. I have called you together to state that our enemies (the Crows) have sent tobacco, through the medium of the whites at the big fort, to me and my children, to see if they could smoke it with pleasure, or if it tasted badly. For my part I am willing to smoke.

"We are but a handful of men surrounded by large and powerful nations, all our enemies. Let us therefore by making peace reduce this number of foes and increase our number of friends. I am aware that many here have lost relatives by these people. So have we by the Gros Ventres, and yet we have peace with them. If it be to our interest to make peace, all old enmities must be laid aside and forgotten.

"I am getting old, and have not many more winters to see, and am tired seeing my children gradually decrease by incessant war. We are poor in horses—from the herds the Crows own we will replenish. They will pay high and give many horses for peace. The Crows are good warriors, and the whites say good people and will

keep their word. Whatever is decided upon, let it be manly; we are men. Others can speak. I listen; I have said."

This speech was received by a slight response from some of "Hoo-o-o-o," and by the majority in silence. After a few minutes' interval another chief, the third or fourth from where he sat, a savage, warlike, one-eyed Indian, replied.

A FIGHTING SPEECH

He said that he differed from all the old chief had said regarding their enemies. He liked his father, the chief, individually as a man and as their leader, but the father must be growing old and childish to advise them to take to smoking the tobacco of their enemies, the Crows.

"Tell the whites to take it back to them," he pleaded. "It stinks, and if smoked would taste of the blood of our nearest relations."

He thought his old father (the chief) should make a journey to the banks of the Yellowstone, speak to the grinning skulls of 30 lodges of his children, and hear their answer.

"Would they laugh? Would they dance? Would they beg for Crow tobacco or cry for Crow horses?"

If horses were wanted in camp, let the young men go to war and steal and take them as he had done—as he intended to do as long as a Crow Indian had a horse. What if in the attempt they left their bones to bleach on the prairie? It would be but dying like men!

For his part it always pleased him to see a young man's skull; the teeth were sound and beautiful, appearing to smile and say, "I have died when I should and not waited at home until my teeth were worn to the gums by eating dried meat."

"The young men," he concluded, "will make war, must have war, and, as far as my influence goes, should have war. I have spoken."

This speech was received with loud and prolonged grunts of approbation by more than two-thirds of the assembly. It was agreed that war should continue.

EXCELLED IN POETRY, SONG, DANCE

The poetry of the Indian is filled with fine imagery, a deep appreciation of Nature, and reflects his often beautiful religious philosophy.

Singing and dancing were highly devel-



Photograph by Harrison Howell Walker.

PENOBSCOT WOMEN WEAVE BASKETS, AS THEIR GRANDMOTHERS DID,
WHILE THEIR HUSBANDS BUILD CANOES

On a framework of wooden splints, held in place by a barrel-shaped form (right), they weave strands of yellow, green, and blue. Long ago the Indians decorated their clothes with embroidery made from dyed moose hair and colored porcupine quills. When the white man came, natives traded furs for glass beads, which eventually replaced their aboriginal ornaments. Designs, too, were changed from simple geometric figures to more elaborate floral patterns introduced by Europeans.

oped, but instrumental music was not correspondingly advanced. Flutes, drums, and rattles were commonly used.

Most artists agree that the finer examples of sculpture, modeling, and painting by aboriginal American artists take their places beside the masterpieces of all time.

The terraced irrigation systems of Peru and the canals of the American Southwest, the long highways constructed through the mountains of Peru and the jungles of Yucatan give mute evidence of the Indian's skill as an engineer.

INDIAN GIFTS TO THE WORLD INCLUDE
FOODS, QUININE, RUBBER

He was a skillful weaver of textiles and basketry, and a maker of artistic pottery without the aid of the potter's wheel. Although he devised a hand loom, he was deficient in mechanical inventions. For example, he never discovered the wheel or the keystone arch.

The American Indian's greatest gift to

the world probably resulted from the activities of prehistoric scientific agriculturists.

Among the plants developed by these ancient botanists are maize, beans, potatoes, and sweet potatoes, now four of the leading foods of the world. Manioc, extensively cultivated by the natives of tropical America, is now the staff of life for millions of people living in the equatorial belt. Other important items, such as peanuts, squash, chocolate, peppers, tomatoes, pineapples, and avocados might be added.

In addition, the Indian was the discoverer of quinine, cocaine, tobacco, and rubber, useful commodities of modern times.

Maize, or Indian corn, was one of the most important contributions of the American Indian to mankind. Over a considerable portion of the Americas, it was the staff of life. With maize also spread the cultivation of beans and squash.

Coming into the southern United States from Mexico, the practice of agriculture spread around the Gulf coast, northward up the Mississippi, and along the Atlantic



Photograph by Harrison Howell Walker

HOME RUNS, NOT SCALPS, ARE BATTLE TROPHIES AS TWO TRIBES CLASH

Many a redskin bit the dust when trying to slide to the home plate in this game between Paromaquoddy and Malecite teams (page 561). Neptune, ex-chief of the home tribe, acted as umpire (left). As in olden times, when Indian clans gathered to play lacrosse (Color Plate I), these modern braves celebrated with a feast and war dance after the game.

coast as far as the St. Lawrence River.

School children have read how Squanto taught the settlers at Plymouth to plant and raise corn, thus enabling the colony to become partly self-supporting. Without maize both Jamestown and Plymouth would certainly have failed and the settlement of the Atlantic seaboard been delayed many years.

The agricultural Indians of the Eastern Woodlands used simple but effective methods of cultivation. Champlain tells that in place of plows they employed an instrument of hard wood shaped like a spade.

The gardens were planted in May on suitable land near the village. Three or four kernels were placed in one spot and a small hill of dirt heaped over them. In each hill were planted also a few beans. The hills were placed in rows at intervals of about three feet.

When the seed sprouted, the bean vines would interlace with and climb up the cornstalk, at the same time keeping the ground about the hill free from weeds.

Pumpkins and squash usually were

planted in open areas around the edge of the corn patch, where vines would not be too much shaded by the tall corn plants.

Apart from the efficiency of this method of planting, the Iroquois believed that the guardian spirits of the three plants were sisters who desired to remain together.

The care and harvesting of the gardens were almost exclusively the duties of the women, the men being too much occupied with hunting activities during the growing and harvesting seasons (Plate XVIII).

THE ORIGIN OF SUCCOTASH

The corn plant was held in such regard by the Iroquois that the name of maize means "our life." This love and veneration for corn was typical of all of the agricultural tribes of America, who regarded it as their principal means of subsistence.

Many varieties of beans and corn were cultivated and there were numerous methods of preparing them as food. The aboriginal New England dish of succotash, consisting of a mixture of maize and beans, still retains its Indian name.

Corn was eaten in many different ways. The green ears were roasted or boiled, or the kernels scraped from the green ear and prepared as a kind of corn soup. Since corn could be preserved when dried, it was stored in granaries or caches in the ground and eaten in time of scarcity.

Dried corn was pounded into meal in deep wooden mortars or ground with shallow stone mullers. There were numerous ways of preparing the meal, but it was usually eaten as bread or mush. Hominy was made by boiling the corn in a weak lye solution to loosen the hulls, which were then washed off with water.

Moccasins, mats, masks, and toys were woven from corn husks. Floats for fish nets and tubular containers were made from the cornstalk. Corncob fires were burned when smoking skins, while the pulp of green corn was occasionally used in place of animal brains for dressing skins. All parts of the corn plant were utilized as fuel, and corn fires were particularly satisfactory in the house, as they did not produce much smoke.

GAMES OF CHANCE AND SKILL

The Indian was very fond of games and sports. Two types of games prevailed throughout the New World: those of pure chance, consisting of many varieties of dice or guessing games, and those requiring dexterity. Games requiring athletic skill and endurance combined with dexterity prevailed throughout the New World.

Foot racing and wrestling were the most common varieties of man-to-man competition. Athletic games requiring team play and mass participation were widespread.

Throughout most of the eastern half of the United States was played the game of lacrosse, which has since been taken over by the whites (Color Plate I).

Wagers were made on all games (Plate XV). Frequently the stakes were heavy and a man would risk his entire property on a single dice game or athletic contest. Caught in the fever of gambling, after losing all of their material holdings players would put up their wives as stakes, and sometimes would wager their own persons, the loser becoming the slave of the winner.

Indian women have been described as drudges, beasts of burden, chattels, and as being virtual slaves of their husbands. Their existence has been pictured as a continuous round of backbreaking physical work, childbearing, and dutiful waiting on

their husbands' every whim. Such a picture is not at all characteristic.

WOMAN'S PLACE IN HOME AND GARDEN

In aboriginal times the house and the gardens surrounding it were the woman's domain. While they tilled the soil, prepared food, and occupied themselves about the domestic establishment, the men were busy in the more strenuous pursuits of hunting, fishing, and warfare. Visitors therefore usually saw women industriously attending to their work around the house, while the men, if present, apparently reclined lazily about with nothing to do.

The division of labor between the sexes was strongly fixed by custom, so that when the encroachment of the white man destroyed the game, fenced off hunting grounds, and removed the possibility of aboriginal warfare, the balance was completely destroyed. The woman's work remained, but the man was left with nothing to do.

In the old days Indian women worked hard, took pride in their work, lived, loved, and gossiped, much as women do in all parts of the world. Since much of their work was out of doors, their life was a healthy one. The husband had no real authority over his wife's person and, while custom differed among various tribes, the woman as a rule could leave her husband when she wished. There was as much mutual consent involved in marriage as in our own society.

So-called purchases of wives, when analyzed, are found to consist either of a mutual exchange of gifts by the families as a goodwill gesture, or as compensation to the bride's family for the loss of her services.

Among many of the Indian tribes descent is reckoned only through the female line, so that all forms of inherited rights can be carried on only through the woman. Among some groups, such as the Iroquois, the women had an important voice in tribal affairs and were regularly members of council meetings (Color Plate II).

The breakdown of native culture was inevitable once the white man had entrenched himself in the New World.

The first disaster resulting from this contact was the introduction of new diseases, such as smallpox, measles, and chicken pox, to which the Indians had developed no racial resistance. Whole tribes were swept away and others were greatly reduced in numbers.



Photograph by Clifton Adams

"WHEN THE WIND BLOWS, THE CRADLE WILL ROCK"

If this little Chippewa, in his blanket hammock, had been born a few decades ago he would have been strapped to a board and hung on a tree to sleep, as in the old nursery rhyme. A son of "Comes Over the Mountain," the baby is attended here in Itasca State Park, Minnesota, by a girl of the tribe, who covers him with mosquito netting.



Photograph by Harrison Horrell Walker

ALERT TEDYUSKUNG, TOMAHAWK IN HAND, WATCHES OVER
HIS BELOVED VALLEY

Like a protecting spirit, the chief's statue stands on the brink of a cliff overlooking Wissahickon Creek, near Philadelphia. This Delaware leader, born about 1700 and baptized a Christian, helped the British capture Fort Duquesne (Pittsburgh) from the French. Tedyuskung was noted for his love of hard liquor. "Though he is a Drunkard . . . yet he is a man that can think well," wrote a white settler. More recent palefaces have tattooed the old sachem with their initials.

The introduction of alcohol likewise did much to break down the pride and spirit of the Indian, who seemed unable to drink in moderation.

Even more devastating, in the long run, was the psychological effect of the contact of the two civilizations.

Among American aborigines tribal organization was based on kinship, which carried with it the obligation of mutual

assistance and protection. Typically, inheritance was reckoned through one side of the family, usually the mother's, and children were under direction of the clan to which the mother belonged.

Our system of bilateral descent puts children directly under parental authority and removes the feeling of oneness with the clan.

The new culture also obliterated the basic occupations of tribal life. No longer could a man gain prestige through war honors. Extermination of wild game left no place for the hunter and maker of hunting implements.

The woman not only had a large part in the cultivation of the fields (page 594), but she also was a potter, usually the weaver of textiles and baskets, and the dresser of skins. She prepared the food and managed the domestic establishment.

These skilled arts, which permitted the full development of the individual, vanished with the coming of metal kitchen utensils and

machine-woven cloth. The man, left with nothing to do, could only loaf about the house. Readjustment has been slow and painful.

Today the blood of the American Indian flows in the veins of many of our leading citizens. His contributions to civilization and toward the betterment of mankind are encountered on every hand, but his story as a separate people now is a subject of history and a record of the past.

PEARL FISHING IN THE RED SEA

BY HENRI DE MONFREID

T IRED of trading in leathers and coffees in northeast Africa and feeling the urge of the sea, I built myself a 10-ton boat rigged with a lateen sail and went off to fish for pearls.

Mine was a light-draft Arab craft that could skim across the reefs at high tide. Four Somali sailors made up my crew. I planned to pick up Sudanese pearl divers after a trial run to the Arabian coast.

The first land I sighted after leaving Djibouti in French Somaliland was the islands of Moucha, characteristic of the coral isles of the Red Sea and Gulf of Aden. Silence and mystery brooded over the lush green landscape where big brown crabs, fat sea slugs, and white egrets provide the only touch of life.

I returned to the boat in full moonlight. From the flat expanse of an island, its white beaches shining in the moonlight, arose the hoarse cries of sand crickets coming to life at night. Little waves died gently on the beach at long intervals like the breath of all sleeping things.

While the stars passed slowly above my head, I thought of the unknown where I was going to venture.

"IT WAS TIME TO GO"

The tide rose slowly; the moon at its zenith revealed the coral with surprising clearness. It was time to go.

First with a boat hook to clear the reef, and then with a brisk south wind, we made the blacker waters of the open sea.

At daybreak the yellow mountain spur of the Ras Bir showed up to port. We skirted the Dancalia coast, taking advantage of the offshore breeze. Then the monsoon rose and we ran for the mouth of the Red Sea, the Strait of Bab el Mandeb (map, p. 600).

Toward nine o'clock the British island of Perim stood out like an enormous sea monster guarding the strait and dividing it into two passages. The smaller, on the Arabian side, is practicable only for fishing boats and the *zarugs*, or light, swift Arab sailing craft, of tobacco smugglers (pages 609, 612, 625). I decided on this narrower one because it was the shortest route to the northern shore.

I had been warned that this passage was dangerous because of strong and treacherous currents, but I felt that the force of the fol-

lowing wind should carry us safely through. I was a little anxious, though, when I remembered that Bab el Mandeb means "Gate of Tears."

Waves, driven up from India by the monsoon, broke against high black cliffs in steaming torrents of spray. It was too late to change course. Any loss of speed in this angry sea would make these almost vertical waves doubly terrible, as they would then overwhelm us from the stern.

A STORMY PASSAGE THROUGH THE
"GATE OF TEARS"

Better to risk our all! If the rigging held we were saved. We tore through the tumultuous sea only a few cable lengths from the fury of the waves breaking against the rocks of the shore.

Suddenly, Abdi, crouching down in the bow, shouted something I did not hear, and pointed in the line of our course.

I saw that the sea was covered with what appeared to be liquid cones rising suddenly and disappearing again. Waves whipped with spray rushed in a circle. Here the great swirl and eddy made by the current, which was held back by the wind's force, became a veritable whirlpool.

As I tried to steer toward a zone of comparative calm, the mainsail was brought down by the violence of the wind. Ahmed threw himself on the clew line to prevent the sail from bringing the boat by the lee, which would have instantly capsized us.

The whirlpool caught us and a wave, rushing over the stern, swept away the sail.

A sharp cry rose above the tumult and a dark figure washed past in the foam. Ahmed had been carried away by the furious sea!

I threw out lines which drifted astern, but I could think only of steering to keep behind us the mountainous waves. Abdi succeeded in hoisting a piece of sailcloth that served as a storm jib and enabled us to make headway.

But we were ready to sink. The boat was half full of water. One more sea and we should go to the bottom.

I turned around. There was Ahmed clinging to the dragging ropes. We pulled him on board like a fish on a line. Without a word he got a pail and set about helping to bail out the boat.



Photograph by Henri de Monheid

POSED LIKE A GROUP OF BRONZE FIGURES, ZARANIK PIRATES MAKE SAIL
OFF GHULAIPIQA.

The turbulence and raiding instincts of these powerful, warlike Zaraniks add hazards to caravan trading across their lands on the Arabian coast. The tribe musters about 10,000 fighting men.

In these few seconds the dangerous zone where the current, wind, and waves all seemed to meet was crossed. The sea calmed. We were saved.

At the height of the storm I had vowed to my sailors that I would embrace Islam if Allah saved us. The miracle accomplished, I took the name Abd el Hai, "Slave of the Life-Giving." *

With our rigging repaired we sailed the length of the Arabian coast. We passed clusters of palm trees and carpets of clear green that are the little fields of durra, a grain sorghum.

Sometimes white zarugs were seen, drawn up on the shore at the little Zaranik Arab villages spread out along

* See "Sailing Forbidden Coasts," by Ida Treat, in THE NATIONAL GEOGRAPHIC MAGAZINE, September, 1931.

the coast between Dabab and Hodeida.

These Arabs ordinarily live by catching and drying fish, but some are more or less pirates at times. Tobacco smuggling is one of their many resources, but the most lucrative is the carrying of slaves from the African to the Asiatic shore.

Though strictly forbidden by the nations having interests in this part of the world, and sharply curtailed in recent years, this ancient traffic still is carried on clandestinely, on a small scale.

ON THE ROAD TO SLAVERY

The slave runners set out to fish on the African coast at a point prearranged with the *nagadi*, or head of the slave convoy. Their zarugs demasted and hauled up on the beach, they go peacefully fishing, drying their catch and living in an improvised



Photograph from Henri de Monfreid

THE AUTHOR SCANS THE SMUGGLER-INFESTED RED SEA FROM THE DECK OF HIS PEARL-FISHING BOAT

Weary of humdrum trade at Djibouti, this adventurous Frenchman, Henri de Monfreid, built an Arab boat and went fishing for pearls. During a storm he vowed to his Somali sailors that if Allah saved his craft he would embrace Islam. He survived and took a name meaning "Slave of the Life-Giving."

shelter made of a sail stretched over spars.

When the slave caravan coming from the interior nears its destination, it is halted in the mountains five or six hours' march away, and a man is sent ahead to spy out the situation on the shore. The caravan starts off again toward nightfall to reach the sea about nine o'clock.

That day the "peaceful fisherfolk" bring out barrels of water they have hidden in the sand, for the slaves will be thirsty, and they float their boat. At sundown, from a rise in the ground, they study the sea and the surrounding country; if no patrol is in sight the night is propitious.

They then light a big fire as if to prepare a meal. Another fire replies somewhere in the mountains.

Shortly afterward, a silent troop emerges from the night—the slaves accompanied by a few guards. Others have gone off in two groups along the coast to warn against surprise by an unexpected patrol.

STRANGERS SHOT ON SIGHT

Any stranger who might come up at this moment would be shot on sight with no chance to defend himself, for these men, color of the ground, stretched out in the undergrowth at night, are invisible.

In a few minutes the slaves, generally numbering about 25 or 30, are put on board and heaped in the bottom of the zarug with a sail stretched over them (pages 609 and 625). The south wind, which nearly always blows a gale, makes the light boat



Drawn by Albert H. Bunstead

TINY PEARL-FISHING ISLANDS, LIKE PEARLS THEMSELVES, DECK THE NECK OF THE RED SEA

Among these islets far from the steamer lanes scurry fleet Arab craft with rakish sails and piratical-looking crews. Some are peaceful fishermen seeking pearl-bearing oysters, sea slugs, sea snails, and turtles. A few are pirates, pearl thieves, smugglers of slaves. Setting sail from Djibouti, with a crew of Somalis, the author was nearly wrecked in the Strait of Bab el Mandeb, the Arab "Gate of Tears." Wandering then among the Red Sea islands, the Dahalachs and the Farasans especially, he saw, as few whites see, the hard lot of the men who fish for pearls.

leap forward with all the crew to windward clinging to the stays to balance the pull of the sail.

At this speed the Red Sea, scarcely 15 miles wide at one point, is crossed in less than two hours. What patrol boat could hope to stop and examine this fleet little craft, soon lost in the night on a tossing sea?

Many slaves taken to the interior of Arabia do not remember having seen the sea, so swift is the nocturnal crossing.

Early one morning we sighted an overturned boat, only the keel of which stood out of the water. A naked man, a negro, flat on his stomach, clung to it. He looked exhausted.

Abdi and Salah dived into the sea with a rope and secured the helpless man under the arms. We hoisted him aboard with some difficulty, for he was heavy. He was already advanced in years, but still in the fullness of his powers. He did not resemble any

of the tribes of those coasts.

He ate the food we offered him like a man famished, and then fell into a dead slumber. Toward evening he awakened. He had regained his strength and felt more at ease among us.

After dinner we were all seated on the quarter-deck on one of those nights when the very sea appears to sleep. Then the stranger spoke as if he had to unburden himself of all the memories that oppressed him.

THE ODYSSEY OF A SLAVE

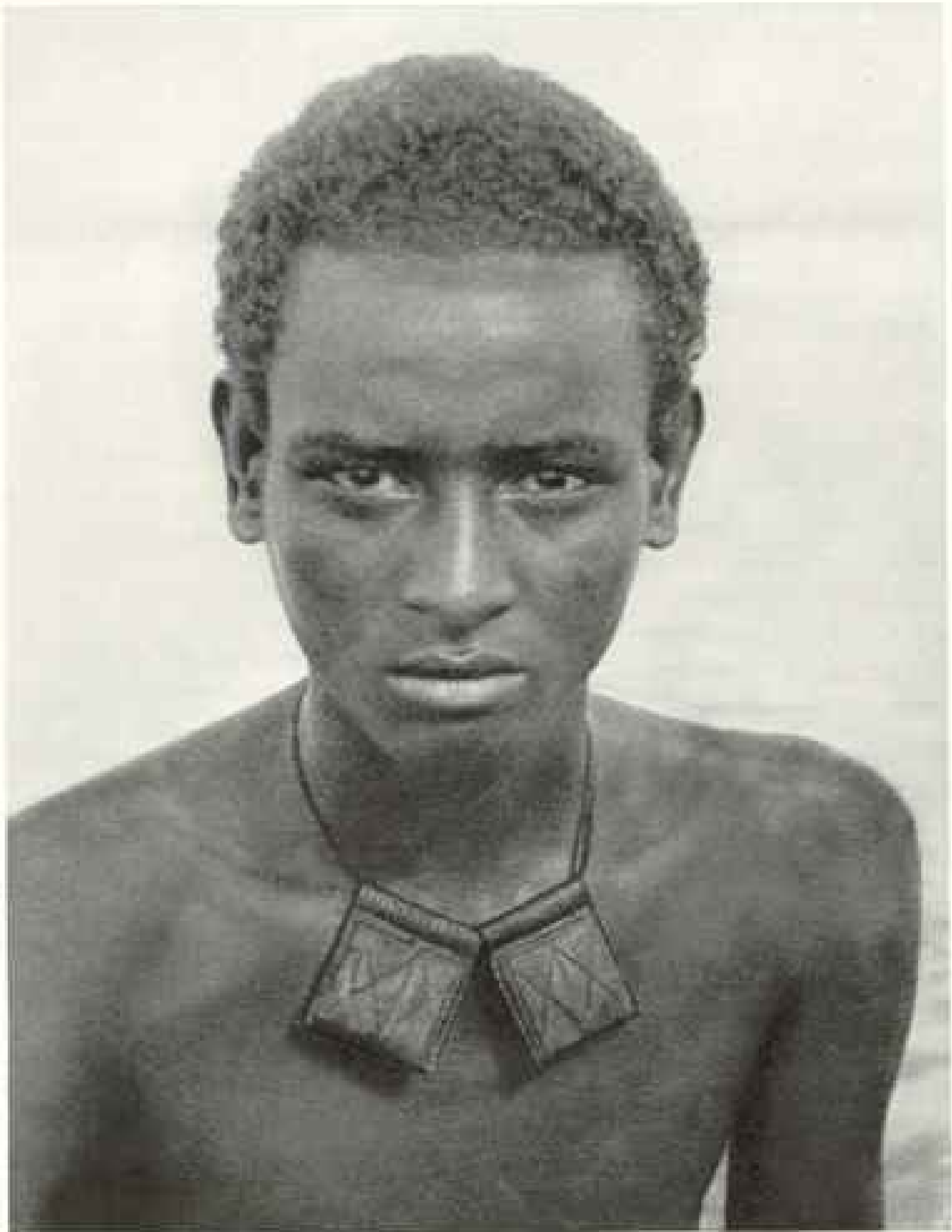
He was an Abyssinian (Ethiopian), he said, of the Galla tribe, originally from one of those distant provinces that border upon the country of the Somalis and the Wallamos. He was named Gabre.

Through that hot night in the Red Sea we listened until morning to the tragic Odyssey of a child, then of a man, on the long, long road to slavery.

Gabre had been a slave in Arabia since the age of 10, and he had gained the confidence of his master. He was a diver on board a pearl fisher. One day he helped eight Galla slaves escape in a zarug which he found anchored.

Pursued, they were captured and thrown in a heap at the bottom of the boat that was to return them to Arabia.

Now let Gabre tell his own story:



Photograph by Henri de Moufroid

THIS DANKALI HAILS FROM THE HOT LOWLANDS WHICH FACE THE RED SEA NORTHWEST OF DJIBOUTI

On one of the little volcanic Sowahih Islands near the Strait of Bab el Mandeb the author found a naked, emaciated Dankali turtle fisherman, marooned without water. Nearly dead from thirst, he had fought death for ten days by chewing raw crabs (page 626).

"I thought of throwing myself into the sea at the mercy of the night; with my arms tied I should have quickly drowned. While I was screwing up my courage to make an end of it all, I saw two white lights in the offing; a steamer was bearing down on us.

"A sudden glare blinded me. Then the night closed round us again and we were lost by the beam of light that was sweeping sky and sea. It was an Italian patrol boat from the base at Assab. The crew of our boat seemed very scared.

"A second time the beam of light caught us and hovered for a few seconds. The crew lay flat on the deck and the finger of light left us, returned again, and finally fixed us in its white glare. We had been seen!

"Feverishly a sailcloth, very heavy and thick like leather, was stretched over our heads and tied around the planking with heavy ropes.

DROWNING THE HUMAN EVIDENCE

"I trembled, for I understood what was about to happen. They were going to sink us with the boat to do away with the evidence which would have doomed them to penal servitude.

"My companions could not understand what was going on. I told the one next to me to gnaw at the cord which bound my hands. Would there be time?

"I heard the noise of canoes being launched, then heavy blows shook the hull of the boat. Very soon water mounted around our legs, flowing ominously along our dark hold.

"We could not stand upright because of the sail stretched over our heads. The water mounted steadily. Men shrieked, knocking their fellows down and drowning each other. Of course the one who had begun to gnaw my bonds now thought only of himself.

"Suddenly I felt the boat rock. My old diving habits made me instinctively fill my lungs with air, and at once the black water cut short the agonized clamor of the poor wretches around me.

"In my desperate effort to escape suffocation, my bonds, now weakened and wet, broke. My head bumped against the overturned hull and I found myself in an air pocket.

"I did not dare to move any more for fear of losing that bubble of air which held the last moments of my life. My head touched the wood; the water came up to my chin. Suddenly, I felt the bodies pressing around me moved aside, and I was able to kick them down; my prison was opening. The mast, wrenched out of its socket, had ripped the sail as it floated up to the surface.

"I dived at once and came up in free air at the side of the hull. In the distance I saw the lights of the coast patrol boat which had pursued us. Twice the blinding beams of the searchlight caught me, but at

that distance my black body was such a little thing that nobody saw me.

"The ship stood on her course, and soon her lights disappeared in the night.

"Two days passed and I was going to give up and die when God ordained that I should be on your course."

Arrived at Assab, near the southern end of the Red Sea on the African coast, I tried to hire Sudanese pearl divers in the native cafes which they frequent.

Cafes line the street, each with its special clientele—Danakil from the bush; Arabs wearing as hats the little traditional baskets of straw; Sudanese and old-time slaves listening to the tamboura player, the last echo of their homeland.

The tamboura is a sort of primitive lute. The natives carry this instrument with them wherever fate may cast them.

In the depths of Arabia, beyond the mountains of the Yemen, in the death-dealing desert, on the boats which come up the Persian Gulf or wander among the archipelagoes of the Red Sea—everywhere the same recitative draws from five catgut strings the same strange tones, always the same for thousands of years.

Their chants are a sort of prayer that these men with the faces of brutes and souls of little children cry to the pagan gods of their native country.

Many knew me, having seen me at Djibouti or at sea. But they had little confidence in my knowledge of pearl fishing.

SHARE-DIVING FOR PEARLS

I had hired men by the month, which, as I now saw, was absurd. I learned that pearl-fishing boats belong to men who rarely sail themselves. Instead, the owner has a *nakhoda* (or *nakhuda*) and a *serinj*; that is to say, a skipper and an agent. I decided to be my own *nakhoda* and *serinj*.

Divers team up in twos and threes, each team providing its own pirogue, or open dugout canoe (pages 604, 605). In general a boat of ten tons will take up to six canoes, which makes about 15 men, plus two or three boys to bake durra bread and do the other cooking.

The owner of the boat advances the food for the expedition, which consists of durra and rice, sometimes with oil or butter; nor does he forget leaf tobacco for chewing. This is very important, for a boat without tobacco is virtually disabled, all the crew being demoralized.



Photograph by Maynard Owen Williams

TODAY ITALIAN VESSELS CROWD MASSAWA DOCKS AS IL DUCE STRIVES TO SPEED UP
ETHIOPIA'S TRADE, INDUSTRY, AND FARMING

Until the Italians took Ethiopia, trade at this Eritrean port centered mostly in the import of silks and cotton goods and the export of hides, cotton, coffee, and civet. Now large quantities of gasoline, machinery, medical supplies, and factory goods are brought in here.



Photograph by Henri de Moufflet

FROM THE AUTHOR'S VESSEL HIS DUSKY MEN LAUNCH A DUGOUT CANOE TO GO DIVING FOR PEARLS

Three expert divers put off in this tiny craft, with a glass-windowed box through which they search the sea bottom for possible pearl-bearing oysters. In such a boat the author found a fisherman who had died of thirst, his tambour, or lutelike musical instrument, beside him (page 608).

The owner then gives each of the teams a little money for the subsistence of their families pending the return. This is the debt which binds the unfortunate diver and puts him at the mercy of the master.

All the teams work on a communal basis, and at the end of the expedition a division is made. First, the owner is repaid his advances; then the returns are divided thus: one-third for the boat, two shares for the *nakhoda*, one share for the *serinj*, and finally a small percentage for each man.

SELLING THE CATCH

But before apportioning the profits, the results of the trip must be sold. For the boat that fishes the *bilbil* only the pearls are worth anything, because the shells are valueless. Those who fish the *sadaf* sell the mother of pearl as well.

The packet of pearls from the communal fishing is tied up in the traditional red cloth, and the *nakhoda*, the *serinj*, and a representative of the divers set off to sell them to the brokers and buyers.

For the region where we were working

this was a pilgrimage which began at Mas-saua, on to the great Saïd Ali, of whom I shall speak, at Dahalach; then to Maida, Qizan, and finally to Aden.

What usually happens is that the *nakhoda* and the *serinj* get together and then intimidate the divers' representative so that he agrees to report a price equal at most to half the real value of the pearls.

They then return to the boat where the crew is awaiting the upshot of their negotiations. There is much lamenting the ridiculously low prices and hard times; but it is urgent to repay the advances of the owner, for during the absence of the negotiators he has had to give more money to the womenfolk.

Finally the *serinj* gives the divers a receipt for their debts, adding as a favor a few thaler.

Thus they swing the deal and once again those who have brought treasures from the depths of the sea at the peril of their lives are as much out of luck as before. If they want to eat they must get back to work at once.



Photograph by Ida Treat

SOMALI PEARL DIVERS LOCATE OYSTERS BY LOOKING DOWN THROUGH A GLASS-BOTTOMED BOX

Each day in a prayer the divers take oath that they have stolen no pearls from the master who hires them. If a giant clam clamps its jaws on a diver's hand or foot, a companion dives with a knife, slices the bivalve's ligaments loose from the coral, and frees the drowning diver (page 608).

But as an attack provokes its defense, the divers sometimes try to divert the spoils in their own direction.

One thing, however, serves to make this fairly rare—the superstition of these simple men, who dread the punishment of heaven because of the prayer they make each day before the opening of the oysters is begun.

