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CONTENTS

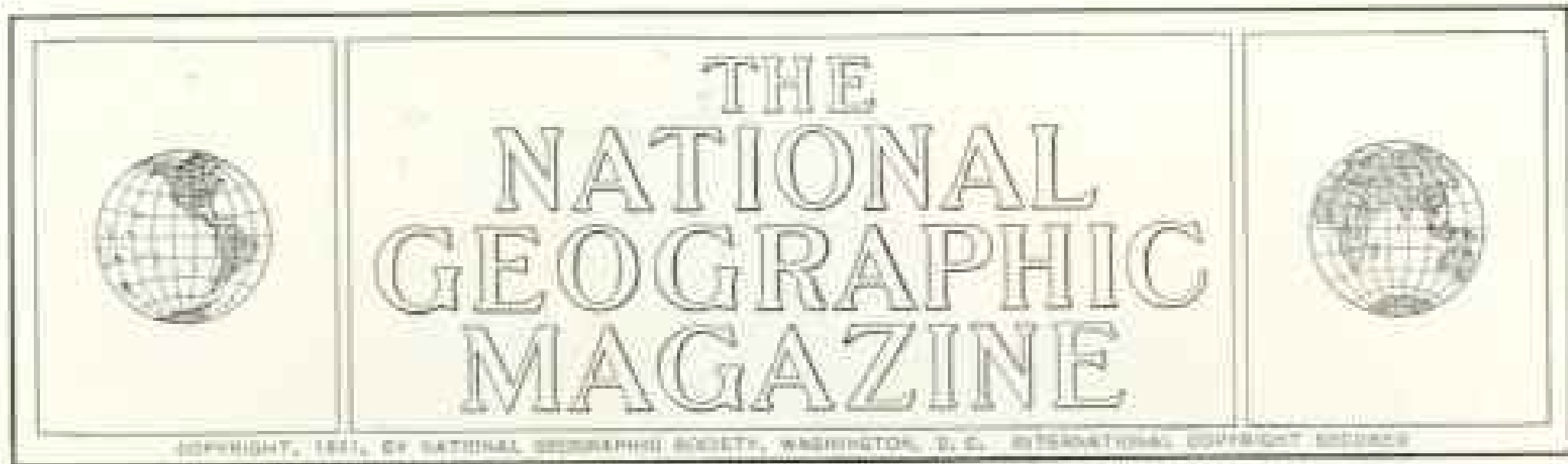
Special Map Supplement
21 Illustrations in Full Color

- The Travels of George Washington
With 54 Illustrations WILLIAM JOSEPH SHOWALTER
- The Depths of the Sea
With 16 Illustrations WILLIAM BEEBE
- Fantastic Sea Life from Abyssal Depths
Eight Paintings E. BOSTELMANN
- The Land of William the Conqueror
INEZ BUFFINGTON RYAN
- Charm and Color of Norman Byways
Thirteen Natural Color Photographs
GERVAIS COURTELLEMONT
- Byroads and Backwoods of Manchuria
With 25 Illustrations OWEN LATTIMORE

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THE TRAVELS OF GEORGE WASHINGTON

Dramatic Episodes in His Career as the First Geographer
of the United States

BY WILLIAM JOSEPH SHOWALTER, SC. D., LL. D.

AUTHOR OF "VIRGINIA, A COMMONWEALTH THAT HAS COME BACK," ETC., ETC., IN THE NATIONAL
GEOGRAPHIC MAGAZINE

With a Special Map Supplement in Five Colors

SOME of the most dramatic episodes in the many-sided career of George Washington are concerned with his travels.

It was in 1748, when he had just turned sixteen, that he set out with his young friend, George William Fairfax, on a surveying trip to the lower Shenandoah Valley of Virginia and the South Branch country of what is now West Virginia. From then until his last journey to Philadelphia, in 1798, he traveled far and wide, considering the transport methods of those days.

His journeys covered a larger area in America than those of any other official of his time. They carried him from Savannah, Georgia, to Kittery, Maine; to Crown Point, New York; from the vicinity of Lake Erie, in Pennsylvania, to the neighborhood of Point Pleasant, in West Virginia, and Gallipolis, in Ohio. He traveled on horseback from Williamsburg to Fort Le Beuf; from Mount Vernon to Boston; from Dismal Swamp to Braddock's Field.

He followed the South Branch of the Potomac to its source, laid out a chain of frontier forts from Maryland to North Carolina, boated down and up the Ohio from the mouth of the Monongahela to the confluence of the Kanawha, and hunted

buffalo along the lower reaches of the latter stream.

The large Map Supplement accompanying this number and the maps on pages 12, 36, and 40 show in detail, for the first time, the various routes followed by Washington during the four periods of his travels. Many months of careful research have been devoted to plotting these routes, which are based upon Washington's own diaries and upon the records of his contemporaries.

WASHINGTON'S PROWESS AS A HORSEMAN
OFTEN DEMONSTRATED

When one recalls the furor aroused by the famous fitness test that President Roosevelt ordered—that every Army officer should ride 90 miles in three days—and compares that test with Washington's horseback feats, it is hard to suppress a smile; for Washington sometimes averaged upward of 35 miles a day for more than a week, and on one occasion rode 360 miles in 16 days, making the trip from Cumberland, Maryland, to Williamsburg, Virginia, and return; and two days of these were "time out" waiting for an armed escort, as he carried the pay for Braddock's army in his saddlebags. He modestly says that his habitual gait on horseback was five miles an hour.



Photograph by Orren R. Lowden

WAKEFIELD, THE BIRTHPLACE OF WASHINGTON

The restoration of the birthplace of the Father of His Country was made by the Wakefield National Memorial Association. It will be furnished and open for the Bicentennial celebration in February. The original house was burned while George was a baby.

Horses often broke under the strain, when public duty called Washington to move with dispatch. For instance, when riding to join General Braddock, upon reaching the vicinity of what is now Charles Town, West Virginia, he reported that he killed one horse outright and had rendered the three others he had brought along unfit for service.

When there was no urgency of public business his horses fared better. After his trip to his western lands in 1784, during which he had twice crossed the Appalachians and had been so far from civilization that he could get no corn for his horse (and nothing or only boiled corn for himself), he sets down with satisfaction that he had traveled 680 miles between the first day of September and the fourth day of October, on the same horses.

The accuracy with which Washington on horseback gauged distances well may excite our wonder. Often he tells in his notes how far he traveled on a given day. In many places where a staff member of the NATIONAL GEOGRAPHIC MAGAZINE

was able to check these distances with speedometer readings, they corresponded remarkably with Washington's mileage record.

AN EARLY TASTE OF HARDSHIPS ON THE FRONTIER

The youthful lowland aristocrat was to get a very early taste of the hardships of the highland frontier, as the lower Shenandoah Valley then was. The third night of his trip with young Fairfax was one he doubtless never forgot.

"We got our Supper," he tells us, "and was lighted into a Room and I not being so good a Woodsman as ye rest of my Company striped myself very orderly and went in to ye Bed as they called it when to my Surprize I found it to be nothing but a Little Straw—Matted together without Sheets or any thing else but only one thread Bear blanket with double its Weight of Vermin such as Lice Fleas &c I was glad to get up (as soon as y. Light was carried from us). I put on my Cloths and Lay as my Companions. . . . I made a Promise



Photograph by Clifton Adams

AN OLD GIG THAT BELONGED TO LORD FAIRFAX

The old "chair," which now belongs to collateral descendants of George Washington, once served Lord Fairfax at his estate, Greenway Court, and is the type of vehicle driven by Washington when traveling in Tidewater Virginia. The seat at the rear was for the negro servant boy who always went along to open gates and look after the horse.

not to Sleep so from that time forward chusing rather to sleep in y. open Air before a fire. . . ."

The next night he was more favored. The party finished its work about 1 o'clock and went up to Fredericktown (Winchester). There, he tells us, his baggage came to him and ". . . we cleaned ourselves (to get Rid of y. Game we had caught y.

* This and succeeding quotations from the Diaries of George Washington are taken from the four volumes edited by John C. Fitzpatrick, A. M., L. H. D., and published for the Mount Vernon Ladies' Association of the Union by Houghton Mifflin Company.

Night before) and took a Review of y. Town and thence return'd to our Lodgings where we had a good Dinner prepar'd for us Wine and Rum Punch in Plenty and a good Feather Bed with clean Sheets which was a very agreeable regale."

From Winchester they went to Maj. Andrew Campbell's. Major Campbell kept an ordinary on the road from Winchester to what is now Hancock, Maryland, and young George chronicles that there he "had a Tolerable good Bed (to) lay on."

The next few nights the party spent at Thomas Barwick's, who lived on the south side of the Potomac, opposite Hancock.



Photograph by Clifton Adams

LOOKING DOWN THE SOUTH BRANCH OF THE POTOMAC RIVER THROUGH THE TROUGH (SEE MAP, PAGE 36)

As a boy surveyor Washington described this split mountain, and more than a century later President Grover Cleveland found it an ideal spot for bass fishing.

Their next stopping place was with Col. Thomas Cresap, opposite the mouth of the South Branch and about 40 miles above Hancock. Washington tells us that it rained all day and describes the road in terms we still occasionally hear: "I believe y. worst Road that ever was trod by Man or Beast."

At Cresap's, now Oldtown, Maryland, the travelers met with thirty-odd Indians returning from the warpath. Washington and his associates had some liquor, "of which we gave them Part it elevating there Spirits put them in y. humour of Dauncing." He then describes their dance in the sprightly manner of a born reporter.

From Cresap's the boy surveyor and his party went up the Potomac to Patterson Creek, and up the latter stream over the very ground where, a few years later, he

was to locate a chain of forts (see map, page 40, and text, pages 31-33). At that time white men could go unguarded wherever they would. Yet six short years were to transform all that area into a no man's land, with French and Indians fighting against the English and the colonists.

A PICTURE OF THE SIMPLE LIFE OF THE FRONTIER

At the head of Patterson Creek, a short day's ride above the place where Nancy Hanks, mother of Abraham Lincoln, was born, young Washington came to Solomon Hedges's, "one of His Majestys Justices of ye. peace for ye County of Frederick where we camped."

He unconsciously preserved for us a picture of the scant and simple life of the frontier of that day, even in the best homes,

when he adds: "When we came to Supper there was neither a Cloth upon ye. Table nor a knife to eat with but as good luck would have it we had knives of (our) own." The lady of that household was none other than the daughter of John Vanmeter, who owned one of the finest sections of river bottom in the present State of West Virginia and to whom many prominent people in every section of the country proudly trace their lineage.

From there, "attended with y. Esqr," Washington rode over to the South Branch of the Potomac, to Henry Vanmeter's. He was now in an area that must have warmed his heart, for he was always a judge of good land, and as he rode up the South Branch to the home of James Rutledge, one of the earliest settlers in that region, whom Washington describes as a horse jockey, he must have been impressed with the magnificent scenery.

To this day the valley of the South Branch is still unsullied by blaring advertising signboards; the river itself is as clear and sparkling as it was then. To this day, too, there are James Rutlidges by other names resident in this area, for it is a great cattle- and horse-grazing country. In summer the stock is driven to the blue grass and in winter is brought down into the valley, to be fed from the haystacks that dot the landscape. Augusta County records show that Rutledge traded in stock as far afield as the Carolinas.

DEVELOPING GEOGRAPHIC INSTINCTS

There was more on this first trip than lice and fleas and eating at a table without a cloth. The boy diarist records that one night the straw bed caught fire! On another night the wind blew their tent away. Still another night was so smoky that they had to "leave ye Tent to ye. Mercy of ye Wind and Fire."

Washington's geographic instincts began to develop on this early trip. The Trough (see opposite page), about six miles below Moorefield, he described as "(a) couple of Ledges of Mountain Impassable running side and side together for above 7 or 8 Miles and ye River down between them." He adds: "You must Ride Round ye back of ye. Mountain for to get below them."

With boyish zest Washington ate his evening meal on Friday, April 8.

"We Camped this Night in ye Woods near a Wild Meadow where was a Large

Stack of Hay after we had Pitched our Tent and made a very Large Fire we pull'd out our Knapsack in order to Recruit ourselves every (one) was his own Cook our Spits was Forked Sticks our Plates was a Large Chip as for Dishes we had none."

In a day or two the boys were homeward bound. On the way Washington saw his first rattlesnake, and they got lost. They had gone into the Shenandoah Valley by way of Ashbys Gap and wanted to come out by way of Snickers Gap. But when they reached the top of the mountain they found they had taken the wrong road, and were again in Ashbys Gap! What did they do but turn back, ride down the mountain, down the river, and then up the mountain again, so that their purpose of going by Snickers might not be thwarted!

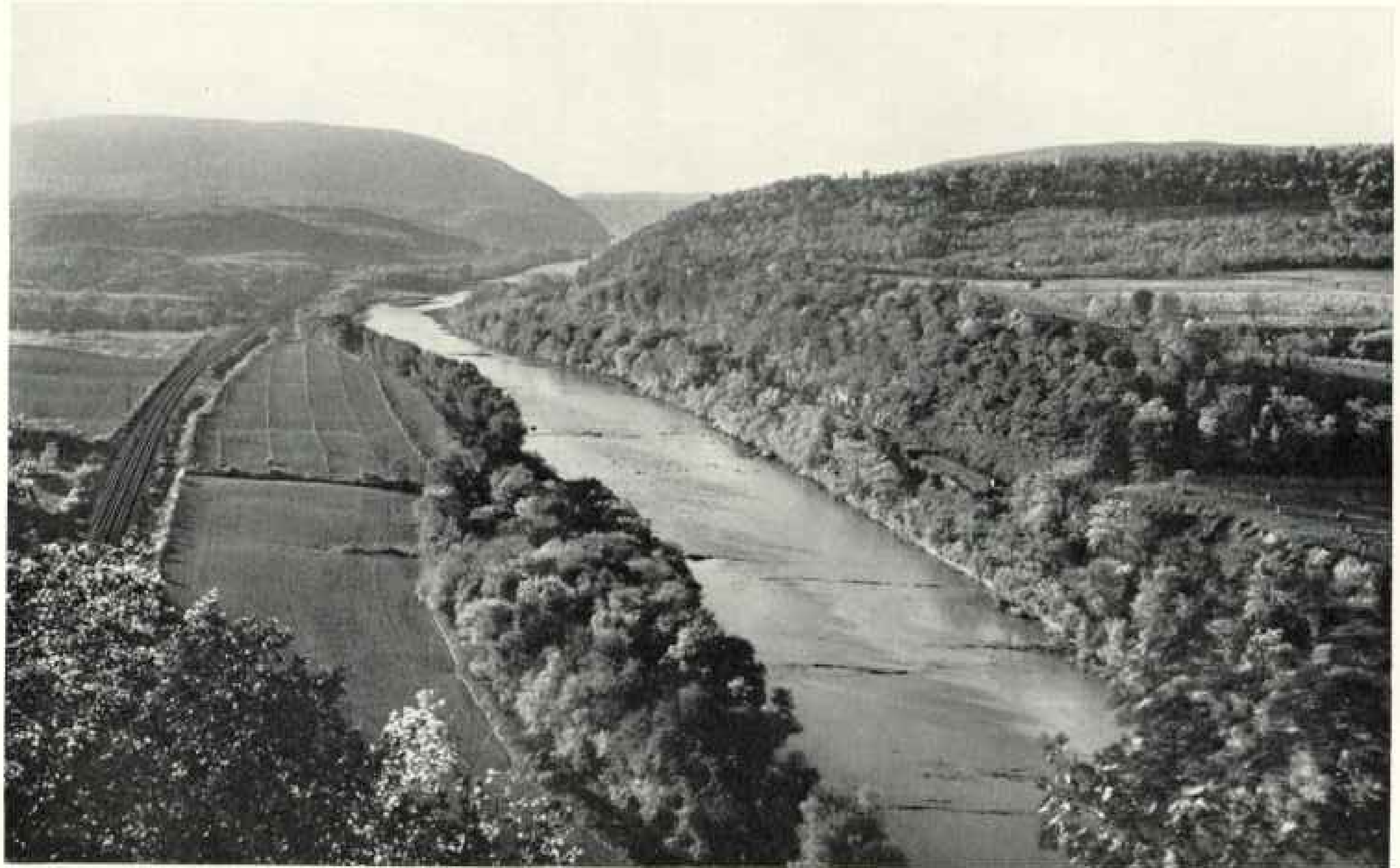
YOUNG WASHINGTON WAS WELL PAID FOR HIS SURVEYS

A letter written to a friend while on one of the several other surveying trips he made to the waters of the Shenandoah, the Cacapon, and the South Branch in 1749, 1750, 1751, and 1752 indicates it was the good pay that reconciled young Washington to the hardships of a surveyor's life. Therein he says that he had not slept above three or four nights in a bed, but after walking all day he laid down "before the fire upon a Little Hay Straw Fodder or bairskin which ever is to be had with Man Wife and Children like a Parcel of Dogs or Catts & happy he that gets the Berth nearest the fire there's nothing would make it pass of tolerably but a good Reward a Dubbleloon (\$7.16 $\frac{2}{3}$) is my constant gain every Day that the Weather will permit my going out and some time Six Pistoles (\$21.50)."

The training in woodland adventure which his surveying trips had given him laid deep hold upon the imagination of the future soldier and statesman. Less than two years before it had been his dream to follow the footsteps of his elder brother, Lawrence, and become a midshipman; but now the mountains claimed his interest.

A TASTE OF THE SEA

However, the Fates ordered that he should have his taste of the sea before committing his destiny to the land. His brother Lawrence contracted pulmonary trouble and in the fall of 1751 was ordered to Barbados. Young George, not yet 20



Photograph by Clifton Adams

SCENES OF WASHINGTON'S FIRST EXPLORATIONS—THE POTOMAC VALLEY ABOVE BERKELEY SPRINGS.

George Washington, the boy surveyor, ran boundary lines on the south side of the river in this area, and after the Revolutionary War rode over them and forded the river near here on his way to his Pennsylvania lands.



PANORAMA OF CUMBERLAND, MARYLAND, ALSO KNOWN IN WASHINGTON'S TIME AS WILLS CREEK AND FORT CUMBERLAND. In the distance is the Narrows through Wills Mountain, where the Braddock Road to what is now Pittsburgh began (see pages 11 and 22).

7



Photographs by Clifton Adams

THE CHEAT LAKE BRIDGE, SITE OF THE OLD ICE'S FERRY, WHERE WASHINGTON CROSSED THE CHEAT RIVER IN 1784



Photograph by Orren R. Loudon

THE OFFICE OF WASHINGTON AT FERRY FARM, OR CEDAR GROVE, OPPOSITE FREDERICKSBURG

This is the only original building surviving on the farm where he spent much of his youth (see, also, illustration, page 9). Many of Parson Weems's stories, including the cherry-tree tale and the killing of the colt that would not be broken, have their "locale" here.

years old, accompanied him and decided to keep a diary of the voyage.

Boylke, he ruled his diary in true log-book form, entered in it the speed and course of the ship, and noted the direction of the wind in approved seaman fashion. Unfortunately, the first nine pages are lost.

On the 6th of October he reported the catching of a dolphin, a shark, and a pilot fish, and on the 7th his unsuccessful attempt to entice two barracudas with a baited hook while they played for several hours under the stern of the ship.

That the trip must have been a rough one we may judge from his entry on the 30th of October, for he says: "This morning arose with agreeably assurances of a certain and steady trade Wind which after near five Weeks buffeting and being toss'd by a fickle and Merciless ocean was glad'ening knews."

Landing in Barbados, the Washingtons were as much entertained as the health of Lawrence would permit. George was afraid to go to Maj. Gedney Clarke's, for he had heard they had small-pox there; but finally he yielded to a personal invitation from Mrs. Clarke and her niece, Miss Roberts, "to come and see the serpts fir'd." This was a display of homemade squibs in commemoration of the Gunpowder Plot in England.

At Judge Satus Maynard's he became acquainted with tropical fruits. "After Dinner," he says, "was the greatest Collection of Fruits I have yet seen

on the Table there was granadella the Sappadilla Pomgranate Sweet Orange Water Lemmon forbidden Fruit apples Guavas, &ca. &ca. &ca."

The round of entertainment went on until the 17th of November, when young George contracted smallpox. He did not recover until December 12th. Ten days later he sailed alone for Virginia, recording as he went his impressions of Barbados, its governor, the agricultural situation, etc., and exclaiming how strange it was that such a country should be in debt. Furthermore, of all the island fruits, he favored



Photograph courtesy of Virginia State Conservation and Development Commission

FERRY FARM, ACROSS THE RAPPAHANNOCK FROM FREDERICKSBURG, WASHINGTON'S HOME BEFORE HE ACQUIRED MOUNT VERNON

The large group of buildings in the middle ground on the near side of the river represents the site of the old homestead, to which Washington often referred as River Farm, not to be confused, however, with the "River Farm" of the Mount Vernon estate. Mary Washington in after years lived across the river in the neighborhood shown in the extreme upper left corner of the picture.

the pineapple. "The Avagado pair," he tells us, "is generally most admired tho none pleases my taste as do's the Pine."

GOVERNOR DINWIDDIE IS DEEPLY IMPRESSED WITH YOUNG WASHINGTON

Upon his return, a fortnight before his twentieth birthday, Washington stopped at Williamsburg and paid his respects to Governor Dinwiddie, with whom he later dined. That dinner soon was to prove another milestone on his road to fame. So impressed was the governor by the bearing and character of this lad that a few months later he gave him a commission as Adjutant of the Southern District of Virginia.

Next year the governor needed the help of a diplomat who must also know wood-

craft. What he wanted was an agent able to penetrate leagues of trackless forest, win the support of certain Indians around what is now Pittsburgh, and then take a message to the French in northwestern Pennsylvania demanding that they retire from the Ohio basin. To this task Dinwiddie called Washington.

The alacrity with which the boy responded is shown in his report on his return. He had set out on the same day he received the commission, going from Williamsburg to Fredericksburg, where he engaged Jacob Van Braam as his interpreter, and thence to Alexandria, where he bought the necessary supplies, and to Winchester, where he got his horses and baggage. Thence he went to Wills Creek, now

Cumberland; there he engaged Christopher Gist as guide, two white servants and two Indian traders, to go with him.

Little could he then have dreamed that the message he bore from Governor Dinwiddie, under instructions from the King of England, would lead to a war which, in the words of Parkman, "kindling among the forests of America, scattered its fires over the kingdoms of Europe and the sultry empire of the Great Mogul; the war made glorious by the heroic death of Wolfe, the victories of Frederick the Great, and the exploits of Clive; the war which controlled the destinies of America and was first in the chain of events which led on to her Revolution, with all its vast and undeveloped consequences."

WASHINGTON RIDES OVER THE SITE OF FUTURE PITTSBURGH

The party set out from Wills Creek on the 15th of November. The first night they came to Georges Creek and camped a mile or so south of what is now Frostburg, Maryland. They reached Gist's house, in the new settlement around what is now Mount Braddock, on Sunday night, November 18. Anyone who has been over such mountains as Big Savage, Negro Mountain, Keysers Ridge, and Laurel Hill by the Old National Trail knows what hard climbing those four days involved.

The snow was ankle deep when they set out from Gist's. Crossing the Youghiogheny just below Connellsville, they headed north to Jacobs Creek, and spent the night at Jacob's cabins, which stood not far from what is now Mount Pleasant; then they turned northwest, crossed Sewickley Creek, and came to the big bend of the Monongahela almost at the spot where the highway bridge crosses the river from McKeesport to Duquesne. Here they marched across the site of that busy industrial center of to-day and then recrossed the river after passing below what is now Kennywood Park.

Frazier's cabin stood just about where the plant of the Edgar Thompson Steel Works stands to-day, between the river and Washington Street, at the mouth of Turtle Creek. From here Barnaby Currin and Henry Steward, in a canoe, carried the baggage down the river to its confluence with the Allegheny. Washington, with Gist, rode over the site of the future Pitts-

burgh. He reached the forks of the Ohio ahead of his baggage and, while he waited for Currin and Steward, studied the point as a site for a fort. He found a "considerable bottom of flat, well-timbered land all around it." How different the "point" at Pittsburgh to-day, with its downtown district and its great highway bridges!

The party swam its horses across the Allegheny in almost the same spot where the Manchester Bridge crosses it to-day and camped not far from the present Federal Highway No. 19.

The next morning they set out down the river, and at what is now known as McKees Rocks came to the home of the Indian Shingiss, at that time a friend of the English, but later to justify Hecke-welder's description of him as "a terror to the frontier settlements of Pennsylvania."

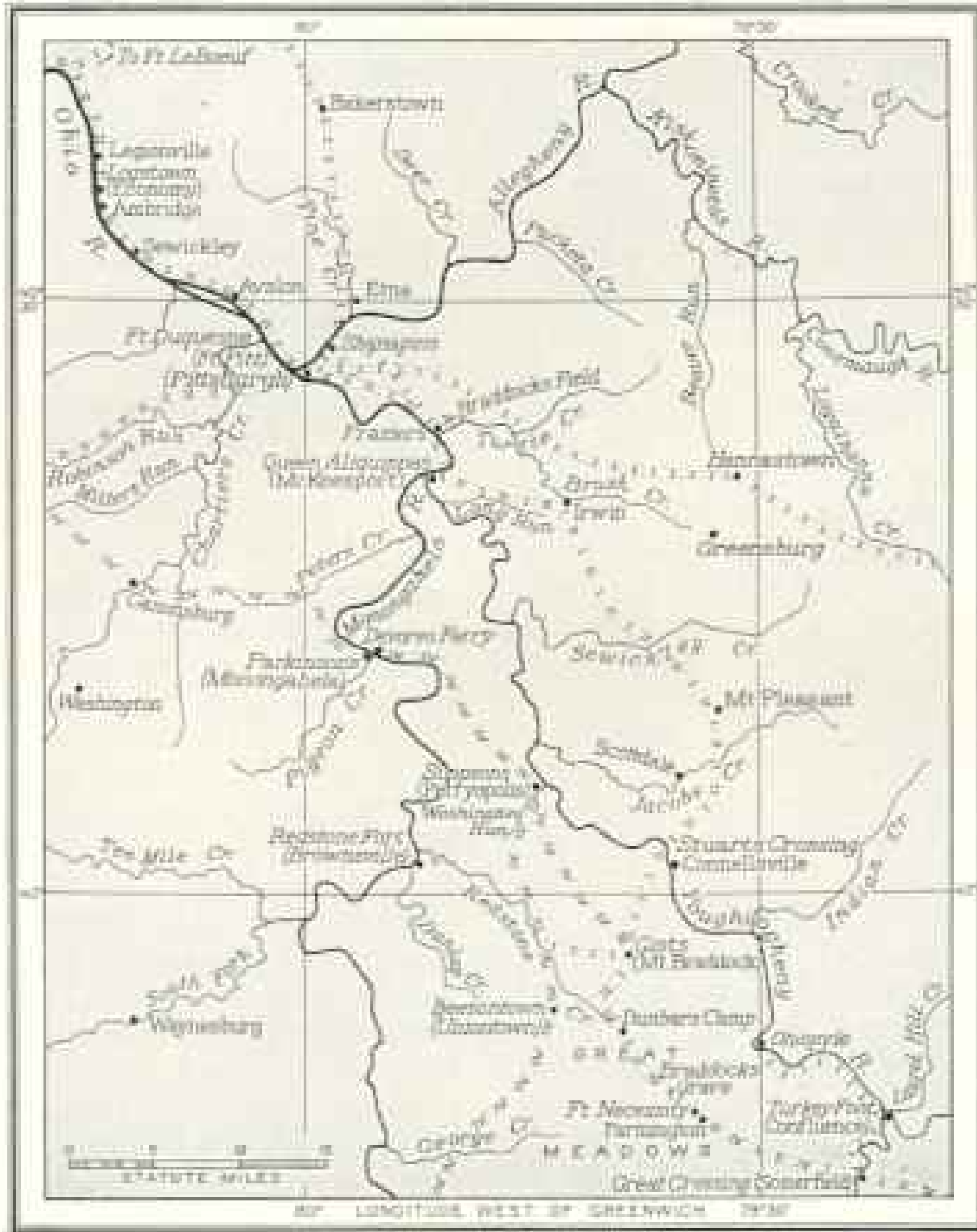
While at the home of Shingiss, Washington, not yet 22 years old, made a careful study of the site, for it was here that the Ohio Company had planned to build its fort. The youthful major was quick to see the disadvantages of this site as compared to that within the forks of the Ohio, and reported thereon to Governor Dinwiddie. The French, English, and American governments in later years put their seal of approval on the findings of the boy soldier.

THE OHIO RIVER THEN AND NOW

When Washington left McKees Rocks, Shingiss accompanied him to Logstown, the headquarters of the Half-King, a Seneca chief so known because he owed allegiance to the Six Nations and could be overruled by them.

What changes have been wrought in the land over which Shingiss and Washington marched together that day! Along the river is one unending succession of industrial plants, with Ohio River stern-wheelers, vast fleets of coal barges, and all sorts of river craft.

Washington marched over the sites of what are now Bellevue, Avalon, Ben Avon, Emsworth, and fashionable Sewickley, and just below Ambridge, with all its factories, came to Logstown. On one of the many railroads of the Pittsburgh district there is the flag station of Legionville, near the town of Economy. Here, where Mad Anthony Wayne camped in his final march to end Indian hostilities, was Logstown, built by the French as a trading post.



Drawn by J. M. Darley

WASHINGTON'S TRAVELS IN SOUTHWESTERN PENNSYLVANIA

One of the most difficult problems encountered in tracing the routes followed by George Washington in his travels has been presented by the fact that he frequently employed several spellings for the same place, a practice in which he was not alone among his contemporaries. For instance, Devores Ferry is encountered in the literature of Washington's day as Deborres, Deborres, Devoirs, Devoies, and Devoes. His travels may be conveniently divided into four periods, 1732 to 1758, 1759 to 1774, 1775 to 1783, and 1784 to 1799, and are indicated respectively on the routes shown by the Roman numerals I, II, III, and IV (see map, page 36).

Many a commentator has been unable to place Logstown. One of these recently wrote that "it is supposed to have been on Big Beaver Creek." But the National Geographic Society's research disclosed in the Pennsylvania Archives at Harrisburg the old "Depreciation Pay Surveys" made by the State of Pennsylvania in giving her Indian War and Revolutionary War soldiers free lands, and these plat the entire area down the Ohio to the mouth of Big Beaver Creek (Beaver River) and show

Logstown's location on the flats at present-day Legionville, miles up the Ohio from the mouth of Big Beaver.

Also, French and English contemporaneous maps and Washington's own map (see page 10) show the location of Logstown exactly where the depreciation land surveys place it.

When Washington arrived, "between Sun-setting and Dark, the 25th Day after I left Williamsburg," he found the Half-King out at his hunting cabin, about 15 miles off, on Little Beaver Creek. But Monakatoocha, headman of the Logstown Shawnees, was there and dispatched a runner to advise the Half-King of Washington's arrival. For this service Washington gave him a string of wampum and a twist of tobacco and "invited him and the other great Men present" to his tent.

Finding there a group of Frenchmen who had deserted the French cause, after boating 100 men and 8 canoeloads of provisions up from New Orleans, the alert young Virginian made careful inquiry of them as to the situation of the French from New Orleans to Lake Erie and obtained much valuable information as to the location of forts, etc.

The Half-King arrived next day. Young Washington asked the Indian to his tent for a private interview and sought infor-



Photograph by Clifton Adams

TABLET ON THE GEORGE WASHINGTON BRIDGE ACROSS THE ALLEGHENY RIVER:
PITTSBURGH

With one hatchet as their only implement, Washington and Gist spent nearly a day near this spot making a raft. Poling through the ice-blocked waters, Washington was hurled into the rushing stream and almost lost his life (see text, page 15; and illustrations, pages 17 and 20).

mation about that part of his trip which lay ahead of him.

THE HALF-KING'S COÖPERATION IS WON

Washington found the Half-King very bitter against the French, charging them with the violation of a solemn treaty, and also with receiving him rudely when he visited them. When they signed the treaty the French had solemnly taken a silver basin and put in it the leg of a beaver, to witness that all nations might come and eat thereof in peace, and had placed by the side of the dish a rod with which, they said, the Indians were to scourge anyone, including the French themselves, who dared break the pact.

The next day, November 26, a conference was held at the Long House. Washington made a speech to the Indians. He told them that their brother, the Governor of Virginia, had sent him with a letter to the French, demanding their retirement from the area, and on his way was to impart this information to his Indian brothers and ask their aid and advice.

There was soon much bustle about Logstown, as the Half-King tried to mobilize a force to march with Washington to Fort Le Boeuf.

How many among the tens of thousands who daily pass the site where Logstown stood, whether in the fast trains that rumble up and down the Ohio, by the Ohio River Boulevard, or on the puffing side-wheelers on the river, know that they are passing one of the most historic spots in America, where the American Indian at his best and the man who was destined to become America's premier hero met and planned an undertaking that was to figure largely in the shaping of America's future? The Daughters of the American Revolution have marked the spot as the camping place of General Wayne, but no marker tells of Washington's visit there.

MARCHING THROUGH THE WILDERNESS TO
VENANGO, NOW FRANKLIN, PA.

On November 30th the party started, the Half-King, Jeskakake, White Thunder, and a hunter all accompanying Wash-



© Johnston and Johnston

THE UNIVERSITY OF PITTSBURGH'S "CATHEDRAL OF LEARNING"

The windows of this great edifice overlook the scenes of Washington's earliest struggles against Indian and Nature.

ington. Contemporary maps show they marched down the Ohio to the vicinity of Rochester, and then cut across country to the northeast. Gist says they marched 15 miles and came to Murderingtown, on a branch of Beaver Creek. It is so shown on both the French and the British maps of that time. The following day they marched about 30 miles and came to the intersection of the path from the Kuskuskies, who lived somewhere above New Castle.

They reached Venango on December 4. There they found a Frenchman, Captain Joncaire, who advised that, while he was in command on the Ohio, there was a general at Fort Le Boeuf, to whom Dinwiddie's message should be presented. Joncaire invited Washington to supper.

"The Wine," says the Virginian, "as they dosed themselves pretty plentifully with it, soon banished the Restraint which at first appeared in their Conversation; and gave a licence to the Tongues to reveal their Sentiments more freely. They told me, That it was their absolute Design to take Possession of the Ohio, and by G—they would do it."

THE BOY MAJOR FINDS THE FRENCH GENERAL A WILY ADVERSARY

Here Washington had trouble with his Indians. When Joncaire found that Half-King was there, he sent for him and professed indignation at not having been advised of his arrival, but expressed great pleasure in seeing him. The Frenchman plied the Indians with cheap presents and much liquor. It required all the astuteness of Washington and Gist together to get the Indians away from Joncaire. They went up French Creek, through what are now Meadville and Cambridge Springs, to Fort Le Boeuf.

The young Virginian delivered his letter from Governor Dinwiddie, insisting that the French leave

the entire area, and received one in which the French commander, Le Gardeur de St. Pierre, announced that he intended to stay.

While the French were framing their answer, Washington busily studied their fort and had his men count the canoes being made ready for the following spring's advance to the forks of the Ohio. He attended to every phase of his business with utmost care, and then prepared to return.

But St. Pierre was crafty. He was excessively courteous while, as Washington wrote, he was "exerting every Artifice which he could invent to set our own Indians at Variance with us, to prevent their going 'till after our Departure. Presents, Rewards, . . . every Stratagem which the most fruitful Brain could invent, was practised, to win the Half-King to their Interest." No wonder the daring Virginian later said that never in his life had he suffered so much anxiety!

A TREACHEROUS REDSKIN FIRES AT WASHINGTON AND MISSES

At last patience ceased to be a virtue. Washington protested to St. Pierre against this double dealing. Night came and still the Indians delayed, for they had been promised a present of guns if they would do so. The next day, the influence of presents having passed, fire water was resorted to, and Washington later wrote that he had no doubt that this would have succeeded if he had not urged and insisted with the Half-King until the old chief finally kept his agreement.

Between the wiles of the French and the duplicity of the Indians, Washington needed his last ounce of courage and resource. But he won, and there, on the banks of French Creek, the Fates further annealed the mettle that was to transform this lad of less than 22 years into the matchless leader he afterward became.

The return journey was also full of hardship and danger. The French followed them down French Creek, still trying to entice the Indians away from them, and Gist writes that "we had the pleasure of seeing the French overset, and the brandy and wine floating in the creek."

Leaving Venango on their return, their horses were so feeble that all but the drivers of the pack horses dismounted, put packs on their own backs to help the horses, and started out afoot.

Eager to report promptly to Governor Dinwiddie, Washington marched on with Gist afoot, leaving the remainder of the party to follow. At Murtheringtown he expected to leave the roundabout trail, by way of what are now Zelenople, Rochester, and Legionville, and take a short cut through the country to the Ohio forks.

Passing through the beautiful, rolling country in the west of what is now Butler County, they came again to Murtheringtown, where they met an Indian whom Gist believed he had seen at Venango on the way up. The redskin called Gist by his Indian name and pretended to be glad to see him. He would be very happy to guide them on their way. But, though he wanted to appear friendly to such a degree that he carried Washington's pack, it was clear to both white men that he was trying to steer them away from Shanapins town rather than to it.

Thwarted in his purpose to mislead them, the Indian became sullen; in an open meadow he suddenly wheeled and at 15 paces fired at Washington. He then ran ahead and behind a big white oak tree started to reload, but Washington and Gist were upon him. They let him finish reloading, covered by their guns. Then they forced him to march with them.

Gist wanted to kill him on the spot, but Washington would not have it; so Gist told him that the only alternative was to rid themselves of the Indian's company under a ruse, and then to march all night to escape his vicinity. So they ordered the Indian to make a fire by a stream, as if they intended to sleep there; then, giving him a cake of bread, they told him to go to his cabin and have some meat ready for them when they arrived next morning.

Though he was so footsore and weary that he had said they must stop, Washington still preferred to march all night rather than to slay the Indian who had so recently, without a qualm, sought to assassinate him.

They marched all that night and all the next day, to a place on Pine Creek where they felt safe enough to sleep.

WASHINGTON'S NARROW ESCAPE FROM DROWNING IN THE ALLEGHENY

But their hardships were not yet at an end. On Saturday, December 29, following Pine Creek and the general course of



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THE OHIO RIVER, SHOWING THE SITE OF LOGSTOWN.

Here came Washington in 1753 to consult with the Half-King and to enlist his aid in reaching the French commandant at Fort Le Boeuf. Logstown stood on the plain on the near bank of the Ohio at the left of the picture (see text, page 12). Here Washington also stopped on his way down the Ohio on his trip to the Kanawha in 1770 (see page 44).



THE WASHINGTON CROSSING BRIDGE SPANS THE ALLEGHENY RIVER WHERE MAJOR WASHINGTON NEARLY LOST HIS LIFE RETURNING FROM FORT LE BOEUF (SEE TEXT, PAGE 18)

4



Photographs by Clifton Adams

THE FLAGPOLE MARKS THE SITE OF FORT NECESSITY, WHICH WASHINGTON SURRENDERED AS A YOUTH OF 22 (SEE TEXT, PAGE 19)

the present-day Butler-Pittsburgh Highway, they came to what is known now as the Washington Crossing of the Allegheny River, where there is a handsome bridge. In that day there was a midstream island, afterward known as Wainwright's Island, which since has disappeared (page 17).

They expected to find the river frozen over, but were disappointed. Ice extended out 50 yards from either shore, but in midstream was a moving mass of broken cakes.

"There was no way for getting over but on a Raft; Which we set about with but one poor Hatchet, and finished just before Sun-setting. This was a whole Day's Work. Then set off; But before we were Half Way over, we were jammed in the Ice, in such a Manner that we expected every Moment our Raft to sink, and ourselves to perish. I put-out my setting Pole to try to stop the Raft, that the Ice might pass by; when the Rapidity of the Stream threw it with so much Violence against the Pole, that it jerked me out into ten Feet Water; but I fortunately saved myself by catching hold of one of the Raft Logs."

They finally reached the island and camped. The night was so cold that the next morning the channel was frozen and they crossed safely.

From the day after he left Logstown to the day before he departed from Fort Le Boeuf, there was but one day on which it did not rain or snow incessantly, and throughout the whole trip they encountered "but one continued Series of cold, wet Weather."

ALQUIPPA PREFERRED HER BOTTLE OF RUM TO A FUR COAT

While waiting for his horses at Frazier's, Major Washington decided to visit Queen Aliquippa, at the mouth of the Youghiogheny. He carried with him as presents for her a fur hunting coat and a bottle of rum, and later reported that she thought the bottle of rum much the better present of the two.

On October 31, 1753, Washington had left Williamsburg; on January 16 he returned. He had traveled more than 1,000 miles, most of the way through an unbroken wilderness.

So pleased was Governor Dinwiddie with Washington's recital of his trip that he asked for a written report of it. This he made. In the foreword to the printed

copy, which he called "An Account of My Proceedings to and from the French on Ohio," he apologized for its style and diction and stated that he had only one day in which to prepare it.

WASHINGTON BEGINS HIS FIRST CAMPAIGN TO EXPEL THE FRENCH

Before ten weeks had passed Washington, now a lieutenant colonel, was headed once more for the region between Cumberland and Pittsburgh. The French had occupied the forks of the Ohio and were engaged in building a fort there, in the identical spot he had observed several months before.

Washington undertook to build a road from what is now Mount Braddock, south of Connellsville, to Brownsville, on the Monongahela, and to widen the trail between Cumberland and Mount Braddock.

He also explored the Youghiogheny for about 30 miles, in the hope of finding a waterway open down the river to the forks of the Ohio. But the Ohiopyle falls turned him back (see page 28). He then concentrated his men at the Great Meadows to erect a fort there. Col. Joshua Fry, the commander of the regiment, having died of a fall from his horse on May 31, Washington assumed command.

Things happened on that trip. The Indians who wanted to be loyal were alarmed at the weakness of the English and at the strength of the French. Jumonville, a French officer, leading a small party of French troops, was discovered trying to ambush the Virginia soldiers.

With the support of the Half-King, Washington attacked this force on top of Laurel Hill, to the west of the Great Meadows. Here Jumonville was killed. The French afterward asserted he was carrying a message to the Virginia troops and not acting in a military capacity; which claim Washington, with unusual vigor, denounced.

THE SURRENDER OF FORT NECESSITY

Washington was so displeased with his pay of two dollars a day and with that of the other officers under him that he begged Governor Dinwiddie to let him serve without pay at all. "I would rather prefer the great toil of a daily laborer and dig for a maintenance . . . than serve upon such ignoble terms," he wrote the Governor,

There followed now war councils, Indian powwows, wampum exchanges, and finally news of the approach of a strong French force. It seemed wise to retreat to the Great Meadows and occupy Fort Necessity.

Supplies failed to arrive, and when the French opened fire it was plain that surrender was inevitable. The defense lasted until about 8 o'clock in the evening, the attack having begun an hour before noon. Then a parley was held, and Washington was given his choice of surrendering as a prisoner of war or marching out with flags flying and drums beating, but leaving his artillery to be destroyed.

As one stands by the old brick tavern beyond Farmington, on the Old National Trail east of Laurel Hill, and looks down by the creek where Fort Necessity stood, it is easy to imagine what his capitulation to the French on that third day of July, 1754, cost him.

He returned to Williamsburg disheartened, but the House of Burgesses passed a resolution of which he wrote, "Nothing could give me and the officers under my command greater satisfaction than to receive the thanks of the House of Burgesses, in so particular and public a manner, for our behavior in the late unsuccessful engagements with the French."

When General Braddock came to Virginia on February 20, 1755, he heard of the intrepid young soldier of Mount Vernon and invited him to "become one of his



Photograph by Clifton Adams

A BRONZE TABLET TELLS THE TRAGIC STORY OF FORT NECESSITY

The inscription reads: "Fort Necessity was located about 400 yards to the South in the Great Meadows, built and commanded 1754 by Lieut. Col. Geo. Washington, aged 22. Here after nine hours engagement with M. Coulon de Villers in command of 900 French regulars and their Indian allies, Washington and his 400 raw Virginia and South Carolina troops capitulated, and early next morning, July 4, 1754, marched out with the honors of war. Marked by the Pennsylvania Historical Commission and citizens of Fayette County, 1925." (See, also, page 17.)

family (in the) ensuing campaign." This invitation Washington accepted, after putting his affairs at Mount Vernon in order.

Riding to his plantation near Charles Town, he went from there to Frederick, Maryland, where he joined General Braddock and accompanied him to Fredericktown (Winchester), Virginia. Thence they marched to Willis Creek, and Washington confided to his brother that the General had "a good opportunity to see the absurdity of



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THE FORKS OF THE OHIO AS THEY ARE TO-DAY

The most distant bridge on the Allegheny River (at the left) marks the point where Washington narrowly escaped drowning (see, also, illustrations, pages 13 and 17, and text, page 18).



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THE GOLDEN TRIANGLE AT PITTSBURGH, SHOWING THE MONONGAHELA ON RIGHT, THE ALLEGHENY ON LEFT

Fort Duquesne, built by the French in 1754 and burned by them when they retreated, in 1758 (see page 39), stood on the point between the two bridges in the foreground. Fort Pitt, built by the English in 1763, stood on the left bank of the Allegheny above the bridge. Braddocks Field was up the Monongahela. Washington, on his trip to Fort Le Boeuf, swam his horses across the Allegheny at a point close to the white bridge, in the foreground. As he returned he crossed farther up the stream (see pages 17 and 20).



Photograph by Clifton Adams

THE OLD STONE BRIDGE AT GRANTSVILLE, MARYLAND

It carries the Old National Trail across Casselman River and marks the site of the Little Crossing, where General Braddock's army forded that stream.

the route (selected) and of damming it very heartily."

They had barely reached Wills Creek, where Washington was formally appointed aid-de-camp to General Braddock, when it was found that the expedition had failed to bring along any funds for expenses.

So, on May 15, Washington set out for Williamsburg to get money. He reached there the 22d, riding nearly 35 miles a day. Going back with the funds, he left Williamsburg on the 24th and made the return trip in seven days. Including a wait at Winchester for an escort through the frontier, this was an average of 40 miles a day.

OVERTAKEN BY ILLNESS, WASHINGTON EXACTS A PLEDGE FROM BRADDOCK

On June 7 the expedition got under way, reaching Allegany Grove, on what is now U. S. No. 40 highway, from Baltimore to Wheeling. Seven days later, on Georges Creek, just below what is now Frostburg, Washington was seized with a violent fever and pains in his head.

For two weeks he suffered. His illness was too violent to let him ride. He tried

a covered wagon, but the jolting was too great, and at last he halted by the roadside, with a guard and some necessaries, there to wait as patiently as he might the coming of the rear guard, two days' march behind the advance. But stop he would not, until he had extracted a solemn promise from General Braddock that there would be no attack until he was able to regain the advance party.

Those grim pine forests through which Braddock's Road ran from Frostburg to Grantsville must have seemed even worse than "Shades of Death," as they had come to be known, to the desperately ill young aid-de-camp when he saw his opportunity to avenge Fort Necessity about to slip from his grasp. No wonder he exacted "the General's word of honor, pledged in the most solemn manner," that he should be brought up before Fort Duquesne was attacked!

Before Braddock left his stricken aid he insisted that the doctor should dose his patient with "Dr. James's Powders." The medicine seems to have brought results, for Washington gave it a testimonial for



Photograph by Clifton Adams

A MODERN HIGHWAY FOLLOWS BRADDOCK'S ROAD ACROSS THE ALLEGHENIES

Grantsville can be seen in the distance. It was in this region that Washington was so desperately ill during his march with Braddock.

which a modern patent medicine manufacturer might give a million dollars! In a letter to his brother he said it was "one of the most excellent medicines in the world."

Though unable to mount, Washington was determined to be at the front when the battle was finally joined. So, in a covered wagon, leaving Dunbar's slow-moving troops, he hastened on to overtake General Braddock, and reached him the day before the disaster on Braddock's Field. Into that fray he galloped with his chief, although, as he himself expresses it, he was "very low and weak."

Braddock's army had approached the battle field full of confidence. The steep and rugged ground on the north side of the Monongahela had prevented the troops from marching to it on that side of the river and had forced them to ford it twice. Early in the morning the whole train made the first crossing a little below the mouth of the Youghiogheny and then proceeded in perfect order to the second crossing, at what is now Braddock (see map, page 12).

Washington often declared the most beautiful spectacle he had ever beheld was

the display of the British troops as they marched forward to the second crossing, over the plain where now stand the city of Duquesne and Kennywood Park. "Every man was neatly dressed in full uniform, the soldiers were arranged in columns and marched in exact order, the sun gleamed from their burnished arms, the river flowed tranquilly on their right, and the deep forest overshadowed them with solemn grandeur on their left."

It was noon when Braddock's men reached the second crossing. Beyond this they marched uphill from the site of the present Edgar Thompson Steel Works, ten miles from their objective. A body of 300 men under Colonel Gage constituted the advance guard. Behind these marched another force, of 200 men, and after them the General, with the artillery, the main body of the army, and the baggage.

MARCHING INTO A DEADLY TRAP

Suddenly a volley of musket fire swept the front of the advance guard, followed by a fusillade on its right flank. The British had not known the foe was near. The



Photograph by Clifton Adams

A BIT OF BRADDOCK'S ROAD NEAR MCKEESPORT, PENNSYLVANIA

Colonel Washington was so ill that he had to make this part of his march to Braddocks Field in a covered wagon, but later he was in the saddle where the gunfire was most furious (see text, page 23).

advance troops, in panic, fell back on the artillery, near what is now the Pennsylvania Railroad Station in Braddock. Braddock and his officers behaved with the utmost courage, but the soldiers could not be rallied from their confusion in the face of an unseen enemy.

"DEATH WAS LEVELING MY COMPANIONS
ON EVERY SIDE"

Colonel Orme, who was wounded, wrote of the battle: "The men were so extremely deaf to the exhortation of the General and the officers that they fired away, in the most irregular manner, all their ammunition, and then ran off, leaving to the enemy

the artillery, ammunition, provisions, and baggage."

Only the provincial troops seemed to retain their senses. They knew the Indian method of fighting and each of them fought as the foe fought, from behind trees. Colonel Washington himself had four bullets through his coat and two horses shot under him; yet he escaped unhurt, "although death was leveling my companions on every side of me."

Of the battle he wrote:

"We have been beaten, shamefully beaten, by a handful of men, who only intended to molest and disturb our march. Victory was their smallest expectation.

But see the wondrous works of Providence and the uncertainty of human things! We, but a few moments before, believed our numbers almost equal to the Canadian force; they only expected to annoy us. Yet, contrary to all expectation and human probability, and even to the common course of things, we were totally defeated, and sustained the loss of everything.

When this story comes to be related in future annals, it will meet with unbelief and indignation; for, had I not been witness to the fact on that fatal day, I should scarcely have given credit to it even now."

M. de Contrecoeur, French commandant of Fort Duquesne, had feared that his force was inadequate to meet Braddock's army. It was while he hesitated that M. de Beaujeu, a captain in the French service, proposed an ambush. Contrecoeur agreed, provided Beaujeu could get the Indians to assist. At first the Indians declined. But Beaujeu exclaimed: "I am determined to go out and meet the enemy. What! Will you suffer your Father to go out alone? I am sure we shall conquer."

And so it was that Captain Beaujeu, more reckless than the experienced Commandant Contrecoeur, blocked the British effort at an early conquest of the upper Ohio basin, enabling the French to hold that area for many years.

WASHINGTON'S SENSE OF HUMOR KEEN

Washington's sense of humor allowed him to say, in a letter to his brother John Augustine, "As I have heard since my arrival at this place (Cumberland) a circumstantial account of my death and dying speech, I take this early opportunity of contradicting the first, and of assuring you that I have not as yet composed the latter."

Though defeat had been his bitter portion again, Washington's reputation grew, for the Colonies were aware that the saving of the remnant of Braddock's force was in no small measure due to the judgment of this lad of 23.

Back over the ground he had traveled so often before, back where he had struggled through the wilderness that is now McKeesport and Irwin, Mount Pleasant and Connellsville and Mount Braddock, marched the dejected men. Over Laurel Hill they came. And then, when they reached that highland meadow where Fort Necessity had been built, occupied, and lost

a year before, the gallant Braddock surrendered at last to his wounds. His young Virginia aid, it is said, was called upon to read the burial service over his dead chief.

They buried Braddock in the roadway, and then drove their wagons over his grave to hide it from the triumphant savages, hot on their heels. It is marked now by a monument, which stands by the Old National Trail west of the site of Fort Necessity (see page 27).

Washington hoped upon his return that his military career was ended. "If it is in my power to avoid going to the Ohio again, I shall; but if the command is pressed upon me by the general voice of the country, and offered upon such terms as cannot be objected against, it would reflect dishonor upon me to refuse it; and that, I am sure, must or ought to give you greater uneasiness than my going in an honorable command." Thus he wrote his mother.

CALLED TO COMMAND AGAIN

But his trials were not ended. Virginia resolved to raise a regiment of 10 companies and asked him to command it. He began to recruit and mobilize troops at Fredericksburg and Alexandria; then started for his old post at Fort Cumberland, arriving there September 17, just ten weeks after Braddock's defeat.

As colonel of the regiment, Washington wanted his officers smartly dressed. He therefore ordered that each should obtain a suit of regimentals of good blue cloth, the coat to be faced and cuffed with scarlet and trimmed with silver, the waistcoat to be scarlet and trimmed with silver lace, and the hat for garrison duty to be silver laced.

With formalities at Fort Cumberland concluded, he set out, up the South Branch and down Jacksons River, to Fort Dinwiddie "to see the situation of our frontiers, how the rangers were posted, and how troops might be disposed of for the defense of the country." As he traveled up the South Branch, famed to this day for its fine beef cattle, he purchased for his troops 650 beeves, for which he paid 1.67 cents per pound on the hoof; for a few he was obliged to pay 1.83 cents per pound.

He rode by what are now Romney, Moorefield, Petersburg, and Franklin, West Virginia, and by Monterey, Virginia, and on down Jacksons River to Fort Dinwiddie, situated some five miles northwest

of Warm Springs, making the trip and completing the inspection of Fort Dinwiddie in four days. There were settlements at frequent intervals along the way.

As an excellent judge of good land, Colonel Washington's heart must have rejoiced at the beauties of the little Moorefield Valley, of the Upper Tract flood plain, and at the magnificent bottoms on the reaches of Jacksons River. He was indeed journeying through a land as fair as the poet represents Killarney itself to be.

But his heart was heavy with the responsibilities that rested upon him. He wrote Warner Lewis that he was still weak from the disorder that had seized him in the Braddock campaign; that circumstances had become such "that no man can gain any honor by conducting our forces at this time, but will rather lose in his reputation if he attempts it."

He had seen the morale of the people sink and troop discipline so wane that "no orders are obeyed but such as a party of soldiers, or my own drawn sword, enforces." And had he not even heard threats to "blow out his brains"?

"I would again hint at the necessity of putting the militia under a better regulation, had I not mentioned it twice before, and a third time might seem impertinent," he modestly writes Governor Dinwiddie, and then adds that unless the Assembly passes an act for the enforcement of the military law in all its parts he would have to surrender the command, urged thereto "by the foreknowledge I have of failing in every point" if this should not be done.

When he left Fort Dinwiddie Colonel Washington set out for Augusta Court House (Staunton), coming over to the Cowpasture River along the general route now followed by the Chesapeake and Ohio Railway from Millboro.

TRAVELING EXPENSES NOT WHAT THEY USED TO BE

Traveling expenses were cheap in those days. Virginia had a law that rates for accommodations in each county should be fixed by the court thereof, and that any keeper of an ordinary not observing these rates should be heavily fined, half the fine going to the informer. The Augusta County Court Order Book shows that a hot dinner cost 9 pence; a cold meal, 6

pence; lodging, with clean sheets, 3½ pence; twenty-four-hour stabling and fodder for a horse, 6 pence; and corn or oats, per gallon, 6 pence. When it is remembered that the Virginia shilling was worth 16⅔ cents of our money, we see that a hot dinner cost 12½ cents and other service in proportion.

From Staunton, Washington rode to Fredericksburg by way of Charlottesville, making the 114-mile journey in three days and still being fit enough to play billiards the evening he arrived.

On October 7, when on his way from Fredericksburg to Williamsburg to report to Governor Dinwiddie, he was overtaken by an express rider from Winchester with news that hostile Indians were on the warpath, murdering whites in the South Branch country and burning their homes. He immediately turned back, reached Fredericksburg on the evening of the 8th, and was in Winchester on the 10th, about 83 miles away.

WASHINGTON'S FIRST TRIP TO BOSTON

For months after he took command of the Virginia forces, Washington was greatly embarrassed and handicapped by a Captain Dagworthy, who had seen service in Canada, where he held a King's commission. Dagworthy had been mustered out of that service, but when sent as a provincial officer to Fort Cumberland he claimed that his commission still held good, and that under English law any British regular officer outranked any Colonial officer—a captain even outranking a colonel or a brigadier.

At every turn Dagworthy claimed Washington was subordinate to him, asserting, even, that after the Virginia ammunition and supplies were put in the storehouse they could not be removed except on his order.

Washington stood this interference for a time, but on Wednesday, February 4, 1756, he set out for Boston to lay the case before Gen. William Shirley, commander-in-chief of the British forces in America. He reached Philadelphia the following Sunday, and took five or six days to look around the city.

He apparently made the 90 intervening miles to New York in two days. And what must the New York of that day have meant



Photograph by Clifton Adams

THE GRAVE OF GENERAL EDWARD BRADDOCK ON THE OLD NATIONAL TRAIL NEAR FARMINGTON, PENNSYLVANIA

After General Braddock fell, mortally wounded, in the battle with the French and Indians on the Monongahela, ten miles south of old Fort Duquesne, he was carried to Old Orchard Camp, near here, where he died. He was buried on this spot, July 14, 1755, the funeral service being read, tradition says, by George Washington (see, also, text, page 25).

to the young Virginian, who had spent the last three years mostly in the primeval forests or fighting French and Indians on the savage frontiers!

There was the "Microcosm" to visit, described at the time as a world in miniature, which took 22 years to build. Washington's enthusiasm for it is written in his accounts, for on two separate occasions he enters items "for treatg. Ladies to ye Mi(crocos)m." There was also a rout at Mrs. Baron's, and tips to the servants in the household of Beverley Robinson, son of the Speaker of the Virginia House of Burgesses. The young officer was always punctilious in tipping the servants in households where he was entertained, and equally so in entering these items in his account books—two traits that have aided a great deal in tracing his travels.

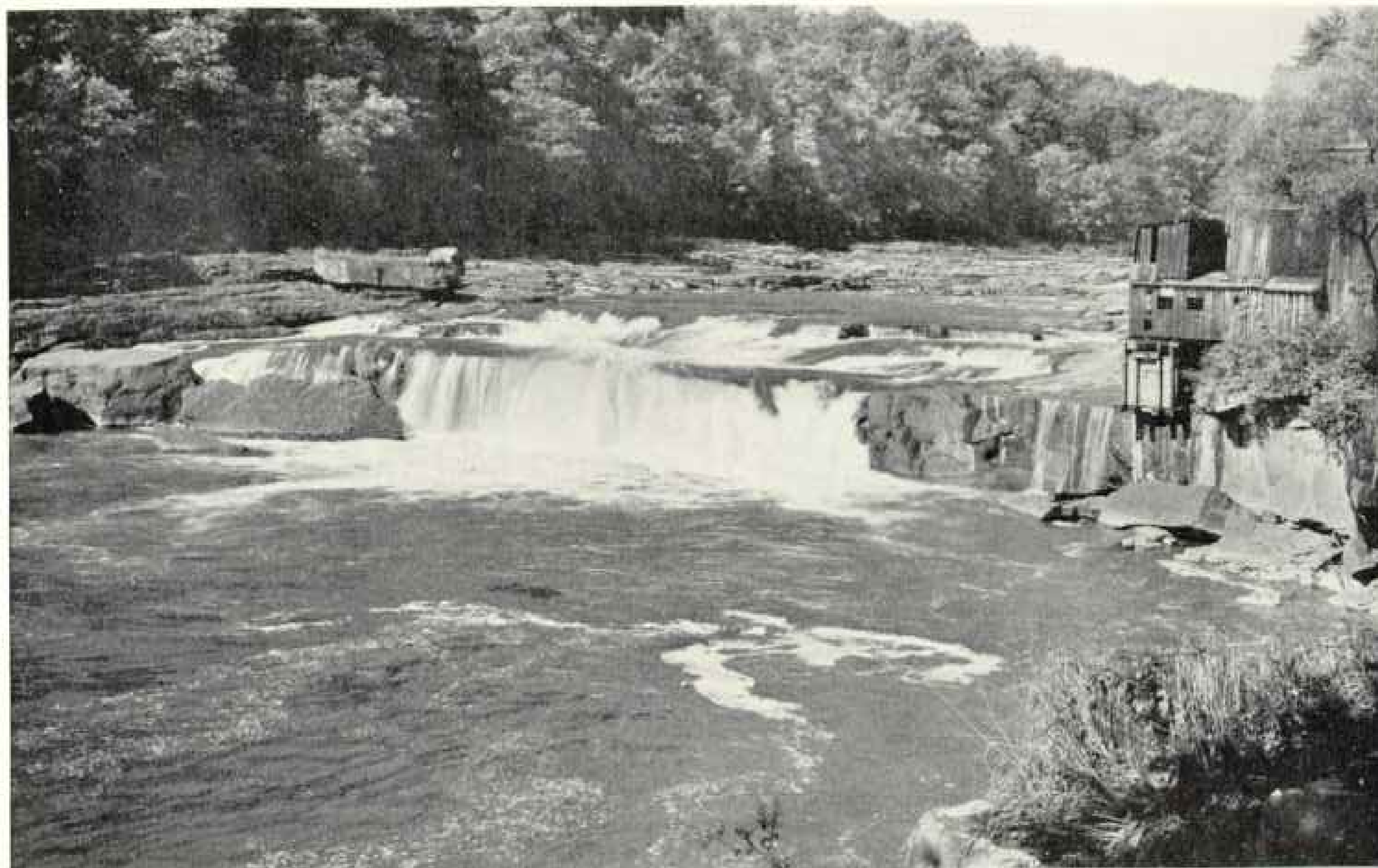
Two days before he was 24 years old he set out on the last leg of his journey to Boston, and the *Pennsylvania Gazette* carried the news that "Colonel Washington,

of Virginia, but last from Philadelphia, left this city (New York) for Boston."

FOUR POUNDS FOR A BROKEN BOWL

On his way to Boston he stopped with a Mr. Malbone, in Rhode Island. He entered a tip for the latter's servants of £4 and another item of £4 for a broken bowl. We may well wonder if this did not mark the occasion of the celebration of his 24th birthday.