This prayer, the *Fatha*, implies an oath that nobody has hidden what God has given him during the day. The guilty usually put a bad face on it which does not escape the experienced eye of the old serinj. Thus, thieves are quite rare. The promoters of the expedition, on the other hand, do not suffer from the same superstitious distress.

THE THRILL OF OPENING AN OYSTER

The fishing is done from the dugout canoes, each occupied by three men, sometimes two. They set out in the morning, weather permitting, and return to the boat at night with the result of the day's labor.

When all have come back the oysters are opened in front of everybody. It is like a game of chance, and a veritable frenzy

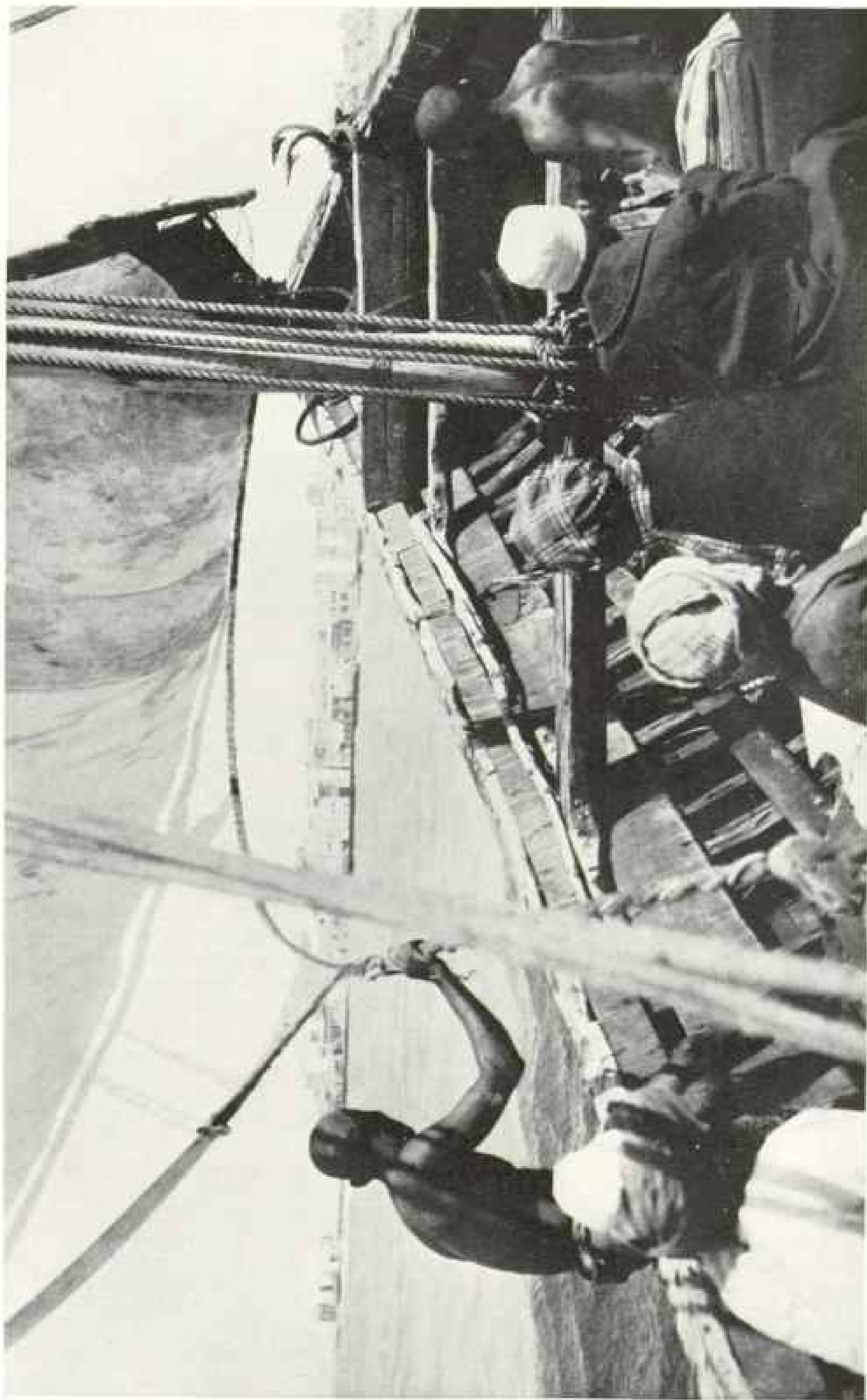
keeps the Sudanese at their work, much as the gambling passion holds players around the baccarat table.

What emotion as each oyster is opened! What is going to come out? The man who opens the bivalves squashes in his hands the mollusk containing the calcareous cysts which are the precious pearls.

What joy when a lustrous stone is taken from the slimy mass! Each man then pretends he recognizes the oyster as one he fished, and there are violent discussions solely to show that one is favored with luck, for everything is on a communal basis.

It requires a good deal of conscience for a man alone on a distant reef to resist the temptation of opening part of the catch in the canoe for his own account. This type of fraud is severely punished.

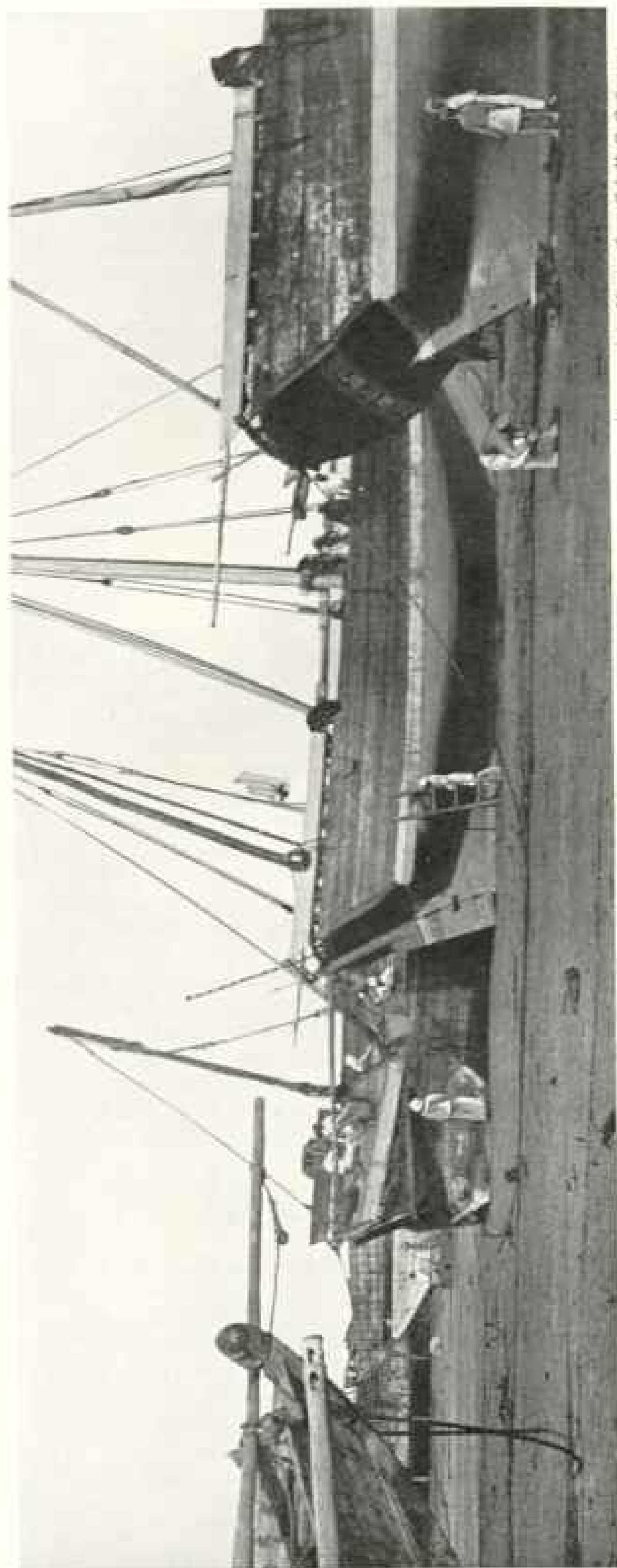
A diver who is convicted is banned forever, and never again finds anybody who will hire him for work on a pearl fisher. He then becomes one of those solitary figures along the shore who live on all kinds of fish and take their chances in their little canoes.



Photograph by K. S. Twissell

SINCE STEAMERS TO HOUEIDA MUST ANCHOR FAR OFFSHORE, LIGHTERS HANDLE FREIGHT AND PASSENGERS

This Arabian Red Sea coast town is the center of Yemen's maritime trade. Dates and coffee are exported heavily to Aden, Suez, and Massaua. Houeida's inhabitants of many races and tongues number about 35,000. Arabs like jewelry; the sailor on the gunwale wears a bracelet.



Photograph by Nepton from Col. H. G. C. Swain

DHOWS WITH SQUARE STERNS BUILT AT CHINESE ORIGIN; CATHAY JUNKS CAME TO OMAN WATERS CENTURIES AGO



Photograph by K. S. Tschickel

GRACEFUL ARAB DHOWS; BEING BUILT AT HODEIDA, RESEMBLE THE CRAFT USED BY ANCIENT PHOENICIANS

Pairing up, they go off to far-away reefs, paddling their frail boats for several days to get to good fishing grounds. Frequently they disappear, blown over by a sudden squall; or, in the course of a dive off a distant island, one may be snapped up by a shark.

The survivor cannot now, alone, cross the distance that separates him from his starting point, for one paddle is not enough for such a journey. So he dies.

I once found a drifting boat which the presence of flocks of scavengers had indicated a long way off. A body beside an empty water tank told of death from thirst, and the inseparable tamboura on which, perhaps, the dying man had for the last time evoked his native forest, was bobbing up and down in the brine in the bottom of the canoe.

When two of these men team up, the one in the rear paddles slowly; the other, his head in a sort of box with a window which he puts on the water, inspects the ocean bed (page 605). He sees an oyster and dives, leaving the box floating. This the man behind takes in his turn. He watches the movements of his companion to help him in case of danger.

Armed with a lancelike iron pole about ten feet long, he is ready to strike at any aggressor, be it shark or other carnivorous fish.

THE MENACE OF GIANT CLAMS

Sometimes a diver is caught by a giant clam. These huge shellfish are so close together in some places that they touch each other. They are half open to get water filled with plankton, and the sun lights up their internal mantles, which seem phosphorescent, throwing out green, yellow, red, or violet hues.

If a foot or a hand is accidentally thrust into the opening the two valves close like a vise, strongly enough almost to crush the bone. The other fisherman must then dive with a big knife to cut the ligament by which the enormous bivalve is clamped onto a rock.

It is easy to understand the solidarity of interest between these two men when each holds his life at the mercy of the other.

An old nakhoda advised me to go to Massaua where I should more easily find teams of divers. There I met Schouchana, a buyer for a big pearl king. He was a jovial, frank, and friendly person, and soon

became a good friend. He invited me to be present at a pearl buying. I accepted with alacrity.

The next day I found him at home wearing a long shirt and Turkish slippers. Always jolly, he served me a sumptuous lunch with fruit he had bought at exorbitant prices. In this his prodigality knew no limit, but immediately afterward, in his business dealings, he stood up for his interests with disconcerting keenness.

While we talked a native entered. He was a broker; he brought sellers. They were an old Arab—the nakhoda, no doubt—and two other members of the crew.

THE DRAMA OF BARGAINING

First, tea was served. The talk was about everything except pearls. After a while, Schouchana put the question as if the exact words must not be used:

"You have something?"

Without replying the old Arab took out of his girdle the usual red cloth that covered a parcel as big as an egg. With a rapt expression, he held it in one hand while the circle of onlookers drew suddenly closer.

There, in that little blood-colored cloth, was the year's labor of perhaps fifty poor devils; many others may have lost their lives or contracted incurable illnesses.

I feel the unconscious emotion that strikes these men silent as they give their little treasure into the hands of the foreigner, who is about to speak.

Schouchana, with the indifference of a man bored by his job, opens the small bag, regards its contents for a moment with an imperceptible pout, wonders whether he should close it or examine the pearls more closely. With consummate art he prolongs the uncertainty to the point where the broker exclaims:

"But look! There are some magnificent pearls. Bilbil from the depths of the ocean."

"Oh, you! You would bring me goat dung and still tell me it is marvelous."

With that pleasantry, he spreads the pearls on his green cloth and sorts them out with a silver spatula. The three pairs of eyes never leave the cloth and the hands of my friend. The lifeblood of those men might have been on that table. I was fascinated by the magnificent luster of this variety of pearls.

But the cynical selection begins. First, the round ones, then the seed pearls, and



Photograph by Henri de Montfreid

SUDDEN RED SEA SQUALLS CAPSIZE MANY A "ZARUG," DESPITE QUICK, SKILLFUL WORK

Slats covering this craft hint that it may be carrying slaves, chained prone in its bottom. Since zarugs are also used in fishing, official patrol boats cannot tell from a distance which ones may hold contraband.

lastly the irregularly shaped ones are separated.

With one operation of the sieve the *duga* is disposed of. This is the dust of little pearls from which orientals make kohl to treat the eyes and blacken the eyelids.

Came the weighing, and calculations to which I was being initiated. Then, his mind made up, Schouchana shoots the question:

"How much?"

"Twenty thousand rupees," replies the *nakhoda* (about 2,000 pounds sterling).

"Hundred pounds," says Schouchana impassively.

The argument is on, with the difference between 2,000 and 100 separating the demand and the offer!

A BROKER'S FINGER LANGUAGE

At the end of two hours, hardly any progress has been made. The *nakhoda* has come down to 1,500 pounds, and Schouchana has climbed up to 300. But there is still hope. For then the broker inter-

venes. He drops his unfolded turban on the hand of the seller, and a sort of dumb dialogue goes on between the two hands hidden under the cloth. Here is the key to it:

By taking hold of one finger is meant: 1-10-100-1,000, etc.; two fingers signify 2-20-200, and so on up to ten.

It is possible to express any round number in this manner; the actual values under discussion indicate whether hundreds, thousands, or tens of thousands are meant.

During this pantomime, the buyer breaks in and makes a counter offer by taking the fingers of the broker in his turn. That goes on for a half hour.

Then the broker, who now has a secret proposition to work on, starts a similar wordless discussion with the buyer.

At last, when he thinks he has found the acceptable figure, the buyer and seller are brought together. The broker takes the hand of the buyer and forces the seller to place his own in it.

"Say 'I sell.'"

At first the seller refuses, stands on cere-



© Hans Hehring

RAYS ARE COMMON AMONG THE MANY KINDS OF FISH, SOME POISONOUS; WHICH INHABIT THE WARM WATERS OF THE RED SEA

Flat and ugly-looking, this particular ray is being carried to the fish market in an Arab town. Literally shocking is one of the members of its family, the electric ray, which is able to impart a strong shock, either in defense or to kill prey. The tail of that living storage battery is short and stout, differing from the "whip tails" whose barbed spine carries poison and may inflict a dangerous wound.

mony, but finally he utters the binding word.

"Say 'I purchase.'"

The buyer, too, complies and the deal is concluded.

The broker then names the price he has arranged. Imprecations explode from both sides.

The seller:

"You have swindled me! You are a thief! God will punish you." Etc.

And the buyer:

"I'm ruined, and by an imbecile like you. May the commission you make take you to hell!" Etc.

Frequently the impassive broker is attacked. But that is the custom. All this is merely comedy; once the seller has gone the broker bursts into laughter, and, rubbing his hands, says to the buyer:

"I did him that time, the old skinflint. Say, you ought to pay me well."

A moment later the same broker will go to the cafe where the *nakhoda* awaits him. More laughter.

"You saw how I fooled that evil-looking one. He didn't want to pay more than 400 pounds (I tell you, between friends, that your lot wasn't worth any more); but I made him pay 600."

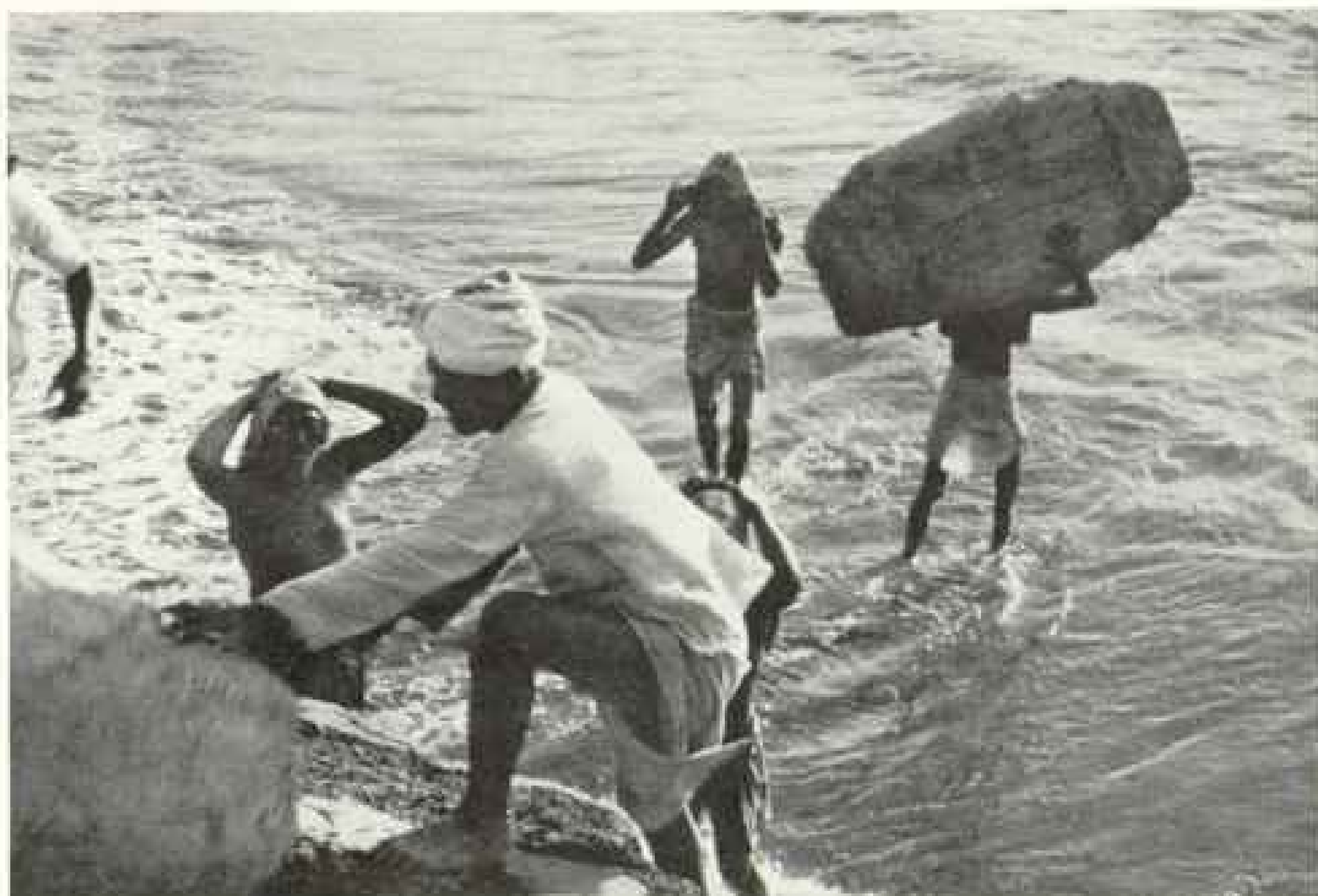
The thing is to make each party believe that he has tricked the other. The broker gets one percent of the value of the lot for his work. No transaction is possible without him. *Schouchana* has a regular broker. That is why he makes excellent deals.

LUSTROUS "TEARS OF THE NIGHT"

I began my fishing expedition in the *Dahalach Archipelago*.

On *Dahalach Grande*, the largest of the islands, I went to see a very rich Arab named Saïd Ali, who owned some of the most beautiful pearls in existence. I had the good fortune to be of service to him by treating him for an indisposition and in return he let me see his treasure as a mark of confidence.

He showed me some widemouthed, short-necked bottles like those used for preserves,



© Hans Hellmuth

LIGHTERMEN OF HODEIDA STAGGER THROUGH THE SURF WITH BALES OF EMPTY COFFEE BAGS.

True Mocha coffee is still produced in Yemen, Arabia. Coffee has been drunk in Arabia and Ethiopia since time immemorial. Though the Koran prohibits its use, its popularity in the Moslem world is as universal as tea in China.

full of clear water, and on the bottom, like marvelous gravel, layers of pearls several centimeters deep.

At his order an old eunuch took one of these bottles and placed it before him.

The man became transfigured; he seemed to radiate voluptuousness as he plunged his hand into the neck of the bottle.

He drew out a handful of brilliant, perfectly shaped pearls of different sizes, each with the same orient, and spread them out on a dull-colored cloth where they gleamed like beautiful little moons.

"Why do you put them in water?"

"That water is rain water, absolutely pure—water that has never touched the earth—just as it springs from the union of the sun and the white clouds. Pearls, you know, are drops of dew that fall from heaven on moonlight nights and carry in their depths a little of the soft and wonderful light of that star that numbers our days.

"The sadafs of pearly luster catch these precious tears of the night in their silky mantles and in the mystery of the sea they

take the shape of pearls—daughters of the sky water and the moon."

The old man spoke as in a dream.

"When the pearls come out of the sea," he resumed, "they are impregnated with salt water, which turns their pure luster slightly green. In the water of heaven they become purified, for they are her daughters."

Schouchana had pointed out to me this peculiarity, which it is well to remember. A newly found pearl which appears white becomes reddish after a few months. If its base is greenish it will turn absolutely white. Time will do it, anyway; the use of distilled water is an old tradition.

WHY RAIN "GROWS PEARLS"

"Since you wish to go pearl fishing, don't forget what I have just told you, and always go to places where there are abundant rains at the season when the moon is at the full."

The old Arab spoke the truth. Pearls abound in rainy years. The reason for this is not in the poetic origin of lunar pearls,



Photograph by Henri de Montreuil

KNOWN AS A "ZARUG," THIS RED SEA CRAFT IS MUCH USED BY ARAB
TOBACCO SMUGGLERS

Light and swift, the boat of ancient type is cleverly handled by experienced Red Sea sailors. When hard pressed by a customs patrol, the zarug is easily hauled on the beach, demasted, and its smuggling crew quickly turned into innocent-looking fishermen.

but in the abundance of a variety of ray, or skate, which seeks muddy water. This fish excretes a microscopic parasite which lodges in the flesh of the oyster and may form a cyst—the pearl.

THE AFTERMATH OF A RAID

After staying a few weeks in the Dahanach Islands, I decided to go to the archipelago of Farasan, near the Arabian coast, where the beds are less worked over.

As we neared the slightly hilly island of Harmil, we saw in one of its most elevated parts a man waving a long cloth on the end of a pole.

We approached the shore with a sandy bottom beneath us.

"Luff!"

By putting the tiller hard over, I avoided the remains of a wreck whose timbers were too near the surface; it had been a fairly large boat.

Once anchored, I saw the man who had been making signals hurrying down toward the sea. My divers knew him and showed

him great respect. He was a Sudanese nakhoda of Massana. The wreck we had just encountered was that of his boat which had sunk after taking fire that same morning.

But before going into details he led me to the shade of a half-vaulted rock, raised a covering of tattered cloth, and I saw the still form of a man, another Sudanese. He opened his eyes, seemed to look at us, and then closed them again to withdraw into a sort of savage loneliness.

The poor fellow was dying from a rifle wound in the lower part of the abdomen. I went to get a restorative, but when I returned the old nakhoda said simply:

"It's all over."

A BURIAL IN THE SAND

As the sun was sinking into the calm evening and the noisy gulls were wheeling round and round above us, in silence we covered the warm, dead body with sand still burning hot from the sunlight. Two stones set upright marked the spot, and the

immense peace of its solitude gave a poignant grandeur to this primitive tomb.

We returned on board. The nakhoda then told us of the drama which had taken place here a few hours before. To him it was banal enough, a mere incident that is one of the risks of the job, like being drowned or snapped up by a shark.

While his craft lay at anchor after a season's fishing a big Zaranik zarug came just before dawn and surprised them. They plundered everything, even taking the rigging of the boat, which they set on fire and sank at its moorings.

The nineteen Sudanese who made up the crew were carried off to be sold as slaves. The man now dead had been shot accidentally while trying to make use of the only gun on board. One of the attackers set it off in trying to snatch it out of his hands. As for the nakhoda, he escaped because he had slept on shore to go fishing with a dragnet at dawn.

When the zarug had gone, he found his companion fainting on the beach. He had been thrown into the sea for dead, but had had strength enough to drag himself to the shore and hide behind a rock.

OFF ON A PIRATE CHASE!

I was outraged by this raid and my first thought was to give chase to the pirates; I had six guns on board and, in addition, a few dynamite caps which I used for fishing.

But the nakhoda was resigned; he would rely on Allah, who had permitted this thing, to give him whatever retribution was just.

However, my Somalis were eager to do something. The old hate of the African races for the invading Arabs awoke.

The nakhoda had seen the zarug scudding along toward the east and its sail had disappeared only a short while before. All the afternoon it had been becalmed.

At the most it could have reached Sarso, the only anchorage possible on the edge of the reef of the Farasan Bank. Moreover, the crew would suspect nothing, believing all the survivors to be aboard the zarug.

"What did you have on board?" I asked.

"A few sacks of sadafs, but in my box the pearls of our entire trip, and they are worth more than 10,000 rupees."

I discounted the exaggeration; nevertheless, the sudden raid had been very fruitful.

The breeze was holding and gave hope that it would last all night. We decided to attempt the adventure. If the bird was in

the nest we should surprise him in turn at the approaching dawn.

The decision was welcomed with cries of joy from all the Somalis. In ten minutes we were outside the island, the mainsail bellying. Night had come and I set the course by the compass toward the open sea. We had to cross the central part of the Red Sea—about 90 miles to make before dawn.

I certainly had no desire to see any of my men killed or wounded for an affair which, after all, was none of my business.

But, all said and done, I was certain we were running absolutely no risk if we surprised the zarug during the night. I knew enough of the natives' habits to foresee their reaction to the type of attack I had in store for them. I made a packet of three dynamite caps, one of which was primed and furnished with a fuse calculated to burn for 20 seconds.

This improvised torpedo was fastened to the end of a long boat hook. If everything went as I foresaw, this would suffice to avoid anything approaching a fight; but we had to get there in time.

The island was mountainous. We could see it in the night. It was 2 a. m. and all eyes were fixed on the horizon. Not even the cabin boy slept.

With the aid of a night glass I guided us closer and Ali pointed out to me an isolated black point in the sea to the south of the island. It was a zarug moored to the edge of the reef.

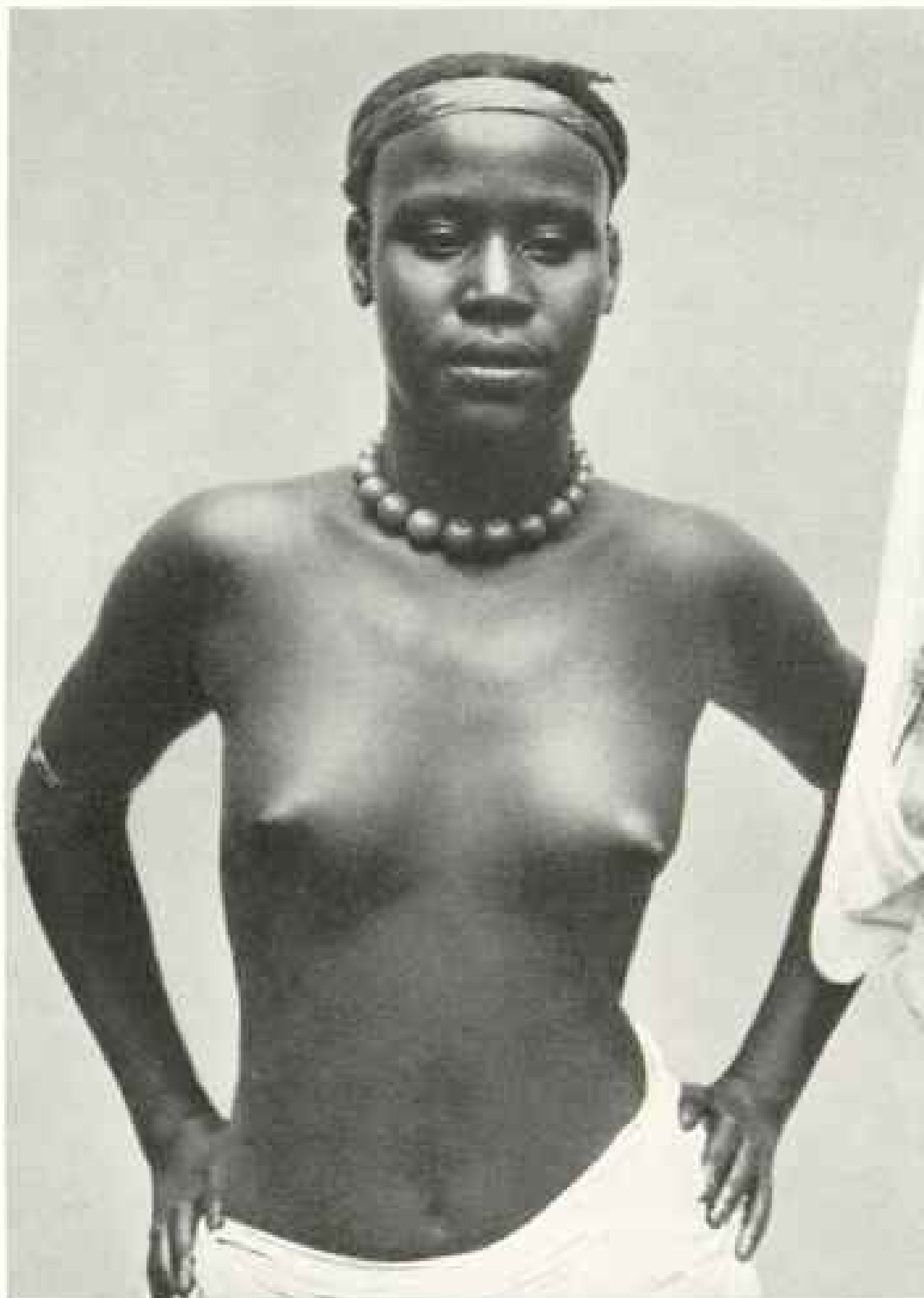
Our rifles were quickly loaded with five cartridges each. I had only 50 all told. Then the ax, a jumper bar, and a big iron hammer were put in battle order as if we were going to board.

I was in a state of nervous irritation caused by all these preparations. But the die had been cast; I could no longer retreat.

We were half a cable's length from the sleeping zarug when the old Sudanese recognized it. I put the helm up, and as the sail fell we drifted to within a few yards of our quarry.

Forms stretched out under the sails began to stir. I called the usual "Hooooo" as if we were an innocent boat coming there by accident, though this was a very unusual hour to drop anchor.

Meanwhile I had lighted the fuse with my cigarette. The little light from the jet of flame passed unobserved and the black fuse smoked on ominously in the dark.



Photograph by Henri de Monfreid

THIS SUDANESE SLAVE GIRL BELONGS TO A RICH ARAB
MERCHANT OF MOCHA

Treaties among Christian nations to suppress the slave trade are without effect on human behavior in remote nooks of the Moslem world. When a traveler visits a sheik and admires a slave, his host—true to desert hospitality—may make him a present of his human chattel!

I plunged the long boat hook into the sea as if about to anchor, but held the bomb under the vital parts of the boat. I carefully counted the seconds up to ten. Then I cried to the nakhoda, who was ready:

"Call your men."

All together we shouted to the men in the zarug to jump into the sea if they could.

The Zaraniks awoke; the breech of a rifle clicked; I continued to count—18, 19. . . .

Then a greenish flame spurted from the center of their boat as the dynamite exploded.

I had held the explosive under the mast, where there are usually no sleepers. The mast crashed down, and a few seconds later stones rained on all sides—the pebble ballast had been blown sky-high. By a miracle nobody was knocked senseless.

A SEA OF WRITHING
MEN

The zarug sank in a few seconds and men floundered in the water. There were wild shouts. The Sudanese swam heavily by their arms, as they were chained two and two by the legs. The Zaraniks fled toward the island in small boats. The panic was complete.

I lighted a big torch of gasoline, which illuminated the scene. The zarug had disappeared, but a multitude of objects floated on the placid water. The Zaraniks were paddling off in three boats, bailing out the water meanwhile. I fired in their direction while my Somalis gave chase.