In Boston he stopped at Cromwell's Head Tavern. He saw General Shirley, who decided the question of command at Fort Cumberland in his favor; visited a man-of-war in the harbor, lost some money at cards at the Governor's House, and then set off for Virginia. But at the Governor's he had met such people as John Adams, and made a deep impression by his recital of conditions in western Virginia, Maryland, and Pennsylvania. Unconsciously he again was playing into the hands of destiny, for John Adams was one of those who



Photograph by Clifton Adams

THE FALLS OF THE YOUGHIOGHENY RIVER AT OHIOPYLE, PENNSYLVANIA

In May, 1754, Washington explored the Youghiogheny for nearly thirty miles, and then "came to a fall, which continued rough, rocky, and scarcely passable, for two miles, and then fell, within the space of fifty yards, nearly forty feet perpendicular." The Indian who accompanied him would not go farther than Turkey Foot until Washington promised him a ruffled shirt and a match coat, saying that the French always had Indians to show them the woods because they paid well for the service requested. (see, also, text, page 18).



62

Photographs by Clifton Adams

OLD FORT PITT, IN THE FORKS OF THE OHIO, AT PITTSBURGH

This relic of Indian War days stands a hundred yards or so up the river from the site of Fort Duquesne (see page 21).



AN OLD HOUSE AT OLDTOWN (CRESAPS), MARYLAND

It sheltered Colonel Washington in French and Indian War times (see page 4).



Photograph by Clifton Adams

THE HOME OF CHARLES WASHINGTON, BROTHER OF GENERAL WASHINGTON, AT CHARLES TOWN, WEST VIRGINIA

Charles Washington built this house late in life and named it "Happy Retreat." General Washington occasionally visited him here.

19 years later joined with Thomas Johnson, of Maryland, in making him Commander-in-Chief of the American forces. Boston had liked the Virginia soldier and henceforth was his friend.

Colonel Washington hastened back to Williamsburg with his good news and then on to Winchester.

He found the frontier in a sorry plight. The Indians were unusually audacious, attacking the forts, massacring the farmers and their families, and stealing cattle.

Even under such circumstances the militia would not respond. At a call to duty only 15 responded. "All my ideal hopes of raising a number of men to scour the adjacent mountains have vanished into nothing."

At a later date he wrote to Governor Dinwiddie, inclosing reports of continued Indian outrages: "Your Honor may see to what unhappy straits the distressed inhabitants and myself are reduced. I am too little acquainted, sir, with pathetic language to attempt a description of the people's distresses, though I have a generous

soul, sensible of wrongs, and swelling for redress. But what can I do? I see their situation, know their danger, and participate (in) their sufferings, without having it in my power to give them further relief than uncertain promises. In short, I see inevitable destruction in so clear a light that, unless vigorous measures are taken by the Assembly, and speedy assistance sent from below, the poor inhabitants that are now in forts, must unavoidably fall, while the remainder are flying before the barbarous foe. . . . The supplicating tears of the women, and moving petitions of the men, melt me into such deadly sorrow, that I solemnly declare, if I know my own mind, I could offer myself a willing sacrifice to the butchering enemy, provided that would contribute to the people's ease."

Throughout the summer of 1756 Washington wrote the most urgent letters to Williamsburg for funds, for troops, for laws giving adequate control of the militia, etc. As one reads these letters it becomes plain that here again the forces of adversity were seasoning him for the trials and

tribulations that he would later face at Valley Forge.

WASHINGTON PLANS TO PROTECT THE FRONTIER

Early in October, Colonel Washington, stirred by the increasing boldness of the many bands of marauding Indians that infested the frontier from the Potomac River to the North Carolina line, decided to make a personal survey of the frontier with a view to establishing a chain of forts at the important passes, in the hope of damming the Indian tide behind the Allegheny Divide.

No original record of this long trip has been found except two letters which Washington wrote to Governor Dinwiddie, a few items in his expense account, and a plan for the distribution of the several forts in the chain, with the waters upon which they were located, the distances between them, and their names or the names of the officers commanding them.

Time has obliterated most of these forts (see map, page 40).

Since this chain of forts played such an important rôle in the French and Indian War, 1754 to 1758, and since their establishment constituted one of his foremost tasks as a military engineer, I resolved to locate them. The task proved much more difficult than I had anticipated.

During the French and Indian War days, villages and towns near the frontier had not yet begun to take shape, except in the case of county seats. Places were known as "John Smith's Plantation," "William Scott's Mill," "Tasker Tosh's Ford," Big Lick, etc. The changing ownerships of five generations, together with the substitution of bridges for fords, have obliterated these names from map and memory alike.

It was necessary, therefore, for the author, first of all, to go patiently through scores of massive land-grant books, dozens of old deed books, and all the survey records that have survived, in order to find out where the early settlers lived.

As the area investigated covers approximately 15,000 square miles, or more than Massachusetts, Connecticut, Rhode Island, and Delaware combined, the reader will understand that, even though population was then sparse, the real-estate transfers were numerous.

By classifying settlers according to the streams on which they lived, a picture of the times began to appear.

My next step was to study the history of the main roads of that period.

Settlers desiring to get a road built in those days would petition the county court. If a request was approved, the court issued an order about as follows: "Road ordered—William Bryan, overseer—from William Carravan's plantation to William Bryan's, on Roan Oak." Then would follow a list of persons along the proposed road who were to help build it. Generally it also was ordered that the overseer should put up guideposts at every crossroad and every fork.

To locate the roads that were open at the time of the French and Indian War necessitated the reading by the author of more than 7,000 pages of the Court Order Books of the Virginia counties of Orange, Frederick, Augusta, and Halifax.

Another line of investigation involved a study of court records of petitions to establish ordinaries and mills. The Journals of the Virginia House of Burgesses, the correspondence of Governor Dinwiddie, and the fragmentary military records of many of Washington's officers also had some light to cast on the situation as Colonel Washington found it in 1756.

Washington's expense accounts also proved of great aid in tracing his travels, for practically without exception I was able to identify the persons whom he paid for lodging, for saddle repairs, and for horses purchased.

THE GREAT SOLDIER FOLLOWS WHAT IS NOW LEE HIGHWAY

Following the Virginia commander up the Valley was not difficult; for, with a few minor exceptions, the Lee Highway follows the old Indian path of the days before white men ever set foot in the Shenandoah Valley. That path became the migrant road over which thousands of families journeyed to the Carolinas and started to Kentucky and Ohio.

He set out from Winchester, passed the places that since have become Strasburg, Woodstock, and Harrisonburg, and presently arrived in Staunton.

There, heartily tired of seeing the people harassed by the Indians while the militia was idle, he asked Colonel Stewart to raise



Photograph by Clifton Adams

HAREWOOD, THE SAMUEL WASHINGTON HOME NEAR CHARLES TOWN,
WEST VIRGINIA

George Washington owned a plantation on Bullskin Run and his brother Samuel's plantation was on Evitts Run, near by.

a party of soldiers, which he proposed to lead himself, marching through the mountains in the neighborhood of Hot Springs and Covington to Jacksons River, scouring the woods in the hope of falling upon the enemy. But he waited for five days and only five men came.

THE MILITIA PROVES INDIFFERENT TO THE
COUNTRY'S CALL

Disgusted with such indifference upon the part of the militia, he decided to ride on to what is now Buchanan, on the Lee Highway, to see Col. John Buchanan. Capt. William Preston accompanied him from Staunton.

The Shenandoah Valley was arrayed in its richest robes of autumn, but Indian summer had brought only dread to the people who populated the borders of every stream. It was the time when Indian marauders were at their worst.

Colonel Buchanan told Colonel Washington with great concern that it was not in his power to raise men. Only three days before, the Indians had attacked Fort Wil-

liam, on Catawba Creek, not more than fifteen miles from the Buchanan home, and people in all the settlements on the upper James River had fled. Colonel Buchanan had ordered three companies to be mustered in and to take the field, but only a captain, a lieutenant, and seven or eight men had responded.

Finding it impossible to get a body of men together "to range and scour the frontiers," as he put it in his report to Governor Dinwiddie, Colonel Washington added: "It remained only to proceed without men, to see the situation of the forts, or to return back. The latter I was loath to do, since I had come thus far and was anxious to see what posture of defense they were in."

So, accompanied by Colonel Buchanan, he set out for Fort Vaux, located at what is now Shawsville, on the Lee Highway, some 30 miles west of Roanoke.

The situation at Fort Vaux illustrated to Colonel Washington the hopelessness of the struggle against the Indians, with the militia so irresponsive to the necessities of the hour. He found a Captain Hunt here

with some 30 men from Lunenburg, "but none of them would strike a stroke unless I would engage to see them paid forty pounds of tobacco a day."

From Fort Vaux Colonel Washington visited the forts in what was then Halifax County, sites now in Patrick, Henry, and Franklin counties. With his report to Governor Dinwiddie he inclosed a letter from Captain McNeil saying that within two hours after Colonel Washington had left Fort Vaux two white men had been killed on the road over which he had just passed.

THE LOCATION OF WASHINGTON'S SOUTHERNMOST FORT

On October 10, 1756, Colonel Washington reported: "This day, within five miles of the Carolina line, as I was proceeding to the southernmost fort in Halifax, I met Major Lewis." He found Capt. Samuel Harris in command at that fort, which he located, in his "Plan of the Number of Forts," on the Mayo River 12 miles from Fort Trial, on Smiths River.

This southernmost fort of the chain disappeared from the landscape long ago, but I discovered in an old French and Indian War affidavit made by John Echols, an aid of Capt. Robert Wade, a clue that has enabled me to locate and identify it. In the affidavit Echols described a trip under Captain Wade, "Commandant at Fort Mayo in 1758," to "range for Indians," signs of whose presence had been discovered in the vicinity of present-day Blackburg. He set forth that they marched



Photograph by Clifton Adams

AN OLD FIREPLACE AT HAREWOOD (SEE OPPOSITE PAGE)

In his travels to Fort Cumberland and the forks of the Ohio, George Washington often stopped with his brother Samuel, a neighbor of Charles Washington (see page 30). James Madison was married to the beautiful Dolly Todd in this room. The portrait of Col. Samuel Washington over the mantel is a reproduction of the original painting.

three miles the first day, and passed Gobbilintown, and "camped at the foot of the Blew Ledge," meaning Blue Ridge. On their return they came by way of Fort Blackwater, where the party divided, one part going with Echols directly to Fort Mayo, while Captain Wade led the other by way of Hickey's Fort, *en route* to Fort Mayo.

These statements indicated that Fort Mayo must have stood in the locality of the fort which Washington described as the southernmost fort in his chain and which he said was commanded by Captain Harris.



Photograph by Gerard Hubbard

THE PUBLIC ARTESIAN WELL AT PORT TOBACCO, MARYLAND

In going to and from Williamsburg and to his dower plantations on the York, Washington often crossed the Potomac twice and went by Port Tobacco and other Maryland roads to escape the quagmires of old Chopawamsic Swamp, on the Potomac Path, which is now United States Highway No. 1.

Were the "southernmost fort" and Fort Mayo one and the same? Could Captain Wade have succeeded Captain Harris in command at that fort? The answer is "yes" to each question.

CAPT. SAMUEL HARRIS BECOMES BAPTIST PREACHER

The early history of the Baptist church in Southside Virginia discloses that Captain Harris, while attending a revival, became a convert. The military records of the colonial militia show that he resigned his commission, and as soon as he had discarded the uniform of a soldier he took the cloth of a clergyman. Captain Wade succeeded him in command at Fort Mayo.

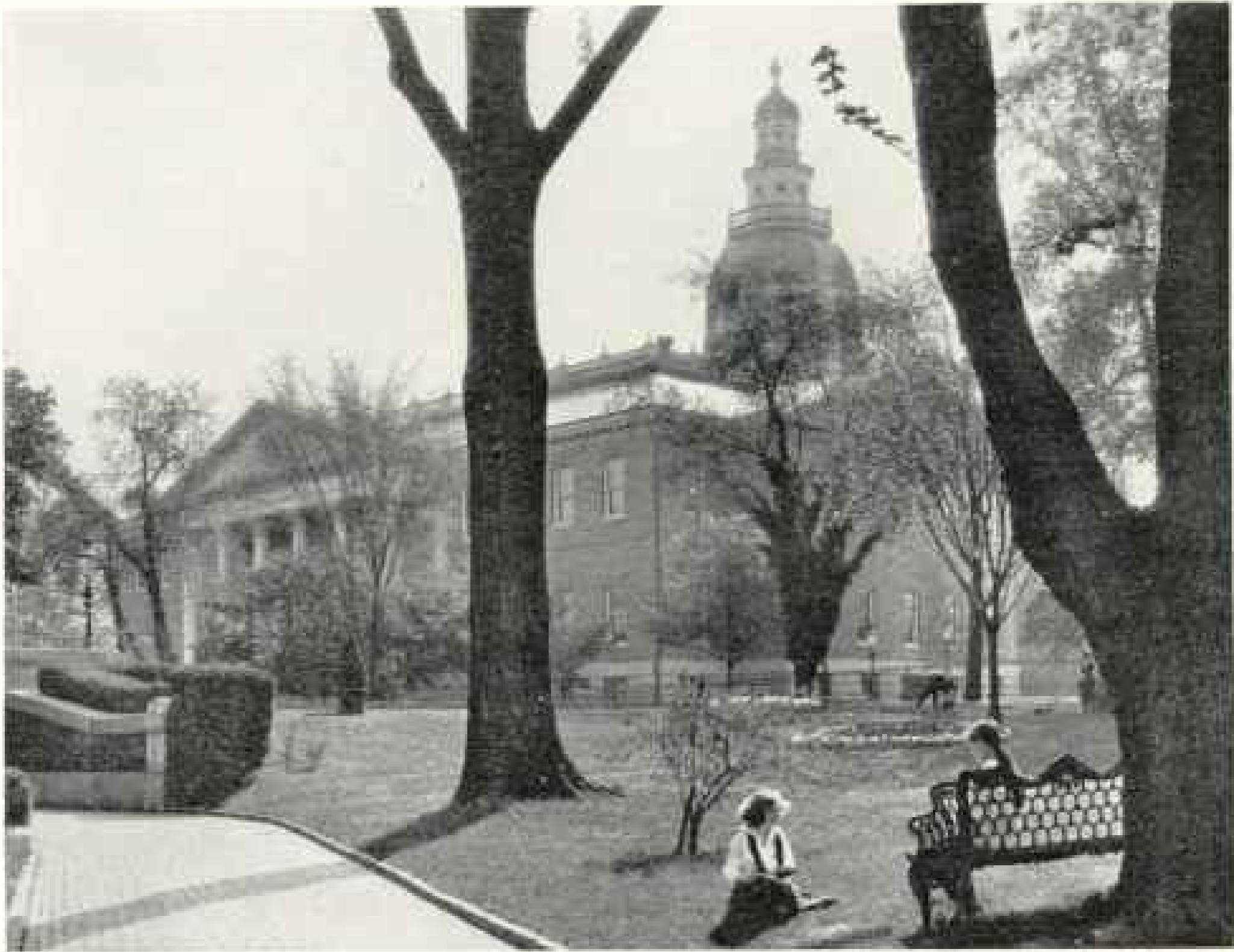
But after the matching of these bits of colonial history had established the fact that Fort Mayo and Washington's "southernmost fort" were identical, its location was still undetermined.

A prolonged search of the records in Richmond and at Halifax Court House next revealed that there was a fort on the home place of John Frederick Miller. Mil-

ler's petition of 1759 to the Virginia House of Burgesses for reimbursement for damages sustained recites that by the order of the commanding officer of the militia a fort had been erected on his land on Mayo River. The fortifications inclosed his dwelling house and other houses and were garrisoned by a company of militia, who, to render the stronghold more secure from the approaches and attacks of the enemy, cut down a large orchard, burned one house and 1,600 fence rails, etc. The House of Burgesses granted the petition.

WASHINGTON STAYS WITH A MERCHANT PRINCE

A survey plat in the Halifax Court-house shows that this tract of Miller's included the headsprings of two small branches of the north fork of Mayo River, near the present village of Spencer, twelve miles from Fort Trial, five miles from the Carolina line, and on the Mayo River, which accords with Washington's description of the situation of his "southernmost" fort.



Photograph by Clifton Adams

WASHINGTON WAS A FREQUENT VISITOR TO THE STATEHOUSE IN ANNAPOLIS

During his long residence at Mount Vernon, the Virginian sought relaxation and amusement in the Maryland capital in the racing and theater season each year. The Congress of the Confederation was in session here when General Washington, having won the War for Independence, surrendered his commission as Commander-in-Chief of the Army in 1783.

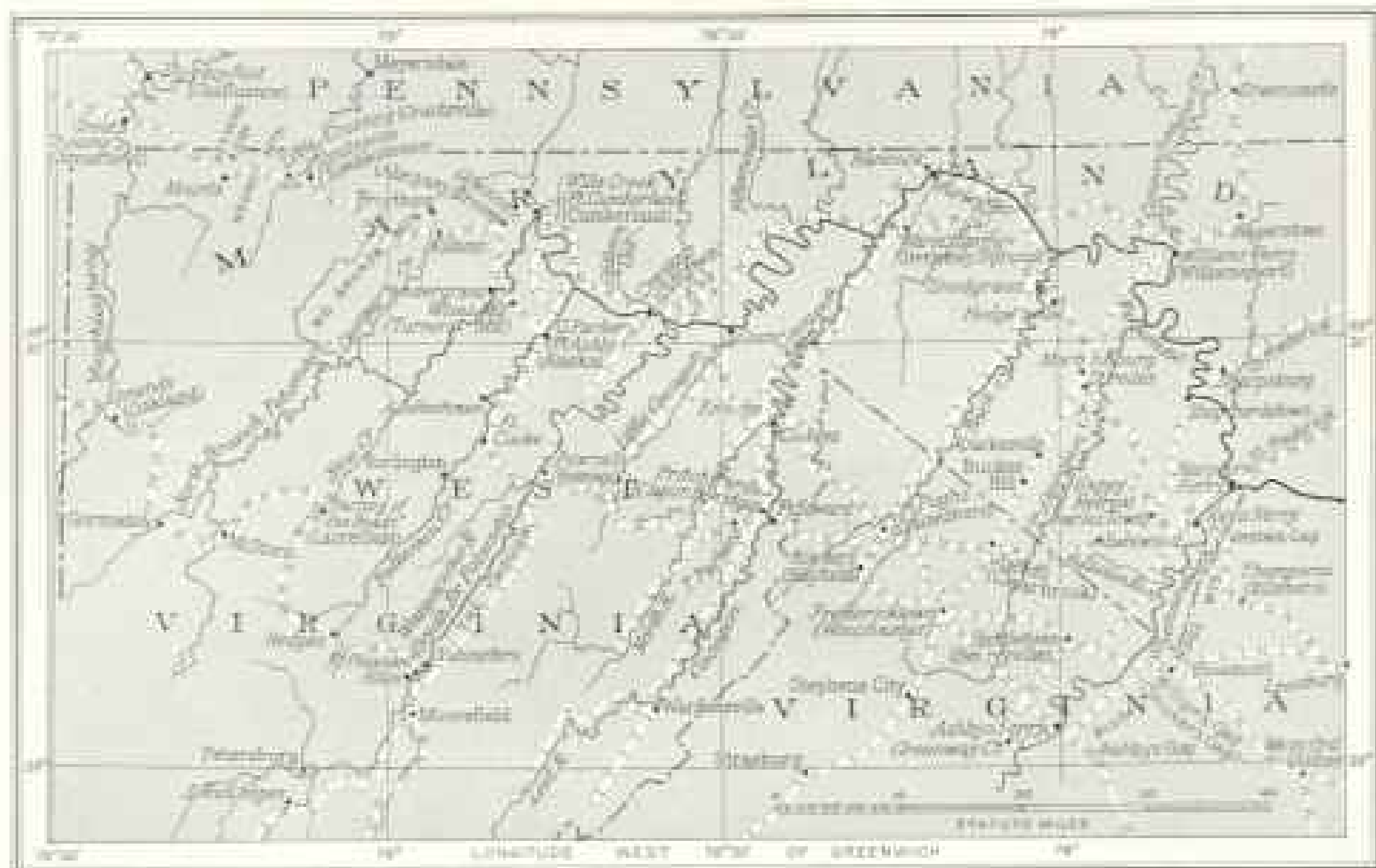
From Fort Mayo Washington went over to Fort Trial, on Smiths River, on the present Roanoke-Winston-Salem Highway. Here he stopped with John Hickey, the first merchant prince of southside Piedmont Virginia. In 1747 Hickey had been granted a peddler's license by the county court of Lunenburg. Gradually he grew rich, and at the time of Colonel Washington's visit he not only kept an ordinary, but owned a mill, a store, and thousands of acres of creek bottoms in what since has been divided into four counties.

Hickey's great caravans of covered wagons hauled goods from what is now Petersburg across all the intervening country by way of Chatham, passing over it so constantly that it became known for nearly a hundred miles as Hickey's Road, a designation that still persists. Then, when flatboats began to move up Roanoke River and Danville began to take form as head of

navigation on the Dan, his wagons headed in another direction, and the road from present-day Martinsville to present-day Danville became known as Hickey's New Road.

Shortly after Washington stopped with John Hickey, the latter's uncollected accounts grew so large that he became insolvent. He decided to Samuel Gordon, the surviving partner of Boyd and Gordon, of Blandford, later incorporated into Petersburg, not only his lands and his store, but his cattle, horses, and hogs, all of his outstanding notes and accounts.

Happily, Hickey was able to stage a "comeback" and in his will left a plantation to his widow and one to each of his 11 children—perhaps one of the earliest Americans to make and lose a fortune and then to make another. His career was one of the early business romances of the Old Dominion.



Drawn by A. H. Bunsford

A DETAIL OF WASHINGTON'S TRAVELS IN THE MARYLAND-WEST VIRGINIA SECTOR

It was in this area that he did most of his survey work for Lord Fairfax, spent most of his time from the beginning of 1754 to the end of 1758. He made many journeys between Fredericktown (Winchester) and Cumberland (Fort Cumberland, Wills Creek) and rode over almost every possible route between the two strongholds. Places existing in Washington's time are shown in italics—*Leesburg*. Places built or renamed since Washington's time are shown in Roman type, thus: *Bluemont*. For explanation of routes, see map, page 12.

From Fort Trial Colonel Washington headed for the fort on the Blackwater River which stood near the present highway bridge, just above the town of Rocky Mount.

In his expense account, which is extant and in the possession of the Library of Congress, he entered an item for meals and lodging at a Widow Evans's.

The colonial records of Augusta County disclose that Daniel Evans died in 1755; that he lived near the Roanoke-Winston-Salem Highway, a few miles south of Roanoke; that he left a widow, Rhoda Evans, whom he made executrix of his estate. The road history of that section shows that the only highway then extant leading from Fort Blackwater past the Evans's home ran through Maggoty Gap where the present Roanoke-Winston-Salem Highway crosses the Blue Ridge. Therefore we know that Washington came over that route.

Next Washington went to Fort William, on the Catawba, where he was joined "by Colonel Buchanan with about thirty men,

chiefly officers, to conduct me up Jacksons River, along the range of forts."

LOCATING FORGOTTEN FORT WILLIAM

The location of Fort William, like that of Fort Mayo, long since had been lost to history, until the research of the National Geographic Society was able to restore it to the map.

In the old records of Augusta County I found three court orders for the building of roads centering at Fort William—one leading up Catawba Creek from the lower ford to Fort William, a second running from Fort William to the head of Catawba Creek, and the third "leading from Fort William to the Market Road," which has since become the Lee Highway. Fortunately, these roads still remain on the highway map of Virginia and the intersection of the three is clearly the point where Fort William stood. When this position was checked with Washington's assigned distances in his fort plan, it agreed exactly, being, as he said, 18 miles from Bryan's,



Photograph by Clifton Adams

FORT ASIERY, AT ALASKA, WEST VIRGINIA, AS IT LOOKS TO-DAY

This was the site of one fort in the chain with which Colonel Washington sought to dam the redskin tide behind the ramparts of the Allegheny Mountains (see map, page 40).

on Roanoke River between Roanoke and Salem, 15 miles from Colonel Buchanan's, and 15 miles from Eagle Rock.

On his way from Fort William to Staunton, Washington crossed the mountains to the present city of Covington, going by way of Rich Patch. At Covington Capt. John Dickinson was in command of a fort referred to as "Dickenson's, on Jacksons River," in Washington's plan, but later known as Fort Young.

"WHOOPING, HALLOOING, GENTLEMEN SOLDIERS"

Speaking of his escort from Fort William to Staunton, Colonel Washington wrote: "With this small company of irregulars, with whom order, regularity, circumspection, and vigilance were matters of derision and contempt, we set out, and, by the protection of Providence, reached Augusta Court House (Staunton) in seven days, without meeting the enemy; otherwise we must have fallen a sacrifice, through the indiscretion of these whooping, hallooing, *gentlemen soldiers!*"

Returning to Winchester, Colonel Washington reported to Governor Dinwiddie

the reckless waste of the militia. Groups would march out, stay a month, and then march back, spending more time going to and from the front than they spent in service. "Allowance for each man, as in the case of other soldiers, they look upon as the highest indignity, and would sooner starve than carry a few days' provision on their backs for conveniency. But upon their march, when breakfast is wanted, they knock down the first beef they meet with, and, after regaling themselves, march on till dinner, when they take the same method, and so for supper.

"Of the ammunition they are as careless as of the provisions, firing it away frequently at targets for wagers. On our journey, as we approached one of their forts, we heard a quick fire for several minutes, and concluded for certain that they were attacked; so we marched in the best manner to their relief; but when we came up we found they were diverting themselves at marks.

"Of the many forts which I passed by, I saw but one or two that had their captains present, they being absent chiefly on their own business, and had given leave to



Photograph by Charles Martin

WASHINGTON'S HEADQUARTERS IN WINCHESTER (1755-8), WHILE IN COMMAND OF VIRGINIA FORCES

The Indian name of Washington was Conotocarious, "Devourer of Villages." Washington signed this name to some of his writings with the Indians.

several of the men to do the same. Yet these persons, I will venture to say, will charge the country their full month's pay."

Of the people he wrote: "They are fully sensible of their misery; they feel their insecurity in relying on militia, who are slow in coming to their assistance, indifferent about their preservation, unwilling to continue, and regardless of every thing but their own ease. In short, they are so affected with approaching ruin that the whole back country is in a general motion towards the southern colonies; and I expect that scarce a family will inhabit Frederick, Hampshire, or Augusta in a little time."

During 1757 Colonel Washington spent most of his time in the Winchester-Cumberland area, where he was sorely handicapped by lack of men, clothing, food, and other supplies. He wrote to Governor Dinwiddie on the eve of the latter's return to Scotland:

"It is uncertain in what light my services may have appeared to Your Honor; but this I know, and it is the highest consola-

tion I am capable of feeling, that no man that ever was employed in a public capacity has endeavoured to discharge the trust reposed in him with greater honesty, and more zeal for the country's interest, than I have done; and if there is any person living who can say with justice that I have offered any intentional wrong to the public, I will cheerfully submit to the most ignominious punishment that an injured people ought to inflict. On the other hand, it is hard to have my character arraigned, and my actions condemned, without a hearing."

"INGRATITUDE A CRIME I DETEST"

This brought from Dinwiddie an accusation of ingratitude. The spirit of Washington is shown in his reply: "I do not know that I ever gave Your Honor cause to suspect me of ingratitude, a crime I detest, and would most carefully avoid. If an open, disinterested behaviour causes offence, I may have offended; because I have all along laid it down as a maxim to represent facts freely and impartially, but

not more so to others, sir, than to you."

With the passing of Dinwiddie and the opening of the spring of 1758, the other colonies awakened to the Indian peril, and sent forces into the field.

After recovering from a prolonged illness, which had seized him in the fall of 1757 and forced him to absent himself from his command, Washington responded with alacrity to the opportunity to lead his regiment to the support of General Forbes, in command of the Pennsylvania militia, whose objective was to wrest Fort Duquesne from the French.

BACK TO THE FORKS OF THE OHIO AGAIN

Marching his troops to Fort Cumberland, formerly Wills Creek, Washington remained there for some time. He built the highway from Cumberland to Bedford, and then participated in the construction of General Forbes's road to Fort Duquesne. On November 28, 1758, he wrote to Governor Fauquier, who had taken Governor Dinwiddie's place in the direction of Virginia's affairs:

"I have the pleasure to inform you, that Fort Duquesne, or the ground rather on which it stood, was possessed by His Majesty's troops on the 25th instant. The enemy, after letting us get within a day's march of the place, burned the fort and ran away by the light of it, at night, going down the Ohio by water, to the number of about five hundred men, according to our best information."

The backbone of the Indian War having been broken, Colonel Washington, still on



Photograph by Charles Martin

ONE OF THE OLD CANNON COLONEL WASHINGTON USED IN THE DEFENSES AT FORT LOUDOUN, AT WINCHESTER

The relic was unearthed and presented to the city of Winchester by James B. Russell. At ninety he is still hale and hearty. He was a Confederate soldier from the beginning to the end of the Civil War and knew personally many men who had known Washington in the flesh.

the sunny side of 27, felt that his public services were ended.

Joyously he retired to Mount Vernon, and on January 6, 1759, married Martha Custis.

A little later he wrote to Richard Washington: "I am now, I believe, fixed at this seat with an agreeable partner for life, and I hope to find more happiness in retirement than I ever experienced amidst the wide and bustling world."

The next dozen years were spent in the quiet way of a Virginia gentleman. There were many trips to the estates of his wife and stepson in the York River area; often

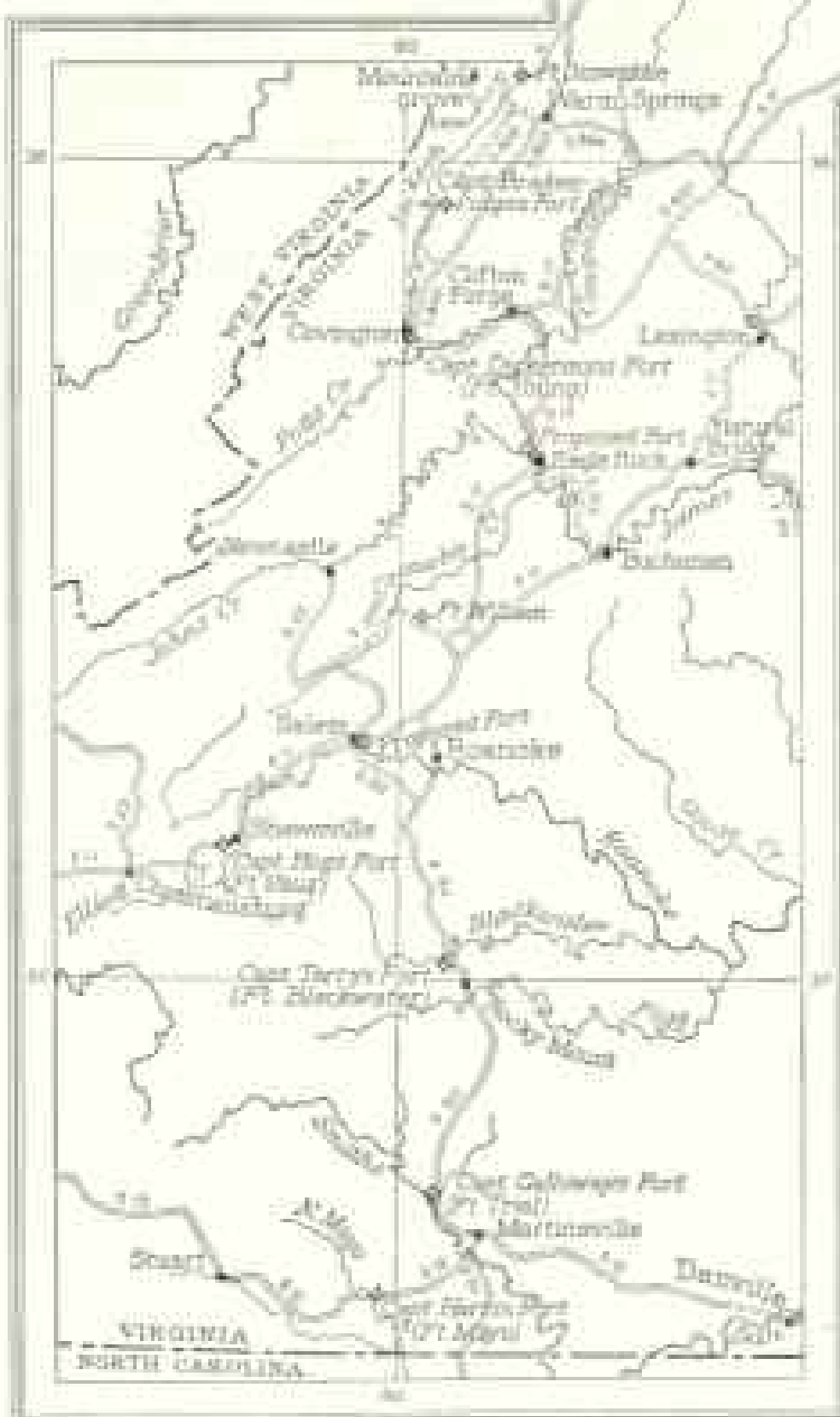
WASHINGTON'S CHAIN OF FORTS

This map shows the location of the 21 frontier forts recommended by George Washington to keep the Indians out of Virginia. Some of the forts had been erected previous to Washington's survey of 1756 (see page 31). Others were erected as a result of that visit, while four were never constructed.