With the men who remained on board I hauled in the Sudanese and with considerable difficulty removed their heavy iron shackles.

Day was breaking and soon we could see through the transparent water the hull of the sunken zarug, the bow resting on a big rock and the stern hanging in the deep-blue water.

One of the rescued Sudanese, a Hercules with rather thin legs, took one end of a rope and dived. I saw him climb over the wreck,

feeling each object, his arms stretched out, the soles of his feet pointing to the surface.

With a supple movement of his back he turned up again and came straight to the surface, blowing streams of bubbles through his nose as he rose. He had made fast the rope and told us to haul on it.

A box came up; we pulled it aboard. It was the coffer of the Zaranik nakhoda, ornamented with inlaid copper figures (page 620). I opened it by forcing the padlock.

The Sudanese swore the pearls were inside. But we searched the contents in vain. There were silk garments, the dyes of which had run; and a thousand other things, soaked with sea water, that had been wrapped in paper. In a silk handkerchief were 50 thaler, two pounds sterling in gold, and some Turkish money. I deciphered the name engraved on the inside of the lid—Mohammed Omar—the name of the nakhoda, the prisoners told me.

So the nakhoda must have the pearls on his person! But there was still hope because two boats were chasing them.

A NOVICE DIVES DEEP

The water was so clear that I felt like diving in myself to see if the boat could really be refloated.

A Sudanese dived at my side and we went straight down. I had never been lower than 18 or 19 feet, and I felt a violent pain in my ears because my eardrum had not been perforated.



Photograph by Ida Treast

BOLD AND SELF-RELIANT AS THE HAWK-EYED AFRICAN SAILOR IS, HE FEARS AN EVIL SPIRIT

When a pearl diver gets "possessed of the devil," friends cast out the demon with frenzied chanting, clapping, and stamping, at the climax of which they feed the "patient" red-hot coals! The author saw one crunch them between his teeth apparently with no harmful effect (page 622).

Suddenly I heard a sound like a pistol shot and it seemed as if all the sea had come into my head. But the pain stopped; the eardrum was perforated.

With my companion, who dragged me ruthlessly toward the bottom without worrying about the capacity of my lungs, I spied the enormous hole, more than a yard long, in the keel. I had seen enough and I gave a vigorous kick to rise again. The ascent seemed interminable. The surface shone like silver.

I kept thinking I was going to emerge.



Photograph by Ida Treat

RED SEA FISHERMEN SWIM WHERE SHARKS AND POISONOUS FISH ABOUND

Small poison fish live in holes in rocks and blend in color with seaweed. Wading in such shallows, hunting snails and sea slugs, fishermen sing and beat the water to frighten away the enemy.

I wanted to fill my lungs; but always water, water, water.

Air at last—and it was time! I do not know whether I could have held on for two seconds longer.

The crew applauded my feat; I did not say with what effort I managed it. I adopted a nonchalant air as if I were in the habit of doing it much better than that.

We brought up four Mauser cavalry carbines, all loaded, and also the old Gras rifle that had killed the sailor left at Harmil. The used cartridge was still inside.

Sounds of firing came from behind the island and soon our two boats hove in sight. With a glass I could see two Arabs in each, surrounded by my men; they were bringing back prisoners.

BANDITS BALK AT NUDITY

The nakhoda was there with three others. Two were absolutely naked and immediately demanded a loincloth; the feeling for modesty is very strong with the Arabs.

The nakhoda was a man of 35, his face brown with the tan of the sea; a short beard that covered his entire face gave him a noble air which would have im-

pressed me had he not been my prisoner.

He carried a string of black beads and seemed scarcely interested in the events which had brought him before me in my simple boat. He wore at his waist the sheath of the dagger my men must have taken from him when they captured him.

The other three were young, between 20 and 30. In the morning's ducking they had lost the little baskets which usually serve them as headgear. Their long, curly hair fell on magnificent bronzed shoulders, and a bracelet of silver encircled their arms just above the elbow.

As he came on board the nakhoda said a salaam from habit, as if he had come to visit, and it would have needed but little to make him shake hands all round. Nonchalance comes very naturally to the Arabs because of their fatalism.

Yesterday these men had been put in irons by him; today it was the other way around. Such is luck. So whatever may be the circumstances, they maintain a sort of quietude that would become a disinterested spectator. Moreover, they don't feel at all guilty. That feeling simply does not exist. They win or lose.



Photograph by Hans Hellfritz

LIKE A VIKING PROW THE KEEL OF A NEW DHOW CURLS UPWARD

On the hot, dry shore of rocky Aden these boatbuilders work. Made entirely of wood, many dhows are put together without nails or screws, only wooden pins and palm rope being used. Such craft, with hard, well-seasoned timbers, may last for generations.

Rapidly my Somalis told me that two other boatloads had gone out to sea. They had frightened this one into stopping by rifle shots.

I ordered the four prisoners put into the irons I had recently opened. They suffered this with the indifference they would have shown a shoe merchant. There were a few protestations, but only because Abdi made one of the rings too tight around the nakhoda's foot.

"Be quiet, Mohammed Omar, and keep your complaints for the knot which in a few minutes will squeeze your neck."

"As Allah wills. But how do you know me?"

I did not reply, wishing to create an air of mystery. The prospect of hanging seemed to ruffle the affected serenity of the bandits.

I say bandits, but that is incorrect. They were Zaraniks—Arab sea rovers. To seize a boat, for example, is for them something less cruel than hunting; a boat can always defend itself, but an animal cannot. At Djibouti many of them live honestly according to the rules of society.

In any case, I did not intend to carry things so far. I was trying to create a psychology of fear so that I might learn where the pearls were.

THE MYSTERY OF THE BOX

While we were deliberating, I saw the nakhoda examining the coffer we had fished up with an attention and persistence that were not warranted by such a simple box.

I gave the order to remove his irons and to bring him to me.

"You know what awaits you according to the law of the sea?"

"Allah is mighty and let what is done be done according to his will! If you wish to kill me I cannot go against you. However, I wish to point out that I have killed nobody."

"And he whom you threw into the sea at Harmil; is he living?"

"Allah alone knows."

"And I, also, since I buried him."

He shrugged his shoulders and kept silent.

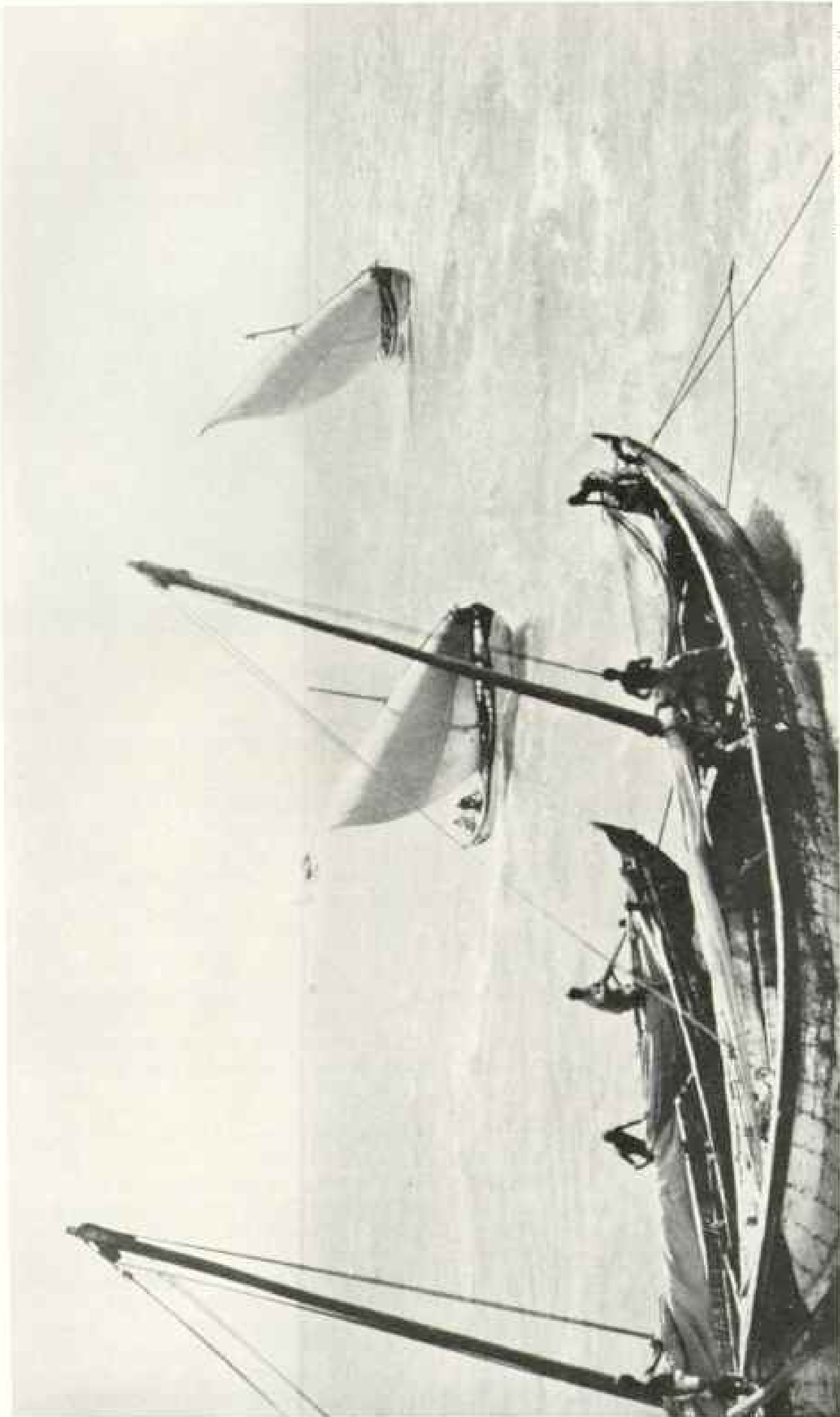
"However, I know you even if you don't know me, and all your tribe shall know that you are dead, hanged like a thief, and



Photograph by Ewing Galloway

AFRICAN SLAVES USED TO BE SOLD INTO ARABIA THROUGH MUSCAT, HOT, HISTORIC CAPITAL OF OMAN, ON THE ARABIAN SEA

The slave trade has been outlawed for years, but persists clandestinely on a small scale. In the old days of power and glory, Portugal built forts here, still seen on the hills. Arabs say hell lies under this bay and keeps it hot.



Photograph by K. S. Twiss

RED SEA DHOWS RACE IN TO ANCHOR IN HOBEIDA'S SHALLOW ROADSTEAD

Small but seaworthy are these Arab-built boats. They cruise the eastern seas from Madagascar to the Persian coast, and even some distance up the Tigris and Euphrates.



Photograph by Henri de Montfreid

SALVAGED FROM THE WRECK OF A RED SEA PIRATE CRAFT WAS THIS ORNATE
TREASURE CHEST

When the author's crew had sunk the pearl thieves' boat and searched the wreck, they recovered this copper-inlaid coffer. In a secret hole, bored the length of one of the mountings and cleverly sealed with wax, they found a sack of pearls (page 615).

that your severed head was thrown to the sharks. For you don't think I am going to give you a sepulture—you who toss wounded men into the sea. Your soul of a dog shall wander until the day of fire."

"As Allah wills."

"However, I give you a way to save yourself, and to save those who are with you if you give the pearls to this man."

"I don't have them."

"I'm not asking that. I want to know where they are."

"I don't have them, I tell you. Search me."

And he tore his clothes apart.

"No good making fun of me. I know you don't have them on you; but I also know where they are. I only made believe to all these men who want your death"—I added in a low voice—"that you told me where they were so as to be able to save you."

In saying this I looked by turns at the copper-inlaid coffer and at his shifty eyes. The interest he had shown in the coffer suggested the idea of a hiding place, and I

dropped the hint without being too sure of anything. But I was on the right track.

After a long silence, with lowered head, he spoke in a subdued voice, like a man who surrenders:

"Bring my box; they are there."

HIDDEN TREASURE REVEALED

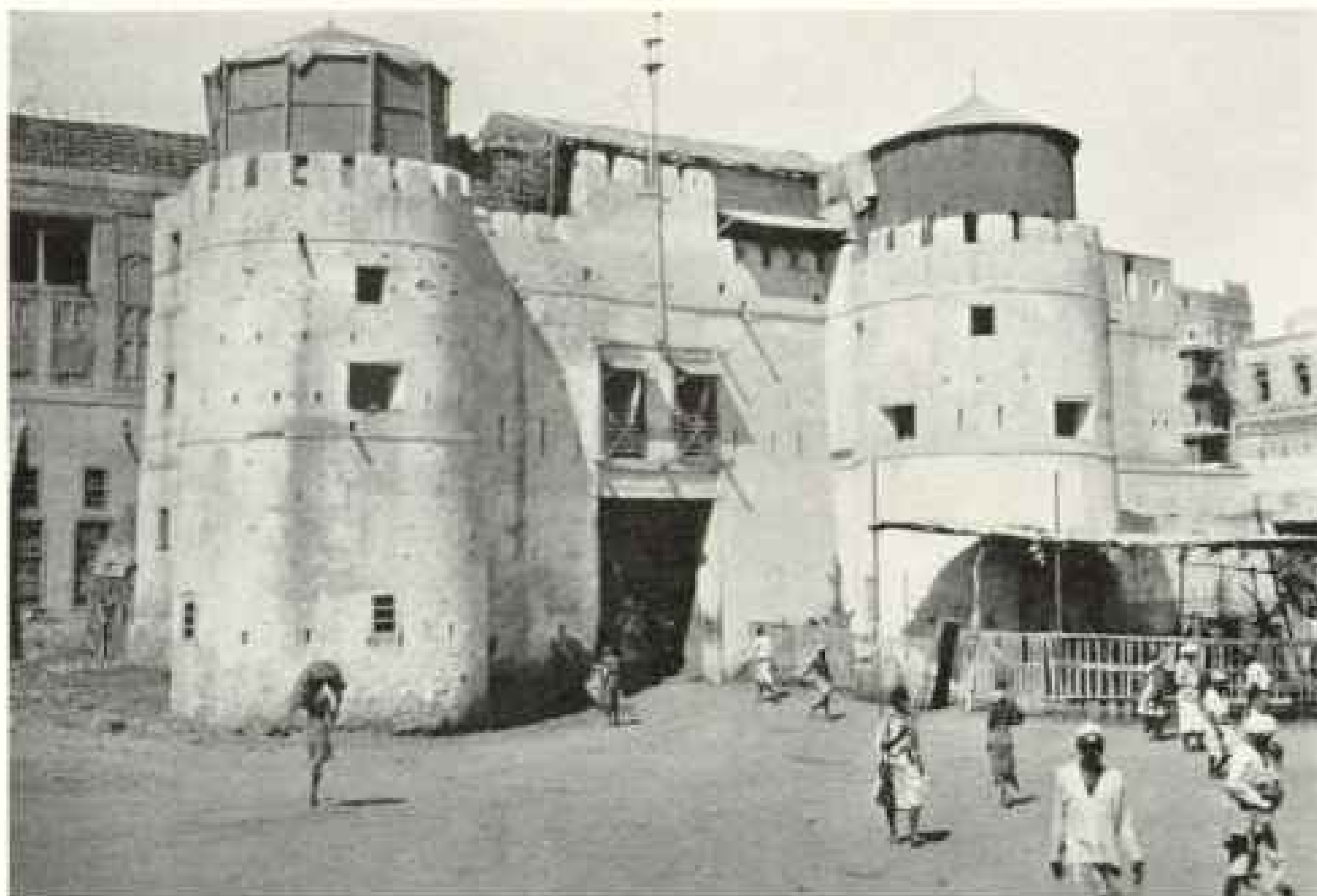
A hole had been bored the entire length of one of the mountings that formed the base of the coffer, and closed with wax. From this he drew a little bag; I gave it to the Sudanese, who opened it.

"But some are missing!" he exclaimed.

"What do you expect?" replied Mohammed Omar. "I had to put some in another packet I entrusted to the serinj, so that nobody knew of the existence of these. One must be careful, and I have experience."

"All right," I said. "I believe you." And, turning to the Sudanese, I added, "As for you, thank heaven you have recovered the most beautiful pearls, for the serinj must have the worst."

I ordered the three Arabs set at liberty,



Photograph by K. S. Twitchell

LIKE A SET FOR A HOLLYWOOD CRUSADER SCENE ARE HODEIDA'S ANCIENT TOWERS.

Hoary walls still stand in the old section of this Arabian city on the Red Sea (pages 606-7, 611, and 619). Arabs say, "Never build a gate so low that a camel driver carrying a spear cannot pass through." Yet this one, leading to the market place, is reserved for people on foot,

as it was mealtime; they joined the sailors to eat the traditional bowl of rice as if nothing extraordinary had happened. But what was I going to do with them now?

A PARLEY AT SEA

While I was thinking, two boats appeared on the horizon, coming toward us. It was the rest of the Zaranik crew.

I called to them to stay at a distance; one was sufficient to explain.

It was very simple. They had thought that at sea, without water or food, death was certain. It was better to try to arrange things, for in the Orient everything is arranged. They threw themselves on our mercy, lamenting their lost boat.

There was a chorus of supplications. The devil had deceived them in leading them to the island of Harmil. Moreover, they had only wanted water, and it was because of the rifle shot fired by the Sudanese that the fight began. Etc.

In the story of the hunter it was the rabbit who began it!

"Where is the serinj?" I asked at once.

"We don't know. He must have been

drowned when the boat blew up, for nobody has seen him since. You killed him with your powder."

I thought at once of the prudence of the nakhoda, who knew how to steer clear of the terrible danger which covetousness can become at a time when it is impossible to enforce authority.

This packet of pearls given to the serinj had singled him out as the holder of all the treasure, and without doubt he had paid for that honor with his life. The nakhoda's look crossed mine as if to exchange the same thought.

I did not want all these men to come aboard, for in such big numbers they were dangerous, although unarmed.

I had them searched, and on the third we found the packet of pearls which had cost the serinj his life.

I made out I did not know its origins; I was not there to render justice. I was above all in a hurry to get away from the whole band of them and I did not want to keep them on board. We were already twenty too many and I should never have enough water or food for more.

I had four empty kerosene tins filled with water, to which I added a big packet of dates, and, abandoning all the Zaranik crew to its lucky star in two pirogues, I advised them to make for the steamer routes and be picked up by a philanthropically minded captain.

Some time later I met the former pirate nakhoda, this time on a peaceful merchant boat. He told me that a Norwegian cargo ship bound for Aden had picked them up. Making themselves out to be real castaways, they had been cared for by the English authorities.

We returned to Harmil with the dugouts of the Sudanese, which we had recovered, to resume our pearl fishing. The poor fellows did not know how to thank me and offered all they had to give, their labor.

My boat was soon filthy from the enormous quantities of bilbils we opened every day. In the cramped quarters aboard, mingled odors assailed the nostrils with almost overpowering effect.

AFTER-EFFECTS OF DIVING

Mohammed Mussa, who had long sailed with the pearl fishers, told me that divers who go down to depths of 50 to 60 feet with a stone contract a bladder weakness before they have reached thirty. Three of my new recruits suffered from this affliction.

I ceased my recriminations in pity for these victims of their trade. This is another ill to add to the already long list they have to endure as they wrest from the sea those superb necklaces that will gleam luxuriously on the soft, perfumed skin of a woman's throat.

Each evening the Sudanese gathered in the bow, and very late into the night, in the damp and heavy sea air, the tamboura sang its melancholy song.

One evening the music changed its tone. I heard a rhythmical chanting accompanied by the clapping of hands and a sort of jazz on an empty oil tin.

The Sudanese were grouped in a circle, squatting on their heels around one of their number, a young fellow who was wagging his head to and fro and grunting at regular intervals. He seemed to see nothing and to be under the influence of this measured chanting, which acted like a hypnotic force. He was completely nude.

I asked what was going on.

"He is possessed of evil spirits. We are casting them out."

The cabin boy brought a few red-hot cinders on a sheet of tin plate which one of the Sudanese set before the one bewitched. The uproar increased; all heads drew so close as almost to touch him, and the tempo became more rapid.

EXORCISING EVIL SPIRITS BY CHEWING HOT CINDERS

Then the man greedily put some of the hot coals into his mouth and scrunched them with his teeth. The frantic creatures surrounding him beat a frenzied rhythm, stamping their feet as if to break the deck.

Five times I saw the "patient" chew up and swallow pieces of red cinder as big as a nut. Then he threw himself backward, curled up in his sleeping place, and ceased to move. They covered him with a cloth and he slept.

It was over; the evil spirits had gone. Silence fell on this mad scene. The next day no burns were visible, and he seemed to remember nothing.

This young Sudanese had for some days been giving signs of mental unbalance. One day in the open sea he jumped into the water. All these fellows have attacks of hysteria like this in different degrees. In a period of forty days I saw the ceremony of exorcism repeated three times on two other Sudanese.

SEA SNAILS FOR BUTTONS

To the north of the Farasan Bank are many fishers of those big sea snails called "trochus," the shell of which is used for making buttons.

Trochus fishers pass their lives in the stench of these large sea snails, which rot in the boat. A trochus boat can be smelled for more than six miles at sea (page 624).

Pearl divers do not mix with the trochus fishermen; their work is considered too crude and unskilled. They are generally the Danakil of the shore, very simple and primitive men, capable of doing the most repulsive work without the slightest disgust.

The men wade slowly along the reefs in water up to the waist and often to the armpits. Before them they push a water glass. Each time they see a snail they have to plunge the entire body into the water to seize it. The burning sun and wind dry the salt water on their bodies in a few seconds. That is why one sees them white with salt.

The reef is a complex world where an



Photograph by Henri de Montmid

"CURSES ON THE INFIDELS WHO TOLD OUR MASTER THIS INFERNAL MACHINE
COULD GUTRUN A CAMEL!"

This old military truck belonged to the Imam of Mocha. On the Arab coast near the south entrance to the Red Sea, Mocha, now almost a ghost town, was once famed as the port from which came quantities of Yemen's "Mocha coffee."

intense life engages in ceaseless struggle. Its surface is full of holes hidden like traps in the crumbly coral which gives way under naked feet and skins the legs. Venomous sea urchins are strewn along the bed with their slender spines spread like black stars.

POISON FISH BITES FATAL

Poisonous fish whose bites are often fatal are found in these warm waters. The most formidable are hidden in the holes of rocks and blend in with the seaweed. Others, immobile in the sunlit clearness of the water, flip their multicolored fins like the dainty feathers of some marvelous bird.

The fishermen sing and beat the water to put to flight these dangerous denizens of the coral forests.

When the tide is high all the men go back on board, their only refuge in these solitudes where no land is visible.

A sail stretched over spars serves them for a tent, and there, glad of a rest, these poor fellows listen to the monotonous song of the tamboura, indifferent to the sticky flies, to the burning heat rising from the

sea, and to the stench they are breathing. They sip an infusion of brackish *kecher*, a drink made of coffee bark and perfumed with ginger, which always tastes bad because of the stagnant water in the wooden barrels. But the peppery taste of ginger deceives their palates and empty stomachs.

They do each other the mutual service of rubbing with chewed tobacco the scurvy places on their skin which become burned with the salt. They all catch the pruriginous infection because of contact with a species of colorless jellyfish, invisible in the water, which produces a very painful skin irritation like that of stinging nettles.

Nearly all of them have spreading, obstinate ulcerations, a tropical affliction. Little by little they eat the flesh down to the bone. The fishermen apply sheet lead or brass to these painless wounds.

In spite of myself, I think back to life on the galleys when I see the conditions under which these men live. However, they are all gay, for they are there, they believe, of their own volition.



AT LOW TIDE NAKED MEN WADE RED SEA ISLAND MANGROVE SWAMPS HUNTING THE SEA SNAIL

Undernourished, bitten by flies, with their legs ulcerated from contact with sea urchins and poisonous fish, their hair and bodies odorous from daily handling of decayed snails, these toilers of the sea are unspeakably miserable in body; yet gay and blithe, because nobody has told them how unlucky they are! From the shell of the trochus, or sea snail, buttons are made (page 622).

A small, nameless island emerged in the center of this reef-strewn region, one of those "tables" of coral growth on which the sand has accumulated.

ISLAND POPULATION—TWO CHINESE

Nothing grows there, not a blade of grass, no scrub. But from April to September two Chinese lived there.

The divers had told me several times about these traders in sea slugs (*bêche-de-mer*, or *trepang*). Seeing their hut on a level with the water in the delightful rosy calm of very early morning, I was curious to observe at closer range these two Asiatics lost in this black country.

Nothing moved on the islet as I approached it with my pirogue except armies of hermit crabs fleeing in closely packed groups with a noise like castanets.

The hut was made of rushes or straw, and was much smaller than it appeared when seen from a distance, silhouetted against the sky. On the shore was an enormous cauldron on a brick fireplace, a heap of wood for burning, sacks piled up

under an old tank, and on the sand, drying in the sun, were many little objects all neatly aligned. These were sea slugs.

Naturally an odor of rotten fish exuded from everything. At our calls, grayish heaps began to move, and some bleary-eyed Somalis, heavy with sleep, came out from under the empty sacks.

While we were exchanging the traditional Somali good-day greeting, the rushes which covered the little door of the hut were raised and an ageless, yellow head cautiously emerged. A second later a smile formed on the worn, tired face, then the Chinese came toward us. He wore only a loincloth and his skin was tanned almost as dark as a native's.

After groping around in every language, much as a musician tunes his instrument, he finished by finding the right key and spoke to me in French before I had said a word that could have revealed my nationality.

With exquisite politeness, Mr. Ki at once bade me enter his humble lodging as if we had been on the threshold of a palace.



Photograph by Henri de Monfreid

IN SWIFT ZARUGS SLAVERS RUN CONTRABAND HUMAN CARGO FROM AFRICA
ACROSS THE RED SEA TO ARABIA

Such crossings can be made in one night. Slaves are bound, laid down, and covered with sail-cloth so as to be invisible to patrol boats. Food and water are hidden in African coast sands, at some lonely point, and picked up at the last minute. Vigilance of European nations has greatly reduced this furtive traffic in recent years.

His companion had just awakened; he seemed younger, probably his son or his servant. He greeted me with an inscrutable Chinese smile.

In a corner was an empty kerosene tin which served as a chapel for a little ebony Buddha. A tiny star of light from an opium lamp shone beneath, veiled by its brownish glass.

TEA WITH MR. KI

Mr. Ki sat on a mat and we drank tea—tea which he had brought from way back there for himself alone; a tea unknown to Europeans, the subtle aroma of which did not profane the sanctuary of the old Buddha standing in the gleam of the oil night light.

Mr. Ki told me that he had come there annually for several years. In September he returns to China with his cargo of sea slugs. About 20 boats fish for him on all the surrounding reefs.

To the fishers he sells matches by the dozen on condition that the empty boxes

be returned; incense, cigarettes in little packets of four, fishhooks, string, etc.

Fishing for sea slugs is done on the sandy bottom in depths of from ten to twelve feet with small boats and divers who inspect the sea bed with a water glass.

The sea slug is a fat, flabby, brownish worm as big as a child's wrist and six to eight inches long, or more. The Chinese believe it has aphrodisiac properties and eat large quantities of it.

Mr. Ki also buys sharks' fins from which is extracted, after cooking, a tough, stringy substance like vermicelli. This also is regarded as an aphrodisiac by the Chinese. If not more efficacious, it is at least much more expensive than sea slugs.

FISHERS OF TURTLES

The sight of the little volcanic islands of Sowabih (Iles des Frères), near the entrance of the Strait of Bab el Mandeb, made me curious to see them at closer range. They are visited infrequently by fishers of turtles, who go there with their pirogues and

live for months at a time on the bare rocks, battered by the sea and wind.

On rounding the point toward a sheltered beach on one of the islands, shaped like a horseshoe, I saw a man, almost nude, running toward us on the sand and waving his loincloth.

We found he was a Dankali from Obock, a turtle fisherman. His companion's boat, which should have brought him water and provisions, had not returned. He had been there for ten days, living on raw crabs and passing the time with his body immersed in order to retard the effects of thirst.

Raw crabs are a precious palliative against thirst, for the liquid they contain is much less salty than sea water. It can, therefore, be assimilated and thus retard the dehydration of the human organism which is death from thirst.

However, this poor fellow was emaciated. His prominent cheekbones, hollow eye sockets, and his joy made me think of a death's-head grin.

Once he was on board, we warned him against drinking water too greedily. But he himself knew and so controlled his thirst, drinking at first only one or two swallows. We made him some very hot tea.

He was named Yussuf, and was 25, but in his present state it was impossible to tell his age from his appearance. In his two months' fishing he had collected about 20 turtle shells.

NIGHT HUNT FOR TURTLES

Turtles lay their eggs when the moon is at the full and when the tides are at their highest. If the sand bears the slightest imprint they depart to find a safer retreat.

The fisherman is careful, therefore, to walk only where the sea will efface his tracks. For entire nights, immobile and silent in the shadow, he watches the tide climb slowly up the beach.

The moon rises on its carpet of stars. Its light fills the bay and the sand shines with a white luminosity between the rocks of black basalt.

Then a dark object, like a flat stone, emerges from a fringe of foam left on the wet sand. It is a turtle. Its little head is raised, inspecting; then it drags itself heavily forward and makes for the foot of a sandbank where it digs itself in and lays its eggs.

That lasts more than an hour. Then it covers them with sand and moves off toward

the ebbing sea. The fisherman jumps from his hiding place and in a flash turns the turtle on its back; now it is helpless.

The fishers also use the eggs for food, as the yolk hardens when properly dipped in boiling water and keeps indefinitely.

SCENTED RESIN A BURNT OFFERING

Yussuf went to find his little sack of turtle shells and I followed him toward the grotto which had sheltered him and his few possessions. Daylight penetrated feebly and it was a few minutes before one could distinguish objects.

The entrance was encumbered with a multitude of little rags, white or made white by the weather, hung on shoots of reeds stuck into hollows between the stones.

They were all tied in the same way and each contained a small piece of scented wood. They were offerings to his divinity. Further inside, little piles of cinders heaped on flat stones had served for burning scented resins.

All the fishermen who have come and gone on this island have left traces of secret devotion to their primitive religion. I found these old rites interesting, and was careful to disarrange none of the fisherman's little things, so humble and yet so grand, for they expressed all the weakness of man, his fears, and his awe in the face of Nature on this little lost island.

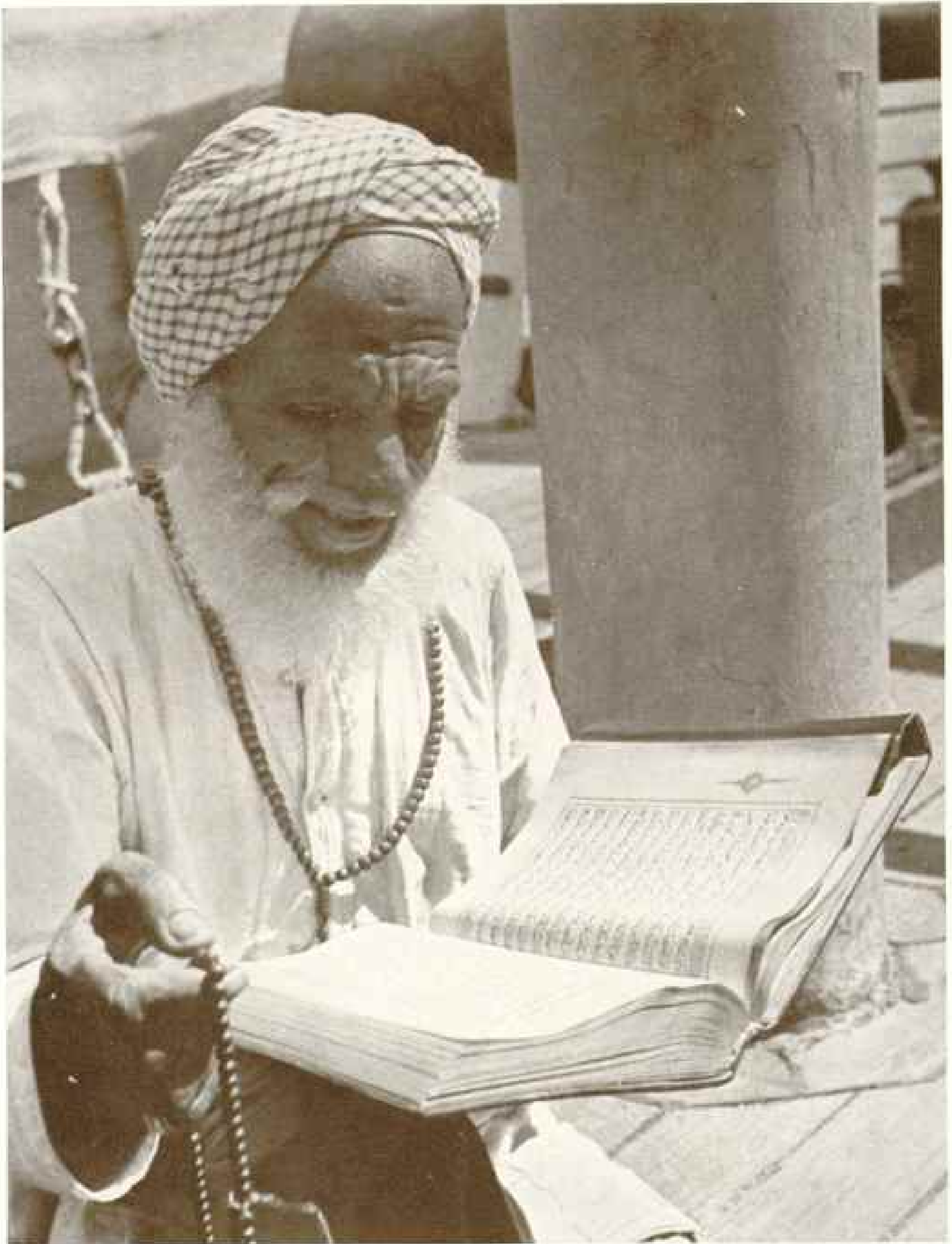
Having lived for many years among these primitive peoples, I have become incapable of resuming European life. During a long absence in Paris I wondered why an intense nostalgia made me always long for the sea, the desert, and the savage bush.

I believe I understood the reason on my return to the Red Sea at last. Among these simple men I found myself, so similar was the new generation to the one I had known years before.

I felt I had not aged, for their mentality was exactly the same as that of their fathers. I had the joy of rediscovering, deep in these simple beings, all that had ever drawn me to them, for everything was unchanged, like the sea and the desert.

There is a softness and sweetness in forgetting our troubled humanity in this forgotten corner where live ageless men as unchanging as the rocks.

Woe to him who will say to them that they must taste the fruits of our civilization, for they must remain what they are or disappear.



© Oscar Reizenstein from Black Star

MECCA BOUND, A PILGRIM SQUATS ON DECK STUDYING THE KORAN AND TELLING THE HEADS OF HIS ROSARY

From Yemen, in southwestern Arabia, this hale old sheik sails up the Red Sea toward Jidda, seaport of Mecca. Every free, able-bodied Mohammedan who can afford it must journey at least once to Islam's holy city, where Christians and other "unbelievers" are not welcome. From 25,000 to 150,000 devotees from all over the Moslem world take part in the pilgrimage during the last month of the Mohammedan lunar year. In 1938 it will begin in February.



NEARING THE GOAL, PILGRIMS SPEND HOURS AT THEIR DEVOTIONS.

This group prays in the shade of a tarpaulin; they secured a good place on the crowded deck at the start of the voyage. Many Moslems save for years to go to Mecca, and are sometimes several months on the way.



Photographs © Oscar Marcus from Black Star.

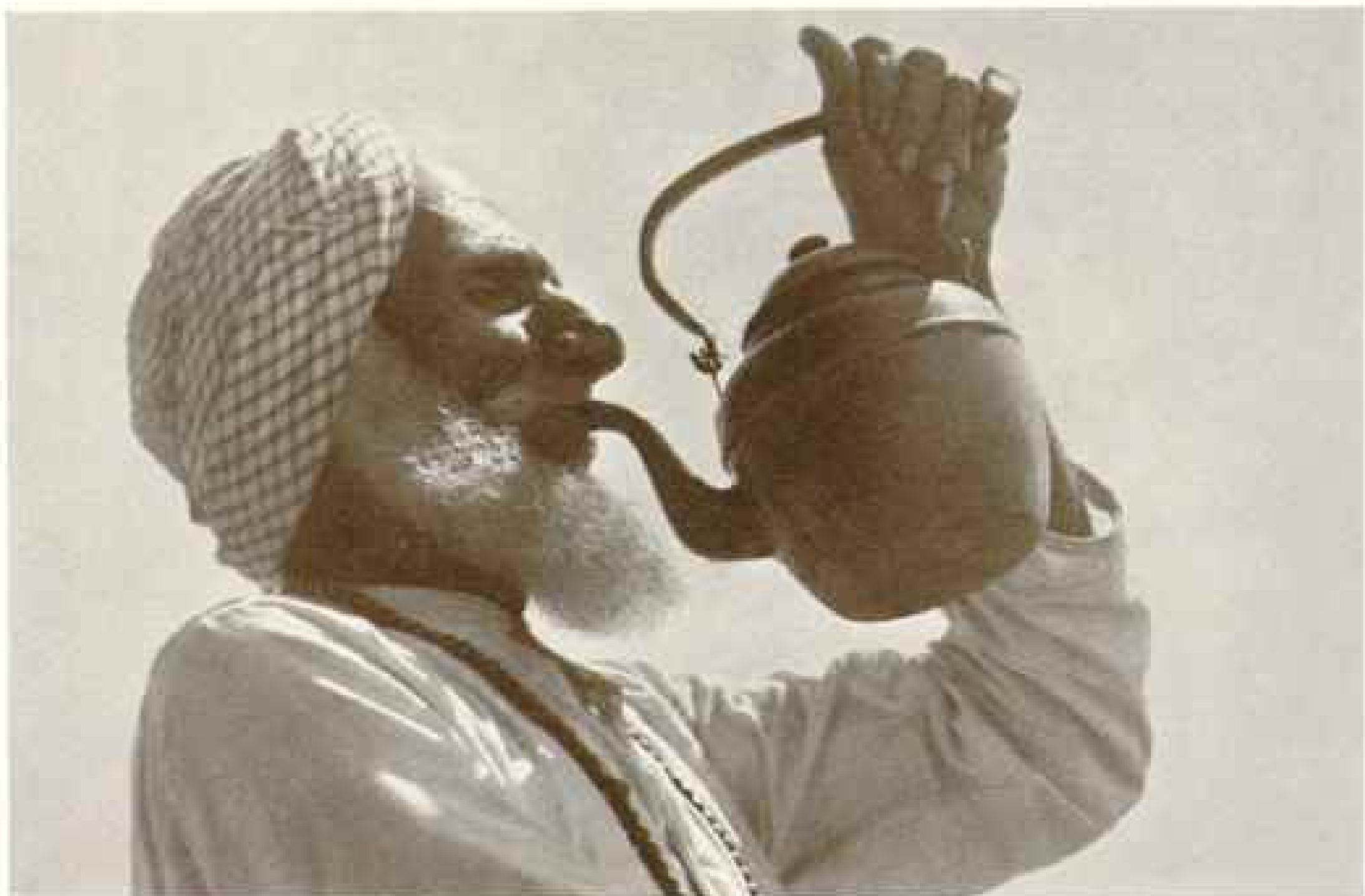
"TURN THEN THY FACE TOWARDS THE SACRED MOSQUE; WHEREVER YE BE, TURN YOUR FACES TOWARDS IT" (THE KORAN)

Even on shipboard, the faithful must kneel in the direction of Mecca when they pray.



"WHEN THE KORAN IS READ, THEN LISTEN THERETO AND KEEP SILENCE"

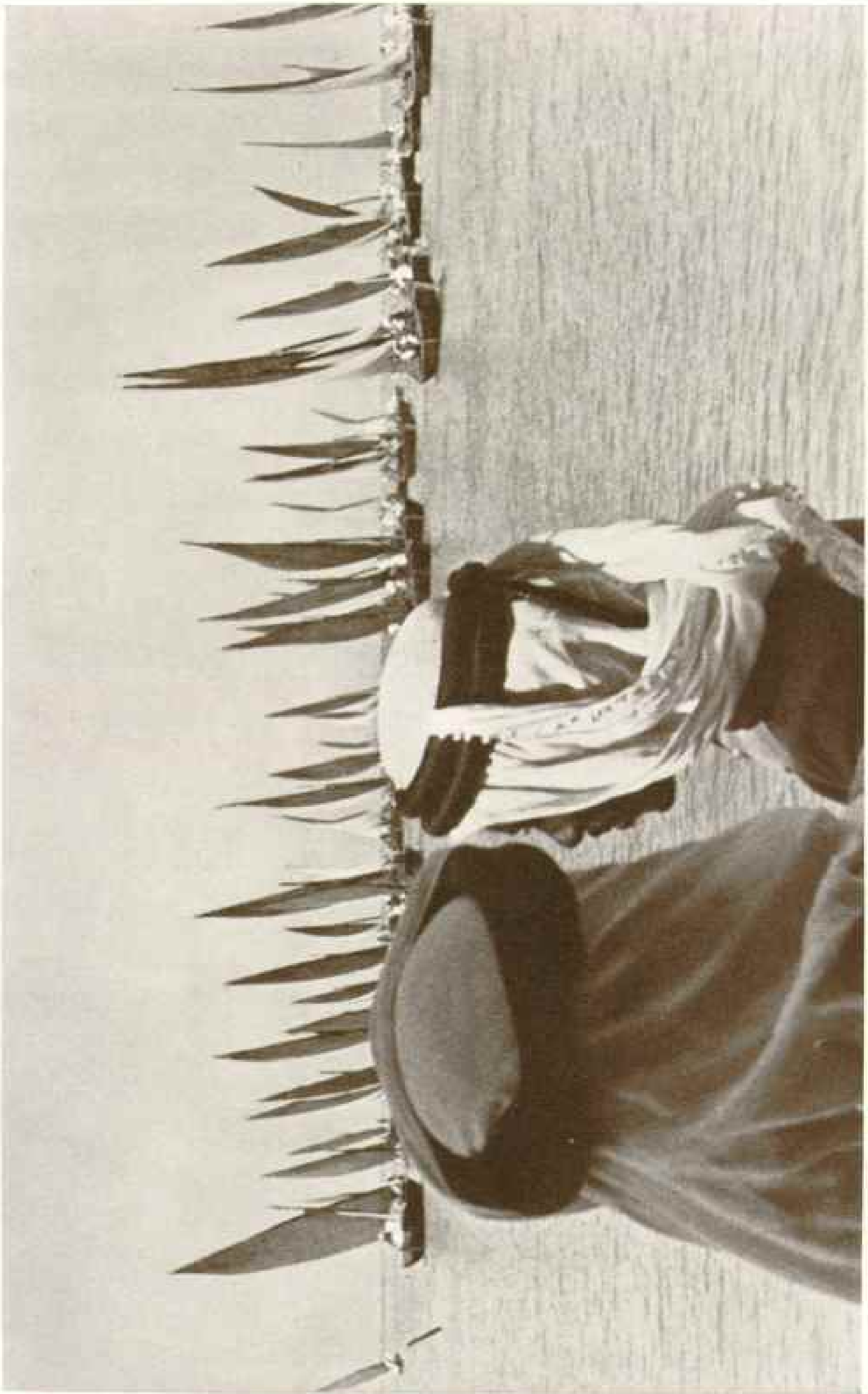
Thus may the bespectacled elder admonish his fellow passengers with an apt quotation from the sacred book, which he reads aloud in a sort of chant. The Koran is said to have been revealed to Mohammed 13 centuries ago.



Photographs © Oscar Marcus from Black Star

DISDAINING A CUP, THIS ARAB SHEIK SWIGS TEA FROM A POT HE CARRIES WITH HIM ON THE PILGRIMAGE

Ships to Jidda seldom supply Moslem food, so pilgrims take their own provisions, including live fowls.



© Oscar Reizenstein from Black Star

THE RACE IS ON!—FIRST BOAT TO REACH AN INCOMING LINER GETS THE BIGGEST LOAD OF PILGRIMS TO BRING ASHORE

Over indigo waters of Jidda's harbor, slim the lateen-rigged sambuks, or small arab dhows, each skipper hoping to pack in as many passengers as possible. More money is to be made at pilgrimage time than all the rest of the year. Pilgrims from Africa and southern Asia usually take the Red Sea route to Mecca. Those from Asia Minor travel overland, part way by railroad or bus and the rest of the way by camel caravan.



JIDDA'S CUSTOMS INSPECTOR SCANS BOATLOADS OF PILGRIMS

The white headress, held in place by the black band, protects him from the scorching sun. This official belongs to the government of King Ibn Saud, chief of the warlike and puritanical Wahabi sect, which captured Mecca in 1924 and now rules most of Arabia.



Photographs © Oscar Reppin from Black Star

A BOATMAN TALKS HIS PASSENGERS TO PREVENT FREE RIDES

Each pilgrim must pay him in gold, not silver or paper; and fares are sharply increased during the "rush season." Many aged wayfarers arrive with just money enough to reach Mecca and fulfill their religious duties before dying. Many of the pilgrims perish on the way.



"THAT'S MY FAMILY OVER THERE, MR. IMMIGRATION OFFICER"

Checking passports; the Arabians wear trim uniforms which contrast with the towellike pilgrim garb: a cloth around the waist and another over the back, exposing the right shoulder. Women must don a long sheet and a mask before entering Mecca.



Photographs © Oscar Maron from Black Star

THEY'VE LOST THEIR FAMILIES, BUT THEY AREN'T WORRYING

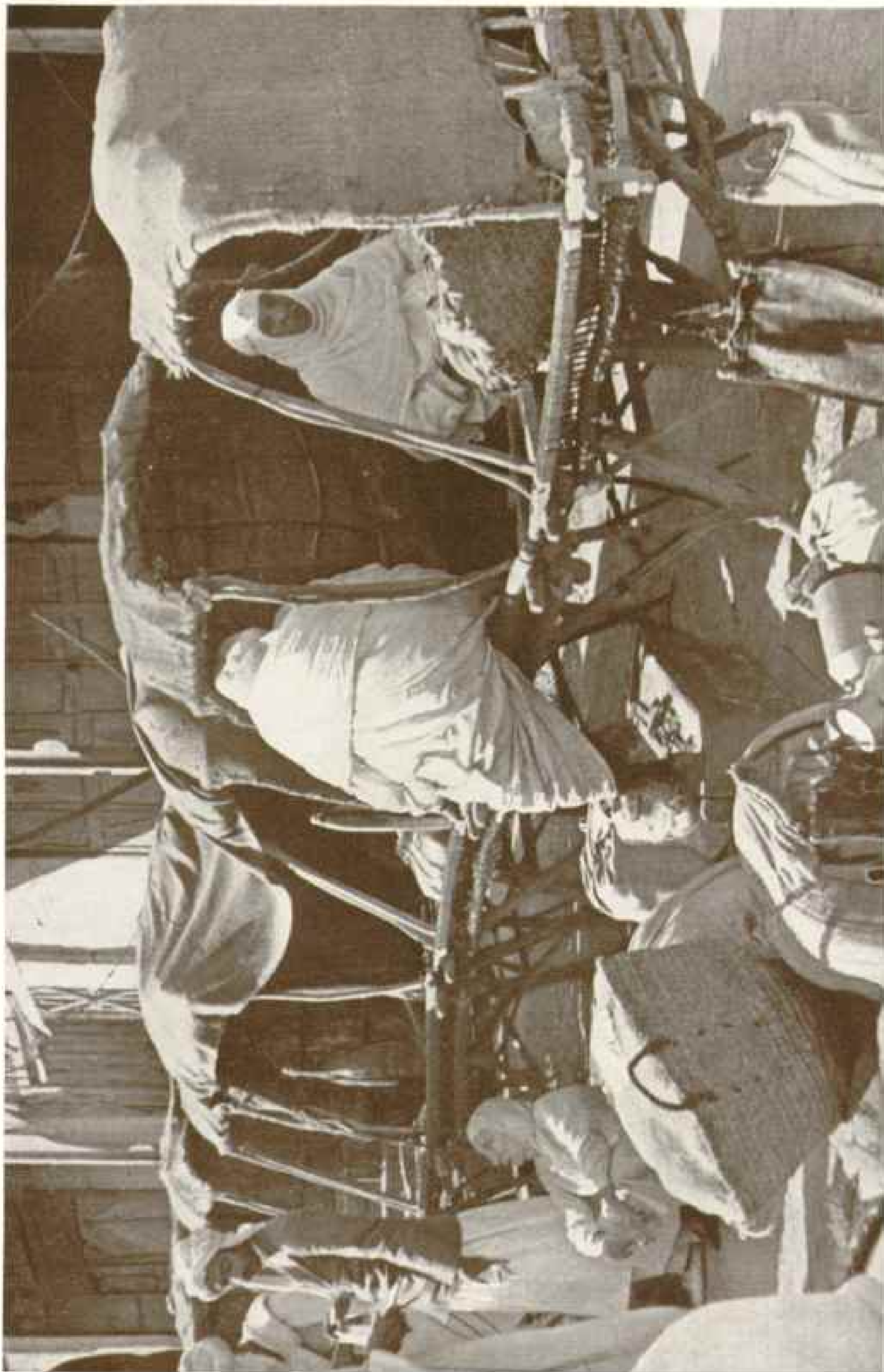
Allah will return the wives and children in His own good time. Meanwhile the fathers sit in the crowded Jidda street and "drink smoke" from a water pipe. On reaching Mecca, many pilgrims engage guides.



© Oscar Marcus from Black Star

LIKE PULLMAN SECTIONS, CAMEL FRAMES SERVE AS SEATS BY DAY AND BERTHS AT NIGHT

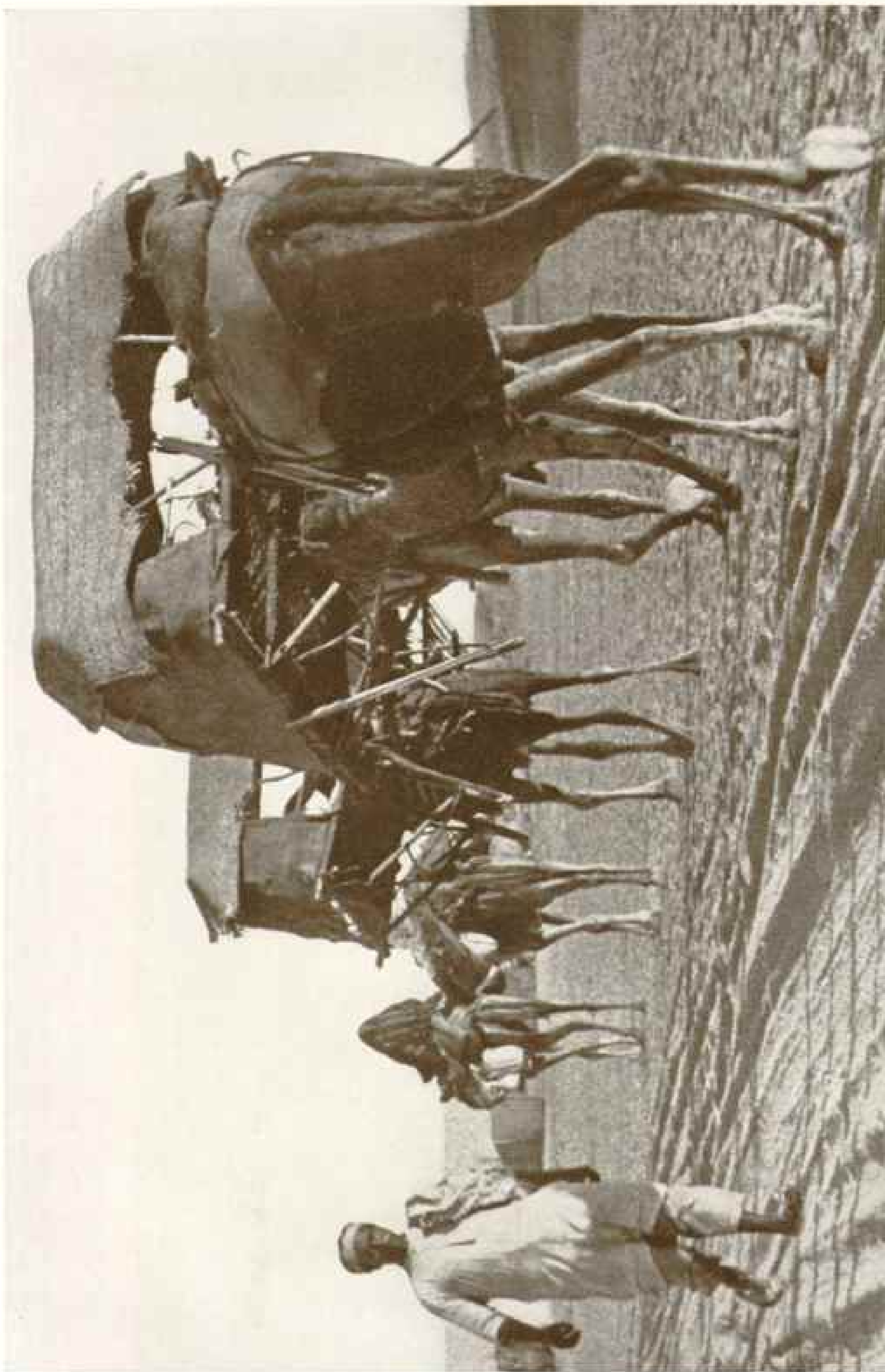
When the caravan halts, the short-legged "bedsteads" are removed from the animals' backs and placed on the ground for passengers to sleep in. A tentlike covering is usually laid on the framework over the top (page 634). Buses travel the 45 miles of desert between Jidda and Mecca in two hours. Fares are high, so many pilgrims prefer the 30-hour camel trip (page 635). Bedouin handits, who infested the route, have been suppressed by airplane patrols.



© Oscar Reisch from Black Star

INTO THEIR DESERT "FULLMANS" CLIMB SHEETED WOMEN TO AWAIT THE CAMEL TRAIN'S DEPARTURE.

Soon the hooded frames will be hoisted onto the animals' backs (opposite page). In a gale of wind, passengers and all may be blown off into the sand. Belongings ready to be loaded include water bags (right) and a modern suitcase (center). Poor travelers sometimes walk all the way to Mecca.



© Oscar Reizenstein from Black Sea

THEIR "UPPER DECKS" ROLLING WITH EACH STEP, SHIPS OF THE DESERT PLOD THROUGH WHITE SAND TOWARD THE HOLY CITY

Leaders of the caravan perch on saddles. "There is a regular language to camels," wrote Sir Richard Burton in his fascinating *Pilgrimage*. "'Ikh! Ikh!' makes them kneel; 'Yáhh! Yáhh!' urges them on; 'Hal! Hal!' induces caution." The Arabian beast, or dromedary, has one hump; Bactrian camels, of Asia, have two.



VEILED FROM HEAD TO ANKLE IN YELLOW SILK, AN AGED PRINCESS ARRIVES AT JIDDA

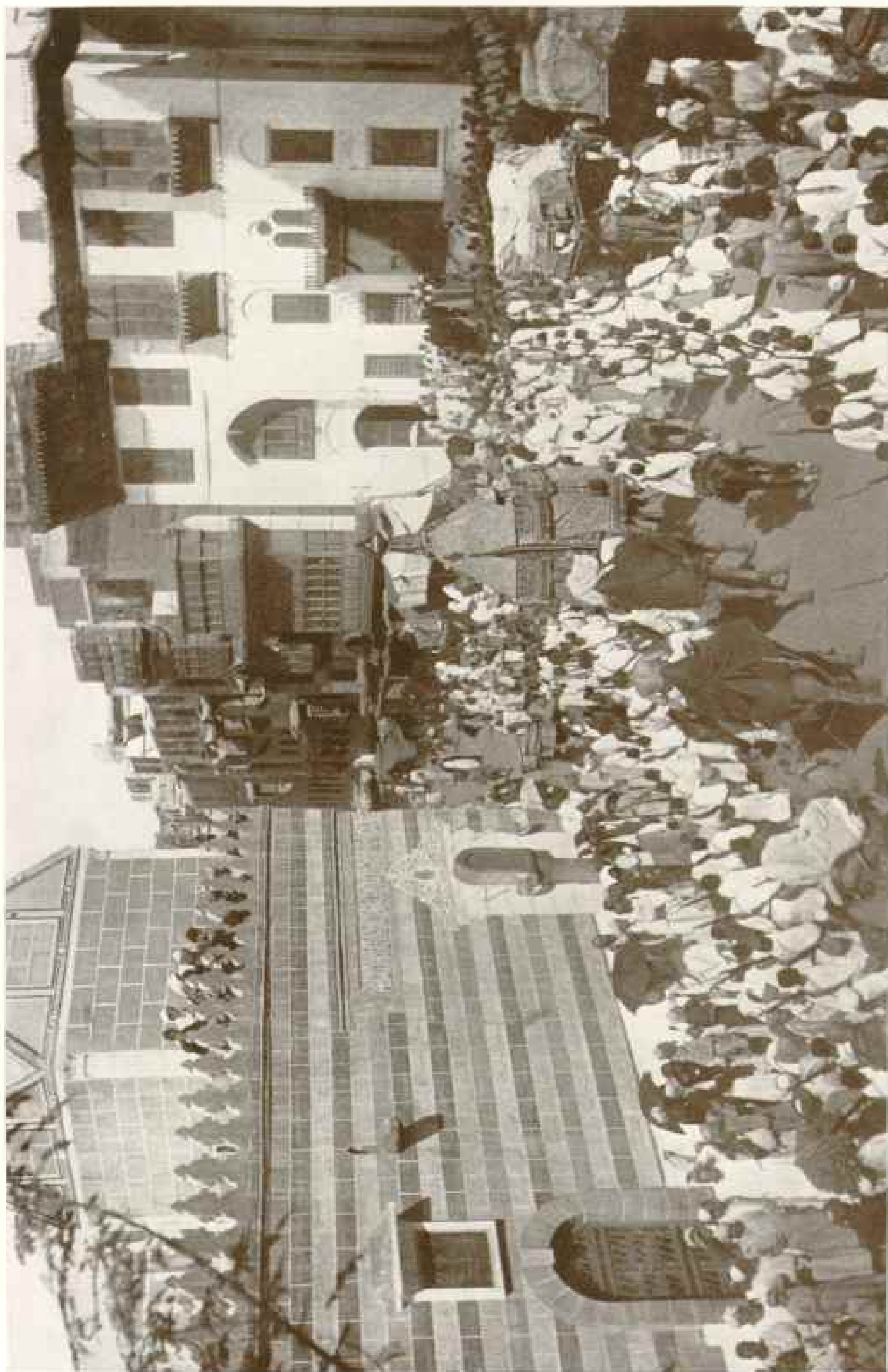
She is a relative of India's chief Moslem ruler, the fabulously rich Nizam of Hyderabad. Many times this devout Begum has repeated the pilgrimage. Here she and her retinue are escorted by the Emir of Jidda (second from right).



Photograph © Oscar Reizenstein from Black Star

A TINY PILGRIM FROM INDIA JOURNEYS TO MECCA IN HIS FATHER'S ARMS

Young as he is, the sheepy tot is correctly dressed for the pilgrimage. Devotees in ceremonial attire are forbidden to cover their insteps. Men are more uncomfortable than women, for they may wear no head covering.



Photograph from G. T. Kruljowski

EGYPT'S PILGRIM CARAVAN PARADES INTO MECCA WITH ITS ANNUAL GIFT FOR THE "HOUSE OF GOD"

Meccans watch from rooftops and roadside as Egyptian infantrymen, in white pilgrim garb, escort the tentlike, camel-borne pavilion containing a new covering of black silk-and-wool cloth for the sacred Kaaba (pages 639, 640, 641). In some years this caravan from Cairo numbers 5,000 people and 30,000 camels.



© Oscar Merz from Black Star

SHADES OF THE "ARABIAN NIGHTS"—A SNORTING MOTOR BUS PULLS UP IN HOLY MECCA.

Mysterious shadowy balconies frown on the modern intruder with its turbaned driver and white-garbed pilgrims. Arabia had only four automobiles in 1926. Now there are hundreds, mostly American makes. King Ibn Saud maintains a royal fleet of about 230 cars, many of them specially designed for desert travel between his two capitals, Mecca and Riyadh.



Photograph from *Niriddna*, Princess of Torrut

CENTER OF THE UNIVERSE FOR 235 MILLION MOSLEMS IS MECCA'S GREAT MOSQUE

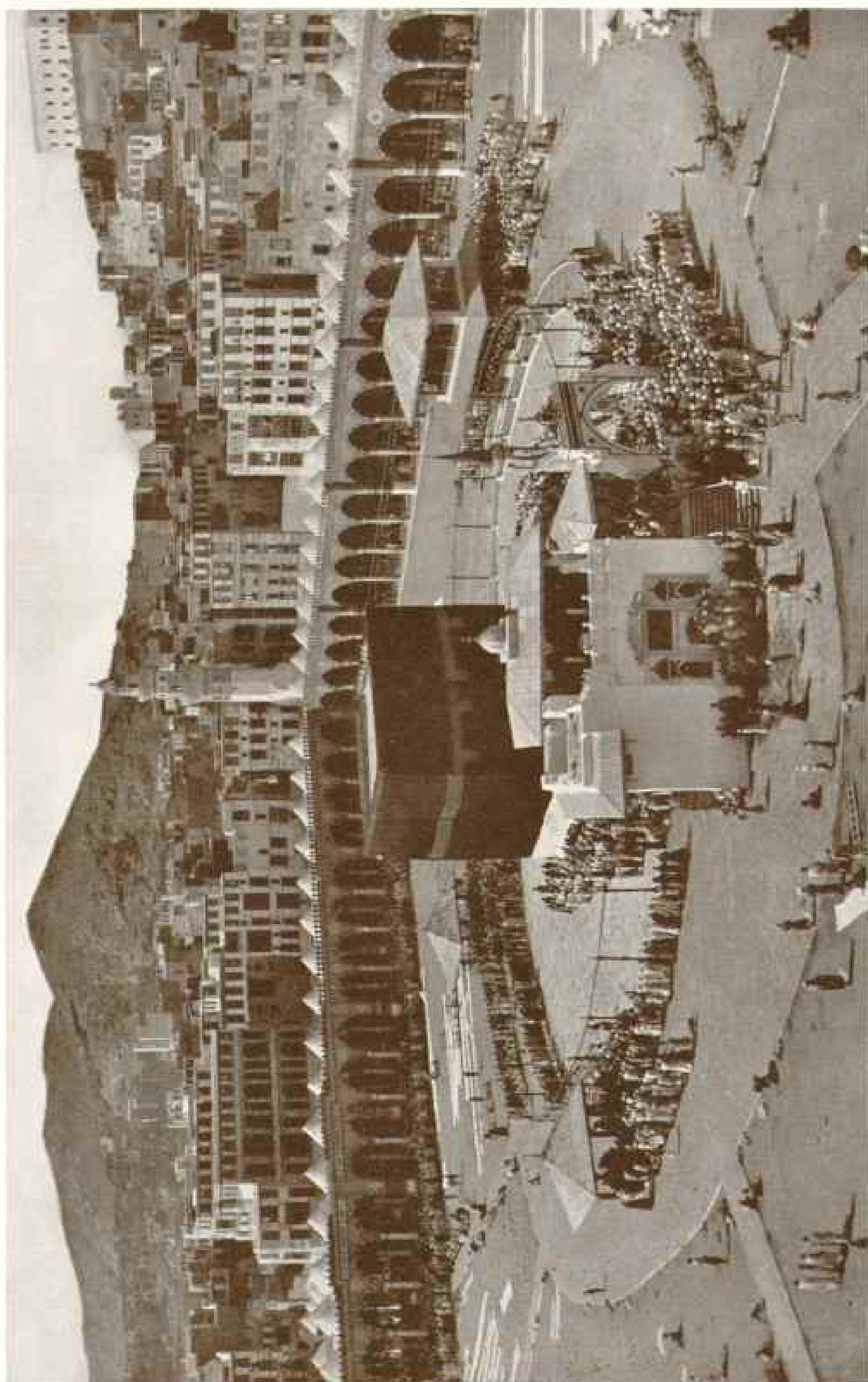
Lifelong dreams are fulfilled when pilgrims set foot inside the colonnade that surrounds the black-draped Kaaba (640). Only a few daring explorers, disguised as Mohammedans, have ventured here. One, Sir Richard Burton, wrote: "Nothing could save a European detected by the populace."