By a search of old records, the National Geographic Society has definitely fixed Forts Mayo, Blackwater, and William, which have not hitherto appeared on any modern map. The Society's research disclosed that the "Fort at Dickensons" in Washington's plan is identical with Fort Young, and not to be confused with a Fort Dickinson on Cowpasture River, 31 miles distant; and that Washington's "Fort at Cocke's" was on Patterson Creek and not at Friend Cox's, at the mouth of the Little Cacapon (see map, page 36).



Drawn by A. H. Bamstead and J. M. Darley



he and his wife drove to Williamsburg and participated in the social life there; frequently he visited his plantations on the Bullskin; sometimes he joined his cronies at Berkeley Springs.

LOCATING SOLDIERS' BOUNTY LANDS

It was not until 1770 that he again ventured far afield, going to Fort Pitt and down the Ohio to locate lands for himself and his comrades of the French and Indian War, to whom the House of Burgesses had granted 200,000 acres. This land had been promised the veterans under a proclamation of 1754, but the promise was not put into shape for execution until 1769. Washington was desirous of seeing Virginia redeem its pledge to the men of his old command, as well as of getting lands for himself.

On October 5 he set off "to the Ohio in company with Doctr. Craik, his Servant, and two of mine with a lead Horse with Baggage."

Going by way of Fort Cocke, which he says was seven miles west of Romney; G.

Parkers, and Turner's Mill, the travelers crossed the North Branch of the Potomac "at the lower end of my deceased brother Augustine's Bottom (lands), known by the name of Pendergrasses," and then went to Joseph Killam's (see map, page 36).

From Killam's Washington was traveling over ground made historic by his campaigns during the French and Indian War. He crossed Big Savage and Negro mountains and Keyzers Ridge to reach Great Crossing (Somerfield), a distance of 30 miles, in one day, and he notes that he found it "a tolerable good day's work."

FORT NECESSITY REVISITED

The 13th day of October must have stirred the emotions of Washington, for he came that morning from Great Crossing to Great Meadows and had breakfast there. Fort Necessity was there, with all of its stirring memories, and Braddock's grave he would presently ride over, for the body had been buried in the road and all traces of it obliterated (see text, page 25). And before the day was done he would pass the scene of his encounter with Jumonville.

But whatever his reflections on these scenes, Washington made no reference to them. He simply wrote:

"The Lands we travell'd over to day till we had cross'd the Laurel Hill (except in small spots) was very mountainous and indifferent, but when we came down the Hill to the Plantation of Mr. Thos. Gist, the Ld. appear'd charming; that which lay level being as rich and black as any thing could possibly be; the more Hilly kind, tho' of a different complexion must be good, as well from the Crops it produces, as from the beautiful white Oaks that grows thereon, the white Oak in generl. indicates poor Land, yet this does not appear to be of that cold kind. The Land from Gists to Crawford's is very broken, tho' not Mountainous; in Spots exceeding Rich, and in general free from Stone. Crawford's is very fine Land; lying on Yaughyanghane at a place commonly called Stewart's Crossing."

ARRANGES FOR THE BUILDING OF A MILL, AT PRESENT-DAY PERRYOPOLIS

While visiting with Captain Crawford at Stuart's Crossing, Washington probably saw his first coal mine, which he says was not far from his host's house, on the banks of the Youghiogheny.

The following day he visited a tract of some 1,600 acres near Perryopolis, which Captain Crawford had taken up for him and which, he says, "Includes some as fine Land as ever I saw, a great deal of Rich Meadow, and in general, is leveller than the Country about it. This Tract is well waterd, and has a valuable Mill Seat (except that the Stream is rather too slight, and it is said not constant more than 7 or 8 months in the Year; but on acct. of the Fall, and other conveniences no place can exceed it)."

He ordered a mill built there, which afterward was to prove a veritable thorn in his flesh; for when the cares of the Continental Army descended upon him, in the opening days of the Revolution, he wrote to Lund Washington: "I never hear of the mill under the direction of Simpson without a degree of warmth and vexation at his extreme stupidity" (see page 43).

On October 17 the party arrived at Fort Pitt. "We lodgd in what is called the Town, distant abt. 300 yards from the Fort at one Mr. Semples who keeps a very good House of Publick Entertainment; these Houses which are built of Logs, and rangd into Streets are on the Monongahela, and I suppose may be abt. 20 in Number. The Fort is built in the point between the River Alligany and Monongahela, but not so near the pitch of it as Fort Duquesne stood."

THE WHITE MINGO RECALLS THE TRIP TO FORT LE BEUF

Before Colonel Washington and his party could get under way down the Ohio, the White Mingo and other chiefs of the Six Nations desired a powwow with him. They arranged the meeting through Colonel Croghan, the commander at Fort Pitt. They brought a string of wampum and a speech from the White Mingo.

Washington summarizes the speech of the White Mingo as follows:

"That as I was a Person who some of them remember to have seen when I was sent on an Embassy to the French, and most of them had heard of; they were come to bid me welcome to this Country, and to desire that the People of Virginia woud consider them as friends and Brothers linked together in one chain; that I wd. inform the Governor, that it was their wish to live in peace and harmony, with the white



Photograph by Chesapeake Aircraft Co.

HARPERS FERRY, SHOWING THE RAPIDS WHICH GENERAL WASHINGTON RAN, AUGUST 9, 1784

Here, where Shenandoah River (left) meets the Potomac and the latter breaks through the Blue Ridge, Washington found one of his knottiest problems in trying to develop an inland waterway to what he called "the Western Waters," meaning those of the Ohio Valley. "At the foot of these falls the Directors and myself (Govr. Lee having joined us the Evening before) held a meeting," he wrote in 1785, "at which it was determined, as we conceived the Navigation could be made through these (commonly called the Shannondoah) Falls without the aid of Locks, and by opening them would give relat to the undertaking and great ease to the upper Inhabitants, as Water transportation would be immediately had to the Great Falls from Fort Cumberland, to employ the upper hands in this work instead of removing the obstructions above." Harpers Ferry is not to be confused with near-by Keys Ferry of colonial times (see text, page 59, and map, page 36).



THE RUINS OF THE OLD MILL NEAR PERRYOPOLIS, BUILT BY
GEORGE WASHINGTON AND SET IN OPERATION IN 1776

The children are sitting on the wall of the old mill race. In 1784 General Washington was unable to lease the property, although he offered to give a tenant exemption from all rents for 15 months (see page 41).



ONE OF THE SURVIVING LOCKS IN THE POTOMAC NAVIGATION
COMPANY'S CANAL AT GREAT FALLS, ON THE POTOMAC

The way in which the stonework has withstood the disrupting pressure of a great tree growing out of the wall testifies to the thoroughness which the first Engineer President required of workmen on engineering jobs.

Photographs by Clifton Adams



Photograph by Clifton Adams

THE MONONGAHELA RIVER AT POINT MARION, PENNSYLVANIA, IMMEDIATELY ABOVE THE MOUTH OF THE CHEAT

"The colour of the two Waters is very different, that of Cheat is dark (occasioned as is conjectured by the Laurel, among which it rises, and through which it runs) the other is clear; and there appears a repugnancy in both to mix."—*Washington's Diary*.

People, and that tho their had been some unhappy differences between them and the People upon our Frontiers, it was all made up, and they hopd forgotten; and concluded with saying, that, their Brothers of Virginia did not come among them and Trade as the Inhabitants of the other Provinces did; from whence they were affraid that we did not look upon them with so friendly an Eye as they could wish.

"To this I answerd (after thanking them for their friendly welcome) that all the Injuries and affronts that had passd on either side was now totally forgotten, and that I was sure nothing was more wishd and desird by the People of Virginia than to live in the strictest friendship with them; that the Virginians were a People not so much engagd in Trade as the

Pennsylvanians, etca. wch. was the Reason of their not being so frequently among them; but that it was possible they might for the time to come have stricter connections with them, and that I woud acquaint the Govr. with their desires."

On October 20, after having hired an Indian called The Pheasant, Joseph Nicholson, an interpreter, and a young Indian warrior to accompany them, the party embarked for the trip down the Ohio in two canoes. The horses were sent back to Captain Crawford's camp.

COMING ONCE AGAIN TO LOGSTOWN

The next day they breakfasted at Logstown. Again there is silence in Washington's Diary at a point which must have inspired stirring memories of his youth,



Photograph courtesy Virginia State Chamber of Commerce

WASHINGTON'S DITCH IN THE DISMAL SWAMP

In 1763 Colonel Washington and five partners formed a company which he designated as "Adventurers for draining the Dismal Swamp." He visited the area in May and October of that year and also in 1766, 1767, and 1768.

for it was there that he won his spurs in diplomacy as he conferred with the Half-King (see text, page 11).

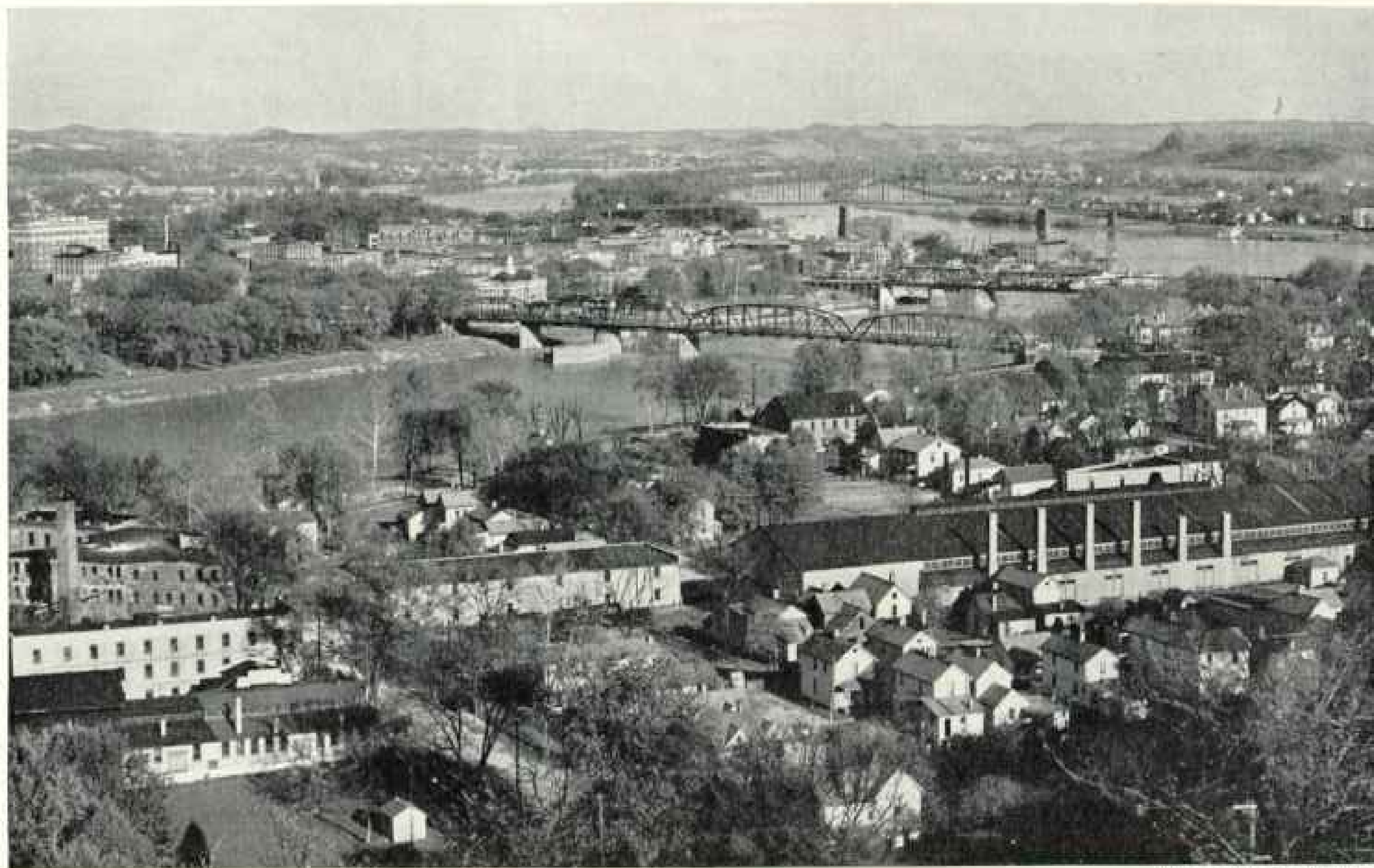
The next ten days were spent going down the Ohio. About 75 miles from Pittsburgh the travelers reached Mingo Town (Mingo Junction, south of Steubenville). They had found wild geese and several species of ducks, and on the day they reached the Indian settlement they killed five wild turkeys, and met sixty-odd warriors of the Six Nations, starting out for the Cherokee country to war on the Catawbans.

On the 24th they passed the site of present-day Wheeling, and on the 25th reported quantities of wild turkeys and many deer

watering and browsing along the shore side, some of which they killed.

While encamped about halfway in the Long Reach of the Ohio where it keeps a straight course for some 20 miles, they put out some lines, and Washington tells us they "found a Cat fish of the size of our largest River Cats hooked to it in the Morning, tho it was of the smallest kind here."

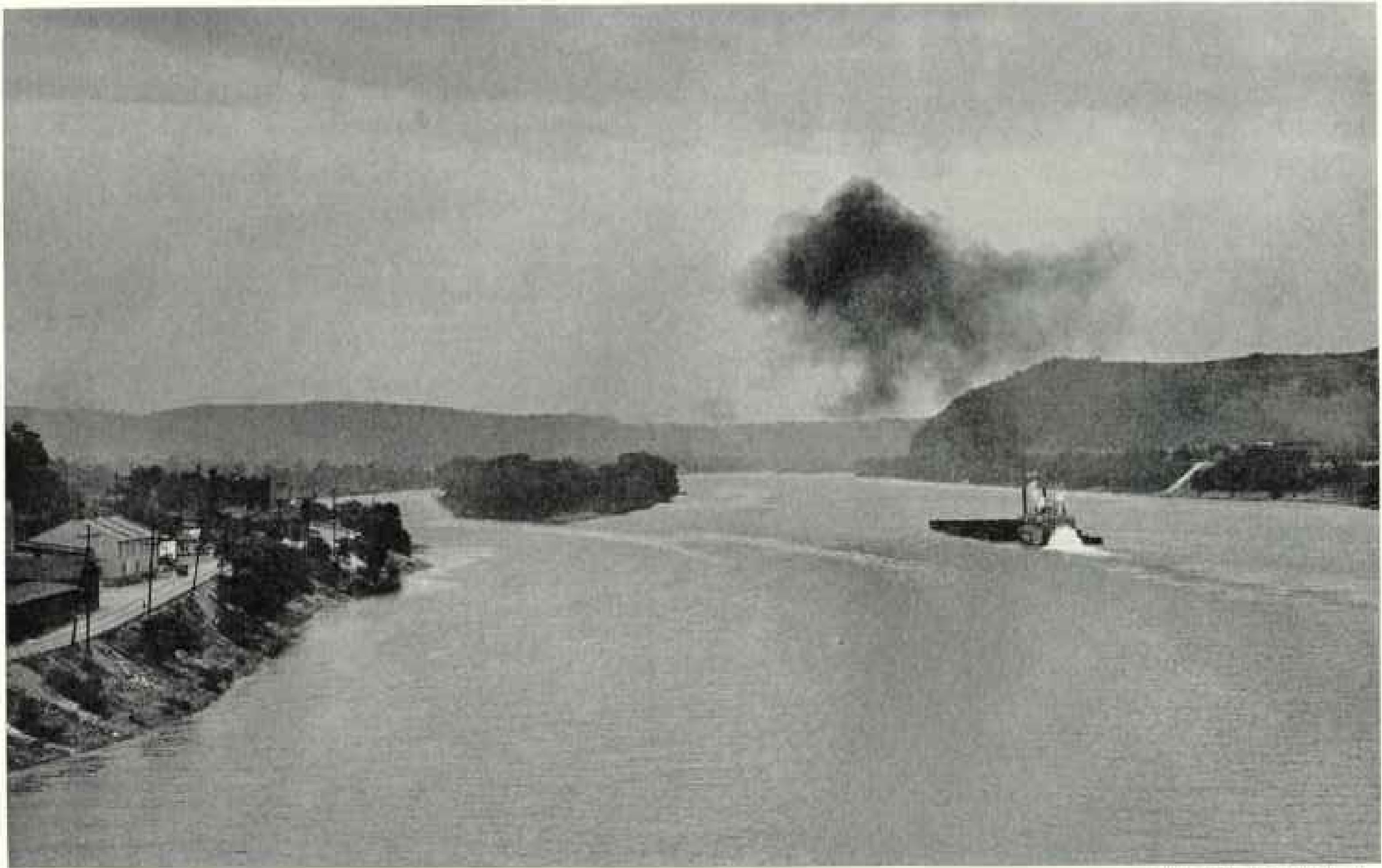
Passing the mouth of the Muskingum River, Washington noted that "it is about 150 yards wide at the mouth, a gentle current and clear stream runs out of it, and is navigable a great way into the country for canoes." On the lower, or southern, bluff, at its mouth, was to be erected, fifteen years



Photograph by Jacob Gayer

VIEW OF MARIETTA, OHIO, FROM HARMAR HILL

Washington passed here on his voyage down the Ohio, October 27, 1770. Fort Harmar was built here in 1785, on his recommendation. Three years later a group of 48 pioneers, headed by General Rufus Putnam, founded Marietta, the oldest city in Ohio. The settlement was named Marietta in honor of Marie Antoinette, then Queen of France. The river coming in from the left is the Muskingum, which flows into the Ohio, the junction being seen on the right of the picture.



Photograph by Jacob Gayer

A REACH OF THE OHIO AT EAST LIVERPOOL

When Colonel Washington made his trip by boat down the Ohio in 1770, bears, deer, wild turkeys, and other game were abundant and buffalo still roamed the area. He hunted buffalo at the mouth of the Kanawha (see text, page 49).



Photograph by Orren R. Louden

THE GEORGE WYTHE HOUSE IN WILLIAMSBURG, VIRGINIA

Before the Revolution, Washington was a frequent visitor in this fine old colonial home, now occupied by Dr. William A. R. Goodwin, the rector of Bruton Parish Church. It was used by him as headquarters while engaged in the preliminaries of the Battle of Yorktown, and was one of the first buildings repaired by Mr. John D. Rockefeller, Jr., in his inspiring restoration of colonial Williamsburg.

later, in 1785, Fort Harmar, the site of which has been almost completely absorbed by the Ohio in the intervening years. In low water, the old well at the fort can be discerned in the river's edge. On the northern bank stands the historic city of Marietta (see page 46).

CHIEF KIASHUTA REJOICES THAT PEACE REIGNS

One week after leaving Logstown the party found Kiashuta, one of the chiefs of the Six Nations, and his hunting party encamped.

"In the Person of Kiashuta I found an old acquaintance," says Washington, "he being one of the Indians that went with me to the French in 1753. He expressed a

satisfaction in seeing me, and treated us with great kindness; giving us a Quarter of very fine Buffalo. He insisted upon our spending that Night with him, and in order to retard us as little as possible movd his Camp down the River about 3 Miles . . . at this place we all Incampd.

"After much Councelling the overnight, they all came to my fire the next Morning, with great formality; when Kiashuta rehearsing what had passed between me and the Sachems at Colo. Croghan's, thanked me for saying that Peace and friendship was the wish of the People of Virginia (with them) and for recommending it to the Traders to deal with them upon a fair and equitable footing; and then again expressed their desire of having a Trade



Photograph by Orren R. Loudon

INTERIOR OF BRUTON PARISH CHURCH, WILLIAMSBURG, WHERE WASHINGTON OFTEN WORSHIPED

The pew that Washington occupied has the door partly open. The canopy to the left marks the Governor's seat, a tall chair which Washington used when he conducted Masonic meetings in Williamsburg.

opend with Virginia, and that the Governor thereof might not only be made acquainted therewith, but of their friendly disposition towards the white People; this I promised to do."

About five miles above the mouth of the Kanawha, Washington and his party left the boats and set out on a hunting trip, making camp at the confluence of that river with the Ohio the same evening, where their canoes awaited them.

The next day they rowed ten miles up the Kanawha, and the following day four more. Here they camped and hunted, bagging five buffaloes, wounding several others, and killing three deer. The country round about was a sportsman's paradise. Washington says it "abounds in Buffalo and Wild

game of all kinds as also in all kinds of wild fowl."

WASHINGTON DISCOVERS A RECORD-BREAKING SYCAMORE

After setting a corner for each of two tracts of soldiers' lands near the mouth of the Kanawha, Washington and his party began their return trip. As they stopped opposite the mouth of Campaign Creek, Gallia County, Ohio, they met a canoe laden with sheep, bound for Illinois. Here, also, he says, "at the end of the Bottom from the Kanawha, just as we came to the Hills, we met with a Sycamore abt. 60 yards from the River of a most extraordinary size, it measuring (3 feet from the Gd.) 45 feet round, lacking two Inches,



Official photograph, U. S. Army Air Corps

PANORAMA OF YORKTOWN DURING THE SESQUICENTENNIAL CEREMONIES, OCTOBER, 1931

Washington's first visit to Yorktown, of which the author was able to find a record, was on July 15, 1748. An item in his ledger shows that he spent £13.0. on that date for ribbons for his mother and 3s. 4d. for a glass ring. Thirty-three years later he struck there the blow that won American Independence. This picture shows, in the mouth of the York River, the *Constitution*, a little to the right the Yorktown Monument (at extreme left), and the scouting fleet of the United States Navy at anchor. Grand stands may be seen in the left center of photograph. Black rows of parked cars stretch across adjacent fields. Tents in the foreground were for the soldiers who participated in the memorial ceremony.

and not 50 yards from it was another 31.4 round."

When they reached Kiashuta's hunting camp again Washington records that, "by the Kindness and Idle ceremony of the Indians, I was detain'd all the remaining part of this day."

Discussing conditions on the Ohio, Washington wrote: "There is very little difference in the genl. width of the River from Fort Pitt to the Kanhawa; but in the depth I believe the odds is considerably in favour of the lower parts; as we found no shallows below the Mingo Town, except in one or two places where the River was broad; and there, I do not know but there might have been a deep Channel in some part of it. Every here and there are Islands some larger, and some smaller, which operating in the nature of Locks, or stops, occasion pretty still water above, but for the most part strong and rapid water along side of them; however there is none of these so swift but that a Vessel may be Row'd or set up with Poles.

LIFE ALONG THE OHIO IN 1770

"When the River is in its Natural State, large canoes that will carry 5 or 6000 weight and more, may be work'd against stream by 4 hands 20 or 25 Miles a day; and down, a good deal more.

"The Indians who are very dexterous (even there Women) in the management of Canoes, have there Hunting Camps and Cabins all along the River for the convenience of transporting their skins by Water to Market. In the Fall, so soon as Hunting Season comes on, they set out with their Familys for this purpose; and in Hunting will move there Camps from place to place till by the Spring they get 2 or 300 or more Miles from there Towns; Then . . . into the Month of May, when the women are employ'd in Plantg. The Men at Market, and in Idleness, till the Fall again; when they pursue the same course again. During the Summer Months they live a poor and perishing life."

Finally reaching Fort Pitt on his return, Washington set out, over his familiar route, back to Fort Cumberland, and thence by Oldtown; dined at Henry Enoch's at the Forks of Capon; came to his brother Samuel's near Charles Town, and thence back to Mount Vernon, where he arrived on December 1, 1770, after an absence of nine weeks and a day.

Anyone who reads the diary of his trip down the Ohio, as he goes over the same territory to-day, sees that George Washington was a superb judge of good land, and that his eye did not miss a single bottom where good land, in sizable tracts, could be found. His apprehension was that random settlers would get in and take possession of small tracts before he and his associates could patent the larger areas they desired to take up under the terms of the bounty land provisions for their services in the French and Indian War.

A RIDE THAT LED TO THE REVOLUTION

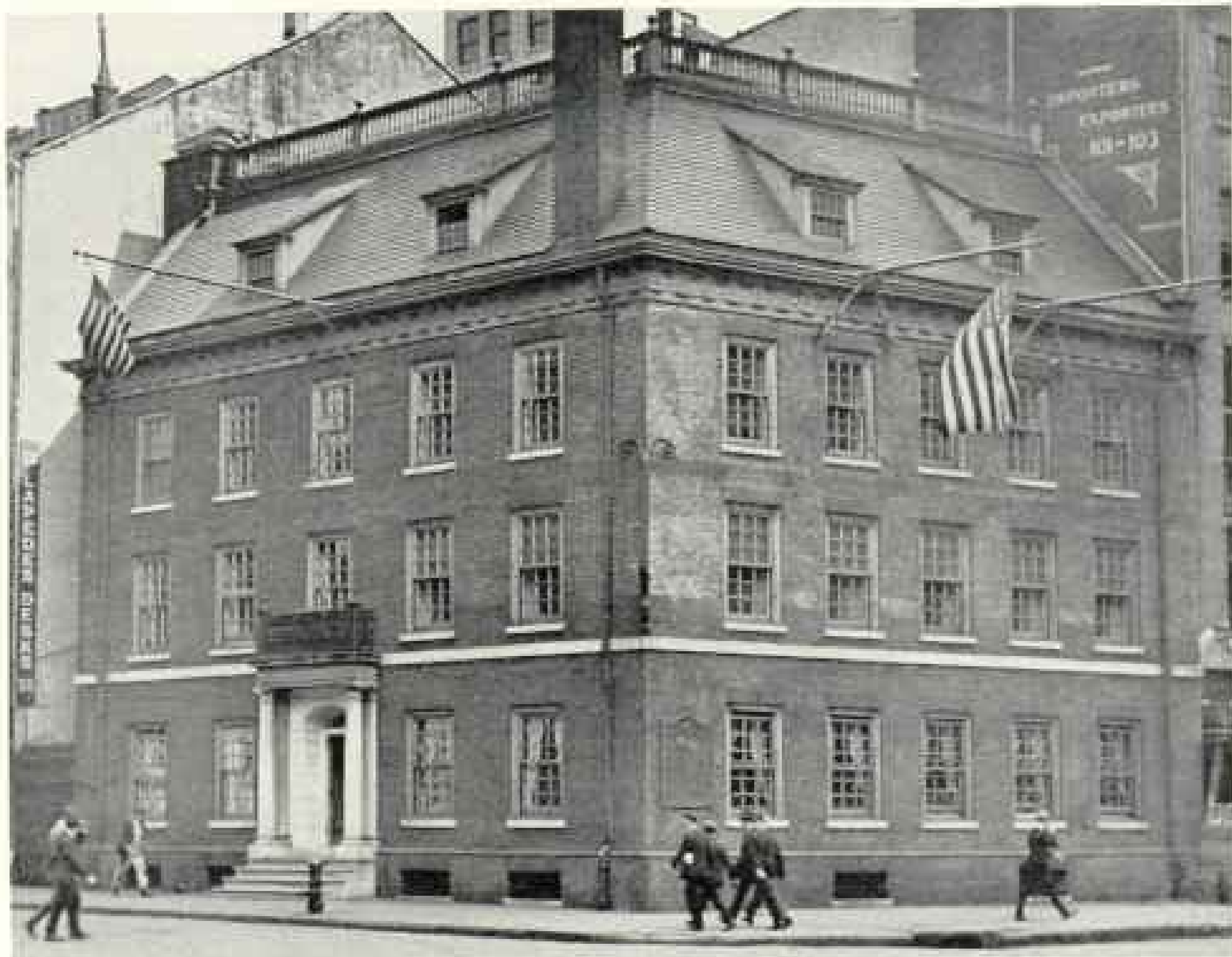
Washington settled down again to the comfortable life of the master of Mount Vernon, with occasional trips to Alexandria, Winchester, Berkeley Springs, Fredericksburg, and Williamsburg. In going to and from Williamsburg he used almost every possible route. Often the road to Fredericksburg was so bad that he preferred to cross the Potomac twice, going through southern Maryland by way of Port Tobacco to get to Virginia's colonial capital (see, also, illustration, page 34).

There were also occasional trips to Annapolis for the races, or to visit the Governor of Maryland and other friends.

In 1773 Washington made another journey to New York to enter his stepson, John Parke Custis, in King's College, now Columbia University. *En route* he visited the Governor of Maryland at Annapolis, dined with the Governor of Pennsylvania in Philadelphia, with the Governor of New Jersey at Burlington, and visited Lord Sterling at Basking Ridge, New Jersey. He returned to Mount Vernon by way of Lancaster, York, and Baltimore. Leaving Philadelphia, he dined at the Sorrel Horse, 13 miles distant; lodged at the Ships Tavern, 34 miles off, and the next morning rode 13 miles to breakfast at the Sign of the Bull.

On August 31, 1774, this home-loving Virginian set out on another trip to Philadelphia, this one destined to transform him from a gentleman farmer and a modest burgess into a world military figure and a hero of the ages.

With Edmund Pendleton and Patrick Henry, he was *en route* to the meeting of the First Continental Congress. The acts of that Congress were to make those of the Second Continental Congress inevitable. After two months he returned again



Photograph by Ewing Galloway

FRAUNCE'S TAVERN, NEW YORK CITY

General Washington took leave of his fellow officers of the Revolutionary Army December 4, 1783, in the Long Room, on the second floor: "I now take leave of you. May your later days be as prosperous and happy as your former ones have been glorious!" The old hostelry, which still stands, at the corner of Pearl and Broad streets, was originally the homestead of a member of the De Lancey family and was erected in 1730. It was sold in 1762 to Samuel Fraunce, who opened it as the Queen Catherine. It was famous for its receptions and balls in pre-Revolutionary days.

to Mount Vernon. His days there were few. He spent some time looking after his affairs in the lower Shenandoah Valley and made a trip to Richmond. Then there were meetings with the Fairfax Independent Company, the Spotsylvania and Prince William troops, all of which chose him to command them.