© Oscar Martin from *Black Star*

"BROTHER, CAN YOU SPARE A PIASTER?"

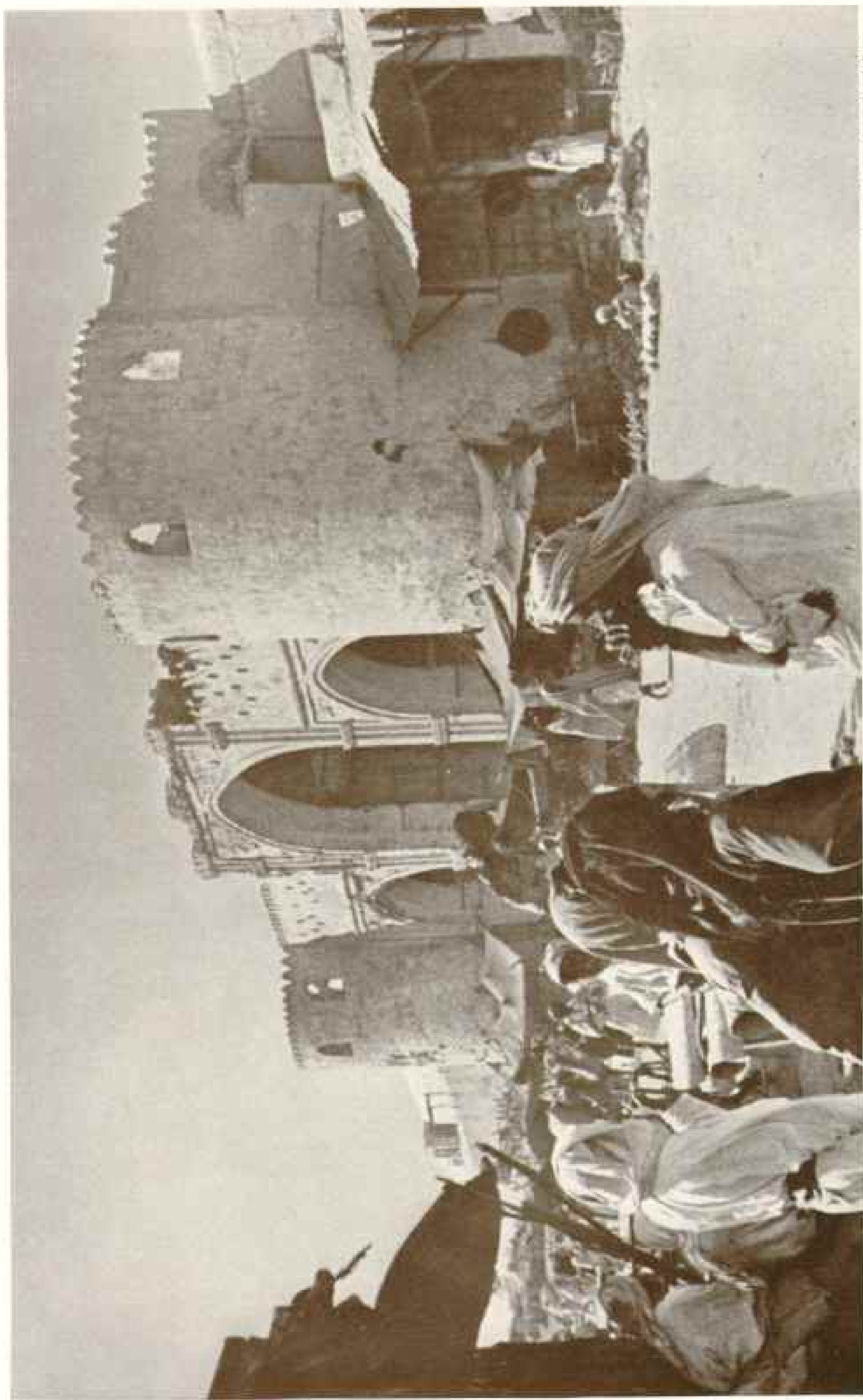
Beggars, including a veiled woman with a baby, besiege the photographer and a lone white-robed pilgrim en route to Eve's Tomb, near Jidda. "We sow no corn nor sorghum; the pilgrims are our crops," say the people of Mecca and vicinity,



Photograph from G. T. Krajewski

“NAVEL OF THE WORLD” MOSLEMS CALL THE SQUARE, HEAVILY DRAPED KAABA, AROUND WHICH MECCA'S BUILDINGS CLUSTER

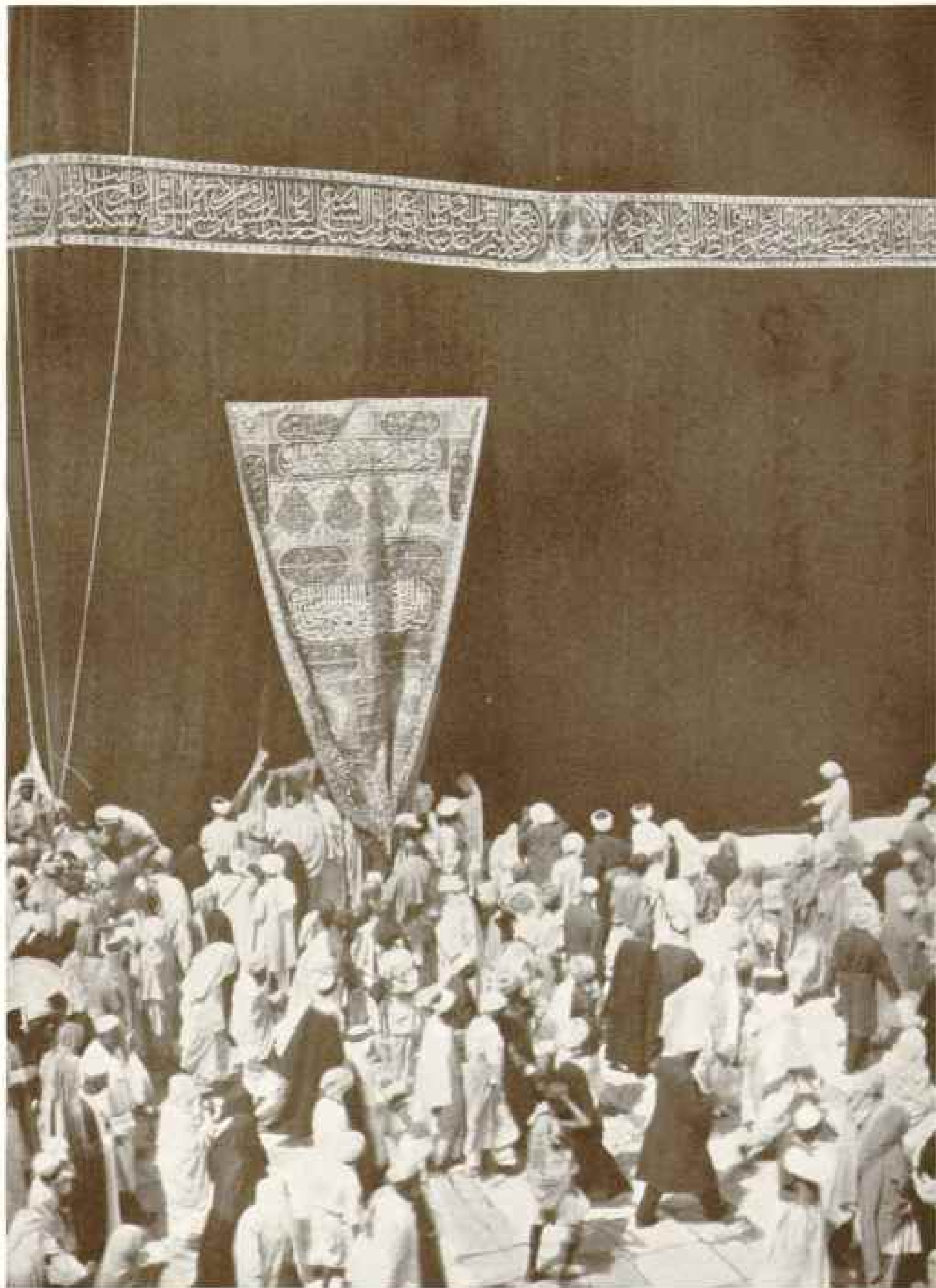
One of the pilgrim's first duties is to run around the shrine seven times. Another is to enter the white building (foreground) and drink from the holy well of Zamzem, where, tradition says, Hagar found water for her son Ishmael (Gen. 21: 19). Devotees mass about the Kaaba and in shady cloisters lining the quadrangle.



© Oscar Reuter from Black Star

“HERE AM I, O GOD, AT THY COMMAND!” SHOUT EAGER PILGRIMS AT THE ANCIENT GATE OF MECCA

Excited devotees hurry along the dusty road (left background) past little awninged booths where merchants display wares, and, passing through the arched portal, hasten into the city to prostrate themselves before the House of God. Mecca was a sacred place of pilgrimage and a busy caravan center long before Mohammed's time. Here the Prophet was born, about A. D. 570, and here his vision of the unity of God took shape, “to be carried to the ends of the earth by the swords of his followers.”



Photograph by Harold P. Lechmpetz

JOURNEY'S END—THE HOUSE OF GOD, TOWARD WHICH ALL ISLAM TURNS IN PRAYER

Many pilgrims faint with emotion at first sight of the huge cubelike Kaaba. Crowding past the embroidered door curtain, they prostrate themselves on the marble floor in the almost bare, pitch-dark, incense-filled interior. Countless kisses have polished the sacred Black Stone, probably of meteoric origin, supposedly given by Gabriel to Abraham, and placed centuries ago in an outside corner of the building. From Cairo come the black wall drapes with the golden band of Koranic texts (page 637).

KEEPING HOUSE ON THE CONGO

BY RUTH Q. McBRIDE

AUTHOR OF "TURBULENT SEAS," IN THE NATIONAL GEOGRAPHIC MAGAZINE

IT WAS one of those hot, overcast days at the end of the dry season. Everyone was tired and irritable.

The chimpanzee stuck his finger in his bowl of rice, found it a little too hot for his fastidious taste, and threw it with a howl of rage at the cook's head. His nerves were on edge, too. The other boys laughed mirthlessly as the poor cook retreated in disorder to his *shimbeke*, a bamboo hut, at the end of the compound.

The sultry, dusty air made even the fox terrier more restless than usual. He kept pacing around the premises and finally dug away at a hole in the far corner. He uncovered the skull of the leopard my husband had shot a week before in Angola, the skin of which, incidentally, made into a jacket, I am now wearing.

The boys had insisted upon burying the skull so that it might be dug up later as a choice, clean "trophy of the hunt," and Bully, the fox terrier, was severely reprimanded for the premature exhumation.

Such incidents serve to prevent any prolonged monotony in this town of Boma, 6,300 miles from Broadway.

I was sitting in an American porch swing, reading magazines, weeks old, brought by the last mail steamer. The long, low, one-story house was almost flush with the dusty pathway bearing the grandiloquent name of "Qual du Commerce," more reminiscent of Antwerp or Le Havre than this little river port of West Africa (page 658).

A GIBRALTAR OF THE CONGO

From the opposite side of the pathway the ground sloped gently down some 25 or 30 feet and there, a short stone's throw away, were the swift, dangerous, yellow-brown waters of the mighty Congo.

Rushing along to join the Atlantic, 60 miles distant, they often tore chunks half as big as a city block out of the marshy banks and carried them, trees, animal life, and all, far out to sea.

A mile out in the stream was the sizable island of Sacra Ambaca, a bluff like a small Gibraltar at its upper end, the only thing that kept the whole island from washing away.

It was a strange sight now—dense smoke rising in black clouds from its entire two

miles of length and hovering as it sometimes does at Vesuvius, almost stationary, high up in the sky. For, at the end of the dry season, the natives go over to burn the elephant grass, tall as a man and dry as straw.

The fires last two or three days and the sight at night of that long line of flame, far out over the river, is strangely beautiful. Thus game is driven from its hiding places and hunting made easy for the native boys.

A "SUBSCRIPTION LIST" FOR MEAT

To Sacra Ambaca my husband went in the early mornings to bag a small antelope, since other fresh meat was so scarce then and the supply uncertain.

Far down the river, on the Portuguese side, a few thin steers and lambs were raised. They were slaughtered once or twice a week and one brought to Boma if all went well with the little motor craft—and often it did not.

Unless your name was entered early upon the "subscription list" at the Portuguese store, the meat market would probably be bare when you got there, and your dinner party turned into a river fish supper.

I had come with some trepidation from far-off Michigan to spend this year and a half on the mysterious West Coast. It is no longer the "white man's grave," this land of Stanley, but rather an exciting and unusual experience with, here and there, the inevitable unpleasant moments.

Instead of taking one of the fine Belgian passenger steamers that sail every two weeks from Antwerp, we proceeded more leisurely on one of the smaller vessels of a Portuguese line.

The Belgian boats, and others, enter the Congo, steam the 60 miles up its course to Boma, and then another 35 to Matadi, the head of ocean-going navigation (pages 649 and 651). But our little steamer stopped at the mouth of the river only to let us off into a tiny tugboat and then continued southward to Angolan ports.

From Lisbon it had introduced us gradually to the Tropics, stopping at bougainvillea-covered Madeira, at several of the strange Cape Verdes, and at verdant São Tomé, sitting almost squarely on the Equator and growing cacao.



Photograph courtesy Directeur de l'Office Colonial

THE RIVER STEAMER "CAMBIER" STOPS AT THE OLD SLAVE PORT OF BANANA

In this lower Congo town with the name of a fruit are grim reminders of slave-trading days: low, solid-stone buildings with high, barred windows and rings for chaining the human chattels. The boat's name recalls Lieutenant Cambier, a Belgian, who led an early exploring expedition.

South of São Tomé the Atlantic was generally calm and placid and deep cobalt, but a whole day before sighting land this color changed abruptly and we entered a strange, brown Atlantic.

SPEED OF SHIPS REDUCED "UP IN THE BROWN SEA"

The enormous discharge of the Congo is noted fully 30 miles from its mouth, and old-time sailors swore that where the brown waters met the blue, their ships would shudder, step up a whole foot, and their speed would be reduced by several knots once "up in the brown sea."

We anchored at the river's mouth, off the little port of Banana, which is on the north bank. A few huts and "factories" of foreign firms jutted above a long line of white sand, bordered by the only coconut palms in this region.

One or two of these factories are of solid stone masonry, long and low, with small barred windows up near the roof. Here and there are iron rings still in the walls, the slave chains of these former warehouses for their unfortunate cargoes.

Here one cannot see the opposite bank, four miles distant, because of the many islands. This great river, one of the world's mightiest, has no less than 4,000 islands in its 3,000 miles of length.

For miles to the north and inland stretch mangrove swamps. Roots hang from branches, oysters grow on the muddy trunks, there is room in many of the slimy, wandering streams only for native canoes, sunlight is hidden by dense foliage, crocodiles slip off into the water as one passes, and tsetse flies await their prey.

We waited long for our little tug to appear. It was after noon when we finally climbed down into it and saw our tropical, black-japanned tin trunks safely stowed. The steamer tooted a goodbye salute and left us and our feeble little craft to battle against that strong, chocolate current.

Gauging from trees on the river bank, it seemed that we made no progress at all. We were not halfway to Boma when night began to fall. There was no twilight. The sun goes down at about six o'clock all the year round, and half an hour later it is black night.



Photograph by the Rev. Pierre Bourva

THIS WEAVER'S RAW MATERIAL GROWS ON TREES

On a crude but effective weaving frame a native of the Kasai District makes cloth from the fibers of the raffia palm. The material is extremely durable but rough on the skin; hence the negroes prefer the white man's cotton cloth, and such sights as this are becoming rarer.

River navigation after dark was out of the question. We were worried, but the captain, still wearing his once-white sun helmet, even after sundown, cheered us up.

A LONE BELGIAN POST

"That's all right," he said. "There's a little Belgian post over on the river bank. They have a fine resthouse for travelers, and you can spend the night there."

Turning shoreward, it seemed our craft would be swept downstream and out to sea again, but through a skillful series of zig-zags, we pulled up just as night fell to the small wooden pier of this isolated station.

The official in charge helped us ashore and welcomed us. He wore a tall sun helmet, and his white-duck uniform was wrinkled by the damp heat. We noticed how thin and pale and yellow the fevers had left him. His wife met us at the door of their crude, thatched cottage.

There were only two such structures in the place, the other being the resthouse. The official and his wife were the only white people marooned at this swampland station. There were a dozen native huts, and

a few native prisoners chained together sawed crude planks from logs used in building the cottages.

The Belgian flag, black, yellow, and red, was visible from far offshore. As far up as Matadi, the Congo divides two mammoth colonial empires: on the north the Belgian Congo, more than 77 times larger than its mother country, and to the south Angola, 14 times the size of its sovereign, Portugal.

JUNGLE CALLS, BATS, AND BATS

Our first night was rather horrifying to a newcomer. The resthouse was on piles, several feet above the ground. The planks of the bare floor and side walls were uneven, with big cracks between. There was only one room, with candle light, two small iron beds with mosquito nets, two hard native-made chairs, and a washstand.

You hop in bed and tuck the net firmly under the thin mattress. Quiet comes. Then strange calls rise from the jungle, native drums sound, and gradually the buzz of mosquitoes increases to unbelievable volume.



Photograph courtesy Directeur de l'Office Colonial

DARK, WOOLLY HEADS CARRY SHEETS OF CONGO RUBBER

When the white, doughy rubber has been coagulated from milky latex, pressed between rollers, and dried in smoke, these dark, doormatlike sheets result. At present much of the Congo's rubber grows wild, but a good start is being made in developing this industry by laying out large cultivated plantations such as those of the Netherland Indies and Liberia.

Every little while I heard a swish in the air, then a thud against the mosquito net—bats. Next a scraping and scampering across the floor and even over the top of the net—rats, big ones. How my thoughts flew to my comfortable room at home!

We embarked again early in the morning, after coffee with our kind hosts. There were more crocodiles along the river banks and the captain gave me my first lesson in shooting a rather heavy, and in his hands effective, rifle. After my shots the beasts would slide off into the water, giving no indication of being disturbed by anything other than the noise!

The region was still low and swampy. From innumerable islands flocks of egrets would rise quickly and disappear at our approach. Before noon we came to Fetiche Rock, jutting out into the river and forming a shoal. Here heavily laden steamers must sometimes discharge a part of their cargo into barges to get over the bar.

"Look, madam," shouted the captain, pointing out over our bow, "a hippo."

All I could see were two small ears above the water, moving swiftly toward the farther shore and leaving behind a wake like that of a submarine partially submerged (page 647).

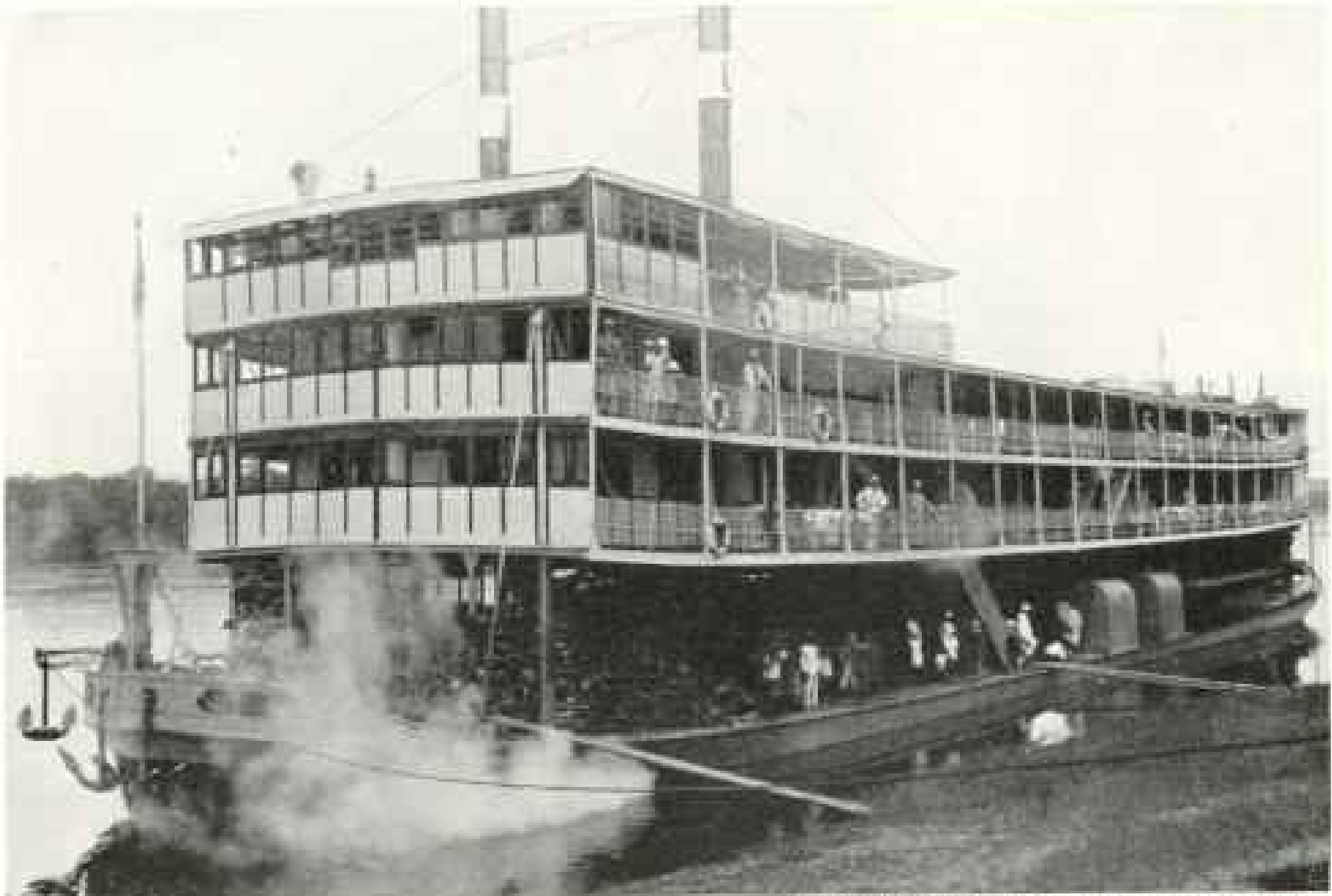
"METROPOLITAN" BOMA

The river took a wide curve, and Boma came into view (page 658). After the trials of that first night, it seemed a delightful metropolis.

A few low hills were studded with small but European-looking buildings and church steeples. At the top of one was the government palace. Among them were green acacias and scarlet flamboyants.

Boma was formerly the capital of the whole vast colony, with 200 or 300 Belgian officials and some 4,000 natives.

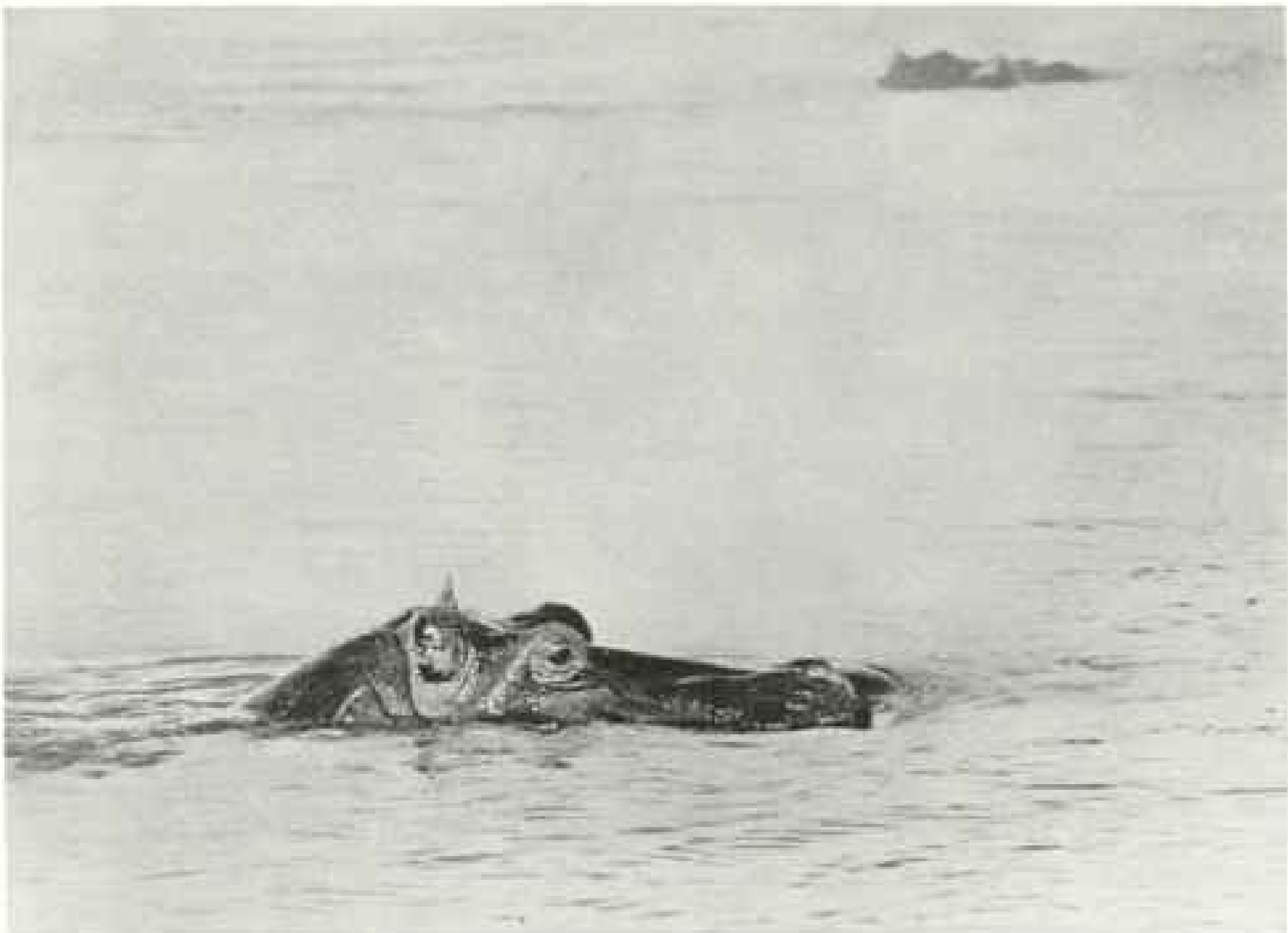
In 1925 came the boom days, with the peak in 1929-30, and the capital was moved to Léopoldville. Formerly it was 35 miles by steamer from Boma to Matadi, and thence two days' train trip to Léopoldville. Now when steamers from Antwerp stop at



Photograph courtesy Belgian Ministry of Colonies

PANTING, THE "KIGOMA" MOORS HER MATRONLY FORM ALONGSHORE.

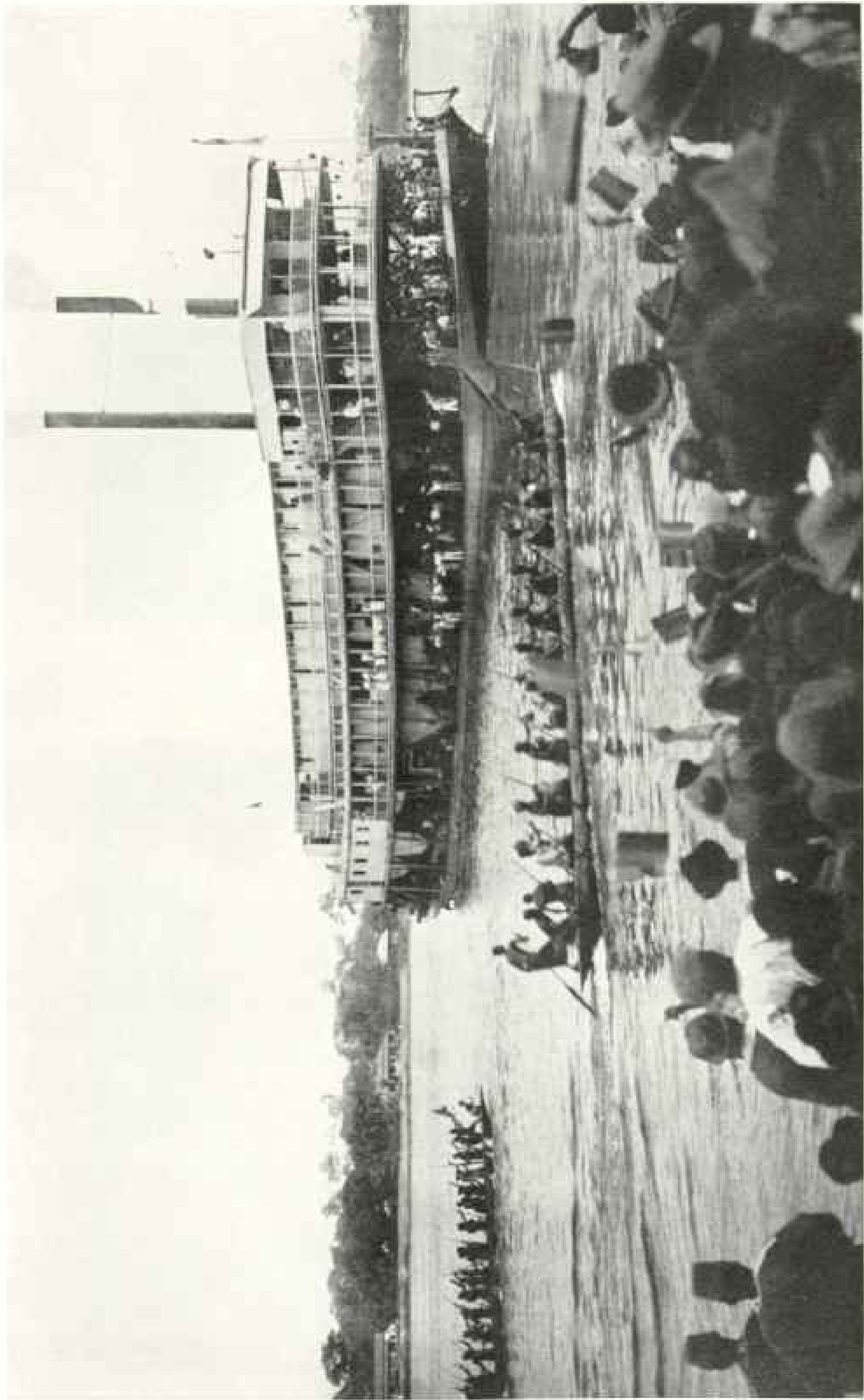
Each night, like the sensible lady she is, this competent Pittsburgh-built steamer on the Congo tied up at the river bank rather than risk the hazards of after-dark navigation (page 648).



Photograph courtesy Directeur de l'Office Colonial

A SWIMMING HIPPOPOTAMUS SUGGESTS A PARTLY SUBMERGED "PIRATE SUBMARINE"

This one has its conning tower awash, but usually about all a person can see is two small ears moving swiftly along in the manner of a periscope (page 646).