"A TRUST TOO GREAT FOR MY CAPACITY"

On May 4, 1775, he bade good-bye to Mount Vernon for the last time until just before the dawn of peace. He was bound for the Second Continental Congress, which, less than six weeks later, was to elect him General and Commander-in-Chief of all the forces raised or to be raised by the United Colonies.

To his wife he wrote of the honor and responsibility: "I assure you in the most

solemn manner that so far from seeking the appointment, I have used every endeavor in my power to avoid it . . . from a consciousness of its being a trust too great for my capacity."

For the next six years he was making momentous history. On his way from the North to the siege of Yorktown he stopped for three short days at Mount Vernon and hastened on to the climax of the struggle.

The third period of George Washington's travels is the history of the movements of his Army. These are traced on the National Geographic Society's map supplement and have been described in such detail in various histories of the War for Independence that they need no further comment here.

His military cares were not to end, however, with Yorktown. He spent the winter



Photograph by Ewing Galloway

GENERAL WASHINGTON WAS TWICE A GUEST IN THE VAN CORTLANDT MANSION,
IN VAN CORTLANDT PARK, NEW YORK

He spent a night here before setting out for Yorktown, and again upon entering New York in 1783, just prior to the demobilization of the American Army.

of 1781-82 with the Continental Congress in Philadelphia. He pleaded with it to foster the freedom that had been won, and to see that the Army and its officers should be paid. He rejoined his Army at Newburgh, New York, in April, 1782.

Finally, with the last British soldier evacuated from American soil, when General Clinton sailed away, on November 25, 1783, he took leave of his fellow officers at Fraunce's Tavern, in New York City, on December 4, and then journeyed to Annapolis, Maryland, where he resigned as Commander of the Continental Army and turned in his accounts of expenses, refusing any salary for the whole period of the war.

HOME AT LAST ON CHRISTMAS EVE!

Then he hastened home, and on Christmas Eve, 1783, entered once more the portals of his beloved Mount Vernon, to become, as he wrote, "a private citizen on

the banks of the Potomac . . . free from the bustle of a camp and the busy scenes of public life," planning to "move gently down the stream of time until I sleep with my fathers."

With the exception of a visit to Philadelphia in the spring of 1784 to attend a meeting of the Society of the Cincinnati, General Washington was almost wholly absorbed in the life of Mount Vernon until September 1, 1784. His letters are full of details of those days, but they are the details of a country gentleman's management of his estates, the embellishment of his gardens, and the entertainment of his friends. The tasks of his home plantations apparently so occupied him that from his return there, on Christmas Eve of 1783, to September of 1784, he did not take time to keep a diary.

At last there came a day when his Western lands demanded his attention, and a day, too, when the problem of communica-

tions across the Alleghenies became of paramount concern to him.

So, on September 1, 1784, accompanied by his nephew, Bushrod Washington, who afterward became a Justice of the United States Supreme Court, and by Dr. James Craik and the latter's son William, he set out by way of Leesburg, Hillsboro, and Charles Town.

WASHINGTON SEEKS A WATERWAY FROM THE POTOMAC TO THE OHIO

At the last place, while staying with his brother Charles, leading men, including Gen. Daniel Morgan, came to see him, "and one object of my journey being to obtain information of the nearest and best communication between the Eastern and Western Waters; and to facilitate as much as in me lay the Inland Navigation of the Potomack; I conversed a good deal with Genl. Morgan on this subject."

From Charles Town he went by Martinsburg to Berkeley Springs, stopping with Captain Strode near Opequon Creek the first night. At Berkeley Springs, James Rumsey showed him a working model of a steamboat.

"The Model, and its operation upon the water," General Washington records, "which had been made to run pretty swift, not only convinced me of what I before thought next to, if not quite impracticable, but that it might be turned to the greatest possible utility in inland Navigation."

At Cumberland, Washington left his party and, taking one servant, rode to Gilbert Simpson's, so that he might make arrangements for the sale of the property he held in partnership with Simpson.

Again he was on the Braddock Road. He stopped one night at Tomlinson's, at the Little Meadows, passed through the Shades of Death the next day, and paused to rest at the Great Crossing, after which night overtook him within a mile and a half of the Great Meadows (map, p. 36).

"Left Daughertys about 6 O'clock—stopped awhile at the Great Meadows and viewed a tenement I have there, which appears to have been but little improved, tho' capable of being turned to great advantage, as the whole of the ground called the Meadows may be reclaimed at an easy comparative expence and is a very good stand for a Tavern." In these unemotional words Washington speaks of the ground

where Fort Necessity stood and near which General Braddock lay buried. But that he was devoted to the spot is shown by the fact that he had bought it in 1770 and held it as long as he lived (see map, page 12).

The hardships of his military life had begun to tell on him, for he writes that "crossing the Mountains, I found tedious and fatiguing." Finally reaching Gilbert Simpson's and his lands around Petryopolis, Washington visited his mill, examined the various farms in the tract, received Col. William Butler and Capt. David Lockett, the latter the commander of the garrison at Fort Pitt, conferred with the people who lived on his land and on Millers Run, and arranged for the sale of the property he held jointly with Simpson.

The sale at Simpson's was not a success. General Washington writes: "My Mill I could obtain no bid for, altho I offered an exemption from the payment of Rent 15 Months. The Plantation on which Mr. Simpson lives rented well—viz. for 500 Bushels of Wheat, payable at any place within the County that I or my Agent might direct—the little chance of getting a good offer in money, for Rent, induced me to set it up to be bid for in Wheat."

THE GENERAL MODIFIES HIS TERMS OF SALE FOR POOR TENANTS

After concluding his partnership with Simpson and employing Maj. Thomas Freeman as his western manager, Washington set out to view his lands on Millers Run, a branch of Chartiers Creek, crossed the Monongahela, and lodged with Col. John Canon at Canonsburg. Noting that the people on his lands were apparently very religious, he thought it best to postpone conferences with them until Monday. There were 14 farms within the 2,813-acre tract. He listed them carefully as to the character of the buildings and fencing, the number of acres of meadow and of other arable land, and in whose tenancy they then were.

Dining at Squire David Reed's, Reed and James Scott inquired whether he would sell the land and, if so, upon what terms, remarking, as they did so, that though they did not conceive that they could be dispossessed, yet to avoid any contention they would buy if General Washington's terms were moderate. To this the General replied that he had no



Photograph by Ewing Gallwey

ON THIS SITE GEORGE WASHINGTON TOOK HIS OATH OF OFFICE AS FIRST PRESIDENT OF THE UNITED STATES

The Subtreasury of the United States stands on historic ground. New York's whipping post, pillory, and debtor's prison once stood here. Washington was inaugurated on this spot, and the stone on which he stood has been marked and placed in the walls of the building. At the end of the street rises Trinity Church. The statue of Washington is the work of the sculptor John Quincy Adams Ward.



Photograph by Charles Martin

WHERE MARY WASHINGTON LIVED IN HER LATER YEARS

After the fire which destroyed Wakefield, where George Washington was born, and a second fire destroyed their Hunting Creek home, the Washingtons moved to the Ferry Farm, opposite Fredericksburg (see page 9). Later this house was built on a part of the Kenmore tract, in Fredericksburg, so that Mary Washington might have the quiet of her own home and still be close to her daughter, Betty Lewis.

intention of selling. But after they had told him of their hardships, their religious principles which bound them together, and their unwillingness to separate or move, he writes:

"I told them I would make them a last offer and this was—the whole tract at 25 S. pr. Acre, the money to be paid at 3 annual payments with Interest; or to become Tenants upon leases of 999 years, at the annual Rent of Ten pounds pr. Ct. pr. Ann."

AN INVENTORY OF THE GREAT TRAVELER'S BAGGAGE

They asked if he would extend the terms of payment on an outright purchase, and General Washington said no. They replied that they would stand suit for dis-possession. Having arranged for the collection of evidence upon which to base such a suit, General Washington went back to Simpson's, where he left most of his baggage, after making an inventory of it. There were two leather valises and one

linen case, his tent, the tent of his horse-men, all of his bedding except sheets, which he took home with him; his equipage trunk, silver cups and spoons, canteens, two kegs of spirits, horseshoes, etc. In his equipage trunk and in the canteens were Madeira and port wines, cherry bounce, oil, mustard, vinegar, spices of all sorts, tea, sugar, and fishing lines, everything under lock and key.

Leaving Simpson's, General Washington rode on to Beesontown, now Union-town, where he engaged Thomas Smith to bring his ejection suits against the Mil-lers Run people. These suits were successful, and Washington finally disposed of the whole tract to Captain Ritchie, in 1796, for \$12,000.

SEARCHING FOR PORTAGES BETWEEN THE SEABOARD AND THE MISSISSIPPI

His personal business now disposed of, General Washington renewed his inquiries about navigable waters in the area between the Atlantic seaboard and the Ohio. At



Photograph by Orren R. Louden

THE TOMB OF MARY WASHINGTON AT FREDERICKSBURG, VIRGINIA

George Washington was as dutiful to his mother as he was devoted to his country. Her unwillingness to have him join the British Navy as a boy became a pivotal factor in American history. She lived to see him become the first President of the United States. She died August 25, 1789.



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CROWN POINT, NEW YORK, VISITED BY GENERAL WASHINGTON IN 1783

This stronghold on the southern waters of Lake Champlain was long a strategic point. The French built Fort Frédéric here about 1731, and held it against repeated attacks, but with the fall of Fort Ticonderoga, in 1759, they abandoned it to Lord Jeffrey Amherst. At the beginning of the Revolution the first thought of the colonists was to open a way to Canada, and Seth Warner, leading a small band of Vermont rangers, or Green Mountain Boys, took it, with 200 cannon and a quantity of ammunition, after Ethan Allen had captured Fort Ticonderoga (see page 63). It was abandoned upon the approach of General Burgoyne, in 1777. It is now a State park.

Beesontown a Captain Hardin told him that the west fork of the Monongahela came close to the Little Kanawha, and that a portage of only nine miles, over ground that would permit the construction of a good wagon road, would be required.

Captain Hardin also thought that a portage could be found between the Cheat River and the North Branch of the Potomac, so that boats could carry freight up the Potomac and discharge it about 30 miles from the Cheat. Then it could be portaged across to Dunkard's Bottom on

the Cheat, and carried down that river to the Monongahela, and up its west fork to the portage to the Little Kanawha (see Map Supplement).

This idea gripped the imagination of General Washington; so he decided to send his baggage home with Dr. Craik, and, in company with his nephew, he took a different route in order "to make a more minute enquiry into the Navigation of the Yohiogany Waters."

From Beesontown he rode to what is now Point Marion, at the mouth of Cheat

River, spending the night with Col. Theophilus Philips, and from there riding to Pierpont's, at the present village of Easton, where he spent the afternoon and evening in conference with Col. Zachwell Morgan and others, making the most incisive inquiries as to the possibility of establishing a water route across the Alleghenies.

"Having attained the foregoing information," he writes, "and being indeed somewhat discouraged from the acct. given of the passage of the Cheat River through Laurel hill and also from attempting to return by the way of the Dunkers bottom, as the path it is said is very blind and exceedingly grown up with briars, I resolved to try the other Rout." So he came by way of Ice's Ferry, where he began again his minute inquiries. The ferryman's accounts of his own boat trips up the Cheat, he writes, "left no doubt on my Mind of the practicability of opening an easy passage by Water to the Dunker bottom."

THE GENERAL RUNS THE RAPIDS OF THE POTOMAC

Riding on, General Washington made inquiry of every man he met about the streams. At the entrance to the glades of the Youghiogheny, in the vicinity of Terra Alta, West Virginia, he had to sleep in the open, with only his overcoat for shelter. At Charles Friends's he was able to get no food for his horses and only boiled corn for himself and his nephew.

Continuing his journey across the headwaters of Patterson Creek, he came to Moorefield, back in the old theater of his early surveying days and of his French and Indian War campaigns. He returned home by way of what is now Madison Courthouse and took the wrong road twice between what is now Remington, Virginia, and near-by Mount Vernon, the only times on his entire journey when he became confused about his route.

"The Western Settlers," he wrote, surveying his observations and impressions, "stand as it were on a pivot—the touch of a feather would almost incline them any way.

"If we are supine, and suffer without a struggle the Settlers of the Western Country to form commercial connections with the Spaniards, Britons, or with any of the States in the Union we shall find it a difficult matter to dissolve them altho' a better communication should thereafter, be

presented to them—time only could effect it; such is the force of habit!"

General Washington's next trip was to Richmond, to escort General Lafayette to Annapolis on his way to Baltimore. In the spring of 1785 he went to Richmond to attend a meeting of the Disual Swamp Company, and in August inspected the work of the Potomac Company from Georgetown to Harpers Ferry.

With the directors of the latter company he rode to Seneca Falls; then, proceeding by way of the mouth of the Monocacy River to Frederick, Maryland, where he spent the night at the home of Governor Johnson, he traveled to Harpers Ferry.

He was dissuaded from making an attempt to run the falls and rapids at Harpers Ferry on August 7; but two days later, having provided a light and convenient boat and two hands to work it, he laid in some stores, and with Colonels Fitzgerald and Gilpin embarked and made his way triumphantly over the upper falls and through the rapids, continuing down the river past Brunswick and Point of Rocks to Seneca Falls (see page 42).

He had previously made the trip between Great Falls and Seneca by boat and later had come down the river from Great Falls to Little Falls; so that he had now completed the navigation of the Potomac from above Harpers Ferry to the environs of Georgetown, except for the Great Falls.

During 1786 Washington did not leave the Mount Vernon community except for trips to Alexandria and Great Falls to attend meetings of the Potomac Company and a brief journey to Richmond to acknowledge some deeds before the General Court.

BENJAMIN FRANKLIN FINDS A RISING SUN

In 1787 he visited his aged mother in Fredericksburg, and then left for Philadelphia to attend the Federal Convention. After the adoption of the Constitution by the Convention he hastened back to Mount Vernon. As the Constitution finally was signed, Benjamin Franklin exclaimed that he had often wondered whether the sun on the horizon in a painting behind the President of the Convention (General Washington) was a rising or a setting sun, but now, with the Constitution signed, he knew that it was a rising one.

In 1788 a trip up the Potomac to Harpers Ferry in June, returning by way of his



Photograph by Clifton Adams

THE BIRTHPLACE OF TOBIAS LEAR, AT PORTSMOUTH, NEW HAMPSHIRE

On the first tour ever made by a President of the United States, in 1789, General Washington visited here. Lear was born in 1760 and became private secretary to General Washington and also tutor to Parke and Nellie Custis, his stepchildren.

brother Charles's home at Charles Town, was his farthest adventure from Mount Vernon (see, also, page 30).

MARY WASHINGTON SAYS HER LAST GOOD-BYE TO HER GREAT SON

Early in March, 1789, General Washington foresaw that he, in all probability, would be elected President of the United States. His ready cash was low, so he applied to Capt. Richard Conway, of Alexandria, for a loan of £500, saying it was a thing he never had expected to be driven to, borrowing money on interest. He added that because of short crops and other reasons not entirely within his control he was indebted to numerous people in Alexandria and elsewhere, and that it would be exceedingly disagreeable for him to leave Virginia "if it shall not be in my power to remain at home in retirement," without discharging those debts.

A few days later he visited his mother, doubtless realizing that his farewell would be his last leave-taking from her amid earthly scenes, as it proved to be, for she died the following August.

When April 16 rolled around he entered in a diary whose whereabouts now is unknown:

"About ten o'clock I bade adieu to Mount Vernon, to private life, and to domestic felicity, and with a mind oppressed with more anxious and painful sensations than I have words to express, set out for New York in company with Mr. Thomson and Colonel Humphreys, with the best disposition to render service to my country in obedience to its calls, but with less hope of answering its expectations."

Elsewhere he declared that he was going to New York with "feelings not unlike those of a culprit who is going to the place of execution."

PRESIDENT WASHINGTON "SWINGS AROUND THE CIRCLE"

As the first Chief Magistrate, General Washington made two extended trips that partook somewhat of the nature of modern presidential "swings around the circle."

With the recess of Congress approaching in 1789, he considered the advisability of making a tour of the Eastern States "to



Photograph by Ewing Galloway

THE JUMEL MANSION, IN NEW YORK

Here General Washington had his headquarters from September 14 to October 19, 1776, and he and his Cabinet were entertained at a famous dinner here in 1790. The house was bought by Stephen Jumel, a noted French wine merchant whose widow married Aaron Burr. It is now a museum, under the auspices of the Washington Headquarters Association of New York and the Society of the Daughters of the American Revolution.

acquire knowledge of the face of the Country, the growth and agriculture thereof, and the temper and disposition of the inhabitants towards the new government."

But before he undertook such a trip he consulted with the leaders in Congress. Alexander Hamilton thought the tour desirable. John Jay also heartily approved it, but warned that such a New England trip would later mean a southern trip. James Madison saw no impropriety in it.

The President set out October 15. Chief Justice Jay, Secretary of the Treasury Hamilton, and Secretary of War Knox escorted him out of New York, but after they turned back his retinue included Maj. William Jackson and Tobias Lear, together with six servants. They lodged at Rye, breakfasted at Stamford, and reached Fairfield in the evening.

New Haven, which then had a population of about 4,000, and Yale University, with a student body of 120, gave him a hearty welcome. The Congregational ministers presented an address, as did Governor

Huntington on behalf of the Connecticut Legislature.

A squadron of Hartford Light Horse escorted the President into Hartford. There he visited the woolen mills and ordered a suit of broadcloth for himself and a bolt of "everlasting" to make trousers for his servants.

At Springfield he inspected the Government stores.

Worcester turned out handsomely to greet the head of the Nation. Cambridge and Boston received him royally; Salem did its best to do him honor. Beyond Beverly the President went to the cotton factory of the Cabots. Newburyport welcomed him with rockets and other fireworks and a parade.

At the New Hampshire line he was met by all the leading State officials and several troops of cavalry. Many officers of the militia were dressed in handsome white and red uniforms manufactured in that State. Portsmouth received him with great honors. After sailing about the harbor, he

visited Kittery, Maine, and then fished for cod with little luck.

The return to New York was by way of Haverhill and Hartford. "It being contrary to law and disagreeable to the People of this State (Connecticut) to travel on the Sabbath day," the President wrote, "I stayed at Perkins' tavern (which, by the bye, is not a good one,) all day—and a meeting-house being within few rods of the door, I attended morning and evening service, and heard very lame discourses from a Mr. Pond."

The next day he reached New York again after an absence of 30 days.

When Rhode Island ratified the Constitution the President went by water to Newport and Providence to express his delight and that of the Nation that the last of the thirteen States was now in the fold.

THE SOUTHERN TRIP WAS A STATE AFFAIR

The southern trip, begun after the adjournment of Congress in 1791, was a more stately affair than the New England trip. "In this tour," General Washington writes, "I was accompanied by Major Jackson,—my equipage and attendance consisted of a Charriot and four horses drove in hand—a light baggage Waggon and two horses—four saddle horses besides a led one for myself—and five—to wit; my Valet de Chambre, two footmen, Coachmen and postilion."

The direct road from Wilmington to Baltimore was bad, so the President went down the peninsula to Chestertown, and then crossed the Chesapeake to Annapolis, the boat running aground about a mile out of Annapolis. The distinguished traveler records that the berth in the Bay boat was too short by the head, and that he had to lie all night in his greatcoat and boots, much cramped.

Annapolis paid the President numerous honors. He spent the night at Bladensburg on his way to Georgetown, where he met the Commissioners appointed to locate the Federal City. From March 31 to April 7 he had the joy of a brief stay at Mount Vernon.

All along the way there were escorts, artillery salutes, formal addresses, dinners, everything that a naturally hospitable section could devise to pay tribute to the Nation's head. Fredericksburg, Richmond, and Petersburg each paid him honor. Wil-

ilmington, North Carolina, and Charleston, South Carolina, had great celebrations. Of the latter General Washington says: "Was visited about 2 O'clock, by a great number of the most respectable ladies of Charleston—the first honor of the kind I had ever experienced and it was as flattering as it was singular."

From Charleston the party journeyed down the coast to Savannah. That city wanted him to see every historic spot in the vicinity; then gave him a great dinner "in an elegant Bower erected for the occasion on the Bank of the River below the Town."

THE PRESIDENT STUDIES THE BATTLE FIELDS OF THE SOUTH

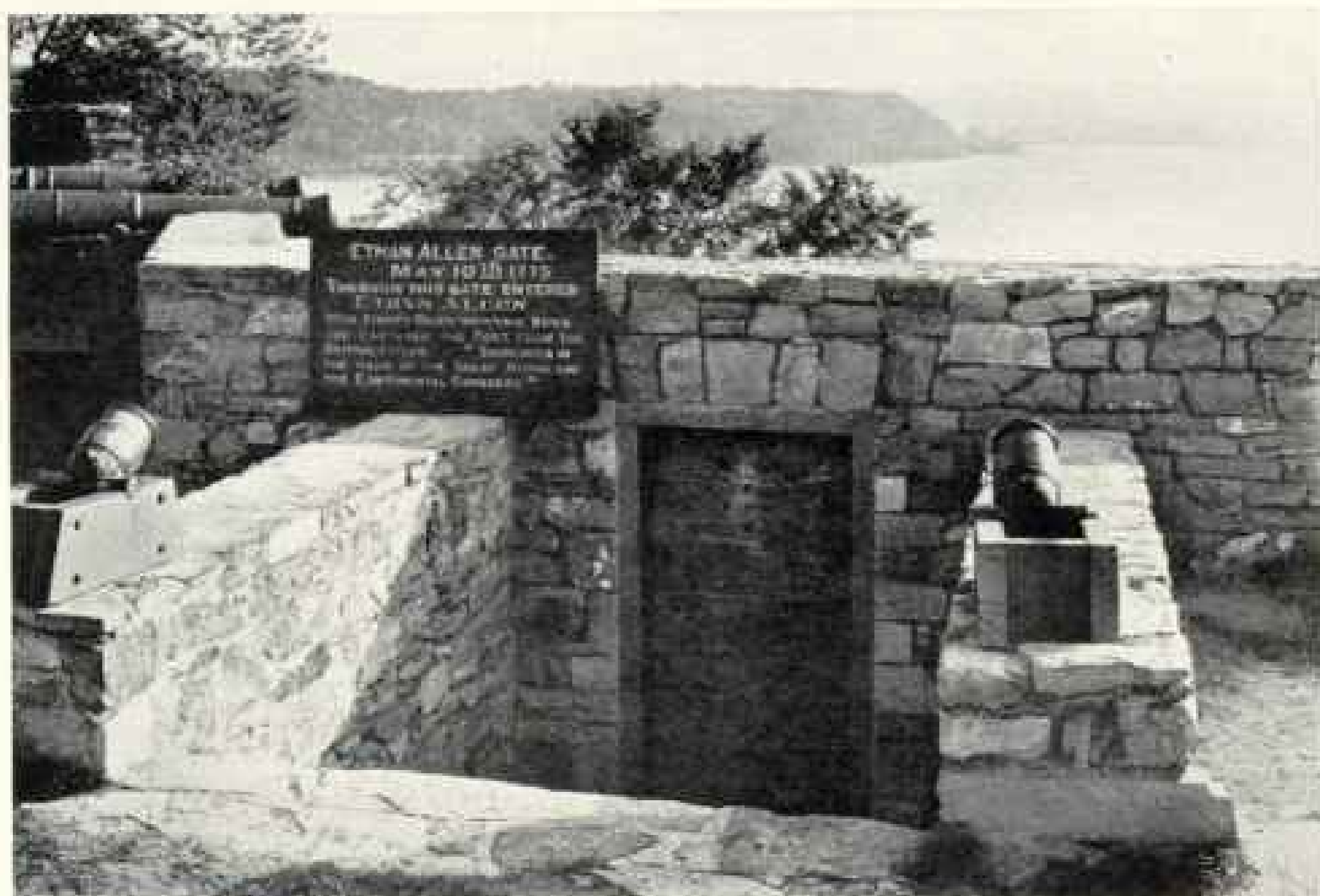
The presidential route swung around to Augusta from Savannah, and from there to Columbia, South Carolina. At Camden the President was much interested in studying the battle field where General Greene and Lord Rawdon had their action. He also studied the battle field where General Gates and Lord Cornwallis stumbled upon one another in the night, and wrote: "Had Genl. Gates been $\frac{1}{2}$ a mile further advanced, an impenetrable Swamp would have prevented the attack which was made on him."

Charlotte and Salisbury also were on his route, and he chronicled that between them he saw the first meadow lands since leaving Virginia.

At Winston-Salem President Washington was much interested in the Moravian settlement. While waiting for the Governor of the State to arrive, he visited the shops of the different tradesmen, the houses in which the single brethren and the unmarried sisters of the community lived, invited six of the leading people to dine with him, and went to hear their noted music in the evening.

At Guilford he visited the battle field where General Greene and Lord Cornwallis tried conclusions, and wrote it as his opinion that if the American troops had behaved well Cornwallis would probably have been defeated.

His return through Virginia was without incident. He stopped to visit his sister in Fredericksburg, spent two weeks at Mount Vernon, three days with the Commission engaged in locating the Federal City, and then set off, by way of Frederick,



Photograph by Orren R. Louden

ETHAN ALLEN GATE, FORT TICONDEROGA, NEW YORK

Washington visited this stronghold in 1783, on his trip to northern and central New York. The inscription reads: "Ethan Allen Gate. May 10th, 1775. Through this gate entered Ethan Allen with eighty Green Mountain Boys and captured the fort from the British captain. 'Surrender in the Name of the Great Jehovah and the Continental Congress!'"

Taneytown, Hanover, York, and Lancaster, to Philadelphia.

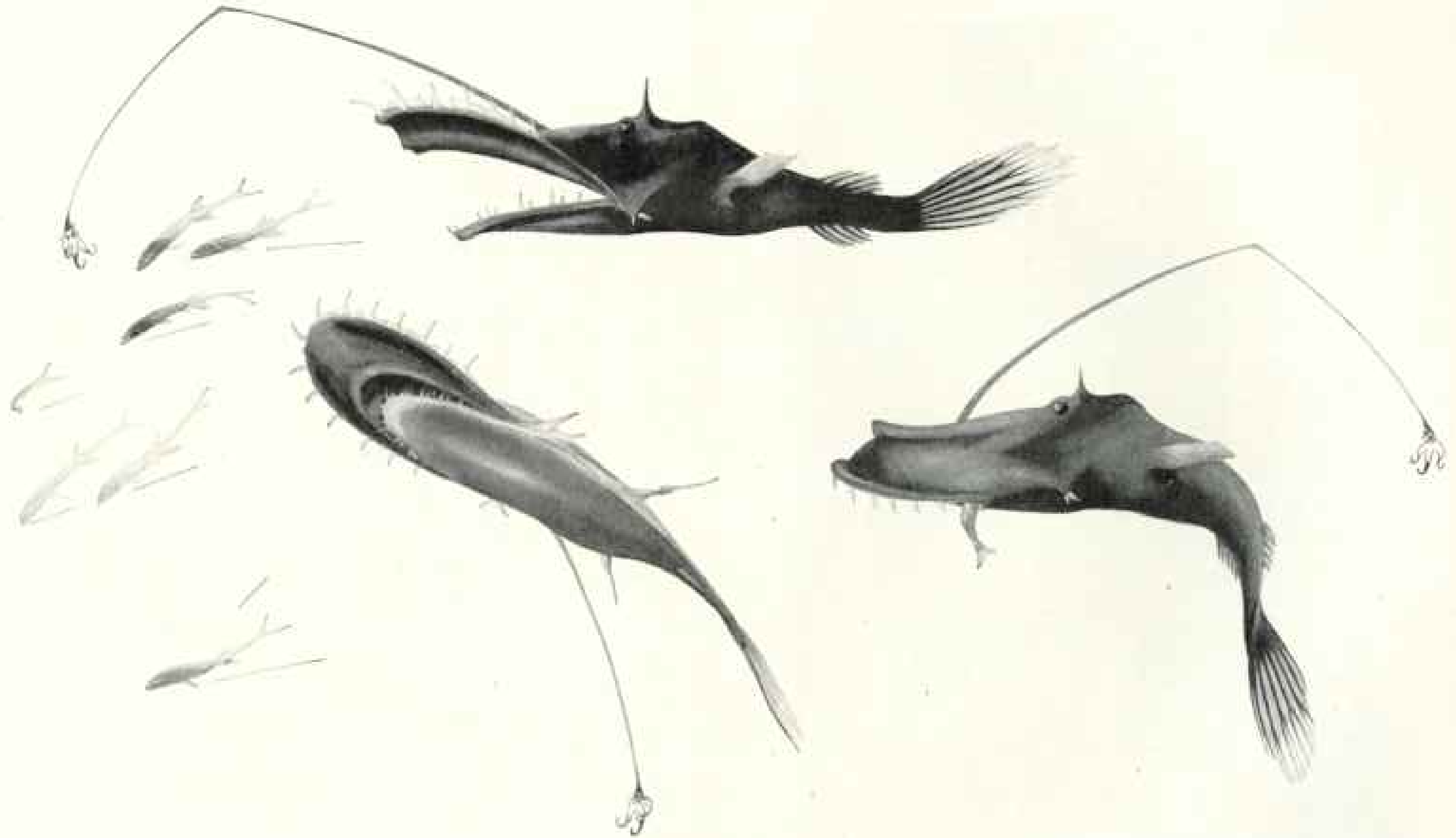
In 1794 the Whiskey Insurrection took the President westward again. He went through Reading, Harrisburg, Chambersburg, and Cumberland, back amid the scenes of his French and Indian War days. Thence he went to Bedford over the road he had built to join General Forbes (see page 39).

The plans of the campaign having been worked out, and with the Congress ready to assemble again, the Commander-in-Chief of the Nation's forces wrote a farewell message to the Army and returned to Philadelphia by way of York and Lancaster, over the present Lincoln Highway.

After the great soldier's retirement from the Presidency the only lure that drew him from the banks of the Potomac was the meeting of the Society of the Cincinnati in Philadelphia in 1798, the year before his death. Thereafter not again until he embarked on the Great Voyage did he leave those well-trodden paths round about Mount Vernon which the decades had endeared to him.

As we of his Bicentennial times read his descriptions of the regions through which he traveled, of the people he met, of the flora and fauna he encountered, of the industries he studied, we come to realize that he was America's First Geographer as well as her First Citizen.

Additional copies of the Map of the Travels of George Washington—size, 20 x 29 inches—may be obtained by members of the National Geographic Society at 50 cents per copy, paper edition, folded; \$1.00 per copy, linen edition, in tube, postpaid.



THE FISHING FISH

Painting by E. Bostelmann

A new species of *Lasiognathus*, which is furnished with a rod, line, illuminated lure, and three hooks. The teeth are on the outer edge of the lips (see, also, text, page 86).

THE DEPTHS OF THE SEA

Strange Life Forms a Mile Below the Surface

BY WILLIAM BEEBE

AUTHOR OF "A ROUND TRIP TO DAVE JONES'S LOCKER," IN THE NATIONAL GEOGRAPHIC MAGAZINE

IF IT is true that the greatest mysteries and the most wonderful places and happenings can be adequately described only in the simplest language, then any account of the abysses of ocean, the depths of the sea, should be in words of one syllable.

When all is told of what we know at present of this no-man's-place, the combined knowledge is relatively of kindergarten amount and quality, for we have only begun to penetrate this vast realm of life, still using the crudest of instruments.