Photograph courtesy Helmin, Ministry of Colonies

"STEAMBOAT ROUND THE BEND!" MEANS EXCITEMENT ON THE CONGO AS ON THE MISSISSIPPI

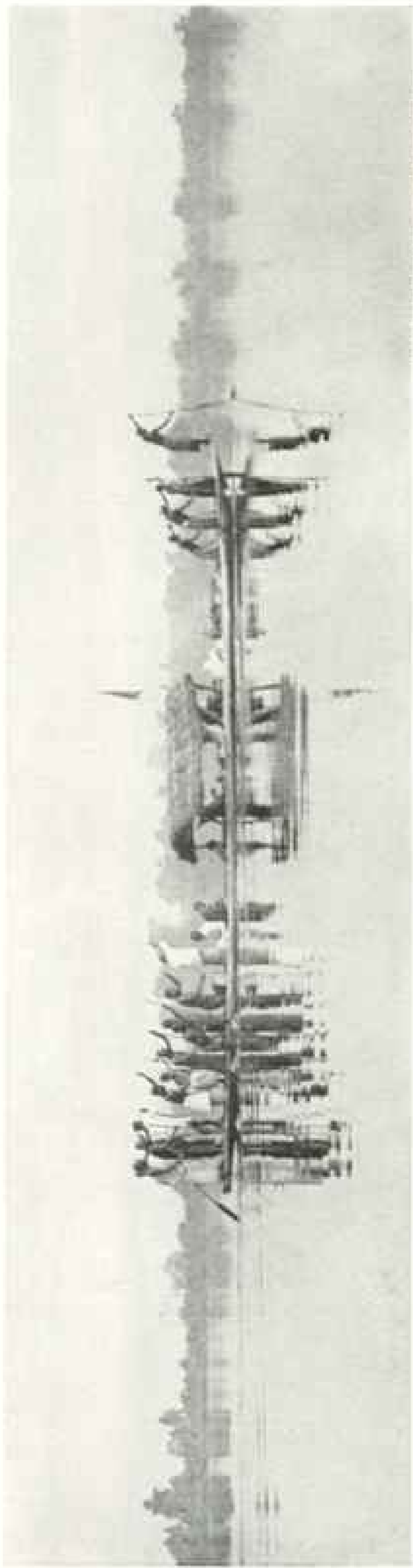
The steamer *Kigoma*, seen at Stanleyville on the upper Congo, was originally built in the United States for service on the American "Old Man River." Taken in pieces to Central Africa, the old wood-burner plies her unworried way on a jungle stream where swimming hippos and crocodiles are often the principal signs of life. Sometimes the night was made noisy by nearly naked natives carrying wood aboard to feed her engines (pages 647 and 655). An exotic touch in this Mississippi-like scene is the sight of the long, narrow native pirogues—each hollowed from a single tree trunk—racing with rhythmic paddle strokes toward the steamer turning in the yellow stream.



Photograph from Acme

GATEWAY TO A VAST INTERIOR IS MATADI, THE BELGIAN CONGO'S PRINCIPAL PORT

Above this town, with its busy warehouses and tracks, rapids block the Congo for some 250 miles, so passengers and cargo are transferred here from ship to train and hauled on up to Léopoldville, where the stream again becomes navigable. Inbound, through Matadi, go machinery, gasoline, cotton goods, arms and ammunition. Items that this rich equatorial colony exports read like a tariff schedule—gold, copper, cotton, palm oil, diamonds, tin ore, coffee, ivory, copal, sugar, and rubber.



Photograph by Rams A. M. Van Crombrughe

EUROPEANS ON A CONGO RIVER TRAVEL WITH THE EASE OF CLEOPATRA ON THE NILE

A thatched roof has been rigged in the center of the native dugout to shield the whites from the equatorial sun, and 14 long, slim paddles dip into the glassy water.



Photograph courtesy Directeur de l'Office Colonial

SUCH RAPIDS MAKE THE CONGO IMPASSABLE FOR SOME 250 MILES ABOVE MATADI

Goods and passengers must go by rail to Léopoldville, where the river becomes navigable again and leads deep into the continent's heart. These men are colonial officials.



Photograph from Agnes

WHITE HOUSES, GREEN FOLLAGE, AND RED FLAMBOYANT TREES MAKE MATADI A PICTURE OF TROPIC COLOR.

Life moves at leisurely pace in the public square of Belgian Congo's principal port: it is too hot to hurry. Most of the houses are built of concrete painted white and nearly all have luxuriant gardens, for jungle flowers, transplanted, grow profusely; at the author's home in Boma even the fence posts took root and sprouted (p. 656).



Photograph by Will F. Taylor

ONE OF THE OLDEST LIVING THINGS IN AFRICA IS THIS NAME-SCARRED
BAOBAB TREE BEHIND THE HOUSE WHERE THE AUTHOR LIVED

Experts estimate its age at 4,000 years. Only yesterday, as such a tree would reckon time, the explorer H. M. Stanley carved his name (partly visible at upper left) when he stopped at Boma on his trans-African exploring expedition of 1874-1877. Among the names are those of several warships; "H. M. S. Ariel" appears at left. As the opening indicates, the tree is partly hollow. A flat place where the limb branches off at the right was the "apartment" of Mike, the author's pet chimpanzee (page 655).

Boma, a 12-passenger plane awaits and whisks humans and mail to "Léo" in two hours and 15 minutes.

If you would go more leisurely, the steamer will disembark you on Matadi's modern docks, with their traveling cranes.

You climb aboard the train which, over its reconstructed route, now carries you the 230 miles to Léopoldville in twelve hours. You lunch in a *wagon-lit* diner as if you were merely running down to Paris from Brussels.

Ocean steamers can go up the river only as far as Matadi. Beyond, the Congo's disturbed and rocky bed starts its climb of 800 feet to Léopoldville. The mass of water plunges downhill in a series of falls,

casades, and whirlpools (pages 650, 664).

At Léopoldville, however, the river widens out in more tranquil mood, receives at intervals its big tributaries, and offers 9,300 miles of inland navigable waterways.

Léopoldville was only a little river port until 1925. But today nearly 30,000 people, 2,000 Europeans, daily newspapers, modern streets, brick and cement buildings, 1,000 motor vehicles, a huge wireless having daily conversations with Brussels, all belie the obsolete term, "Darkest Africa." And you can now get your mail from Europe by air in four and a half days.

There are electric lights, Belgian bungalows, banks, offices, and the four-story



Photograph courtesy Office d'Exploitation des Transports Coloniaux (Otraon)
**DESIGNED FOR TROPIC LIVING IS THE TYPICAL HOME OF A BELGIAN
 RAILROAD OFFICIAL AT THYSVILLE.**

Sleeping porches, with mosquito netting, awnings, and screens, add to comfort in the Congo. This modest dwelling is a palace compared to the house in which the author spent the night on her way up the river to Boma (page 645). Thysville, on the railroad between Matadi and Leopoldville, is named for a Belgian officer who pioneered in Congo railway building.



GIRLS OF A MISSION SCHOOL ARE SWATHED IN BRIGHT MANCHESTER PRINTS.
 Nothing delights the heart of a Congo negro more than a bicycle—unless it be a sewing machine or a phonograph. This voluminous attire contrasts with that of bush natives (page 659).



Photograph by Will F. Taylor

THE DAY'S BEST NEWS PICTURE FOR EACH IS A REFLECTION OF HIMSELF

Observing that the African loves a looking glass, as does all mankind, the shrewd agent of this trading concern procured one, and drew hundreds of natives to his store. Some had not seen their likeness before and made remarks of admiration, disappointment, or awe as they gazed at their own faces. The native at the left carries a fish for dinner.

A. B. C. hotel. But Congo's real skyscraper is down at Matadi, where the Hotel Métropole towers six stories into limpid African moonlit skies.

"TALKIES" AND PERMANENTS IN
AFRICAN WILDS

There are shops, too, with latest styles in costumes and hats from Brussels, "talkies" (in French, of course), and beauty parlors—imagine a real permanent in the depths of Africa!

In the capital itself almost the only familiar sights to the old-timers, a note incongruous amid so much modernity, are the buildings roofed with sheets of corrugated iron. Since the first days of Congo's development, this unlovely material has been found the best for keeping tropical

weather and torrential rains out of white men's homes. During a heavy downpour in the rainy season the noise was so deafening we had literally to shout to be heard.

In the boom days magnificent Government buildings were planned, but depression came and they had to wait.

Leopoldville stretches along the southern side of Stanley Pool, and is made up of several towns; one is Kallina, named after an officer mentioned by Stanley in his *Congo*, who was drowned offshore.

The story goes that Kallina, despite all hardships of tropical exploring, insisted upon dressing in full military uniform, with tight trousers, high cavalry boots, heavy rifle, and revolvers. He and his crew were setting out for the upper Congo in a small dugout canoe. His uniform and high boots

prevented the lieutenant from sitting down in the usual way, so he perched on an up-ended portmanteau. When the canoe capsized in the rapid current, he was lost.

Today there stands at the point a replica of the King Leopold II statue in Brussels done in four tons of Congo copper.

The older residents remember distinctly the first airplanes brought to Central Africa—hangars, still camouflaged, and planes which had been used on the western front—the whole plan then being regarded as a preposterous dream. Today not only is there the service from Boma to Léopoldville, but other air lines are cutting time through Stanleyland in amazing fashion.

At Léopoldville you climb into a plane and fly 800 miles up the Congo to Stanleyville, thence south 900 miles on the Brussels-Mozambique continental line to Elisabethville. Another line links the capital with south-central Africa.

Most of the steamers still burn wood for fuel. They tie up each night at posts along the river, navigation being too dangerous after dark on these changeable equatorial rivers. Passengers' sleep is sometimes disturbed by the scantily clad natives piling fuel on board for the next day's run (pages 647 and 648).

CHIMPANZEE GETS PNEUMONIA

On one of these steamers Mike, our chimpanzee, was brought down from his native forest to join our family at Boma. He soon became a most important and exacting member thereof.

Mike was about five years old and stood some three and a half feet in his "stocking feet." He caught a bad cold soon after his arrival. One day he seemed very feverish; we were worried and sent to town for the physician.

The doctor examined him as if he were a child and finally said, "It's pneumonia, madam. He must be kept in bed, on a strict diet. I will send you medicines."

Poor Mike got worse and worse. He was thin and pale, and had a hurt look in his eyes. One night he could be kept quiet no longer. He cried and whimpered, held up his arms, and begged to be taken up.

We took turns holding him in our arms for hours through the night. He slept quietly and peacefully and in the morning the doctor said, "He has passed the crisis, madam. He will get well."

Mike was affectionate and playful before,



Photograph courtesy Directeur de l'Office Colonial

TO THE CONGO'S FLYING PIONEERS

At Léopoldville, colony capital, stands a memorial to aviators killed in a crash in the early days of African commercial flying. It emphasizes the part played by airplanes in knitting together a jungle domain 77 times the size of the mother country.

but now he literally would not let us out of his sight. He spent the day on a long chain in the big baobab tree just back of the house. A series of knots formed an easy stairway up some 20 feet to where the odd limbs branched off, and where there was a flat place nearly ten feet square—Mike's living room.

This baobab was the largest in the region, a good 60 feet around, although the trunk was only about "two stories" high (pages 652 and 661). Experts estimated it was at least 4,000 years old.

Formerly it was the custom for small foreign warships, when they came to Boma "to show the flag," to send a landing party to carve the name of the ship and its commander on the tree trunk. Famous names appear there. By far the most interesting, atop them all, are the clear-cut letters "H. M. STANLEY." He stopped here on his great journey of discovery.

BAOBAB FRUIT TASTES LIKE GINGERBREAD

Natives call the baobab the "monkey-bread tree" because of the big, oblong fruit, like a melon, which hangs down on a long, thin stem and tastes like gingerbread. Its juice makes a drink helpful to fever sufferers. The boys put its pulverized leaves in food to stop excessive perspiration. Its hanging flowers are like large ivory lilies, and its bark furnishes fiber for the strong native rope.

The huge trunks are sometimes hollowed out by fungus growth, and there are tribes that suspend the bodies of criminals in these cavities, where they become well-preserved mummies.

Mike was cleanliness itself and spent hours brushing his fur. The hair on the top of his head was unruly and gave him much concern, so, halfway up the baobab staircase, we nailed a mirror and alongside hung a hairbrush on a chain.

Mike really applied himself to learning things. After two or three demonstrations, he grasped the idea and thereafter on his way "upstairs" would stop, look in the glass, and carefully brush his hair.

To get to a small bridge club at night we took a rather lonely and unlighted path. In this part of the world you run the risk of stepping on unpleasant live things in the dark, so Europeans have a native boy walk ahead with a lantern. This job we turned over to Mike who, after a lesson or two, became a model lantern bearer.

Upon arrival he would hand the lantern to us to be extinguished, and then curl up under a tree to await the return trip. He was happy and sometimes mischievous, but the lantern job he took seriously and seemed immensely proud of the responsibility.

He would climb in his bed on the back veranda at night, always pull a light blanket over him, and sleep so soundly that he was a complete failure as a night watchman.

Chained up during the day, he was freed about five o'clock and sometimes invited to tea with us—two sugars and not too warm, please. He handled his cup very daintily, but it took a long time to get him to hold his spoon correctly.

MIKE TURNS PRACTICAL JOKER

Only once was Mike severely spanked, and he was unforgiving about it for days. We were to dine at Government House, and I was dressed and ready.

"Where in thunder are my studs?" called husband when the hour was drawing perilously near. We searched high and low, but found no studs, although they were always kept in a little box in his top drawer. He substituted collar buttons.

Next morning, in the room used as his office, he dipped pen in ink and encountered in the inkwell—studs. Just one of Mike's little practical jokes.

The compound at the back of the house was some 100 yards square and, when we arrived, was in dilapidated condition. First we built a new fence around it, sending the boys to cut smooth, round, green tree trunks for the posts.

The postholes were two feet deep. Above were placed crossbars to which were nailed bamboos so as to fit tightly together. A fortnight later my husband asked, "Have you seen our fence posts? They are all growing."

Sure enough, big sprouts showed on every one of them. They all became nice little Japanese plum trees, and even bore fruit the next season!

After the fence was built, the whole compound was leveled, sanded, and then swept clean every day. But it was so barren I decided to start a garden. I laid out two large flower beds and told one of the boys to go into the bush and get some plants.

The next day all we saw were a few bedraggled and wilted leaves stuck here and there in the ground. I called N'Zita



Photograph by Franz Steinhilber

FEAR GENERATES PADDLE POWER ON THE ARUWIMI RIVER

Different from the usual lary gait is the frenzied flailing of paddles which comes when the pirogue is drifting toward dangerous waters or when other peril threatens. Here the hollowed-out tree trunk churns the water while four paddlers perched precariously in the bow seem about to be pitched overboard. The hair of the one at the left stands straight up, like a caricature of terror—but probably it only represents his idea of a stylish coiffure.

and expostulated, "I wanted plants two feet high. Go dig 'em up, plenty of roots, and plant them in the ground."

"You no sabe, missy," said N'Zita. "Them leaf, be fit to grow too much. You wait small. You fit to see."

He watered them every day and in two months this native wizard had a beautiful flower garden in bloom—odd ivory-colored double lilies, yellow daisies, tiny flamboyant trees in scarlet, wild brown-speckled orchids, and two little frangipani trees.

THE CONGO SERVANT PROBLEM

As in the Orient, white folks' servants in Central Africa are men rather than women. Five boys tended to our needs; the marvelous head boy, who was a real major domo; the cook, the houseboy, the cook's helper, and the "wash jack."

We would clap our hands or call "Boy!" and two or three would appear as if by magic (page 667).

It made life very easy, but one morning in my husband's office I heard him call the

boy to ask him what time it was; he was too spoiled even to turn around and look at the clock on the wall! I drew the line there.

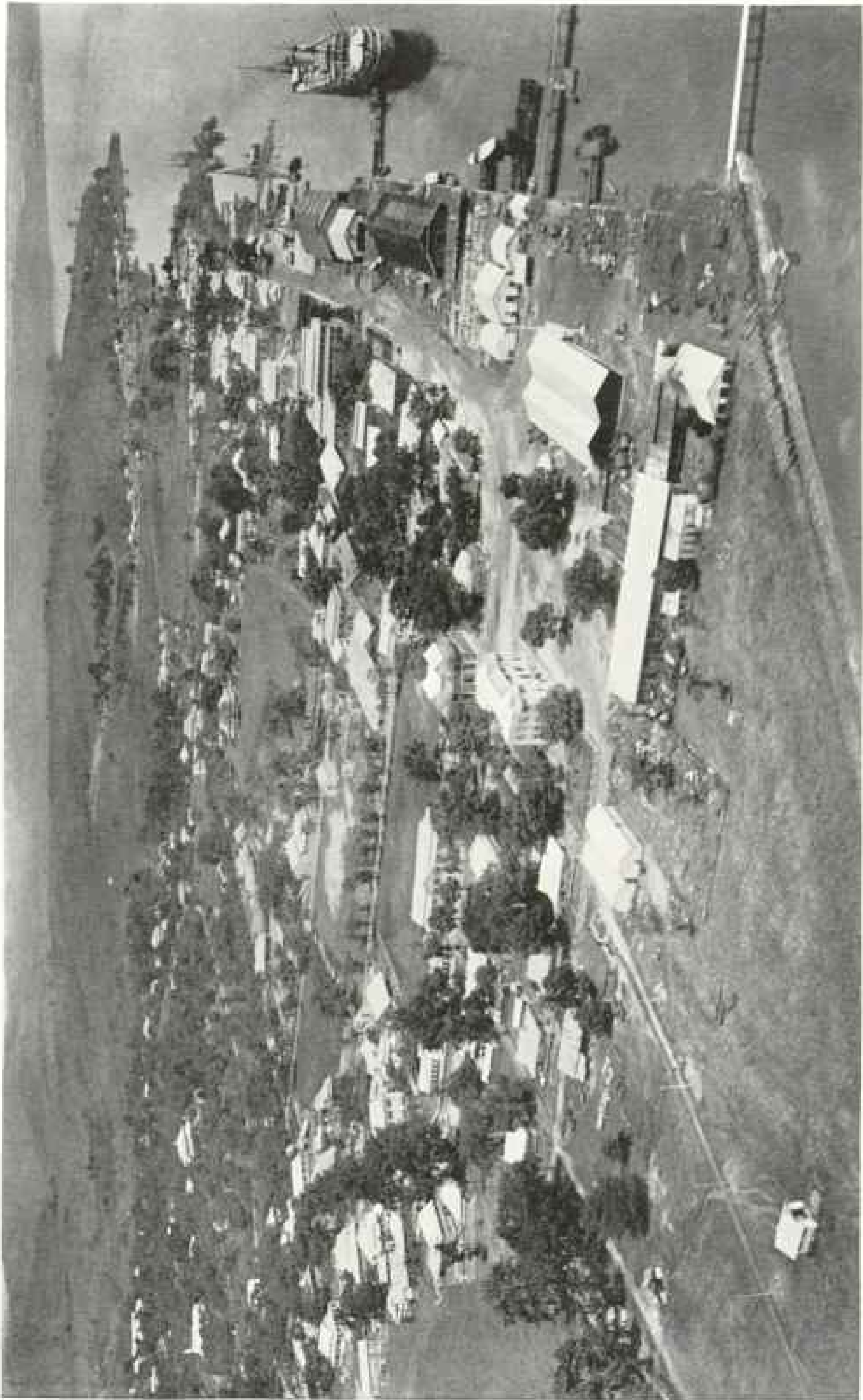
The boys' work clothes in the morning consisted of a piece of blue-printed Manchester cotton tied around the waist and falling to the ankles, and perhaps a diminutive singlet.

After four o'clock, however, they all changed into freshly pressed white duck trousers, a coat of the same material, military style, buttoned up to the neck with a single line of bright brass buttons.

Always they were barefooted. They served at table expertly, wearing white cotton gloves.

Their "coast English" is cruder than in the East. The first dinner I gave was in honor of a high Belgian official and his wife.

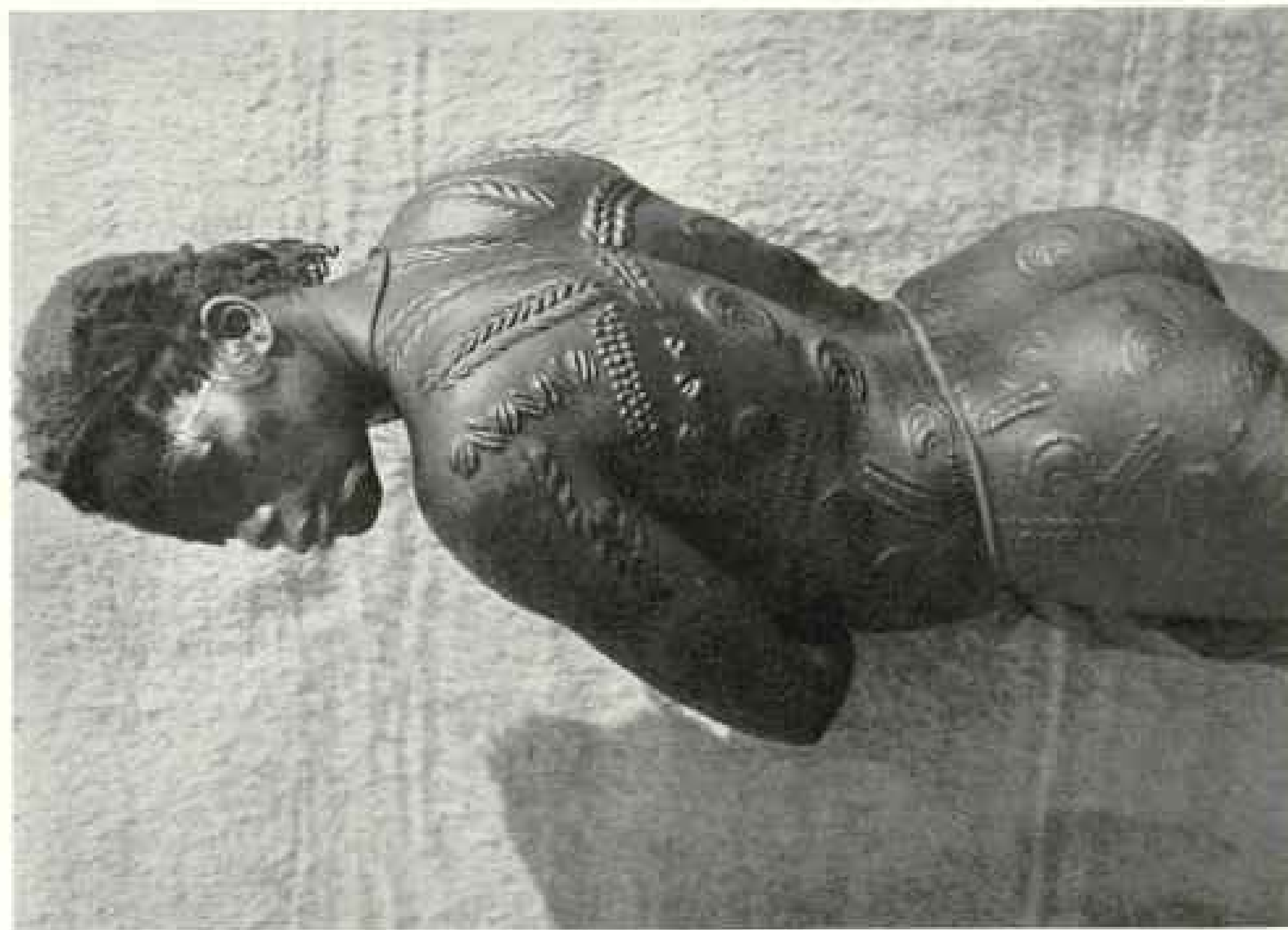
I planned with care and waited in some anxiety. Wemba, the head boy, assured me, "I sabe plenty, missy; you no fit to worry."



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BETWEEN THE GREEN HILLS AND THE YELLOW WAREHOUSES LIES BOMA, FORMER CAPITAL AND HOME OF THE AUTHOR

The street at the right behind the warehouses and parallel to the water front proudly bears the name "Quai du Commerce." Near its farther end, on the left side, is the residence (then the United States Consulate General) where Mrs. McFeide did her Congo housekeeping. The white structure amid spacious landscaped grounds on an eminence at the upper left was the palace of the Governor General before the seat of colonial government was shifted from Boma to Leopoldville (page 646).



HER SCARS COST HOURS OF AGONY IN A JUNGLE "BEAUTY SHOP"

Embossed all over with an intricate pattern of raised cicatrices, this eastern Congo belle has a skin like richly tooled leather. Incisions are made with an awl-like instrument and filled with charcoal and ashes to fester, forming "beauty scars" intended to accentuate the body's charm.



Photographs by Albert Coomans

READY FOR A FIGHT OR A FRIENDLY SMOKE

An old bush negro of the eastern Congo carries both his lethal-looking iron-headed spear and the clay-bowled pipe from which on occasion he sucks contentment and repose. In the Belgian Congo there are more than 525 blacks for every white man.



Photograph by Reg. A. Bourlay

ENRAGED, A CAMERA-SHY BULL ELEPHANT TRIES TO CHARGE THE
AIRPLANE THAT SEEKS HIS PICTURE

With flapping ears and gleaming tusks he left the herd and made a furious rush each time the plane dived toward him. As it passed tantalizingly over his head, he threw his trunk into the air and trumpeted loudly, as if daring the big noisy bird to come down and fight like a man. Old Pugnacity lives in the swamps along the Lufira River in the southern Belgian Congo. The white birds are cattle egrets which feed on insects stirred up by the feet of grazing animals.

He was to receive the guests and announce them. Then, at a signal from me he was to notify us that dinner was ready by entering the room, bowing slightly, and saying,

"Diner est servi, madame."

I had a rehearsal or two on this point, just to be doubly sure. Before the guests arrived, I looked at the table. It was correct in every respect and beautiful with intricate designs of little pink flowers placed carefully upon the tablecloth. My heart felt lighter.

The guests arrived, and little Wemba surpassed many a Park Lane knee-breeched doorman. The moment came to go into the dining room and I gave the signal.

Wemba entered, stood stiffly erect, hesitated a long moment, then growled in a loud voice, "Chop ready, missy!"

Apparently no one noticed but me, but Wemba and I resumed and intensified rehearsals the next day.

Alphonse Wemba, the "Alphonse" having been acquired at mission school, deserves a story to himself.

THE VERSATILE ALPHONSE WEMBA

He was 25 perhaps; small, thin, quick as lightning, and ugly as sin. Two years before, he had come to Boma from his native Bakongo village. A tattooed blue line cut his forehead in two, the lobes of his ears had been removed, and his front teeth filed down to sharp points.

With us he greatly improved upon the coast English spoken by the other boys, learned French with amazing ease at the mission school, picked up Portuguese, cooked, served, carpentered, sewed, and even made our white duck clothes on the sewing machine we bought him. The house was managed so well that there was little for me to do.

He also had an unusual knowledge of junglecraft. He taught the houseboy to



Photograph courtesy Directeur de l'Office Colonial

HUGE, BUT ONLY A LITTLE TREE AS BAOBABS GROW

The jungle giants sometimes reach a circumference of ninety feet, but their height is not proportionate. "Big around as a house but only two stories high" is a good description. The mighty trunk is anchored by roots which flare out like the flying buttresses of a cathedral. Baobabs are often hollow and natives in dry sections sometimes use them as standpipes to store water.

fix mosquito nets so that no insects ever got inside. Every morning he would wipe the overnight mold from shoes and damp leather. He examined all clothing we were to wear—scorpions, centipedes, and other things sometimes got into them.

An itchy sand jigger in your foot? Wemba, with his sharp bamboo prongs and some hot water, would get it out expertly and with less pain than a trained surgeon.

Fever? Wemba with his herb teas, and the quinine you took anyway, would shorten its stay. He learned to shoot, was a natural taxidermist, and was so all-round competent, in fact, that we later took him to England with us.

THE PARADE OF NATIVES

Through the early morning, real bush natives, clad only in loincloths, passed the house on their way to the lively native market place, their bare feet pad-padding along the dusty roadway. A village chieftain would come, a gaudy red or green cotton umbrella over his head, followed

single file by five or six wives. Each would be bent forward, a loaded grass hamper on her back held by native straps resting upon the forehead, and often a pickaninny was strapped on either hip.

Once in this pitiable file there was a white woman, probably 30 years of age, with fine features and hair oiled and coiffed in native style. On her back was a heavy burden. She was clad like the other wives, barefooted, dirty, and wild-looking, and chattered a native dialect.

We often wondered about her, whence she came, and what could have been her weird history. She represented another of those intriguing mysteries of this fascinating continent that go unsolved; at least she proved that Trader Horn's heroine was perhaps not too far-fetched.

A SILK OPERA HAT WINS TRIBAL HONOR

When unpacking our luggage we found a silk opera hat of my husband's which could certainly hope for little utility on the banks of the Congo. After a few months

the leather box became so warped and moldy that I told Wemba to throw the hat away. He asked how it worked, and when we showed him how to shoot it open he literally danced with joy.

A short time later, imagine our surprise when the chief of Wemba's village, with at least a dozen followers, appeared in our compound, wearing only a loincloth and with the opera hat perched jauntily upon his woolly head.

Wemba explained later that because he had presented this gift of unparalleled charm to his chief, he had been highly honored by being raised to the rank of tribal councilman.

AN AVIARY OF RARE BIRDS

One day a small native boy saw me sitting on the veranda and held up a tiny bamboo bird trap of his own making. In it was the yellowest little bird I had ever seen.

"You give me penny?" he demanded.

And right there I made a mistake which soon led me upon a path hitherto entirely unplanned. N'Zita, the houseboy, made me a larger cage of thin bamboo splits and the newcomer was added to the family.

The next morning the same boy appeared again, this time with a beautiful little bird with white breast and vivid blue back. The two outside feathers of the tail were three or four inches longer than the others, deep orange, and curled slightly at the ends. I bought it.

But the young salesman must have told business secrets to his competitors. A few days later several boys came, all with birds about the same size as a canary, but displaying a rainbow of colors. There were little green birds like sparrows, with red wings; plain gray ones; one small individual in full evening dress—white shirt and black coat.

N'Zita's cage became cramped and it appeared that all of these feathered creatures did not belong to the same tribe. There was angry twittering and desperate strife.

N'Zita consulted with Wemba and soon the whole side veranda, through which grew one of the baobab's branches, was fenced in with small-meshed chicken wire, a neat door made for entry, and tubs with plants in them placed all along the wall.

This aviary, which soon contained 36 birds, became a great delight. One in-

teresting inmate was a proud hornbill, its beak so heavy that it seemed out of balance. There were gorgeously colored waxbills, starlings, thrushes, and weaver birds.

"I fit to find you one Belgian bird," N'Zita said.

I wondered what he meant. One morning he came in and carefully set down a box about two feet square. He took off the top slats and lifted into the aviary a jet-black bird nearly 18 inches high, most of the height being in long, stemlike legs of scarlet. It had fairly large bright-yellow eyes—black, yellow, and red—N'Zita's "Belgian bird."

It stalked around awkwardly, but was soon quite at home and in a few days would eat out of my hand.

All the birds became rather tame and would fly to me when I went in to feed them. What a sputtering, twittering, and chirping in the big bird bath which was freshly filled every morning! But none of these pets was a real songster.

The other boys took little interest; they knew that all birds were to be caught only to be eaten, or to supply feathers for the costumes of medicine men and witch doctors.

"One day I fit to catch you fine bird in my village," N'Zita told me. "Big bird, he talk too-o-o much," he explained, in his soft native singsong.

One day one of his village brothers came in with two forest parrots, light steel gray, with bright-red tails. I tried for weeks to teach them to talk, but they learned only two or three native words they heard the boys repeat. No English for them! They lived in a cage near the aviary and soon they could imitate every bird's call, even the guttural squawk of the "Belgian bird."

A HOUSEBROKEN OWL TURNS MOUSE-CATCHER

Unfortunately they also gave frequent and accurate imitations of the ear-splitting shrieks in which Mike would indulge when he was excited or angry. We thought for a while we should have to get rid of the fox terrier; he seemed to have started barking nearly all day long. Then we found he was being ably assisted by the two parrots. So thereafter they spent quite a bit of their time in darkness with a shawl over the cage.

N'Zita also brought an owl, clipped his wings, and house-trained him the way you would a puppy. Thereafter the bird wad-



Photograph by the Rev. Pierre Douvet

IN BUILDING HER HOUSE NOT A NAIL WILL BE USED

Her menfolk have driven sticks in the ground, lashed them together with withes, and put a straw roof on top. The rest of the job is woman's work—bringing clay, mixing it with water, and smearing this impromptu plaster on the skeleton walls. After it dries, the surface is smoothed with wet hands. Such a house in the Kasal District will last for ten years or so. This one is unusually pretentious, having three rooms.

dled all around the house, quite tame, sat by my chair at luncheon and begged for bits of raw meat. He was useful, too, in catching the few mice that had escaped other members of the rapidly increasing household.

A Belgian officer contributed a grown white and gray kitten, domesticated, of course, but with Africa in its veins. It was long and thin, had strong haunches, and stalked its game after the manner of the wild leopard.

When we took the cover off the basket, it whirled around the room like a cyclone, over tables and chairs, up the wall, snarling like a mad thing. It took a long time to train and gain the confidence of this Congo cat.

The "wash jack"—black, smiling, with the same Bakongo tribal marks as Wemba—would stand a small wooden table in the river near the shore, beat the clothes on the table top, soap, rinse, and lay them in the sun to dry.

He had plenty to do, because we wore two or three white duck suits every

day, and he did the boys' uniforms as well.

All the wash jacks were careful not to go beyond knee depth in this yellow water because of crocodiles. One day a small child paddling near the boys did disappear.