If we can imagine the inhabitants of another planet sailing in an airship two miles above one of our cities, with a solid bank of fog between, the situation is much like that of a ship passing over the surface of the ocean.

And if from the airplane a dredge is lowered two miles and drawn by accident along a city street, the heterogeneous mass of odds and ends collected would give no more clue to the habits and lives of the human inhabitants than do the contents of our nets reveal the real plexus of life beneath the waves.

EXPLORING FROM A HALF TO A MILE BELOW SEA LEVEL

There is no scientific field of work which depends so much upon sheer luck as that which attends the capture of deep-sea fish.

While oceanographic work has been carried on for almost sixty years, ever since the classic expedition of the *Challenger*, there has been little improvement in size of nets and none at all in the speed of hauling them through the water.

The very few large specimens of abyssal fish have all been found floating dead at the surface. For the rest, only small, slow-swimming forms can be captured in the nets which must be used, nets which cannot be drawn through the water faster than two knots.

Before I ended the cruise of the *Arc-turus*, I began to plan a more economic method of oceanographic work, and one day I borrowed a tug in New York harbor, steamed seaward all night, and at dawn found myself over the ancient gorge of the

Hudson, with a mile of water beneath my keel. I learned that from a winch on the aft deck of the tug I could make as rich hauls, using six nets strung along two miles of wire, as I had been able to do on the great, seagoing steamer.

My next desire was for a laboratory on some land with a steep offshore, submarine slope. The island of Nonsuch, in Bermuda, was granted me by the kindly British Government for my scientific work, and here, three years ago, I founded an ideal working base, with a chartered tug making daily trips to the open sea. I have carried on this work as the most recent activity of my Department of Tropical Research, of the New York Zoological Society, by means of the generosity of Harrison Williams and the late Mortimer Schiff.

Just as I had spent years studying the life of a quarter square mile of tropical jungle, so here I confined my trawling to a definite area, exactly located, and relocated each day by careful observations of the relative position of the two tall lighthouses of Bermuda.

This area is, roughly, a circle eight miles in diameter and from one-half to one mile in depth. Here, in the course of three years, my tug has made two hundred and seventy-one trips and we have hauled thirteen hundred and forty-four nets. The sum total of the results is an amazing amount of deep-sea loot, many of the fish and crustaceans being new to science and an equally larger number stranger in appearance than anything which the imagination of man could conjure up.

I have made a list of the characters of dragons from the illustrations in a shelfful of vellum-bound books, and I find none that I cannot duplicate or exceed in one or another species of deep-sea fish.

A DAY WITH DEEP-SEA DRAGNETS

The routine of a typical day at Nonsuch will not only illustrate our way of work, but in the more important details represents the methods by which all deep-sea collecting is carried on—methods which will continue until some radical discovery



Drawing by John Tee-Van

WHERE THE AUTHOR'S DRAGNETS HAVE EXPLORED THE DEPTHS OF THE SEA.

Operating from Nonsuch Island as a base and laboratory station, daily trips were made to an area off Bermuda where the number of hauls is indicated by a snarl of black lines. The figures in circles show where the author descended in his specially designed bathysphere to depths of 800 and 1,426 feet, as described in his earlier article in the NATIONAL GEOGRAPHIC MAGAZINE (see June, 1931).

is made permitting a living man not only to descend, but to collect, at depths now impenetrable by human life.

At 6:30 each morning the seagoing tug *Gladisfen* steams out from St. Georges and ties up to a buoy off our wharf. From the south lookout, with the telescope, we study the weather conditions at sea; we note the barometer, the force of the wind, and the direction and power of the incoming swells which shatter themselves on the rocks of Nonsuch. If the ocean is too rough, the tug is signaled to return, for under adverse conditions the nets would be torn from their rings.

If the day is propitious, two of my staff board the tug, and she goes swiftly past the ancient British forts, close to Gurnet Rock, and five miles out to sea. Here the two-hundred-pound bottom weight is slung over, and along two miles of wire six silk nets are strung; and then, very slowly and steadily, the four- or five-hour haul is made.

When the sea is so calm that the tug is surrounded by slicks filled with sargassum weed, we sometimes take to a small boat and with outboard motor and butterfly net successfully pursue small, gorgeously colored flyingfish. Occasionally I shoot a strange sea bird, or we hook a large shark or dolphin, and once I just beat a shark to an enormous pelagic squid.

When at last the cobweb line is reeled in and the bitterly cold contents of the nets have been preserved, the tug heads full speed for shore. Within an hour the catch is in large, white, flat pans. Some of the creatures—crustaceans and fish—are most amazingly still alive, and these are at once immersed in ice water, for temperature is more important than pressure in keeping them alive. Every moment of the remaining daylight and far into the night we study and try to understand the bodies and fantastic appendages and sense organs, and the interrelationships of these beings from another world of life.



Photograph by Mr. Hamilton and Captain Neimes

NONSUCH ISLAND FROM THE AIR

The laboratories are visible and the coral reefs in from one to five fathoms of water.

It is difficult vividly to picture the conditions a mile beneath the surface—darkness so intense, so absolute, that our blackest midnights in comparison are alight; silence and almost complete cessation of movement; cold which lies somewhere between the freezing points of fresh and salt water, and an all-encompassing pressure of a ton on each square inch. We cannot call the darkness night, because for more than a thousand million years, since oceans first existed, there has never been any succeeding or preceding day.

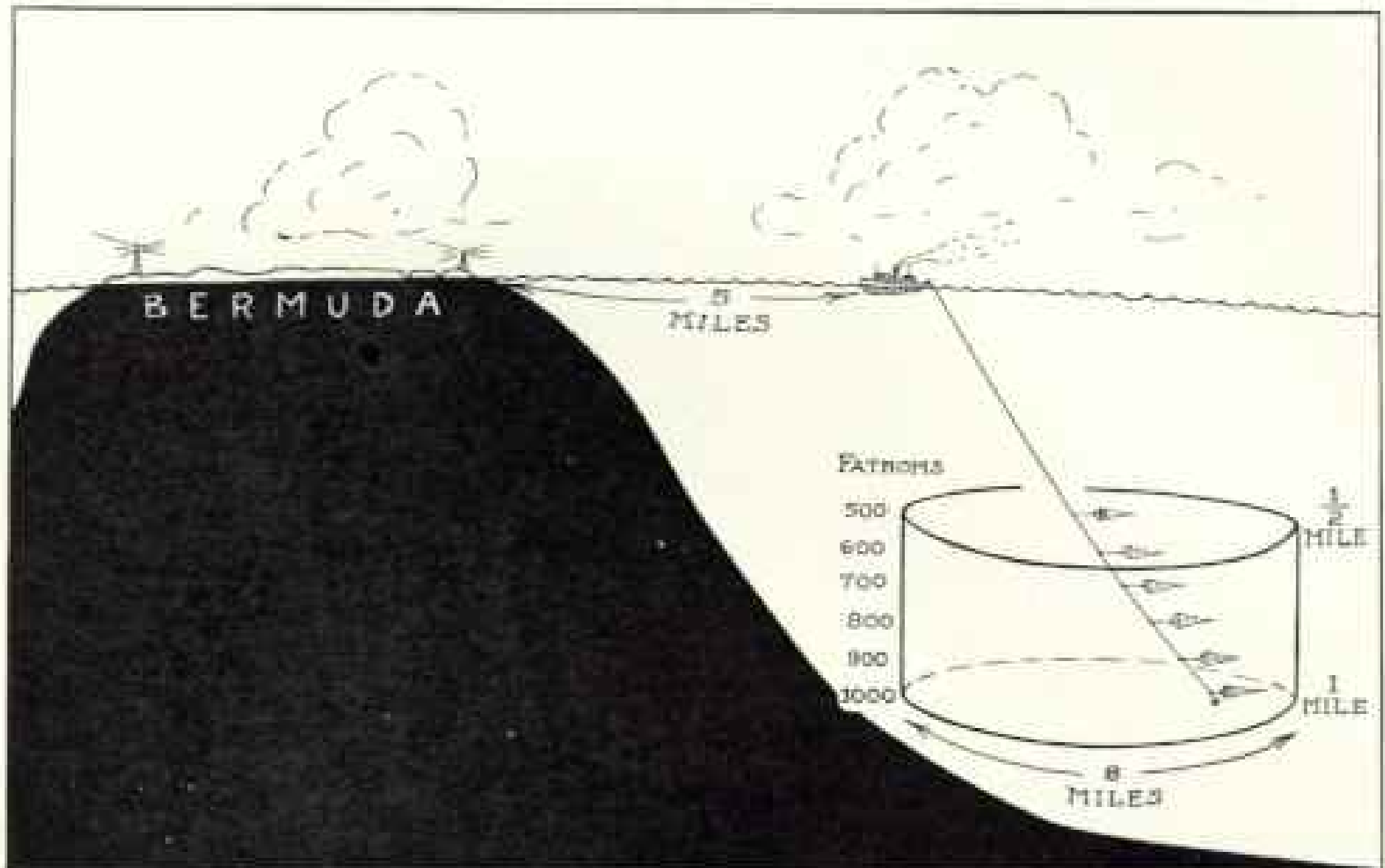
The inhabitants have all come into this unbelievable region in one of two ways: either their forbears have crawled down the slopes of continents and islands little by little, eon upon eon, becoming accustomed with infinite gradualness to the increasing darkness, frigidity, and pressure, or they have, even more slowly, sunk gently from the surface down, down through the waters of the open sea—who can ever say with what speed, or lack of it, or who can ever imagine the uncountable hosts of failures which have given place finally to the

few successful penetrators of the watery abysses.

Let us confine ourselves to the life of the mid-depths, to those fortunate ones who, of all living organic beings on the planet, live their lives most completely in three equal planes of space. We compare a fish from the surface or from a tide-pool with one from a mile depth; there has been no visible adaptation to the lowered temperature, for fish are cold-blooded and their body takes on the temperature of their medium. Increased pressure, too, demands no radically optical shift of form or tissue. Some deep-sea fish are soft when they are brought to the surface, but no more so than an eel or a catfish; many have scales as firm as those of surface fish.

FISH CARRY LANTERNS, SEARCHLIGHTS, AND FLARES

Darkness, however, has worked magic, and in this respect there seems to be a choice of two courses open to creatures entering these portals of eternal obscurity: they may become *Feelers* and develop long,



Drawing by John Tee-Van

A DIAGRAMMATIC VIEW OF THE DEEP SEA NEAR NONSUCH ISLAND

The tug *Gladixen* is shown as drawing six nets through an area represented by an imaginary cylinder eight miles in diameter. An accurate record of the direction of each of the 1,344 hauls made during the last three years is kept (see diagram on page 66).

attenuated tentacles, their fins fraying out like waving streamers which radiate a material aura of sensitiveness. Correlated with this, the eyes become reduced and dimmed, the optic nerve shrivels, and finally the entire eye may be absorbed or sunk quite beneath the surface.

On the other hand, as the fish and shrimps and squids enter the lightless zone they may become *Peerers* and *Lantern-bearers*. In regard to these deep-sea beings, our ignorance of the method and sequence and actual stimulus of evolution may be said to be quite complete. But somehow or other, in the case of the fish which do not feel their way, but eternally peer and peer, using the last failing rays of strained sunlight—in that case Nature comes to their aid and provides illumination from their own bodies.

Great sheets of light are fashioned on certain areas, flares which doubtless attract edible organisms as a candle draws fluttering moths; hieroglyphics of colored fire glow on the sides of other fish, which perhaps heliograph through the murk messages of friendly recognition to scattered members of the school. Then we find flash-

ing make-and-break searchlights on cheeks and tentacles, on tails and foreheads, which very likely are of inestimable value in signaling and answering in the all-important search for mates.

SEA LIFE DIVIDED IN ZONES OF COLOR

Whether blind or provided with telescopic eyes of great power, deep-sea organisms of all classes are profoundly affected by the changing light in respect to color. At the surface many fish and other creatures are dominantly ultramarine blue above and pearly white below, harmonizing with the colors of the open sea.

As we go down we find a more or less well-defined zone of transparent beings; then a transition or silver or twilight zone where are creatures semitransparent, silver, parti-colored, or pink. Finally, from 500 fathoms downward is the flame scarlet and black zone, with most of the crustaceans and worms red and the majority of the fish jet black.

Below the last blue-blackness of vertical twilight, the fish and other hungry creatures can hope for no more diatoms or other vegetable food; beneath this point



Photograph from Dr. William Beebe

THE TUG "GLADISFEN" PUTS TO SEA

Trawling, from the surface to two miles depth, is carried on as successfully from the deck of this tug as from a full-sized ocean steamer.

life may be summed up in two phrases, *Je mange* and *Je suis mangé* (I eat, I am eaten). And in this respect the darkness is an important help to our deductive study. Food is not easy to find in the dark, and, when it appears, disproportionate size should not be an insuperable difficulty. Nor is it.

The majority of these deep-sea chaps have dislocatable jaws and a stomach capacity which may exceed by three times the total dimensions of the entire fish. So, when a normally elongate species comes up looking like a sphere, I carefully remove its last meal, quite dead, but otherwise very often intact and uninjured, and my artist depicts the piscine gourmand as pursuing the squid or fellow fish or shrimp or what-not which it must have pursued and swallowed a mile beneath the surface.

Perhaps the most exciting thing about the life of our cylindrical trawling area is that it is a suspended life—that the inhabitants have nothing to hang on to or sit down upon. While the pressure is very great, yet it is the same upward, downward, sideways, and from within out, so that every particle of organic matter heav-

ier than water has gravitation to contend with as well as the lack of a comfortable resting place. Thus we find that such creatures as sponges, starfish, and sea urchins are wholly absent, although in these, as in many other instances, their larval young are for a brief time drifters or swimmers.

The builders of corals are, of course, unknown, but their cousins, the jellyfish, or medusæ, are at home at all depths and even share the colors of the various levels. Some are tiny, round and active, and almost as transparent as the water itself. One of the commonest, which comes up from all depths, is the Hyacinthine Leaf-jelly (*Periphylla hyacinthina*), an exquisite deep-purple cone, enveloped in a translucent pale-blue covering, a dainty fringe of lappets surrounding the entire base (see illustration, page 86). Worms of many kinds are abundant but small. The most abundant are the Sagitta, or Arrow Worms, which shoot here and there through the water, like shafts from abyssal archers.

Midwater would seem to be no proper place for a snail or slug, bound as they are to earth as completely as a turtle or arna-

dillo. Yet mollusks are abundant. They have shaved down their shells to tissue thinness, and with sometimes a tiny bubble of gas within, so that they are actually a source of support rather than a sinker. Many forms have developed a pair of strongly muscled wings which flap and flap and carry their owners through life by short, abrupt jerks (see, also, page 83).

DEEP-SEA SQUID HAVE AMAZING EYES

Next to fish, the most amazing group of deep-sea animals are the squids, first cousins of the snails, who defy any brief résumé, so varied are their shapes, colors, intricate masses of light organs, and, most astonishing of all, their eyes, which are large and as well developed as those of a bird or a deer. Squids seem to stand the terrible transition from the depths to the thin, pressureless surface water better than any other group of sea life (Plate VIII).

In net Number 724, for example, I found two squids—the first an elongated, slender, arrow of an animal, with eyes of blazing brilliance set close to the body shaft, one end of this a snarl of unbelievably long tentacles—two large, two small, and the remainder very short. It was quite lively and revived still more in the ice-box.

The second squid was small and chaste—it should be reproduced in the most delicate Chinese porcelain—a translucent moonstone chalice flecked with red. From the delicate mouth of this beautiful vase arose a veritable jack-in-the-box, a punch-and-judy sprouted from a fairy bowl. A slender, conic neck supported an opaque, oval head, with a face which was no face. From the summit rose a cap or casque of waving medusa tentacles—two thick, long ones painted with stripes and blotches of pale red, and a nest of short arms. Like a double line of tiny hubbles, the suckers were strung along the arms.

As always, the eyes were the center of development, the amazing focus of the squid's being. Without them we should never think of talking about neck or face or head; but two eyes such as these demand other features. When we realize that they are really organs apart, perfect eyes set in the amorphous flesh of an actual snail, they become very awful.

In this individual they were great, glowing globes with small, pink pupils. Most of the eyeball was frosted, and on the up-

per half were two opalescent light organs throwing illumination in what I should consider the most blinding direction. Between and around the staring eyes were no features whatsoever—only daubs of red paint like a face on a pumpkin.

CRUSTACEANS ARE DOMINANT FORMS OF LIFE BELOW WATER

Numerically, the dominant forms of life below water are the crustaceans—shrimps, prawns, and their host of relations. The group of small beings known as Copepods is legion in species and countless in individuals, and occupies much the same position in the sea as insects do on land. They eat and flee and breed, but chiefly are eaten (see pages 84 and 88).

Most of them row themselves through the water by means of a huge pair of oar-like antennæ; they have rim riot in the way of colors and feathery appendages, and many look at life through a single, median, Cyclopean eye and seem to be successful and happy in their watery existence. Some shrimps are gigantic, six and eight inches in length, and flaming scarlet; others are water-clear, thin and blind; still others glow with colored lights.

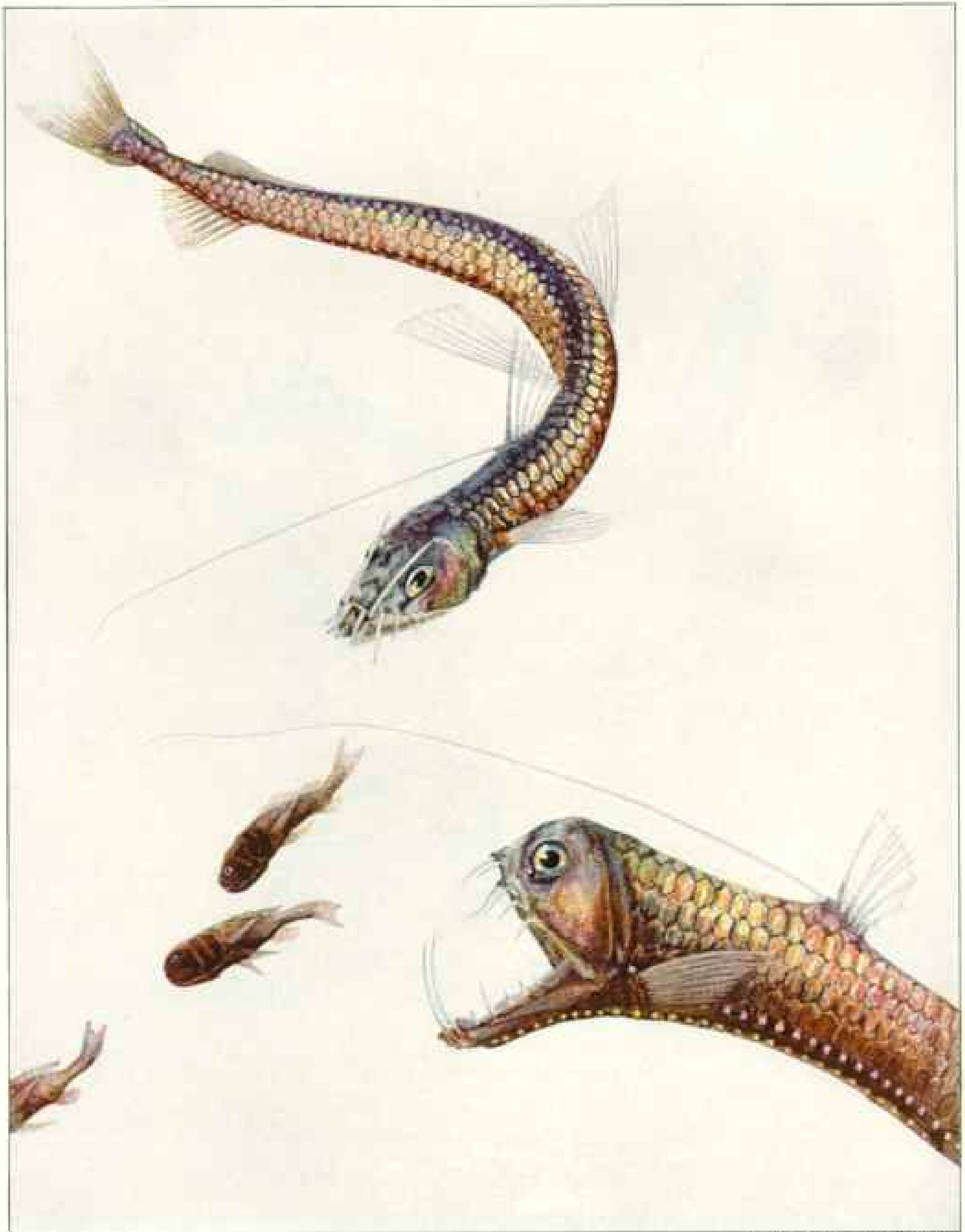
For many years it was believed that the depths of the ocean would yield creatures of very primitive structure, fish and other organisms which had found sanctuary there since early geological times, and whose outward forms and skeletons would reflect the changelessness of their environment. The fundamental conditions of life, however, are so unlike those of the upper levels that most of the fish have evolved into extremely specialized organisms.

The very interesting results are that the majority of deep-sea fish belong to low, generalized orders, such as *Isospondyli* and *Iniomii*, and while retaining a number of their badges of ancestral simplicity have combined with this, most amazing development of sense organs, mouths, teeth, eyes, and tentacles.

NAMES OF DEEP-SEA FISHES PRESENT A PUZZLE

At the very summit of fish specialization we find the frog-fishes, the *Pediculati*, as a third dominant group of deep-sea life. These are admittedly the most specialized of all fish and have found the deep sea a perfect environment for uncontrolled

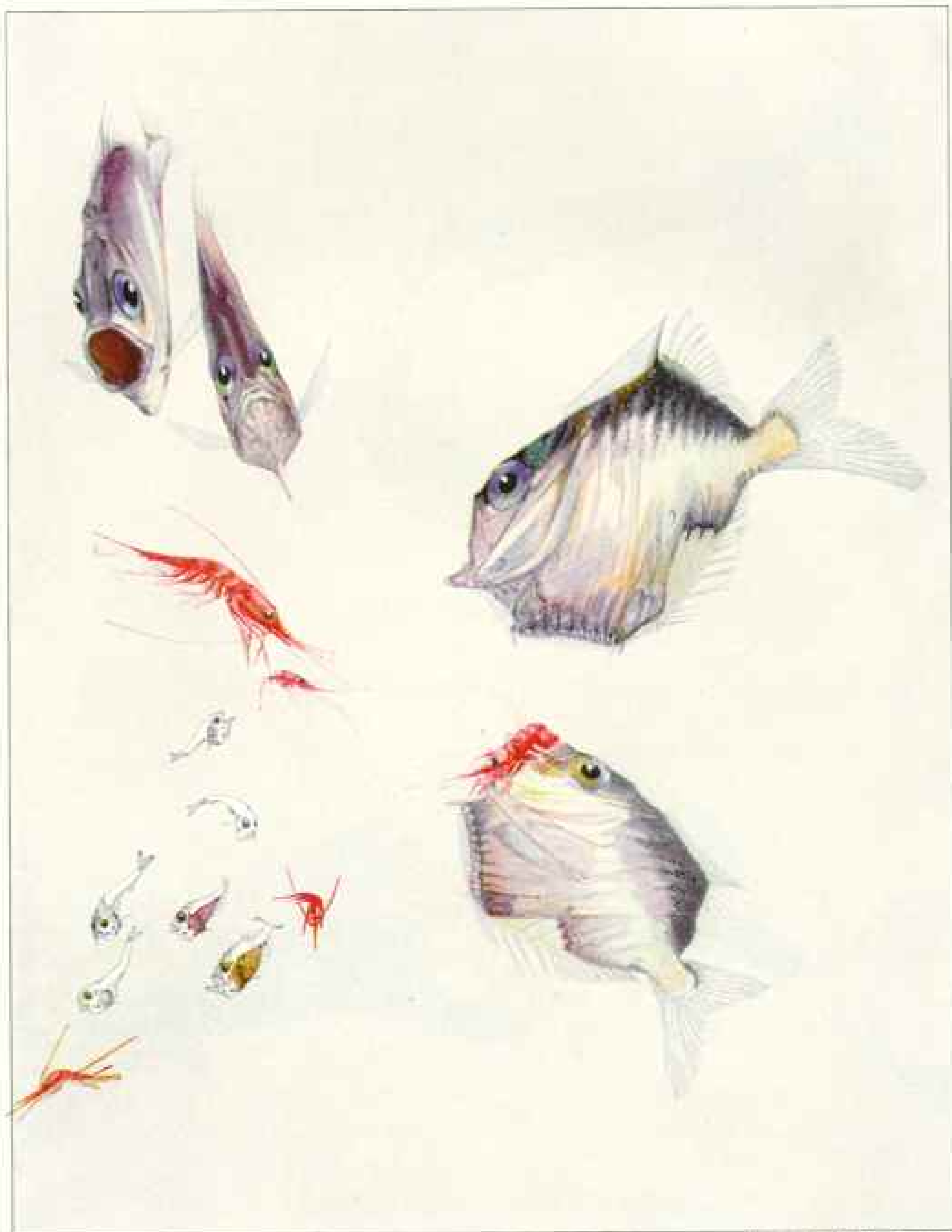
FANTASTIC SEA LIFE FROM ABYSSAL DEPTHS



Painting by E. Doatelmann

SABRE-TOOTHED DRAGONFISH ATTACKING THEIR PREY

These luminous fish (*Chauliiodus sloanei*) are well equipped for life with long feelers, excellent eyes, scores of brilliant lights and needle-sharp fangs of great length. If their bodies measured twelve feet instead of twelve inches they would be veritable dragons.



Painting by E. Haeckelmann

DIAPHANOUS HATCHETFISH WITH ITS YOUNG

This weirdly-shaped fish (*Sternopygus diaphanus*) derives its common name from the fact that part of its body is so thin that the bones show through, and because of the hatchet shape of the young.

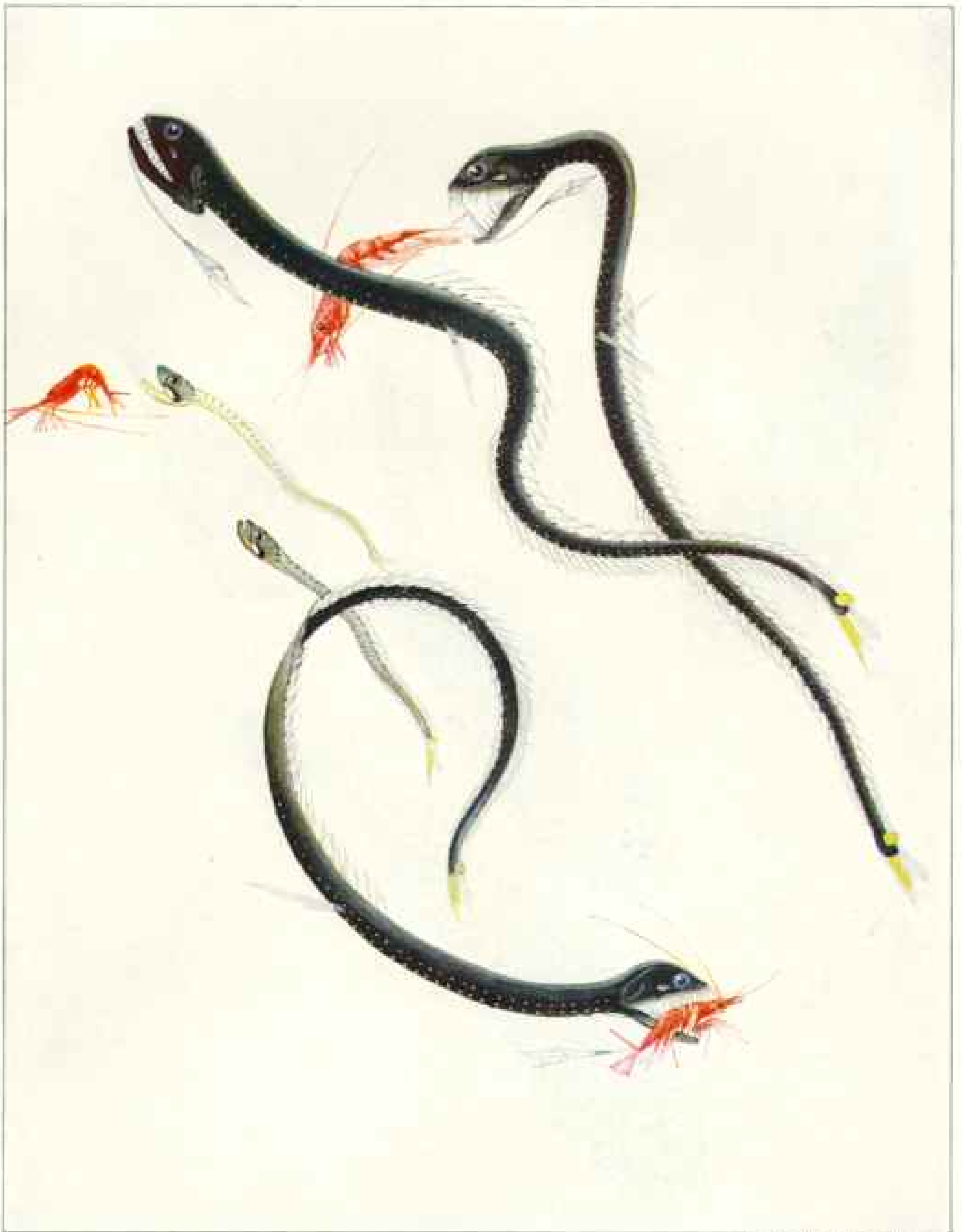
FANTASTIC SEA LIFE FROM ABYSSAL DEPTHS



Painting by E. Bostelmann

TWIN-LIGHTED LANTERNFISH SWIM IN SCHOOLS

These brilliant abyssal fish (*Diaphus macrophis*) feed on small shrimps which are attracted by the many glowing lights. The pattern of side lights may be useful as recognition marks for members of the school.



Painting by E. Posemann

A QUINTET OF GLEAMING-TAILED SERPENT DRAGONS

Idiacanthus fasciola is their more proper but less descriptive name. During growth their illumination shifts from head to tail, the young having enormous cheek-lights, while the full-grown fish develop a flash and a smear of golden glow on the tail.

FANTASTIC SEA LIFE FROM ABYSSAL DEPTHS



Painting by E. Bommelmann

THE DRAGON OF THE SHINING GREEN BOW

This astounding fish of the great depths (*Lamprolaxus flagellibarba*) has a golden cheek-light, a blazing emerald bow etched into the side of the body, and a cluster of glowing bulbs where its pectoral fins should be. Its chin barbel is seven times its entire length.