The wash jack became a little jealous of N'Zita. He decried anything so child-like as bird catching, but he, too, would make "missy" a present. So one evening we were hailed to the back veranda, where he proudly displayed a gray crocodile about two feet long, straining at a rope halter and snapping his already vicious jaws.

CROCODILE GOES ON HUNGER STRIKE

Wemba sawed a huge hogshead in two, put some big rocks in the bottom, poured in water until it was about half full, and into this new home dumped the baby crocodile. One of the rocks protruded well above the surface of the water and upon it I put a little meat or fish every day.

But the new acquisition would have nothing to do with it. He straightway went on a hunger strike, sulking at the



Photograph courtesy Belgian Ministry of Colonies

SUCH FALLS AS THESE LONG BLOCKED THE WAY TO INTERIOR AFRICA

Lovely to look at but handicaps to explorers and colonizers are the cataracts that bar the lower reaches of many African rivers. This is Inkisi Falls on the lower Congo—one of the reasons why a railroad had to be built from Matadi to Léopoldville, by-passing the obstreperous stretch of river at heavy cost in money and lives (page 652).

bottom of the tank, rarely coming to the rock top to sun himself. Every day the old morsel of food would be removed with a prong and a new one placed in its stead.

The little crocodile grew thinner and thinner until he looked like a skeleton. He was too potentially dangerous to let loose again. Indeed, the Colonial Government paid a bounty of nearly a dollar to anyone who killed a grown crocodile, so I advised the wash jack to kill him. But he only insisted:

"One day he eat, missy. You fit to see."

And, sure enough, after four weeks of complete fasting, so far as I knew, and having arrived at what seemed to be an almost lifeless stage, he one day scared me half to death by jumping almost out of the water and snatching meat, stick, and all.

When those jaws snapped shut, they were too near my hand for comfort, and after that one of the boys always fed the crocodile.

Hunters tell how lions, before springing, beat the ground with their tails, but even more terrifying, I think, must be the huge crocodile, silent, half-hidden on the muddy

river bank, waiting to snatch its prey in those sinister jaws.

CHRISTMAS TREE WITH PINK BLOSSOMS

Christmas arrived. Wemba was sent into the bush to cut a tree and brought back a tall and shapely species of acacia, with pretty pink blossoms. This was set up in the living room and hung with paper streamers and a few candles.

The house was decorated with greens, and we evoked a festival air in spite of the fact that the thermometer registered 90° in the shade!

We opened the parcels from home: how welcome they were! All but the 5-pound box of chocolates which had turned into a thick liquid like molasses.

We called in the boys and found little parcels for them on the tree: a small phonograph for Wemba, a large hunting knife and a red umbrella for N'Zita, two or three pieces of choice Manchester cotton prints for the others.

Something happened that day, too, which I shall not forget. It seems that my fame as a sort of local Madarne Hagenbeck had



SHOWING THE WHITES OF THEIR WONDERING EYES, DOLL-LIKE PICKANINNIES SWING ALONG ON MOTHER'S HIP

A loop of cloth serves as perambulator and leaves the parent's hands free for work or for gesticulating, as in the case of the young mother at the right. Girls often marry at 12 to 14 years. Native children rarely cry and are seldom spanked or even scolded.

spread far up the river. In the afternoon, a native canoe hewn out of a big tree trunk came down on the swift current.

Nearly naked boys sat along each gunwale and paddled in unison to the tap-tap, tap-tap of a tin can beaten against the side by the "coxswain." They pulled up in front of the house and two crates were lifted out and carried around back and into the compound.

Mike let out a terrific shriek, then abruptly subsided. Wemba came running in to call me. The crates had been placed upon the ground; around them the boys chattered excitedly; the dog barked, though not very bravely, and Mike was in his baobab tree.

He was standing on all fours, rigid as a statue, every hair on end, eyes staring at one of the crates as if they would pop out of his head, moaning, absolutely hypnotized with terror.

I looked in the crate, and jumped back.

A nearly full-grown, gray-green python, probably a good twelve feet long, was writhing back and forth, round and round, and straining at bamboo slats which looked

to me altogether too fragile to guarantee continued imprisonment. My husband ran for a gun, quickly tossed a silver piece to each native, and hastened them off the place, crates and all, into the canoe. He even helped them shove out into the stream.

PYTHON STEAK A DELICACY

The natives could not understand such conduct. They make little of pythons, which kill birds and domestic animals but rarely attack man. The tribal boys have great sport capturing them and testify that python steak is a palatable delicacy.

In the other crate was a long-tailed monkey which I might have been tempted to keep if he had arrived in better company.

New Year's Day I made a resolution, and began giving away my menagerie, little by little.

Our living room, carpeted with native grass rugs, was furnished almost entirely with the cool and comfortable Madeira wicker furniture. We had standing lamps, not electric, but kerosene. Now, at more modern Léopoldville, housewives have elec-



FIRST DOWN, TEN YEARS TO GO

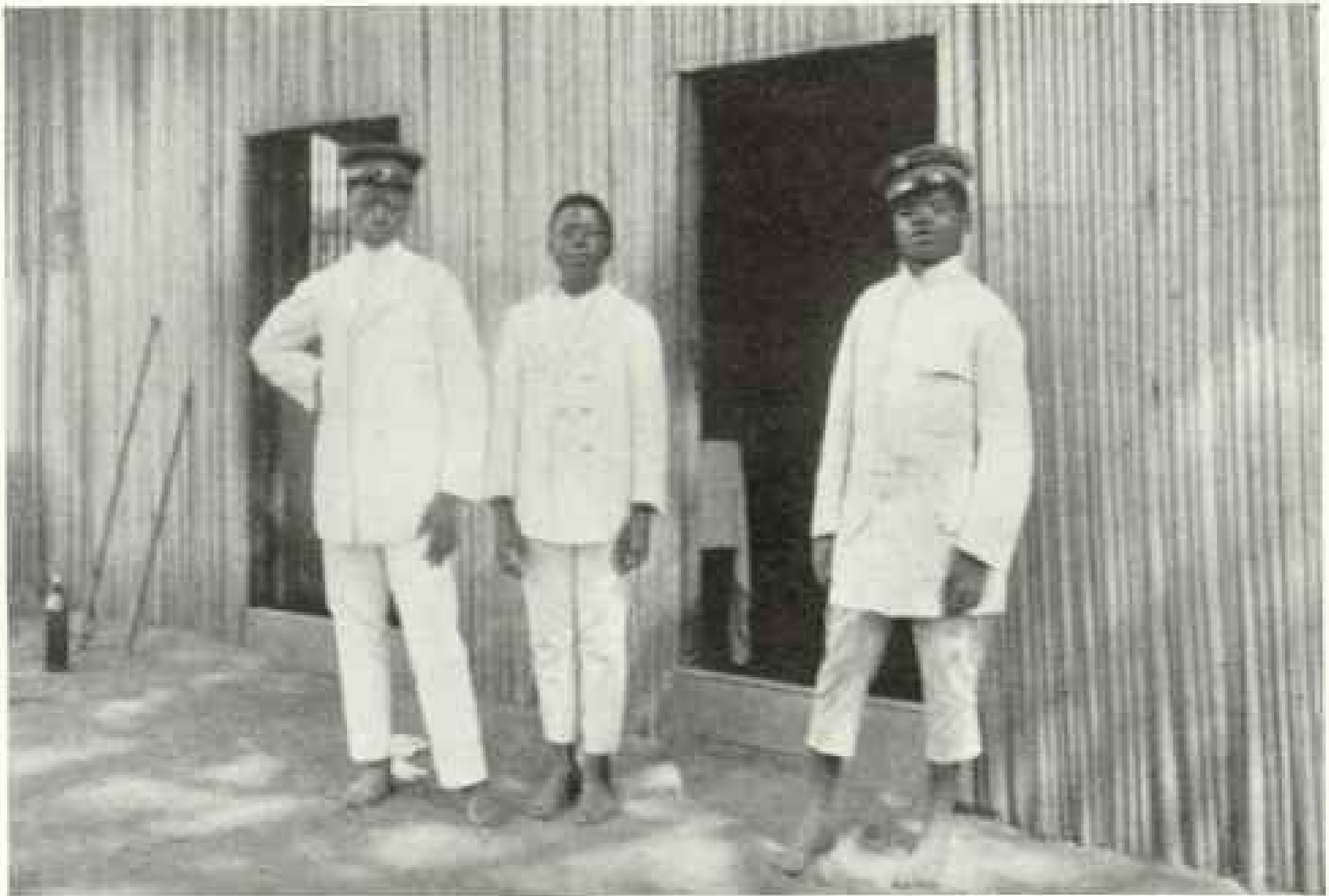
Roped and thrown by natives who specialize in the art, this young wild elephant of the Belgian Congo will be tamed and trained to work in the fields or forest. But it may be a decade before he is sufficiently docile to draw a plow. The African elephant was once thought untamable; now, however, there is a regular business of catching and schooling them in quiet, sanitarium-like camps. Nursing calves are not taken; this one is probably 15 years old and has plenty of fight.



Photographs by Paul Philippson

A BABY ELEPHANT, NEWLY CAPTURED, IS ROPED TO A TAME ONE

The little fellow was separated from his mother and caught with ropes by native hunters. Now he is starting his first day in school, hobbled to the leg of a big old one-tusker who will serve as his tutor and foster parent. The two at the left are adolescents.



Photograph by Ruth Q. McBride

HOUSEBOYS ARE FIRST AIDS TO THE CONGO HOUSEKEEPER

As Wemba (right) put it, "I sabe plenty, missy; you no fit to worry." But there were times when worry was justified; for example, when Wemba, patiently drilled to announce dinner in impeccable French for the benefit of a visiting Belgian official, reverted to type and blurted out "Chop ready, missy." Yet in most ways he proved a perfect "head boy"—so good that the author took him along when she and her husband finally left Africa (page 660).

tric refrigerators, electric lights, and fans.

I had a low rail run all around the room to hold my collection of native-carved fetiches, bamboo combs, ivory elephants, and beautiful knives with large copper blades etched with strange designs.

The copper came from the distant Tanganyika District, in Elisabethville Province (page 670).

The dining room was more American, with black mission furniture of the knock-down variety from a Chicago mail-order house. The buffet was supposed to have glass doors, with crossed wooden slats, but the glass never arrived.

Here I stored our precious glassware. One day at luncheon I heard a faint tinkle, as if the tumblers were being cautiously moved around. Peeking in, I found that Katrine, the Congo cat, had made the buffet a home for a litter of four kittens, well hidden behind the champagne glasses.

The kitchen was across the compound in a native bamboo *shimbek*. From an iron-topped stove made of bricks and mortar

the cook produced delicious meals. When the mail steamer came, there were fresh meat and fruits and vegetables from Europe.

The foreign stores or factories along the water front carried a fairly good assortment of canned things, also rice, flour, sugar, and the like, as well as wines.

The names of some of these firms established all along the West Coast are famous, such as Hatton and Cookson, and Dutch West African Company.

FROM SLAVE TRADE TO KEROSENE

These traders buy native products, ivory, palm oil, gold, amber copal gum for varnishes, and rubber, and exchange them for Manchester printed cotton, cast-off scarlet uniform coats, beads, colored umbrellas, Kentucky tobacco, and Dutch gin.

Several of the firms have been in existence a century and a few remain which started on the Coast as slave traders. Exciting, romantic, and often cruel, this West Coast of fifty or more years ago!



Photograph by Will F. Taylor

CROSSING SUCH A BRIDGE IS LIKE WALKING ALONG A SWINGING HAMMOCK.

Often, however, the traveler in Africa is glad to avail himself of the crude native structures. Made of vines woven into rope, this suspension bridge across the Kwilu River in the Belgian Congo is anchored to strong, well-rooted trees and is safer than it looks. It recalls the rope bridges thrown across chasms by the Incas of early Peru.

There are stories of how difficult it has been to induce the natives to use certain articles.

Clerks smoked themselves nearly to death to show the bushmen how it was done. At last a native would take away a pipe already filled with tobacco as a present. When it was smoked out, he would return for more tobacco, but this time would have to pay in produce for the "refill."

When night came, natives were accustomed to going to bed. They did not need kerosene; in fact they did not even use candles.

Then one trader had an idea. He sent home for thousands of little toy lamps, filled them with oil, trimmed the wicks, showed the natives how to light them, and presented one to every man and woman who came into the store.

The natives were delighted. But three or four days later they brought the lamps back.

"This light be fine too much. But he only go two nights. Wassa matta'?"

"That's easy," said the trader. "You only need some more oil. So much oil for so much ivory, sabe?" And thus was established a trade in kerosene that reached tremendous volume. Now these same stores carry automobile parts, electric refrigerators, and radios.

BREAKFAST: PAWPAW, PANCAKES,
AND QUININE

We arose early before the sun was too high in the heavens. The boy set a dainty table on the veranda, hidden from the street by green-painted curtains made of bamboo slats, and brought on delicious pawpaw with its slightly pepsin flavor, cooled in the homemade icebox. You add a few drops of juice from the tiny green limes.

There were eggs and bacon, crisp rolls, and our cook of cannibal ancestry had



Photograph by B. Anthony Stewart.

STRETCH AN OKAPI'S NECK A FEW FEET AND YOU'D HAVE A CREATURE
MUCH LIKE A GIRAFFE

Extremely rare in captivity are these interesting animals, found in the Congo and here photographed in Belgium at the Antwerp Zoological Gardens. The big-eared fellow in the foreground, sticking out the long tongue with which he grasps his food, is a male which arrived from Africa last summer to join a female which has lived at the zoo since 1928. The okapi was discovered by Sir Harry Johnston in 1900, and was pronounced a missing link between the giraffe and the fossil ruminants of prehistoric times. It lives in dense forests and feeds on foliage.

learned to make very good pancakes, served with local honey dark as molasses.

Then came coffee, made from the delicious wild beans of Angola, across the river. A big bottle of quinine tablets always graced the breakfast table—five grains every morning “to keep the doctor away.”

The other meals were more European, except for the fine tropical fruits: little red-skinned bananas, unusually sweet; fine juicy mangoes, good for your health, with a tinge of turpentine flavor, and tricky to handle without getting the juice all over clothes, face, and hands; large oranges, bright green but sweet as the “oros” of Spain. We had Japanese plums from our own compound fence.

One native dish we sometimes had for Sunday lunch was “palm oil chop.”

Wemba would put a big soup bowl

at each place and surround it with several little side dishes, usually large sea shells. One would contain rice, another ground peanuts, others toast crumbs, crushed bananas, manioc root, and various dainties.

We dumped all these in the soup bowl. Then Wemba would bring on an immense dish of hot, orange-colored palm oil in which were bits of chicken and meat, all flavored with the terribly hot pili-pili, the small local pepper.

It burned our tongue and throat, but it was really very tempting.

At night there was supper on the veranda and a little walk in Congo moonlight, so bright you could read a newspaper. The moon seemed to hang low in the sky, like a great lighted balloon, and the stars seemed so much closer and brighter than in northern climes. High across the river was the Southern Cross.

As night grew deeper, bonfires would appear in the near-by native villages. Tom-toms would start their rhythmic pounding. We could hear the native laughter to the wild, intricate, graceful dances, which sometimes lasted all night long.

Our own boys would build a little fire near their huts, squat around it, laugh, tell native stories of leopards, witch doctors, and juju in their soft musical voices.

SOUNDS OF THE AFRICAN NIGHT

We would retire, but on moonlit nights the whole jungle seemed alive. In New York, taxi horns, the elevated, fire engines keep you awake; in Boma, huge hippos grunt and splash on the opposite bank, big bullfrogs croak, tom-toms drone in your ears, and weird birds screech in the near-by forest.

I would lie awake thinking of this vast African empire that is the Belgian Congo, with its 9,824,000 native souls and 18,600 whites. It is a colony which has cost the mother country relatively little, for it has paid much of its way with its riches, riches as yet scarcely touched.

I thought of my pretty diamond ring, cut in Brussels from a large flawless stone from the mines in the Kasai District, originally developed by American capital and prospectors. I thought of the gold that comes from the Kilo-Moto mines in the northeast; of cobalt, of which more than half the world's supply comes today from Katanga, also famous for its copper.

Katanga copper comes from a belt 250 miles long by 25 to 50 wide. The industry centers in Elisabethville, capital of the Province, but Jadotville (formerly called Likasi) also has the last word in concentrators and electrolytic plants. Central African coal is used in the furnaces, and the copper, so far from its markets, can be shipped to sea by rail through Angola or Mozambique, or even now toward Matadi, to be loaded into ocean-going boats.

Another famous Katanga product, discovered in the course of prospecting for copper, is radium from the mine of Shinkolobwe, near Jadotville, at present the foremost producing center of radium ore in the world.

Of the 26 ounces so far produced in the whole world, the Belgian Congo has contributed about half. It still holds its lead, though Canada has forged ahead rapidly in recent years. The ore is sent to Belgium for refining.

Palm oil, a fair part of it destined for Pittsburgh steel mills, comes down the great rivers in Belgian tank steamers, goes sometimes in tank cars to Matadi, ultimately in American tankers to Brooklyn, New York. It is used in soap making, too.

Congo is up to date on the unemployment problem because natives out of work are sent back to their villages, and whites out of work must be repatriated by their employers. The land's vast reaches are in instant touch with each other by 28 wireless stations.

Its native hordes are learning civilization through some 700 Protestant and 2,300 Roman Catholic missionaries, many of them American. It possesses nearly a sixth of all the water power, developed and potential, in the world. It occupies a large part of the map of all Central Africa and already, in its short colonial lifetime, has built over 2,900 miles of railway and 33,000 miles of roads.

Yes, the huge empire is exciting and vastly interesting, but nevertheless you continue to mark off the days on the calendar—only so many days now till the end of your "tour." Finally the last mark is made. Tomorrow you sail.

GOING HOME!

There is a pang of regret at leaving friends and faithful boys. Mike has been given to one of the officials, but departs very unwillingly.

Couldn't I take the fox terrier and just two or three of the little birds? At Boma all my pets were not out of place, but how different in a Washington apartment, where I might not even be allowed to have one lone dog!

The big steamer comes down the river, ties up at the pier. Home! White stewards, real baths, no mosquito nets, civilization. On board, light-hearted laughter.

Belgian and French officials, who had been drilling black troops, administering justice, and collecting taxes for three long years in the jungle were going home, too; also a few wives and children.

For the present, at least, they have had enough of hot sun, torrential rains, palm trees, jungle, and natives.

Many were pale, some almost beaten by the climate, racing to get out in time. But all were happy, aching for European boulevards as we were for Broadway.

At Dakar we could even throw away our sun helmets!

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To carry out the purposes for which it was founded forty-nine years ago, the National Geographic Society publishes this Magazine monthly. All receipts are invested in The Magazine itself or expended directly to promote geographic knowledge.

Articles and photographs are desired. For material which The Magazine can use, generous remuneration is made. Contributions should be accompanied by addressed return envelope and postage.

Immediately after the terrific eruption of the world's largest crater, Mt. Katmai, in Alaska, a National Geographic Society expedition was sent to make observations of this remarkable phenomenon. Four expeditions have followed and the extraordinary scientific data resulting given to the world. In this vicinity an eighth wonder of the world was discovered and explored—"The Valley of Ten Thousand Smokes," a vast area of steaming, spouting fissures. As a result of The Society's discoveries this area has been created a National Monument by proclamation of the President of the United States.

The Society cooperated with Dr. William Beebe in a deep-sea exploration of undersea life off Bermuda, during which a world record depth of 3,028 feet was attained August 15, 1934, enabling observations of hitherto unknown submarine creatures.

The Society also had the honor of subscribing a substantial sum to the expedition of Admiral Peary, who discovered the North Pole, and contributed \$100,000 to Admiral Byrd's Antarctic Expedition.

The Society granted \$25,000, and in addition \$25,000 was given by individual members, to the Government when the congressional appropriation for the purpose was insufficient, and the finest of the giant sequoia trees in the Giant Forest of Sequoia National Park of California were thereby saved for the American people.

The Society's notable expeditions to New Mexico have pushed back the historic horizons of the southwestern United States to a period nearly eight centuries before Columbus crossed the Atlantic. By dating the ruins of the vast communal dwellings in that region, the Society's researchers have solved secrets that have puzzled historians for three hundred years. The Society is sponsoring an ornithological survey of Venezuela.

On November 14, 1935, in a flight sponsored jointly by the National Geographic Society and the U. S. Army Air Corps, the world's largest balloon, *Explorer II*, ascended to an officially recognized altitude record of 72,195 feet. Capt. Albert W. Stevens and Capt. Cyril A. Anderson took shift in the gondola nearly a ton of scientific instruments, and obtained results of extraordinary value.

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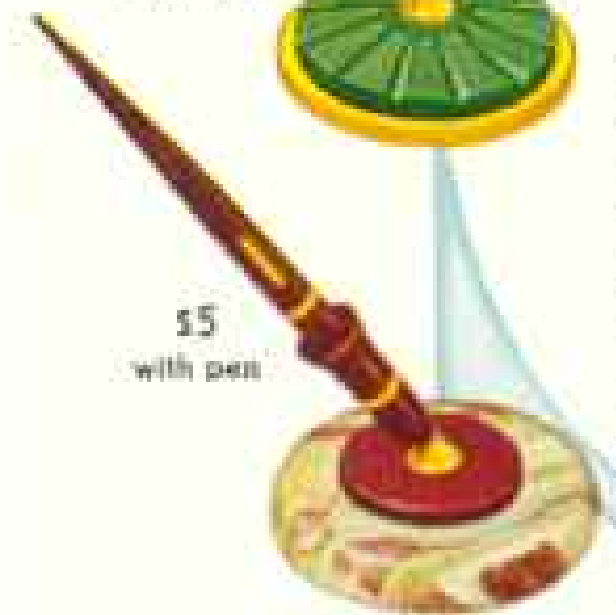
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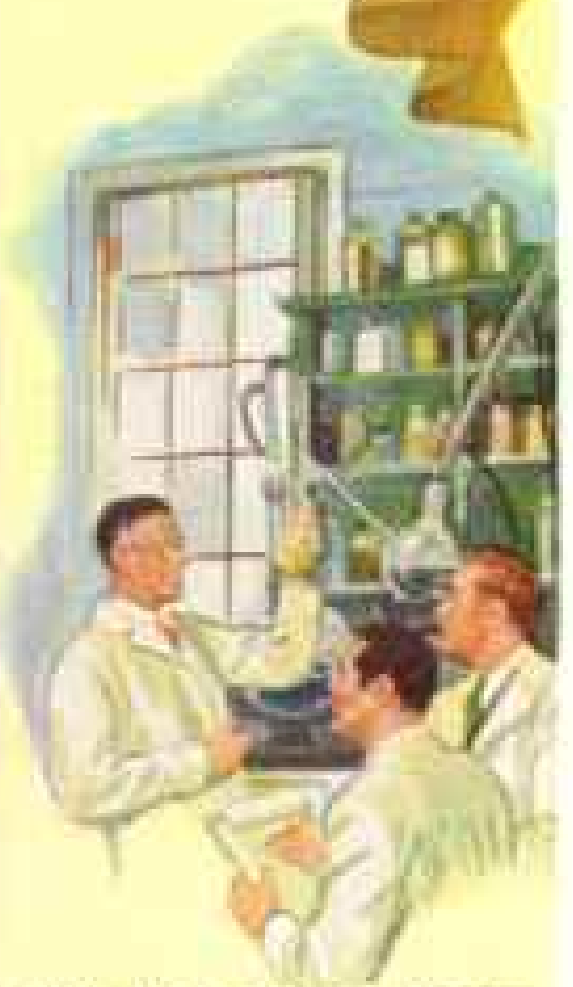
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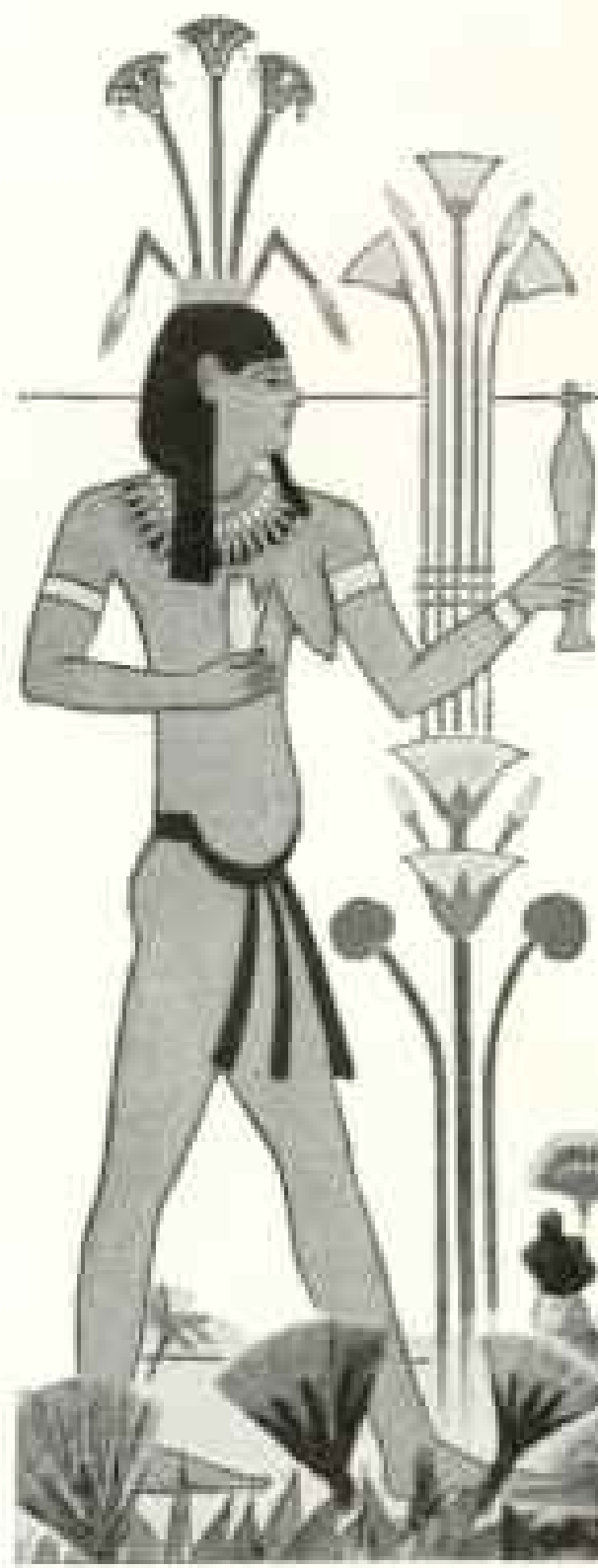
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Black case with chromium trim. Silver dial. Automatic signal device. Each \$12.00*

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Full information of incomparable Matson South Pacific voyages may be secured from all Travel Agents or Matson Line—Oceanic Line, New York, Chicago, San Francisco, Los Angeles, San Diego, Seattle, Portland.

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The superb sun of Waikiki Beach reflected in natural color photographs.

Make friends with the sun in Hawaii

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MOBIL OIL IS
THE WORLD'S LARGEST-
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The doors to new-car secrets are protected like gold vaults—yet almost daily you'll see men of Socony-Vacuum pass through!

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Impurities in all crude oil, harmful to engines, must come out!

All oil refiners know this. But not all of them do the job equally well.

For example, the Clearosol Process, by which Mobiloil is made, removes crude oil impurities that defeat all ordinary refining methods.

Hence, Mobiloil is cleaner, tougher, longer-lasting.

Try it and see for yourself. You find it pays to use the correct grade of Mobiloil in your car!

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SOCONY-VACUUM OIL COMPANY, INC.



TODAY'S INVESTMENT FOR TOMORROW'S SECURITY



Here is a safe, simple and convenient way to add one dollar to every three that you can set aside for future security. Write a check each month, payable to the Treasurer of the United States for investment in a United States Savings Bond. This bond, held for ten years, will return 33½% more than you invested.

Look at the table below, select the Savings Bond you are able to buy regularly. The Treasurer of the United States will forward you full information concerning the Regular Purchase Plan upon your request on the coupon.



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UNITED STATES SAVINGS BONDS

DIRECT OBLIGATIONS OF THE UNITED STATES GOVERNMENT

HOW TO SAVE SYSTEMATICALLY

To provide funds for the future, select the program best suited to your needs, then buy a bond each month.

If you invest each consecutive month any specific amount shown below.

Beginning in 10 years there then will be payable each month for as many consecutive months

\$18.75	.....	\$25.00
\$37.50	.....	\$50.00
\$75.00	.....	\$100.00
\$93.75	.....	\$125.00
\$187.50	.....	\$250.00
\$375.00	.....	\$500.00

Savings Bonds are sold on a discount basis. They mature in 10 years from issue date for ½ more than their purchase price. They may be redeemed for fixed cash values by the owner at any time after sixty days from issue date.

— FOR SALE AT POST OFFICES AND DIRECT BY MAIL —

TO ORDER BY MAIL

TREASURER OF THE UNITED STATES, N-11, Washington, D. C.

- Please send me without obligation your Regular Purchase Plan and forms for my consideration and optional use.
- Send me the following bonds for which I enclose check, draft, or money order.

NUMBER

.....	\$25 U. S. Savings Bonds at	\$18.75 \$
.....	\$50 U. S. Savings Bonds at	\$37.50 \$
.....	\$100 U. S. Savings Bonds at	\$75.00 \$
.....	\$500 U. S. Savings Bonds at	\$375.00 \$
.....	\$1000 U. S. Savings Bonds at	\$750.00 \$
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It is understood that not more than \$10,000 (maturity value) of these bonds issued during each or any calendar year (Jan. 1 to Dec. 31) may be held by any one person.

Register in the name of and send to

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	_____ ^{Mrs.}
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City _____ State _____	

Make all remittances payable to Treasurer of the United States

Willard Batteries Give Protection to Millions



"My Willard saves me money because it lasts longer, needs less recharging —and doesn't let me down."

"I must be on time at the division point where I take over the throttle of the Limited . . . and the only way of getting there is by my automobile.

"I can't afford uncertain starting. I bought one bargain battery that 'looked just as good.' One was enough. But now, with my Willard I get to work, and home again—on time. It starts my car in all kinds of weather. It hasn't needed a recharge in the two years I've had it. And its long life, dependable service, and freedom from trouble make it *cost less to own.*"

★ ★ ★

You get the extra protection of a Willard without spending any more money. The price of today's Willard is no higher than that of many ordinary batteries—and actual figures from owners' service records *prove* that Willards Cost Less to Own.

Buy your next battery from the nearest of the 42,000 Willard dealers that cover the nation. They are equipped to protect you against constant recharging and costly repairs. Play safe—buy a Willard.

WILLARD STORAGE BATTERY COMPANY

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Because they . . . Last longer . . . Crank faster . . . Don't let you down!



SAFETY FIRST -
friendliness too!

HERE are plain facts which touch the lives of us all:

American railroad rates are the lowest in the world; American railroad service is the best.

But the continuance of this efficient, economical service is imperiled today by the threat of laws which would check progress.

One such measure is the bill now before Congress to limit the length of freight trains to seventy cars—a needless restriction that would add more than one hundred million dollars a year to the cost of transportation, but would add nothing to railroad revenues, service or safety.

The unjustified burden of this threatened legislation should not be imposed upon the commerce of the nation.

ASSOCIATION OF
AMERICAN RAILROADS
WASHINGTON, D. C.

in this room -

STYLES ARE MADE

COLUMNS ARE WRITTEN

STARS ARE BORN

TITS might be any of twenty Hollywood or Los Angeles night spots where stage, screen and radio stars gather. The hat on that star at the next table will be all the rage in three weeks; and there's what's-his-name doing his column for a hundred newspapers, and behind you (don't look now) is the actress MGM is grooming for the spring schedules...

Wouldn't you like to be part of this mid-winter whirl? And wouldn't you like days on a tropic isle or at a sun-soaked desert oasis, or golfing in shorts, riding through orange groves, watching the races, or exploring Pasadena, Glendale, Long Beach, Santa Monica, Pomona, Beverly Hills, and others in Los Angeles County and its neighbors?

Even from New York it's just overnight by plane, 2½ to 3 days by train, 5 to 7 by auto or bus, two weeks via Panama. And vacation costs here average 22.5% under those of 20 other leading U. S. resorts.

WARNING! You're taking a chance if you send this coupon,

for it brings you, free, an 80-page book of tantalizing pictures, maps, plans, detailed costs that's been known to start people on their way here inside a week.