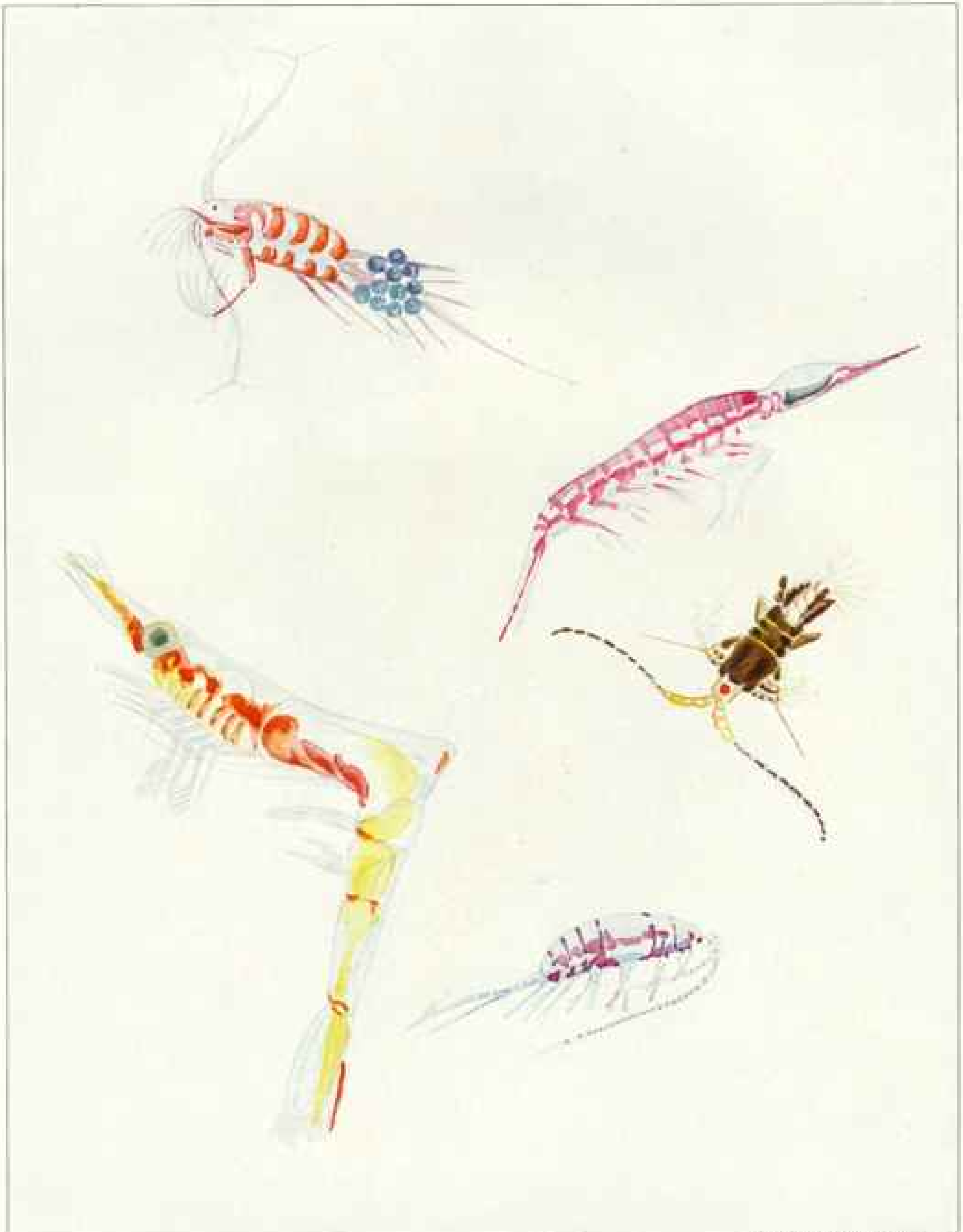


Painting by E. Rostmann.

ZERRA SERPENT-STARS FROM THE MID-DEPTHS

New to science and most strikingly beautiful, these starfish came up on a tuft of seaweed from a depth of eighty fathoms. The arms are as active as those of an octopus.

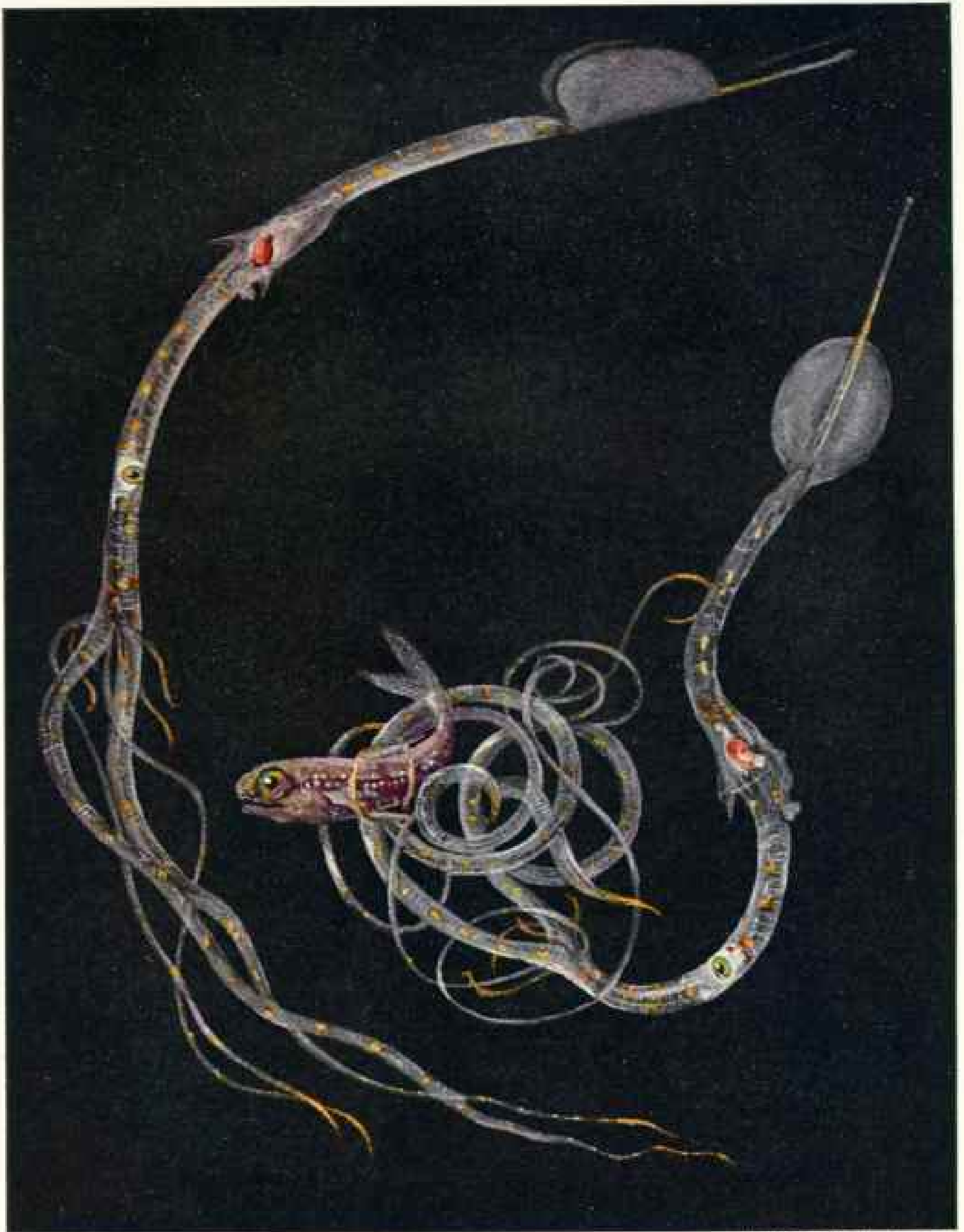
FANTASTIC SEA LIFE FROM ABYSSAL DEPTHS



Painting by E. Bostelmann

BRILLIANT BITS OF SURFACE LIFE

These many-colored copepods, amphipods and scarlet prawns swim up to the surface on dark nights, where, far out on the open sea, they feed, flee from danger, seek their mates or are devoured.



Painting by E. Bosteimann

THE TANGLED WEB OF DEATH OF A DEEP-SEA SQUID

These squids shoot through the abyssal darkness like living shadows, suddenly to unravel into a lethal mass of slender threads which twine about their prey and draw it to their jaws.

development and variation in many directions.

The great difficulty in writing about deep-sea fish is to call them by any terms intelligible to the layman. From the weird character of their shapes, the dragonlike resemblance of their appearance, and their amazing structure, they are of great interest, but when only a fraction of their number has been named at all, and these are known only from one to several individuals, with scientific names longer than their own bodies, popular discussion is difficult.

For example, we find a few straggling cousins of the herrings and anchovies living in the deep sea, unexcitingly known as *Alepocephalus*, *Bathytroctes*, and *Xenodermichthys*. Literal translations lack not only euphony and imagination, but are often technically inexact: in the case of this trio the mind is not enlightened nor the ear especially pleased if we call them the Scaleless-headed Anchovy, Gnawer of the Deeps, and Strange-skinned Herring.

However, beneath all this titular camouflage the fish themselves are tremendously interesting, in that they are apparently recent migrants into the depths and show very few adaptations to their new environment. Among these are increased size of the eyes and reduction of the scales. Much the same is true of the few deep-sea relatives of salmon and trout.

DEEP-SEA LIFE IS DEPENDENT ON PLANTS

Although the depths are weird and strange almost beyond our imagination, yet the laws of Nature operative in the sunlight and on land are just as binding, just as inflexible, beneath the waves. Nevertheless, we have paradoxes seemingly as fantastic as the reversals of time and sense in Alice's Wonderland.

For example, every living creature—billions and countless billions of them—in the deep sea is absolutely dependent upon plant life, and yet there is not a single plant in all that enormous world. Fortunately, this dependence can be achieved by proxy, and if there is not a fresh bit of seaweed or a luscious diatom at hand, then there is almost equal physiologic satisfaction in a small fish whose stomach is stuffed with algae, or a shrimp whose ancestors for a thousand generations have been diatomaceous gourmands.

At the surface of the ocean and as far down as the vivifying rays of sunlight penetrate we have a world of minute plant life affording fodder to innumerable fish and shrimps and other creatures, and these are fed upon by the tenants of the twilight zone, and these in turn devoured by the dragons of the black depths. So, in our submarine cylinder five miles off Bermuda and beginning a half mile down, every creature is carnivorous; it is a world of nonvegetarians.

It should be a source of comfort to the lay reader that the technical terms, which are a cause of annoyance in writing and reading of deep-sea fishes, are equally a problem of uncertainty to the professional ichthyologist. The classification of these fish is at present in the Stone Age, for the very excellent reason that continual new discoveries are upsetting many definitions which for years have been perfectly satisfactory.

For example, the very important Order of *Isospondyli* means, in its actual etymology, fishes with equal vertebrae, and almost the primary distinction in its definition is "anterior vertebrae simple, unmodified." Yet along comes a number of deep-sea dragon chaps whose anterior vertebrae are inconveniently quite lacking! We are dealing with the fringes of a great fauna and can only keep our generalities fluid and ready for shift and change.

One of the most interesting and striking groups is the great one which may be known as Stomiatoids. Literally, this should be translated Mouthfish, but almost every deep-sea fish deserves that title; so Dragonfish will serve instead, since in dragonish appearance these fishes compare favorably with creatures of myth and imagination.

Most of these fish are black, slender, and elongate, with four rows of light organs like portholes, extending down the sides of the body. Some (*Stomias*) are covered with a mosaic of hexagonal scales, in the center of each of which is a small lavender searchlight.

"EATERS OF STARS"

The most normal-looking group, with reasonably distributed fins, is named *Astronesthes*, which means Eaters of Stars, and its appropriateness is obvious, for the food consists of Lanternfish, and, when



Photograph from Dr. William Beebe

AFT DECK OF THE "GLADISFEN" IN FULL ACTION

The winch, wire, and a deep-sea net are shown, the latter coming up laden with strange, new creatures from a mile down. Doctor Beebe, without a hat, at the left.

several have been swallowed, their light organs can be distinctly seen through the skin of the distended stomach.

Almost all the Dragonfish have barbels, in some of which the stem is luminous, in others an elaborately developed tip. True to their name, the teeth are enormous, either preventing the mouth from shutting, or fitting into grooves or actual tunnels in the skull (*Aristostomias*). The vertical fins have, as a rule, shifted far backward and may even come to take the place and usurp the function of the reduced tail fin. The lights are yellow, pink, or lavender, and, while usually arranged in regular lines, some species have them in make-and-break formation like luminous telegraphic records, or again in waving curves.

As typical of the great group of Dragonfishes, let us take *Lamprtorus*—the Dragon of the Shining Bow. Ten individuals have been taken by man, all in the Atlantic, and one which came up in my net Number 816 is the world's record for size—over eight inches in length. It is brownish black, even the fins being of this color. The vertical fins are large and far back, and this extreme aft propelling system, like that of whales and dolphins, seems so efficient that the paired fins are of little account. The ventrals, corresponding to our legs and feet, are reduced to mere useless wisps of rays (Color Plate V).

The pectorals are characteristic of the amazing changes which life in the deep sea has wrought on every portion of the body



Photograph from Dr. William Beebe

THE INTERIOR OF NONSUCH LABORATORY

The deep-sea catch arrives an hour after capture. The staff includes (left to right) Dr. and Mrs. Charles J. Fish, Mr. John Tee-Van, Doctor Beebe, and Miss Gloria Hollister.

of fish. If it were essential for the human race to hear superlatively well in order to preserve life, our present ears would be of little avail. The very limit of bizarre imagination would be to conceive a man with his entire arms and hands transformed into a microphone of sorts. This is exactly the case with our Dragonfish, except that the rays of the pectoral or arm-fins have lost all swimming appearance and function and have broken up into separate finger flares of shining, opaque, milky-white light.

ONE FISH CARRIES 190 LANTERNS TO ILLUMINATE ITS WAY

Illumination must be of the utmost importance to this species, for in addition to these fin lanterns there are strung along the whole length of the body four lines of light organs, numbering in all one hundred and ninety. These are pale lavender set in frames of golden spicules and are all directed downward. This is only the beginning of illumination, for on the cheek is a large, oval organ, giving forth a yellow glow tinged with pink—an organ almost twice as large as the eye.

Strangest of all is a long, irregular band of luminous, blue-green tissue, partly embedded in the skin and inclosing a considerable portion of the anterior sides of the body. This line is quite even except at the front, where three or four irregular zig-zags occur, like the verticals on a fever chart. In one individual, which showed signs of life when at the surface, there was a distinct greenish area of stronger illumination which appeared to move slowly along the light line. The posterior part of the gill covers and the body just behind are splashed with a maze of luminous green dots.

THE REMARKABLE JAW OF THE SHINING BOW DRAGONFISH

Large, clear blue eyes and arrow-sharp, lengthened fangs complete the general appearance of this Dragonfish. There remains only the remarkable long tentacle, or barbel, which arises in the center of the lower jaw and extends, in an ever-diminishing caliber, back and back to an extreme length of quite seven times the extent of the head and body. It is pale gray, studded



Photograph from Dr. William Beebe

A DEEP-SEA CATCH FROM ONE THOUSAND FATHOMS

Giant-mouthed eels, dragonfish, hyacinthine jellies, and a host of microscopic animals are visible in the icy water in these pans.

with numerous black dots and sense organs of some kind. Before death, in a darkened room, there was a dim flicker of light along this tentacle; so the tissues are not wholly tactile.

There is evidence of adaptation for swift swimming, in a deep groove behind the flares of the pectoral fin and a similar depression back of the chin barbel. These hollows or forms allow the organs to fit well below the outer surface, preserving a true stream-line contour. The stomachs of my three fish were all empty except for one small fish, a *Lestidium*, which had evidently been captured and swallowed just before the Dragonfish entered the net, for it was in perfect condition as to shape, fins, and skin.

It is useless to speculate upon the reason for the enormous length of barbel. The weight and friction of pull through the water must be very great, considering the size and strength of the fish, and it is impossible to understand how the delicate lower jaw can support this constant drag and yet snap quickly enough to seize active prey. Even the few minutes of life which

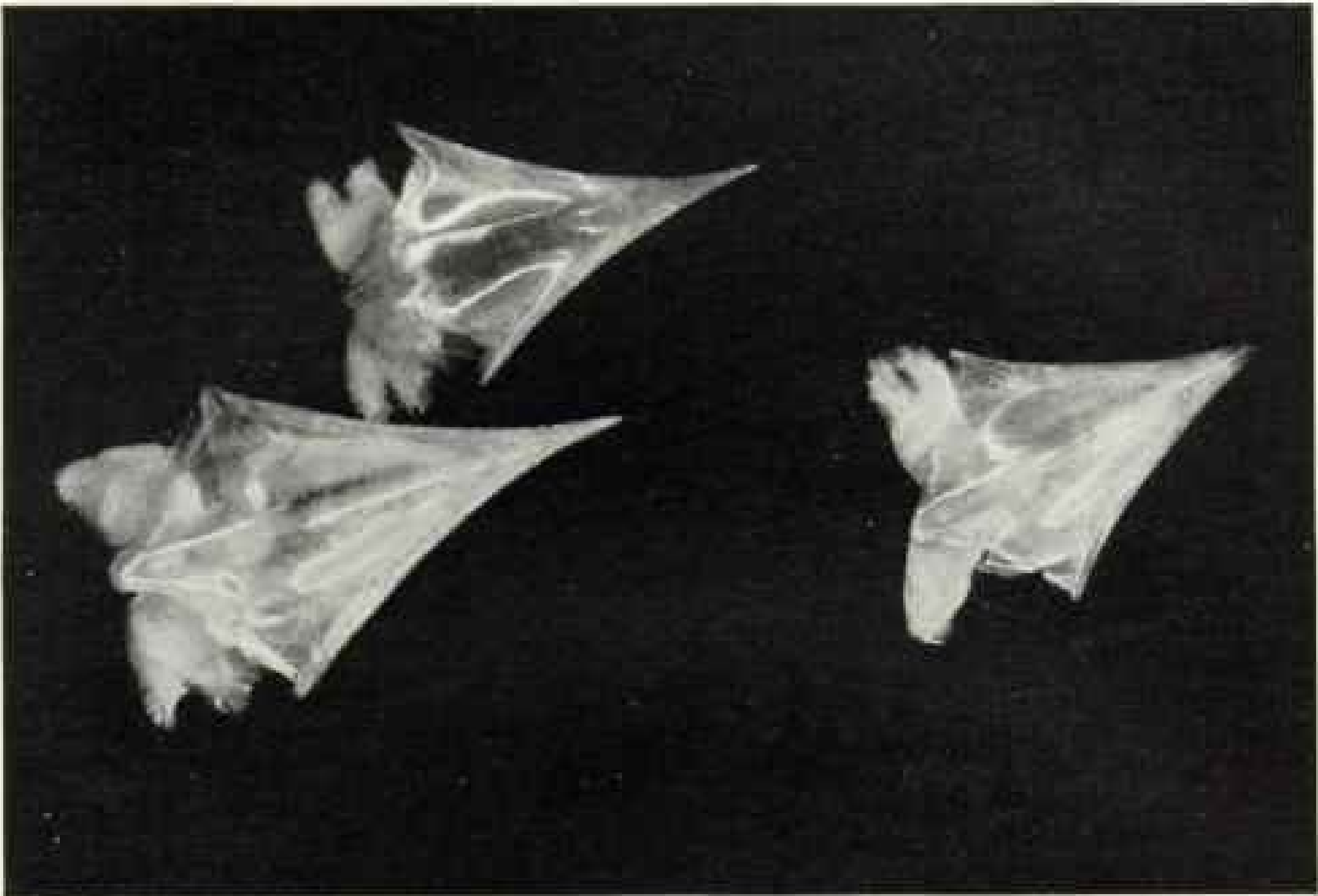
one fish exhibited in the laboratory showed its extreme mobility, turning and twisting the body from side to side, almost doubling up—the snout touching the tail, the jaws snapping, and the lights flashing intermittently.

The cheek light actually glows continually, but in the dark its interrupted flashing was due to the revolving of the entire organ into a socket of jet-black skin. It was as if the entire fish was an eyelid, which rose from time to time and eclipsed the light.

The Shining Bow Dragonfish has been taken near Ireland, in mid-Atlantic, close to the Bahamas, St. Lucia and Barbuda, and I have obtained three specimens from my trawling area off Bermuda. They have been taken at varying depths, from four hundred and fifty feet to two miles, and the fish themselves are from one to eight inches in length.

THE STALK-EYED DUCKBILL

The second hardest thing in writing on this subject is to pick and choose among the various gargoyles, krakens, sea serpents, cyclops, dragons, griffins, minotaurs,



Photograph from Dr. William Beebe

FLYING SNAILS LIKE SILKEN CRYSTALS

These snails fly through life a half mile down, their delicate shells too light and thin to drag them to lower depths (see also text, page 69).

and xiphopagi which I have drawn up from the deep-blue water. For example, the Stalk-eyed Duckbill (*Stylophthalmus*) is exactly what its name conveys, a tiny fish, less than three inches in length, with a white body like a bit of damp string lined with feeble, half-burned-out lights, a spatulate beak, and most excellent eyes perched on the ends of stalks, unbelievably long and slender. In the very young larvæ the eyes are close to the head; in the full-grown young they are remote, far out on each side; in the adult the eyes are again sessile. Why?

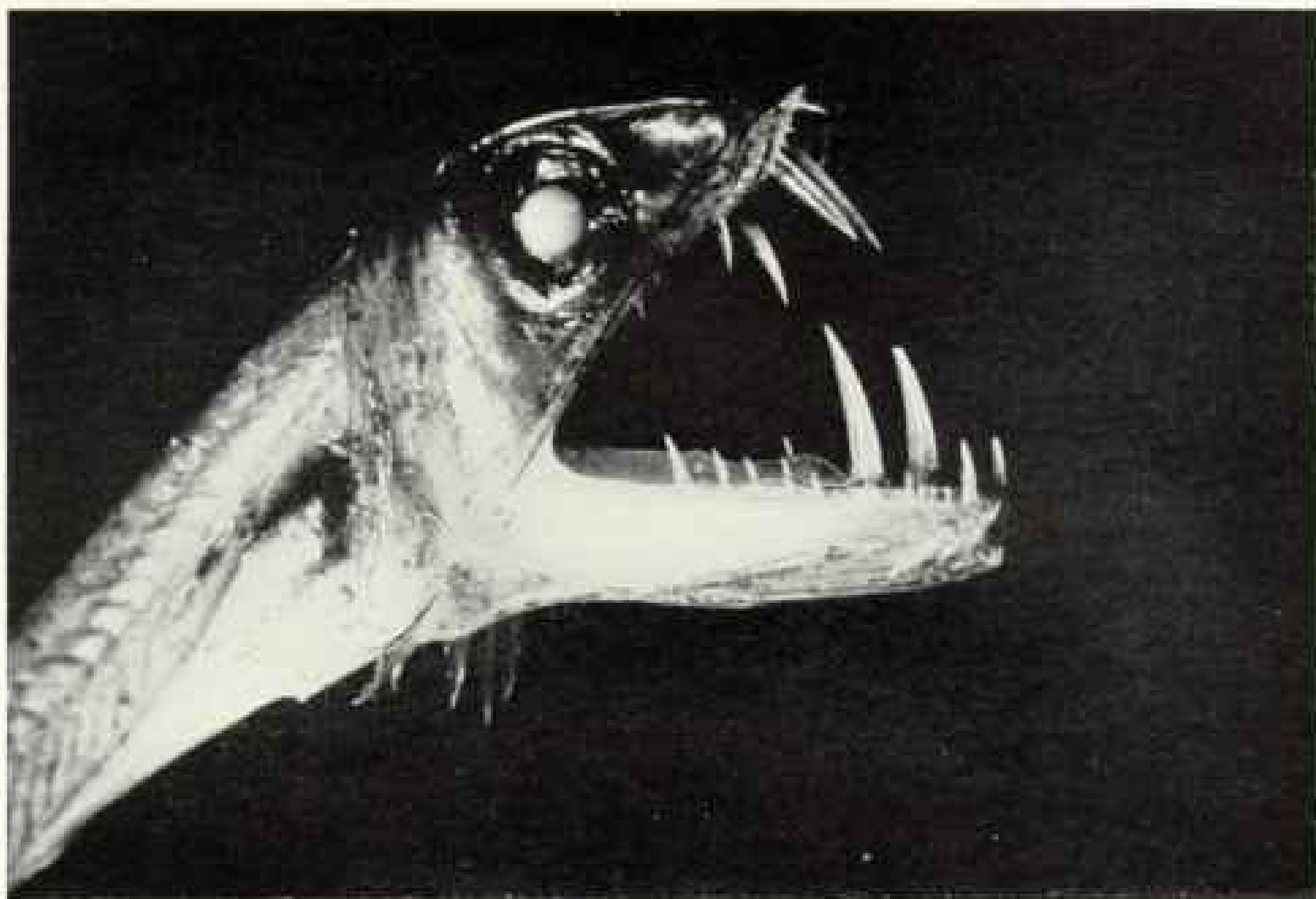
A well-named eel is *Gastrostomus*, the Stomach-mouthed, for the creature consists of an enormous, cavernlike mouth, with a tiny skull and eyes at the extreme front end, and just sufficient muscle and tail to open and close it and push it through the water. The new-hatched *Gastrostomus* is an inconspicuous, transparent little being, with a mouth only very slightly larger than it should have. In both young and old, however, there is an unmistakable family character, a row of ten green lights at the extreme tip of the tail.

At the opposite extreme of the eel gamut we have *Cyema*, the Needle-jawed Eel, a strange, rectangular, blunt-tailed creature, which, in spite of its infinitely slender and delicate jaws, captures the swift orange arrow worms which share its haunts a mile down.

No butterfly was ever more remote in appearance from its caterpillar than our *Cyema* is from its larval leptocephalus—a transparent, paper-thin, rounded sheet or leaf of life, with a milk-toothed, minute head projecting from one end, the only opaque parts being a few dots of pigment, the iridescent eyes, and a well-filled intestine extending in waves along the lower contour like an albino flash of lightning.

We cannot omit mention of the Lantern-fish, or Myctophids, which in number are only inferior to the Cyclothones. In species they are far ahead of any other group. I have taken fifty-nine different Lantern-fish from my limited drop-of-water trawling area, this being over half of the total number known from all the seven seas.

They are small fish with splendid eyes, each species with a particular arrangement



THE JAWS OF A DRAGONFISH

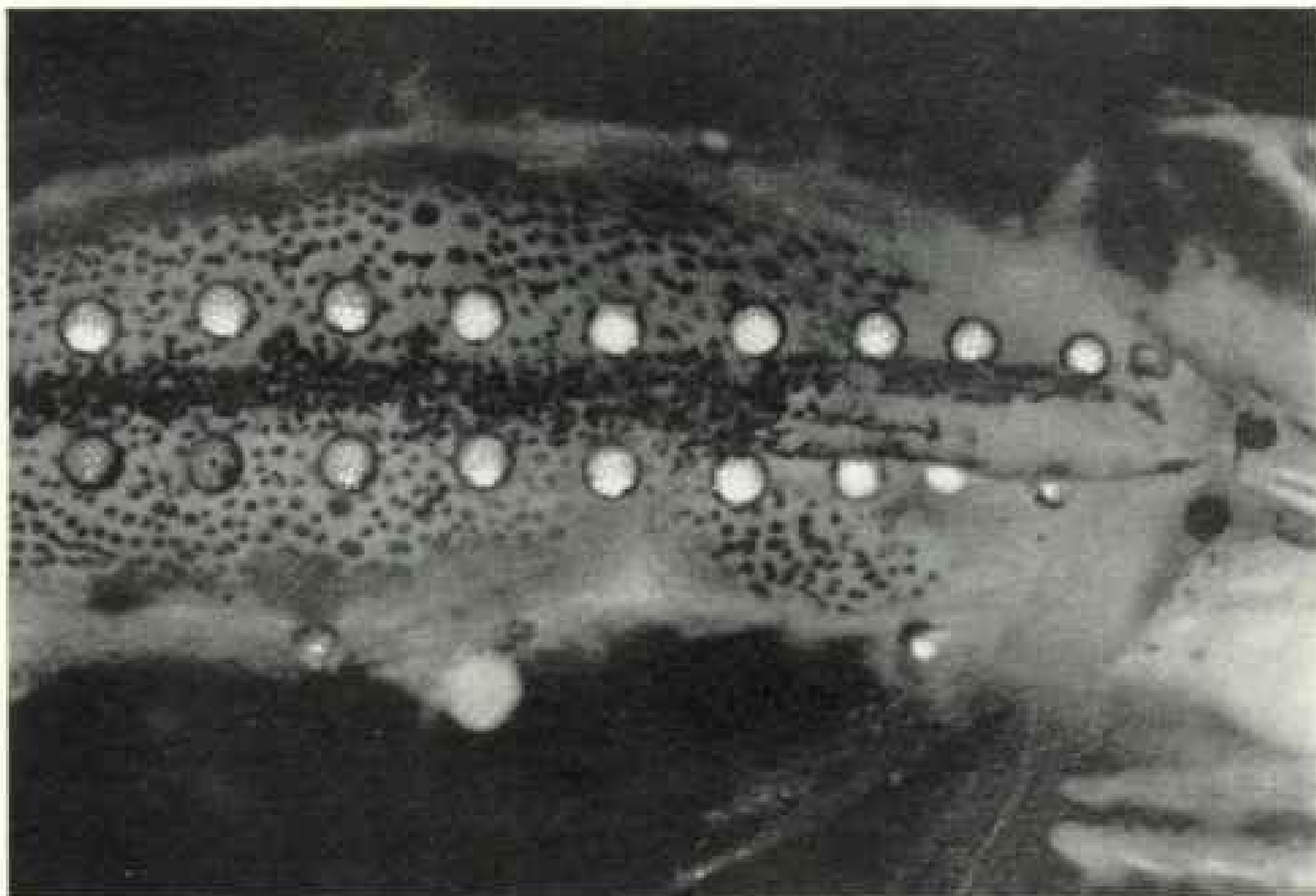
The teeth are hinged and lie flat as the food passes over them; then spring upright into place again.



Photographs from Dr. William Beebe

A GLASS CRUSTACEAN FROM DEEP ABYSSIS

This is *Cystisoma*, a giant transparent shrimp with huge eyes, brought up from a depth of eight hundred fathoms. Individuals have twice come up alive.



Photograph from Dr. William Beebe

LIGHT ORGANS OF THE ROUND-MOUTHS

A double line of lights extends down the body of *Cyclothone*, each light provided with a deeply convex, many-faceted lens.

of light organs arranged by Providence especially for the convenience of hard-working, taxonomic ichthyologists. Lanternfish live in schools and miraculously sustain the paradox of being an abundant and successful deep-sea group and simultaneously fulfilling the destiny of proving the dominant diet for a host of fiercer fellow fish.