When you arrive, visit our new Official Information Bureau, 505 West 6th St., Los Angeles, for expert help in enjoying everything here. **FREE,** of course.

Come to California for a glorious vacation. Advise anyone not to come seeking employment, lest he be disappointed; but for tourists, the attractions are unlimited.

SEND COUPON TODAY

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Send me free book with complete details (including costs) of a Southern California vacation. Also send free routing by auto, rail, plane, bus, steamship. Also send free booklets about counties checked: Los Angeles, Orange, Riverside, Santa Barbara, Inyo, San Diego, Imperial, San Bernardino, Ventura, Kern.

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ALL-YEAR CLUB OF

*Southern
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"Gee, I'm glad I sent them by Pullman!"

WHAT DOES IT COST?

Fully half of the millions who travel by Pullman pay only \$2.50—the price of a lower berth on an overnight trip of about 300 miles. On such a trip, only \$1.00 more would buy a whole section, or \$2.00 more a private bedroom. A bedroom for two costs the same as two lower berths, or for only \$1.00 more each two could share a roomy compartment. Three could share a luxurious drawing room for only about 50c more each than their lowers cost. These are examples of the reasonable cost of Pullman accommodations. For longer trips, of course, costs are in proportion.

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The worse the weather, the more you appreciate Pullman. Let rain beat upon the window pane, let blizzards blow, let hail drum upon the roof . . . you're secure in the inviting comfort of a club-like lounge or restful Pullman bed. Weather holds no terrors for rail and Pullman. They provide the most dependable and safest transportation in the world. There has been no passenger or employe fatality in a Pullman car in nearly three years! The safety of Pullman travel is matched only by its comfort, its cleanliness. Even the air you breathe is controlled, and in air-conditioned cars it's springtime the year around! When you're planning a trip, choose this dependable, safe, comfortable way to travel. Its economy will appeal to you. Ask your ticket agent for information, or write

THE PULLMAN COMPANY • CHICAGO

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“Maybe I’ll
have to
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For the children's sake, we hope Santa Claus resists the temptation to use a Schick Shaver.

But every other male of shaving age should have someone to give him a Schick Shaver for a Christmas gift. It will bring such sheer joy and pleasure into the morning shave that he will remember and be everlastingly grateful as long as he lives.

Never again will he fuss with soap-and-water lather, brush, cream, powder or lotions. Never again will he cut or scrape himself.

Let his first happy shave be on Christmas morning, assuring him of "a merry Christmas and a happy New Year"!

Ask any authorized dealer

He will show you the Schick and explain how simply it gives a quick close shave. **\$15.**

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NO BLADES • NO LATHER

NO OTHER INSTRUMENT SO RICHLY REWARDS THE EFFORTS OF THE BEGINNER"



Dr. G. M. McKinley of the University of Pittsburgh had "only an uncertain and amateurish background in the woodwinds and practically no piano at all," when he acquired his Hammond. But he says: "This instrument has opened new and delightful vistas in music."



A concert organ for your home

"I firmly believe that no musical experience can transcend the sheer joy of learning to play the Hammond Organ," says Dr. McKinley. "No other instrument so richly rewards the efforts of the beginner."

To you who play the piano, the Hammond Organ offers an inspiring new world of music. Even though you have only a limited repertoire, your playing will always be fresh and varied. With flutes, strings, diapasons, reeds—a host of voices at your instant command—you can give perfect interpretation to every musical mood.

Designed on an entirely new principle, the Hammond is the first concert organ ever to meet the requirements of the average home. It is no larger than a spinet piano, and is priced within the reach of medium incomes. Yet its artistic qualities are so superb that it has taken the world of music by storm!

The leading musical merchant in your city has an exciting experience in store for you—an impromptu concert on the Hammond by his expert staff organist. Go and enjoy it as soon as you can—no obligation, of course. Or write for full information to The Hammond Organ, 2959 N. Western Ave., Chicago. In Canada, address Northern Electric Co. Ltd., Montreal.



AS PRACTICAL, AS INEXPENSIVE AS A FINE PIANO!

The Hammond Organ has no bulky pipes, no reeds—instead it creates beautiful organ tones by electrical impulses. Its compact mechanism is contained in a graceful console only four feet square. Much easier to move than a standard piano, the Hammond is ready to play wherever there is an ordinary electric outlet. Maintenance is negligible—this organ cannot get out of tune.

Over 1000 churches use the Hammond Organ . . . it is an appropriate donation for your church

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THE BRILLIANT

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*...thrilling climax to
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Travelers who seek an intimate knowledge of South America turn instinctively to the East Coast. For there's where fascinating play-capitals are—Rio, Santos, Montevideo, Buenos Aires! Of course you'll want to see these rare, exciting cities . . . with their race-tracks, cafes and smart suburbs only a stone's throw, so to speak, from green jungles or sweeping pampas.

The East Coast is renowned for its vivid contrasts! And "Furness Prince" is equally renowned among East Coast travelers—for its four superb motorships, Northern Prince, Southern Prince, Eastern Prince, Western Prince—for its smooth British routine of service and seamanship, for its speedy, fortnightly sailings to the four key cities of the East Coast.

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"THEY CAN THANK *You, young man,* FOR
MY CHANGE-OVER TO GENERAL DUAL 10's"



Today more new car buyers change-over to Generals than to any other make. These people realize that the slight additional cost is a small price to pay for protection that saves life. The General Dual 10 will stop a car quicker at sixty in the rain than you are accustomed to stop at 50 in dry weather. General's Top Quality represents a greater value for your dollar. For instance there is not an ounce of reclaimed rubber used in the manufacture of General Tires. Only fresh, plantation grown rubber goes into Generals. That, coupled with General's patented low pressure construction, means longer life, safer traction and luxurious easy riding comfort. Let the General Tire dealer explain the attractive change-over plan. Full allowance for the regular tires that come on your new car or full allowance for all the unused tire mileage on your present car.

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FREE BOOKLET, "Instructions to Prevent Skidding," fully illustrated, will be sent on request.

• When you apply the brakes flexible ribbons of rubber wrinkle into squeegee-like action—provide positive traction on any road, wet or dry. Stops without side-swing or tailspin.



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Take a westward trek to Phoenix this winter, and find adventure and glamour galore. This warm, dry Valley of the Sun is a land where you can still exult in the thrills of frontier-day life, but with all the modern comforts of home . . . a land where the Three R's mean Recreation, Relaxation, Romance. Canter over enchanted mesas to the tune of creaking saddle leather . . . revel in chuck-wagon dinners 'round an open camp-fire under stars as large and twinkly as the Kohinoor diamond . . . take pack trips into deep-canyoned mountains far from civilization . . . feel your blood tingle at the soft strumming of a guitar as the songs of the range come to life. You can play golf, tennis or polo, too, under the bluest of turquoise skies. And when you feel a yearning for relaxation, sun-laze the time away in palm-lined patios, or gather with smart crowds at fashionable hotels and intimate dine-and-dance-places. Phoenix, and the nearby Valley towns, offer apartments, bungalows, hotels, dude ranches, and desert inns to fit your travel budget.



'Go western' this winter for the most adventurous, most fascinating vacation of your life!

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For many years, in many ways, we've been telling the story of the Far Southwest . . . of New Mexico, Arizona and California, the greatest sunshine factory in all this broad land, where people play out-of-doors the year 'round . . . as hundreds of thousands of Santa Fe winter travelers have found to their abiding joy.

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DIRECTOR OF METRO-GOLDWYN-MAYER'S CURRENT MOTION PICTURE,
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says: "To make good movies you must have a good camera . . . Even amateurs make fine color movies with this palm-size Filmo"



Magnificent scene from the movie, "Conquest," starring Greta Garbo and Charles Boyer

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Using the inexpensive 8 millimeter film, this Filmo takes movies with still-picture economy — keeps the action of those unforgettable scenes in beautiful natural color, or in brilliant black-and-white. Filmo is palm size—is easily carried in a pocket—the world's smallest quality movie camera. With high grade F 3.5 lens for indoor as well as outdoor movies, only \$55 at camera stores everywhere. Other 8 mm. Filmos to \$85. Filmo 16 mm. Projectors from \$465 up.

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INEXPENSIVELY,
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that "Eveready" "Prestone" anti-freeze, if used according to printed directions, in normal water cooling systems, will protect the cooling system of your car against freezing and clogging from rust formations for a whole winter; also that it will not boil away, will not cause damage to car finish, or to the metal or rubber parts of the cooling system, and that it will not leak out of a cooling system tight enough to hold water.

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When you get "Prestone" anti-freeze you get your car off your mind. Protection that can't be guaranteed, is no protection at all. When you can insure your car against BOIL-AWAY, FREEZE-UP and RUST for the whole winter, under the "Eveready" "Prestone" guarantee, why consider any other anti-freeze?

"Prestone" anti-freeze does not boil away; therefore, *first cost is last cost* . . . one shot protects your car until spring.

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TRADE-MARKS

ANTI-FREEZE

FIND YOUR CAR ON THIS CHART

IMPORTANT! The price per gallon of an anti-freeze means nothing unless you know how many gallons you will need during the entire winter. You can't get that information on a boil-away anti-freeze. But you can get it for "Prestone" anti-freeze...and here it is. See how reasonably you can get two-way protection all winter long against both freeze-up and rust with one shot of "Prestone" anti-freeze—one shot because it won't boil off, no matter how warm the weather gets between the cold snaps. If your car isn't on this chart, your dealer has a chart showing all cars, and amounts needed for temperatures to 60° below zero.

Find your car and read from left to right. The first figure shows the protection you get with one gallon of "Eveready" "Prestone" anti-freeze in the cooling system; the second with one and a half gallons—and so on. "+" means above zero, "-" means below zero. If your car has a hot water heater, add 1/2 gallon to the quantity called for.

MODEL	GALLONS				MODEL	GALLONS			
	1	1 1/2	2	2 1/2		1	1 1/2	2	2 1/2
Autumn 6-52, '54; 6-51, '53; 6-54, '54 8-52, '54; 8-51, '53; 8-53, '53	+12	-4	-27	-39	La Salle 35-50, '51; 37 (50-51), '53 39, '54	+17	-4	-27	-39
Buick 40, '54; 42, '54, '57 60, '52; 51, '51, '54, '53 60, 61, 60, '56, '57 60, 60, '52; 60, '54, '54, '55 60, 60, '51, 60, '54, '55	+8	-18	-34	-42	Lincoln 2-52, '54, '57 7-52, '53 to '57	+22	+14	+4	-8
Cadillac 60, '57 370-D, '54, '55 395-D, '54, '55; 395, '55, '56 612-D, '54, '55; 60, '56 60, 60, '55, '57, '57 60, '55, '55, '56	+22	-4	-27	-39	Nash 1070, 1100, 1190, '51; 1070, '57 1220 (1070-51), '54; 1240, '54, '54, '55 1620, 1640, '54; 1700, '57 1620, 1640, '52; 1700, '57 1090, 1100, '51; 1620, '54	+12	-4	-27	-39
Chevrolet 1-51, '51, '54, '55 Master, '51, '54, '55 1-11 Master, '55 1-11 Master, '57	+12	-4	-27	-39	Oldsmobile 7, '55, '56 7, '54; 7, '54, '54; 7, '57 7, '57; 7, '54	+2	-22	-42	-42
Chrysler 6, '52, '54, '54, '55; 6F, '57 6F-6, Imp-6, '55; 6, '56 6F-6, Imp-6, '55; 6F-6, '56 6F-6, '57 DeL-6, '56, Imp, '57	+12	-4	-27	-39	Packard 120, '55, '56, 6, '57 2, '52 to '55; 1400-2-2, '56; 150, '57 Super 6, '55, '56 1500-1-2, '57 17, '51 to '57	+24	0	-27	-39
De Soto 4, '54; 4F, '55, '56; 4, '57 4F, 4F, '57	+16	+4	-12	-24	Pierce Arrow 800, '54, '54; 1601, '56; 1701, '57 840-4, '54; 845, '55 1601-62, '56; 1701-62, '57 1700-A, 1740-A, '54; 1700, 1730, '55	+20	-12	+1	-12
Dodge 6, '52, '53, '54; 6-11, '56 6-11, '56; '55; 6-11, '57	+8	-12	-42	-42	Plymouth PC, '51, '52 PC, '51, '54 PA, '51, '56, '52; PE, '54, '57, '55 PL, '55, '54; PL, '57, '57	+2	-22	-42	-42
Ford 7-6, '52 to '56; 7-6-75, '57 7-6-75, '57	+12	-4	-27	-39	Pontiac '56, '51; 6, '52, '55 6, '52, '54, '55; 6, '56 6, '57 6, '56 6, '57	+8	-18	-34	-42
Graham 80, 90, 110, '56; 85, 110, 120, '57 73-90, 6, 72-6, '56 74-6, '55; 80, '57 6, 4, '52; 6, 8, '54; 75, '55	+10	-8	-24	-32	Reo PC, '51, '54, Roy, '55 6-25, 6, '57; 6-2, '53; 6-6, '54 Roy, N-2, '51; Roy, '55, '54	+12	+2	-16	-32
Hudson 6, '52 (6-51); 6, '56; 6, '57 6, '56, '57 6, '54, '55 6, '53 (6-52)	+3	-21	-42	-42	Studebaker D-6, '52; 6, '52; D-6, '56, '57 Com, '51 to '57; D-6, '54, '55 Pres, '57 Pres, '54, '54, '56; Com, '54 Pres, '55 to '57, '55; Com, '55	+12	+2	-16	-32
Hupmobile 417, 425, '54; 421 (41), '55 510 (51), '55; 6-416-0, '54; 6, '57 417, '54; 6-421-0, '55 600, '54; 527, '55; 627, '56; 6, '57	+10	-8	-24	-32	Terraplane 6, '52, '53; 6 Spec. (early), 6 Del. (early), '52; 6, '54, '57 6, '57 6, '54; 6 Spec. (late), 6 Del. (late), '55	+2	-22	-42	-42
Lafayette 6, '54, '55, '56 '600', '57	+15	+2	-16	-32	Willys 77, '53 to '56 75, '57	+14	0	-21	-36
	+16	+4	-12	-24		-21			-37

\$2.95
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1938 SPEED MODEL CORONA

"On my tenth expedition this winter into the Belgian Congo I am taking two new Corona Silents. Experience has shown me how sturdy these fine machines are."



COMMANDER ATTILIO GATTI

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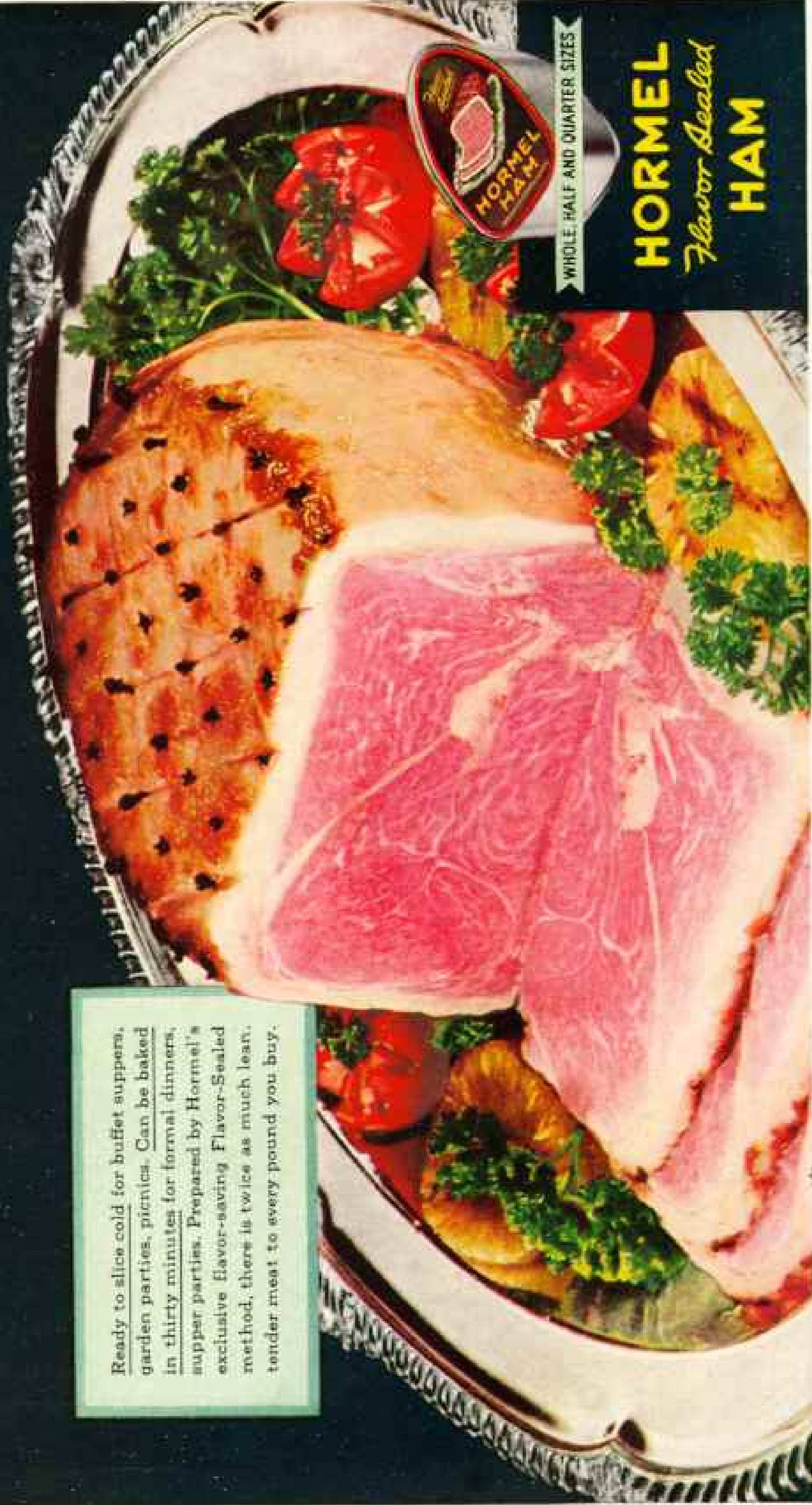
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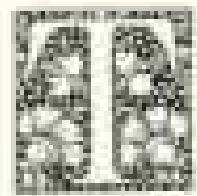
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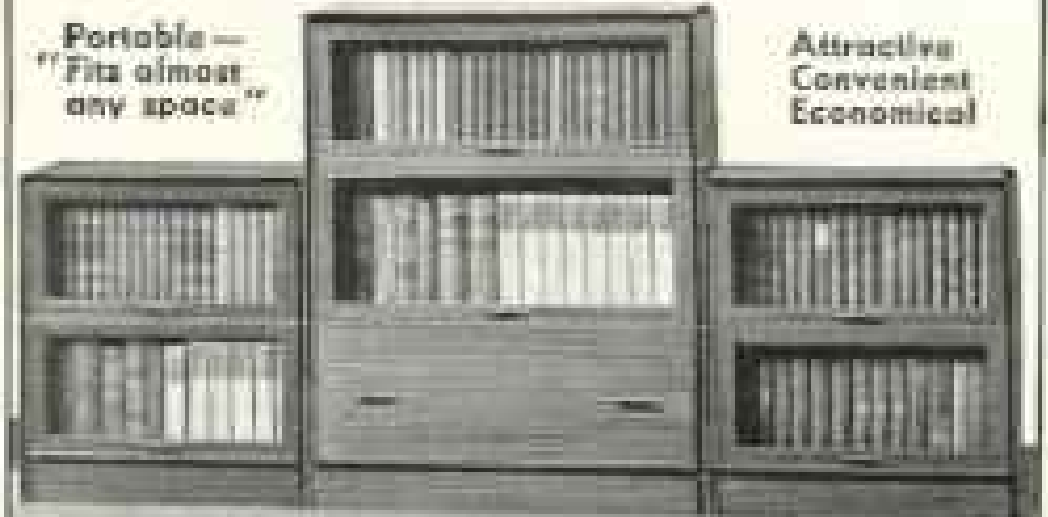
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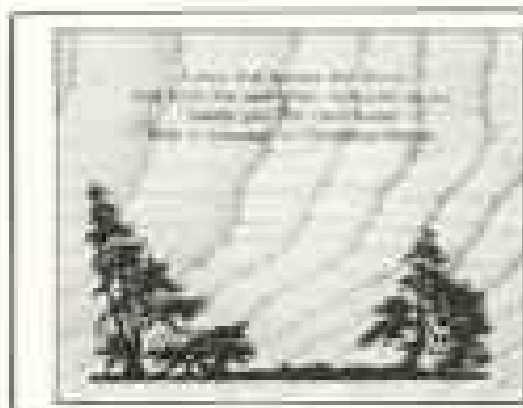
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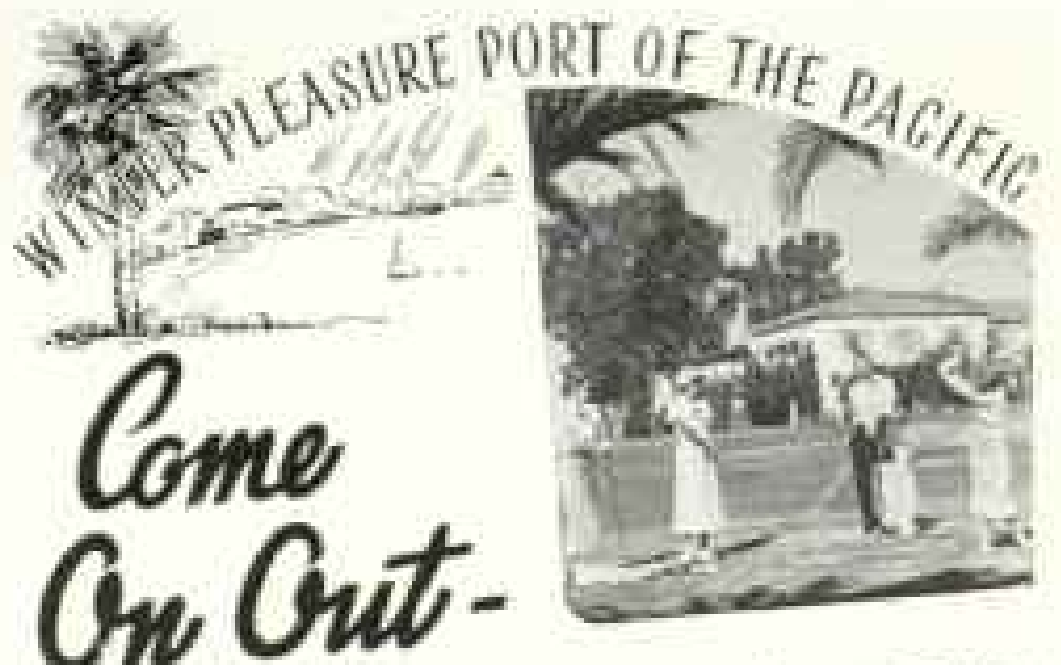
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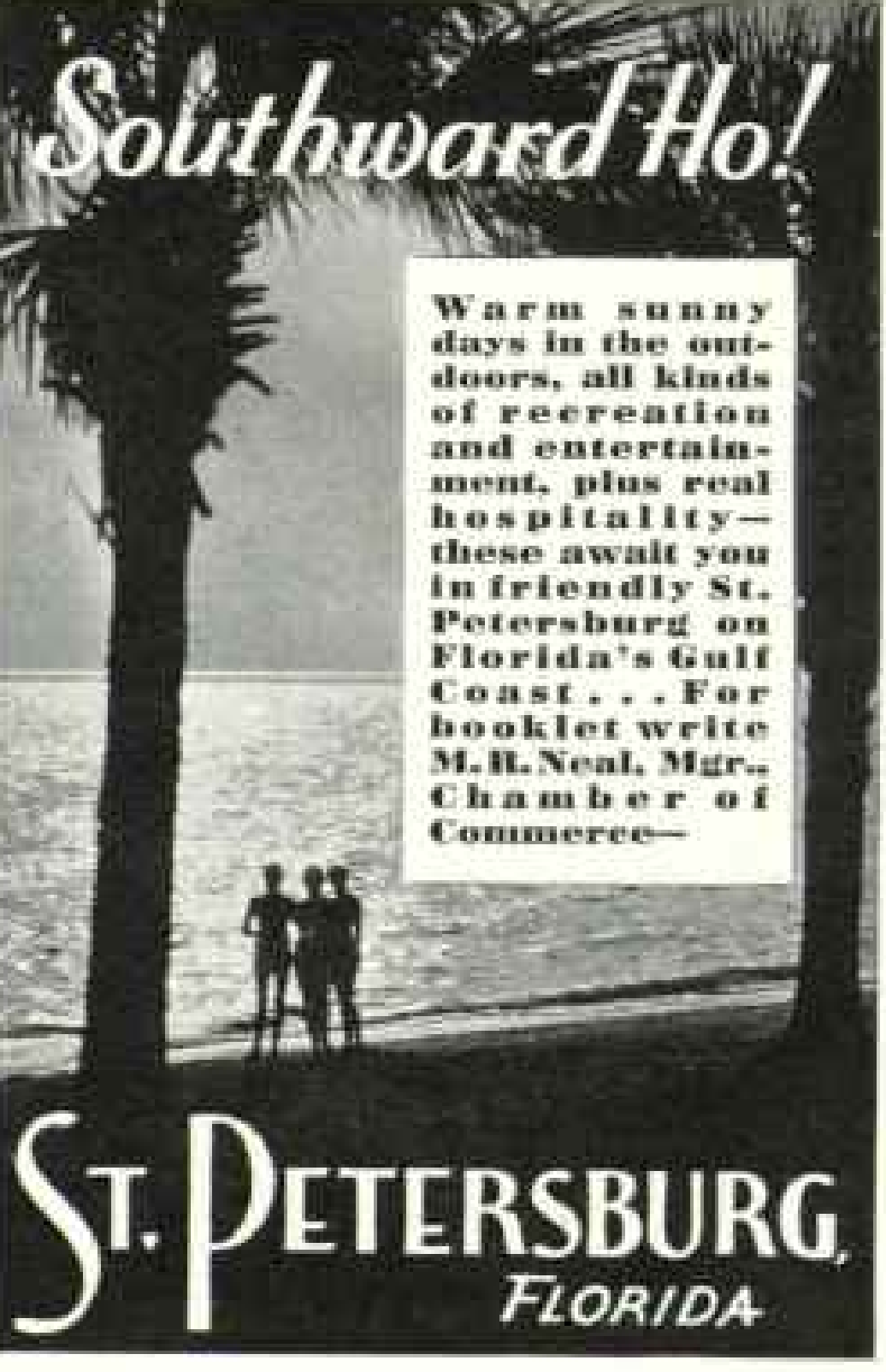
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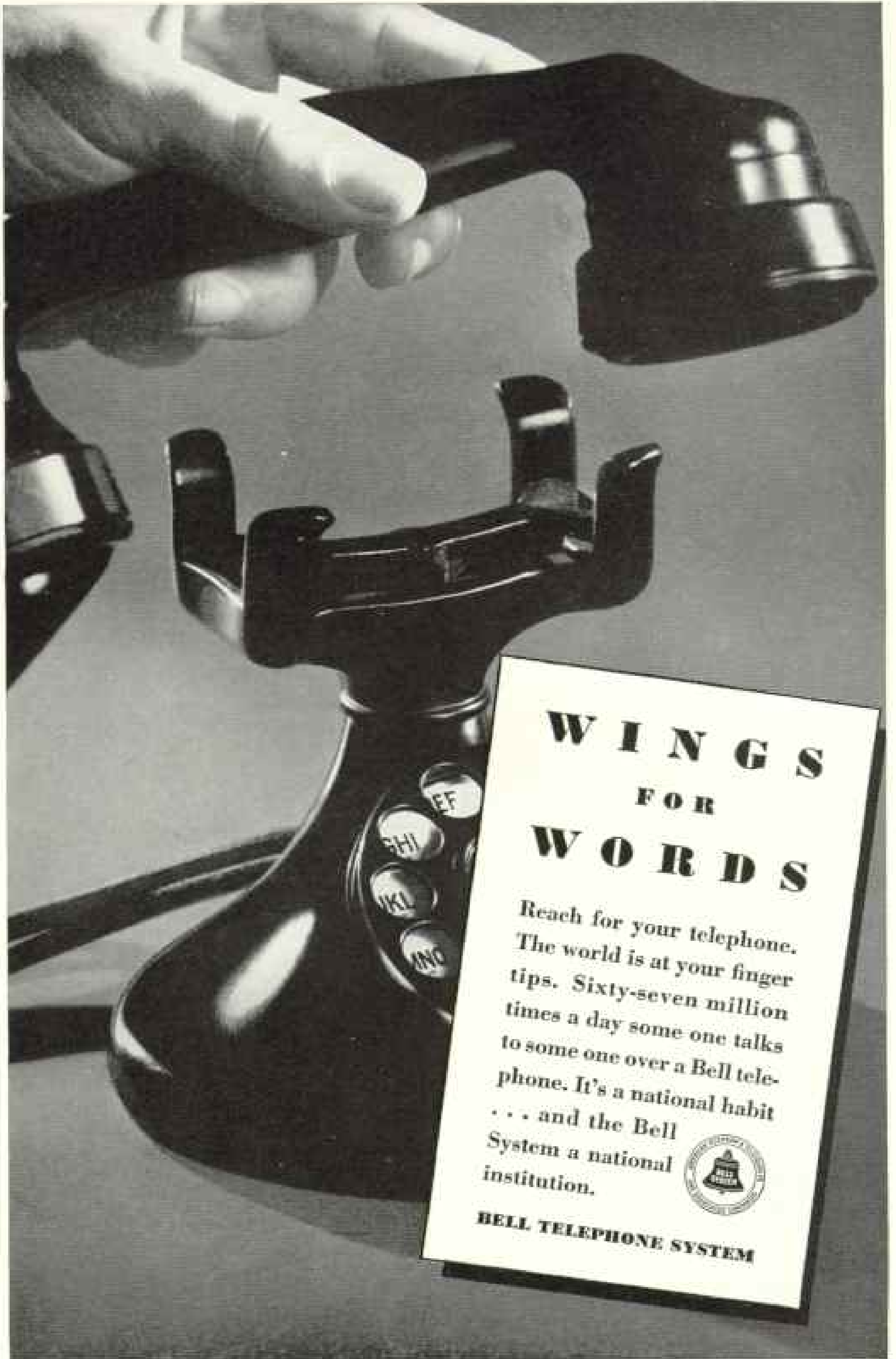
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These qualities are well known. What the possible user does want to know is *how* he can make aluminum deliver these advantages on his particular job.

HOW The aluminum salesman's chief concern is to *show how*; to distill from fifty years of experience the *know-how* which will accomplish that end. He sells by being able to say, with authority, "If you will use aluminum this way, you will be money ahead."

Such advice encompasses the correct choice of alloy in the most economical form, the latest fabricating procedures, the most successful finishes. Often it involves basically new design of parts, even of complete machines or structures.

When problems of application are broader than the accumulated experience of the individual salesman, he calls upon a large technical staff organized to give just such help. Many users of aluminum value this helpful cooperation as highly as the intrinsic qualities of the metal itself.

NO But occasionally the salesman has to say NO. Sometimes judgment and experience will determine that a proposed application is not economical in aluminum. It is important to us that the good name of aluminum be not jeopardized by ill-considered applications. Our salesmen, with no little pride, do develop the ability to recognize the proper time and place to say, "NO, you will be money ahead by using some other material."

It has been his experience that a sincere NO usually creates a confidence which may later lead to a sound and economical use. Then he will have his opportunity to say, "Yes, if you will use aluminum in this way you will be money ahead."

That is the reason people buy aluminum; that is how it is sold.

IT OFTEN HAPPENS THIS WAY

For five years one of our salesmen called on a certain manufacturer. No aluminum could be used on his product. But it was a large factory, with many kinds and types of machines, some very large.

The salesman devoted his calls to two things: Developing an appreciation of how lightness might make machinery work better; and building confidence in his own technical judgment.

Five years he called. No quotations, no apparent need for aluminum.

The time came when the men in the plant said: "We have a machine. Many duplicates of it. Each has a long conveyor, made of big links of heavy metal. Each link has many holes which position the product in process. We've decided the conveyor uses too much power. Its very weight causes expensive breakage of links. Can you show us how to apply the lightness of aluminum to solve this problem?"

Sequel: He did. That is why aluminum is bought, how it is sold.