GIANT OCEAN SUNFISH HAS MINUTE BEGINNING

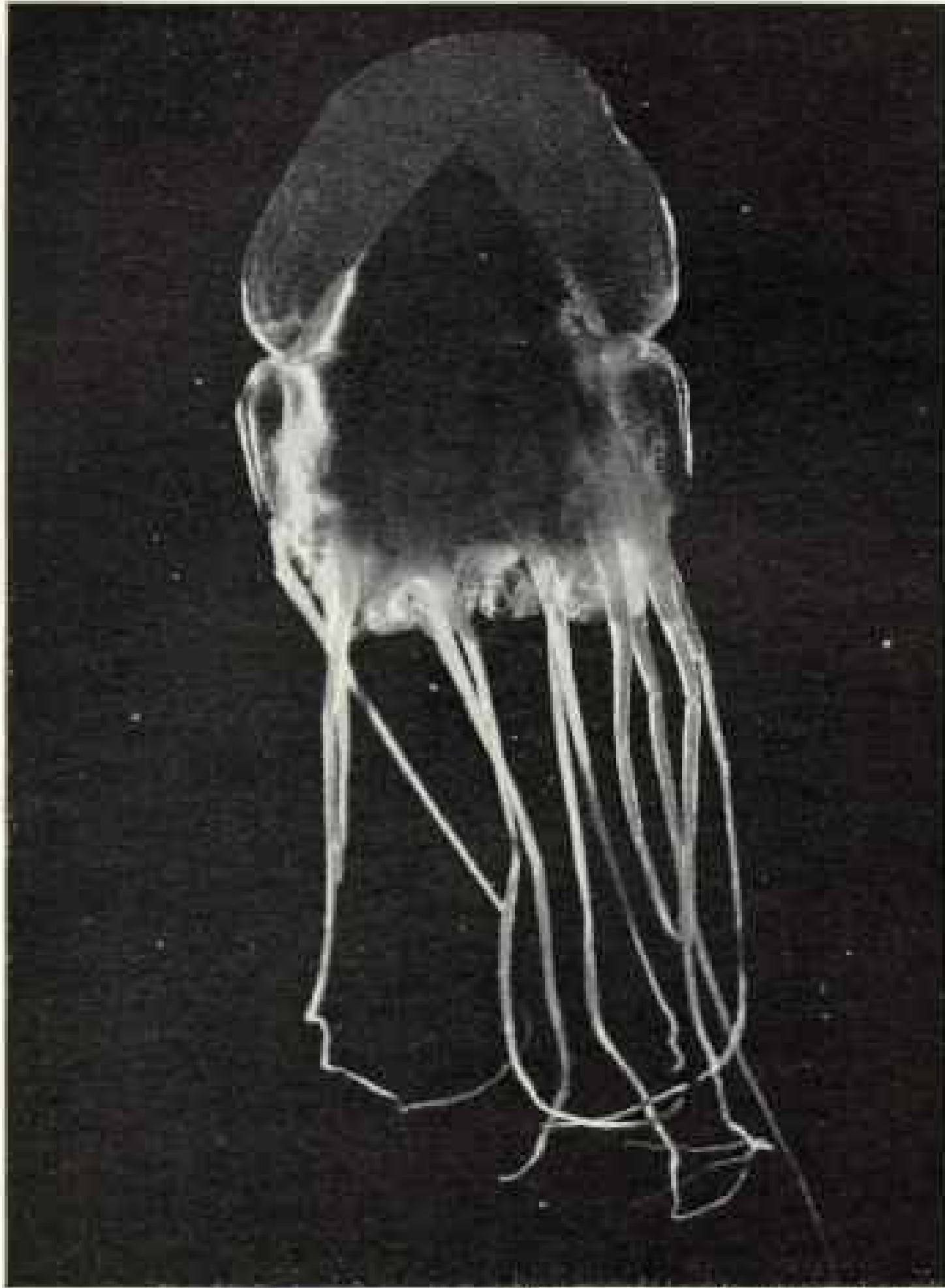
There is a creature of the sea known as the Ocean Sunfish (*Mola*), a great, hulking, shapeless fish whose nine feet of roundness weigh something more than a ton. From a great depth, one day, we brought up two fishlets, hardly larger than the head of a pin—round, aprickle with great spines, and eyes which were at least one-fourth as large as the entire body. Had my net not swept along at this exact time and in this space, the fish-motes would have thrived and increased in size, and ultimately have swum up to the surface, and there lived out their lives—as Ocean Sunfish nine feet long and a ton in weight.

With *Linophryne arborifera* we are approaching the extreme development possible in fish or any other being. It is inconceivable that any living creature can be decorated or burdened or caricatured any further and still remain a creature and alive. A free translation of its technical name would be the Tree-bearing Fishing-frog, but Daemonfish will serve as well as any.

On June 21 this fish came up into the light in net Number 199, from a depth of three-quarters of a mile. It was roundish and black, with four huge head spines and the tail fin dead white. The teeth were curved and of such great length that the mouth could never be closed; and, moreover, they were covered with a luminous mucus, so that they were clearly visible in a darkened room.

From the tip of the snout there arose a stout stem supporting a branched, waxen-white affair, sprouting from a sheet of gold and with the tiny luminous balls at the extremity of each branch.

But the least believable thing was the mass of roots growing from the center of



Photograph from Dr. William Beebe

IVACANTHINE LEAF-JELLY

One of the most delicate of creatures living under a pressure of one or two tons. While it swims in utter darkness, yet it is clad in purple, blue, and cream.

the lower jaw. A basal stem divided at once into several, and then, little by little, into a tangled mass of twigs and tentacles and tendrils—the mixed metaphor being quite intentional! This structure was longer than the entire body, with many scores of very small pink organs, several dozen diminutive lights, and the ability to contract and expand like a snarl of deadly medusa locks.

From the center of all this unheard-of apparatus of life peered out a gentle blue eye, as wholly alien to the rest of the gargoylean exterior as St. Francis in a prize ring.

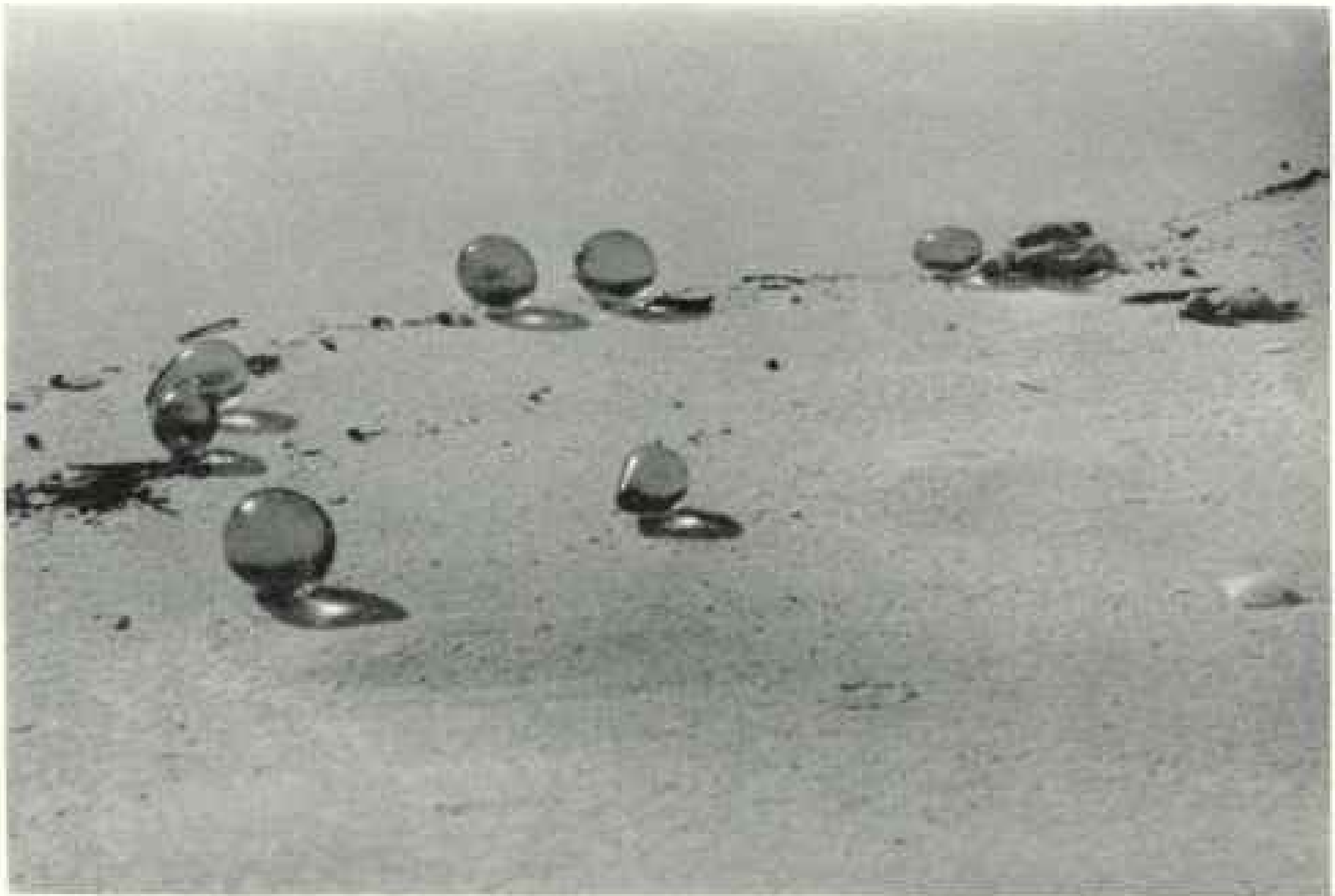
This Daemonfish lay quiescent under my microscope, still in the icy water of its home, and, as I watched, the jaw quivered once or twice and the tentacle tips coiled and uncoiled, the only sign of life I could detect. The normal movements, the speed, methods of capturing and killing its prey, use of its lights and great mass of mental rootlets, what courtship or mating it may have, what enemies, how its evolution came about—all this is a completely closed book. I only know it is, and that suffices to arouse every desire and wish to go down and see for myself, at first hand, the living Daemonfish in its home.

A FISH WITH A FISHING ROD AND HOOKS

The last deep-sea fish which I shall mention is one about which no fisherman or scientist would dare talk without the actual specimen at hand. It is not a living representative of some fab-

ulous monster, but an unbelievably exact imitation of a fisherman's outfit. It is only four inches in length, black, oddly shaped, with spines here and there and well-developed fins. The teeth are on lips so mobile that they can be turned out and upward, and, when prey is captured, closed down, interlocking like the steel edges of a bear trap (see illustration, page 64).

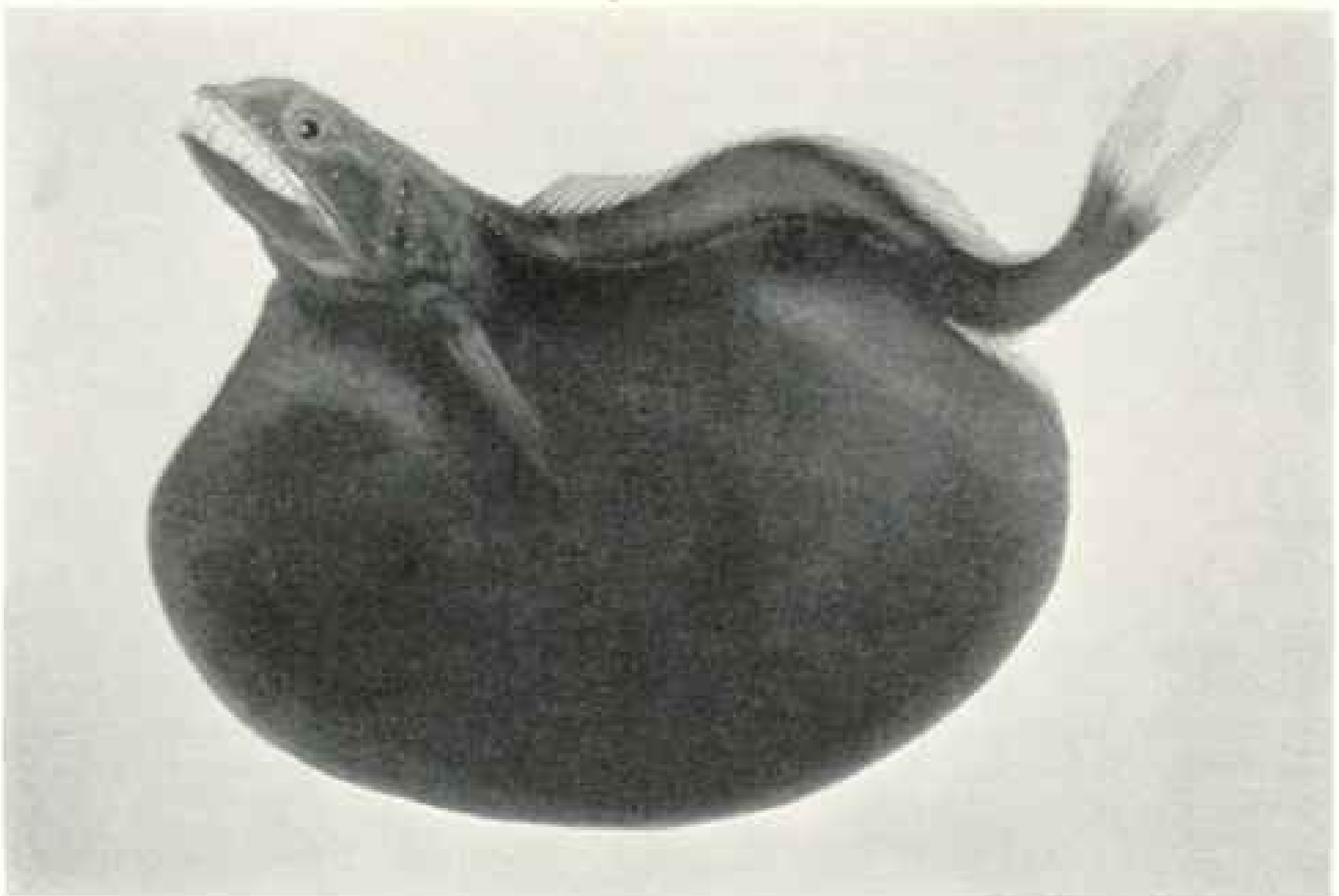
From the center of the forehead arises a slender, pliant rod of cartilage, from the tip of which in turn extends a thin, supple line or thread of tissue equal in length to the rod. At the end of this line there springs a complex structure consisting of a



Photograph from Dr. William Beebe

THE LARGEST SINGLE CELL IN THE WORLD

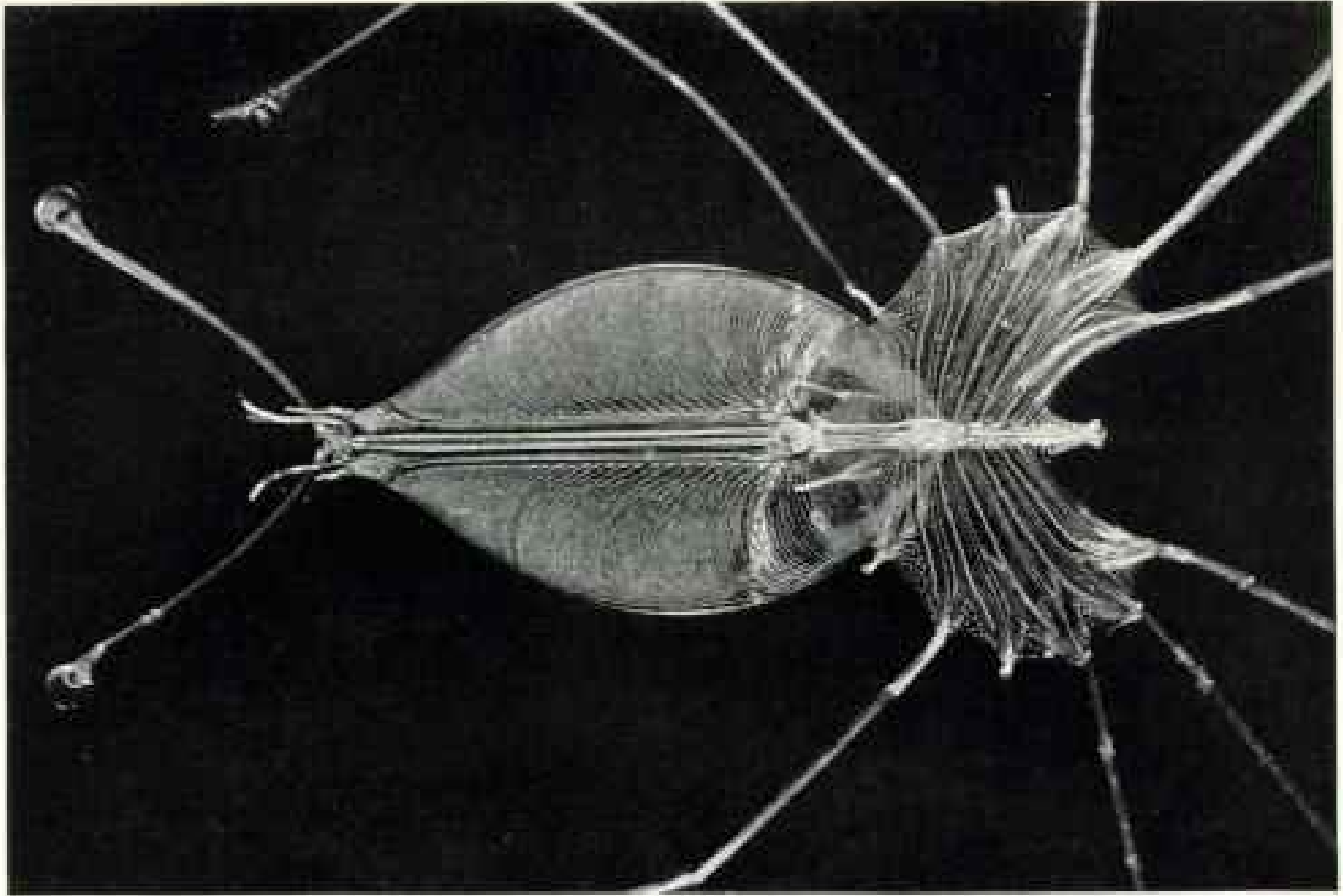
A one-celled Alga, *Halicystis*, known in Bermuda as Sea Bottles. These look like giant emeralds and are washed ashore on Nonsuch beaches. The Rockefeller Institute has for four years maintained a station in Bermuda for the sole purpose of studying this type of single cell.



Painting by E. M. Bostelman

A DEEP-SEA FISH (*CHIASMODON NIGER*) WHICH HAS SWALLOWED ANOTHER (*OMOSUDIS*) THREE TIMES AS LONG AS ITSELF

The jaws must be capable of complete dislocation to permit the passage of food of such great size.



Photograph from Dr. William Beebe

TRANSPARENT LEAF LARVA OF A SPINY LOBSTER

This creature is thin as paper, transparent as glass, and beautiful as a snow crystal.

grapnel of three strong, horny hooks, with three yellow searchlights at their base.

The implication of the whole affair is obvious, and the six basal muscles permit our imagination full scope in visualizing the hooking and subsequent playing of any captured fish. More astonishing things than this occur beneath the waves; so that my only objection to the feat is based not on credulous but purely practical grounds: that the hooks would soon be injured or broken off, and the whole apparatus would then be a hindrance and a danger. It

seems more probable that (as I have indicated in the drawing) the rod, line, hooks, and lure could, at a critical time, be cast swiftly ahead, when the hooks and the lights would so frighten any pursued fish that they would hesitate long enough to be engulfed in the onrushing maw.

Punch, I think it was, had an amusing paragraph on this individual fish: "Dr. Beebe," it read, "has discovered a fish with an entire angler's outfit. The only thing it lacks is a pair of hands to show how large were the fish which got away."

Notice of change of address of your NATIONAL GEOGRAPHIC MAGAZINE should be received in the office of the National Geographic Society by the first of the month to affect the following month's issue. For instance, if you desire the address changed for your March number, The Society should be notified of your new address not later than February first.

THE LAND OF WILLIAM THE CONQUEROR

Where Northmen Came to Build Castles and Cathedrals

BY INEZ BUFFINGTON RYAN

“WHEN it’s apple-blossom time in Normandy, I want to be in Normandy.” I hummed the popular melody over to a world traveler. “True, every bit of it,” he commented. “Go to Normandy in the spring and see for yourself. The old duchy is one huge orchard, its trees snowy with blossoms—a spectacle rivaling Winchester’s or Wenatchee’s. And cider, not wine, is Normandy’s national drink. You can’t eat a meal, you can’t be born, get married, or die without cider. And they press the apples in their own backyards every autumn.”

A land of apple blossoms, then. But what else? We scanned the map of the region which stretches west of Paris down the lower Seine to the Channel, between Picardy and Brittany. In area it is smaller than Maryland’s land and water total. But is there magic in names? Rouen! Deauville, Cherbourg, Havre! Bayeux! Honfleur, Dieppe, Falaise, Alençon! Names to conjure with, right enough; names whose associations make the heart beat faster.

Northmen swooping down, raiding, destroying, but finally settling on the land and giving it a softened form of their name; stalwart son of duke and tanner’s daughter crossing the Channel to make world history at Hastings; Norman dukes reigning in England; the King of the English reigning in Normandy. Armored knights clanking about, in London, Sicily, Naples, at the Tomb of Christ. The Maid burnt at the stake. Daring sons of Normandy roaming the seas to fish, to explore and colonize unknown lands, from Newfoundland to the Antarctic, to the South Seas, around the world. Normans building lordly castles, châteaux, cathedrals, and abbeys of distinctive “Norman architecture,” painting pictures, writing poetry, plays, and novels of enduring fame. Poussin and Millet, Pierre Corneille, Alain Chartier and Malherbe, Flaubert, De Maupassant, and others—a Norman galaxy.

A LAND OF TO-DAY AS WELL AS OF THE PAST

But Normandy does more than sit around and dream of the long ago. Through Havre, second seaport of France;

through Cherbourg, it saw some of the legions pass to the Western Front. It has greeted kings and queens, admirals and generals, and heard the roar of cannon salutes, the hum of sky craft. Through these ports to-day pass travelers from the Western World, and processions of consuls, agents, buyers, salesmen, ambassadors of commerce of every kind—hunters all, scenting the romance and adventure in foreign trade, in anything from anchovies to antiques.

Dress designers, looking to Paris for the first and last word on fashions, send “scouts” to the golden beaches of Deauville and its less aristocratic vis-à-vis, Trouville. Here, where the *beau monde* disports itself in season beneath gaily striped tents, at the casinos, along the promenades, and at the races, the gods and goddesses of style display their latest creations on beautiful women.

Back from white chalk cliffs and sandy beaches stretches a green and pleasant land of winding streams, fertile grainfields and pastures, hedgerows, orchards, well-kept farms, and villages of thatched cottages. There are hills and dales and glens, forests and waterfalls, and the typically Norman long, straight roads.

A REGION OF FINE COWS AND FINE HORSES

And cows! Innumerable herds spot the lush meadows everywhere, but especially in the Cotentin, the peninsula which points toward England. It has given its name to a Norman breed of cattle famous for beef, but more so for milk production. Paris drinks Normandy’s milk and cream, and both London and Paris eat its fresh butter and cheese—Camembert, Neufchâtel, Pont l’Évêque—with histories as distinguished as the duchy’s own.

In one field men in blue smocks are loading hay into carts drawn by ponderous horses. “They’re Percherons!” exclaims the horse lover from the Middle West. “My Indiana neighbor used to import carloads of them. Don’t they remind you of Rosa Bonheur’s ‘Horse Fair’? As a matter of fact, most of her models for that picture were Percherons.”

Not all Percherons come from Normandy, but breeders flock to the horse fairs held every year at Caen, Bernay, and elsewhere; and Normandy supplies the French cavalry with many of its mounts.

Another Normandy product is its patois; one's schoolbook French will not serve here. In the daily common speech one authority has counted some 5,000 words which are foreign to French.

On an early visit to England, the future Conqueror found Normans everywhere. There were "Norman prelates in the bishoprics, Norman lords and soldiers in the fortresses, Norman captains and sailors in the seaports." The Conquest itself affected every phase of England's national activities, especially its political and social institutions. One writer has called attention to the fact that for more than 800 years the British Parliament has used Norman French when imploring the King to approve or reject its laws.

"VAUDEVILLE" WAS BORN IN NORMANDY

Though the old Norse language died out quickly in Normandy, it left tokens of its Scandinavian origin in such place names as Dieppe, "deep"; in Harfleur and Barfleur, *fleur*, the Norse *flot*, meaning "small river" or "channel"; in Yvetot, Ivo's "toft" or "inclosure." Another proof that this is the land of William the Conqueror lies in the fair-haired Scandinavian types which persist to this day in various districts.

As to the origin of the Norman's inclination to "hedge" on every question, let historians argue as they will; but it is a fact that one must usually labor hard to extract a plain yes or no from him. "Was the apple crop large this year?" you ask. His classic reply is: "Well, for a good apple year, it is not too good; but for a bad apple year, it is not too bad!"

The tendency to avail himself of subtle distinctions may account for the Norman's reputation as a somewhat grasping character, and his fondness for legal forms and lawsuits has earned for him and his fellows the title of "the lawyers of France."

For all that, the Norman has his own traditions of fun and good fellowship. Remember, he likes his cider! And never Norman more so than one Olivier Basselin, he of the red nose, who sang songs in praise of hard cider long before Villon roistered and recited in Paris wine shops.

Basselin ran a fulling mill near the little valley known as Vaux de Vire. From it his songs took their name, and these, in turn, gave rise to the corrupted term "vaudeville."

Thirty miles southwest of Vire, as the crow flies, on the border between Normandy and Brittany, towers the duchy's most imposing natural curiosity and its finest coastal monument of the Middle Ages—stupendous Mont Saint Michel. It is a granite islet 3,000 feet in circumference, girt with immense walls and towers, plastered with houses climbing up its sides, and the whole crowned with an ancient abbey, shrine of the Archangel Michael, saint of high places. Lovers of the unique find in its historical associations, in the grandeur of its outward aspect, an appeal and a fascination similar to those of Carcassonne.

East of Vire is Falaise, where Robert the Devil, the Magnificent, looked out of the castle window and saw Arlette, the tanner's daughter. Another story goes that he first saw her washing clothes at the fountain one day when he was returning from the chase. However it was, her "pretty feet twinkling in the brook" led to her becoming the mother of the Conqueror.

WILLIAM'S CONQUERING COURTSHIP

North of Falaise is Caen, a Norman Athens and unrivaled center for the study of Norman art. Here the Normans' extraordinary faculty for adaptation appears at its best. Though they invented little that was new, they adopted from other countries, developed and improved. French language and literature, French feudal doctrines, and Romanesque architecture in particular bear the stamp of their genius. In Norman hands this architectural form from northern Italy became a distinctive, living thing, marked by great size, simplicity, and massiveness, and love of geometric ornament. The two abbeys founded here by the Conqueror and his wife are superb examples of the architecture which preceded the rise of the early Gothic in the 13th century, and which also crossed the Channel even before the Conquest.

The Conqueror was buried in one of these abbeys, and Matilda, his cousin-wife, in the other. Both were built with the hope of conciliating the Pope regarding their marriage.

CHARM AND COLOR DISTINGUISH NORMAN BYWAYS



THE LOWLY THATCHED COTTAGE IN NORMANDY

In certain parts of the old duchy, many of these humble homes resemble those seen in rural England, particularly in Kent. This roof is of rye straw. A cottage at Le Vey (see also Color Plate VII).



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Natural Color Photographs by Gervais Courtehanaut

DOING THE FARM CHORES AT LISIEUX

The milk cans, washed at the fountain and dried, will be filled and loaded on a cart to go into town. The farmer wears a smock and the Norman cotton cap; his wife's headdress is typical of the district.



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Natural Color Photographs by Gervais Courtellemont.

SPRING SPILLS BRIGHT HUES AND SWEET ODORS ON ANCIENT WALLS

Castles, abbeys, manors, survivals of stirring days of old, are not only numerous in Normandy, but in many instances are well preserved. The gate, moat, groves, and hedges of the Castle of La Pommeraye, near Fécamp (left), and to the right, a rose-decked corner of the Castle of Gonstimesnil, between Fécamp and Etretat (see also Color Plates VI and VIII). The girl wears the costume of the Caux District.



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Natural Color Photograph by Germain Courtellemont

ALMOST EVERY NORMAN VILLAGE HAS ITS DAIRY

The old duchy is practically one big dairy farm, where large herds find excellent grazing on the lush meadows. Normandy's butter, milk and cheese are widely known outside of its boundaries. An old, half-timbered cottage, now used as a dairy, on the Rouen-Les Andelys road.



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Natural Color Photograph by Germain Coussilleusout

AT "VERDANT VERNON" THE SEINE ENTERS NORMANDY

This, one of the duchy's prettiest towns, attracts many Sunday excursionists from Paris. The stone bridge connects Vernon with Vertonne. If legend speaks true, it was here that Richard II, Duke of Normandy, good-naturedly assented to the petition of his barons and knights to marry. His son was the father of William the Conqueror.



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Natural Color Photograph by Gervain Courtellemont.

MUCH OF NORMANDY'S APPEAL TO THE TRAVELER LIES IN ITS PLEASANT COSTUMES.

Though they tend to disappear, the snowy, high-crowned bonnets of the women, the large gold crosses, the bright shawls, scarfs, and blouses can be seen on market days and holidays in some of the rural districts, when the country folk flock into town. Left, a girl of the Auge cider and cattle country, and right, a farmer of Fécamp.



© National Geographic Society
BELLES OF THE COTENTIN

Though their peninsula homeland was the first part of Normandy to be visited by the Normans, in some respects it has fewer Norman characteristics than other parts of the former duchy.



Natural Color Photographs by Gervais Courtellemont
A WELL IN THE CAUX DISTRICT

The *Caennois*, living north of the Seine, are considered the typical Normans. A girl in Norman dress of 1830, at the wrought-iron well of Goustimesnil Castle (see also Color Plates II and VIII).



© National Geographic Society

Natural Color Photograph by Gervais Courtellemont.

THE RIVER ORNE ON ITS COURSE THROUGH THE "NORMAN SWITZERLAND"

Rocky hills, waterfalls, dense forests, and hastening streams characterize this picturesque region in the southwestern part of the old province. A water-mill (right) at Le Vey, 12 miles west of Falaise (see also Color Plate I).



NORMANDY'S NOBILITY ENDOWED IT WITH SUPERB CASTLES AND MANORS
A farmer of the Caux District and his daughter stop at Goustimesnil Castle (see also Color Plates II and VI) to pay their rent before going on to a Norman festival.



© National Geographic Society

Natural Color Photographs by Gervais Courdellennont

A MENAGERIE IN PORCELAIN AT HOULGATE

The products of a pottery include strikingly lifelike figures of birds, animals, and gnomes, popular Normandy decorations for lawns and gardens.

What a courtship was William's! A seven-year siege of Matilda's hand, disdain from the lady, slights not to be endured, and finally a wrathful lover rushing into Matilda's presence, seizing her by the hair, dragging her about the room, striking her, flinging her to the floor. After that she said yes!

Still farther north is Dives. Here, in those stirring days of 1066, the future victor at Hastings gathered together "an innumerable host of horsemen, slingers, archers, and foot soldiers," wild, adventurous spirits, the war strength of northern Europe, eager for the battle over the sea. In the river's mouth lay some 700 ships. The largest could hold fifty knights with all their horses and men; the smallest boats were not even decked over and were loaded to the gunwales with stores and provisions, including small grinding mills for the grain.

For pictorial history of the Conquest, go to Bayeux and look at the 58 scenes embroidered on linen—the famous Bayeux tapestry. Probably no other fabric anywhere in the world surpasses it in interest and importance. Crude though it is in design, and partly defaced, it nevertheless recreates a momentous period in world history. That Queen Matilda may have worked on it with her own hands is now denied by some romance-destroying historians.

"EACH MONUMENT A BOOK, EACH STONE
A SOUVENIR"

But all Norman roads lead to Rouen at last. Rouen, "Gothic Queen of France" and the duchy's ancient capital, where "each monument is a book, each stone a souvenir." Yet, more than architecture, more than antiquities, Joan of Arc is the strongest lure; for Rouen is her town, saturated with glorious and tragic memories of her. Her spirit still hovers over the market place where, condemned for "having fallen back into the errors," she went to fiery martyrdom.

Some 80 miles from Rouen the winding Seine meets the sea. And the sea means sailors, and sailors often mean Normans. Roving was in the Norman blood, a heritage from northern ancestors. Even after

they settled down in France, there were always plenty of Normans keen for new adventures, preferably in lands over the waters. Their conquest of England is one proof of it. And if the sun to-day never sets on the British Empire, may not a strain of Norman blood be partly the cause of it?

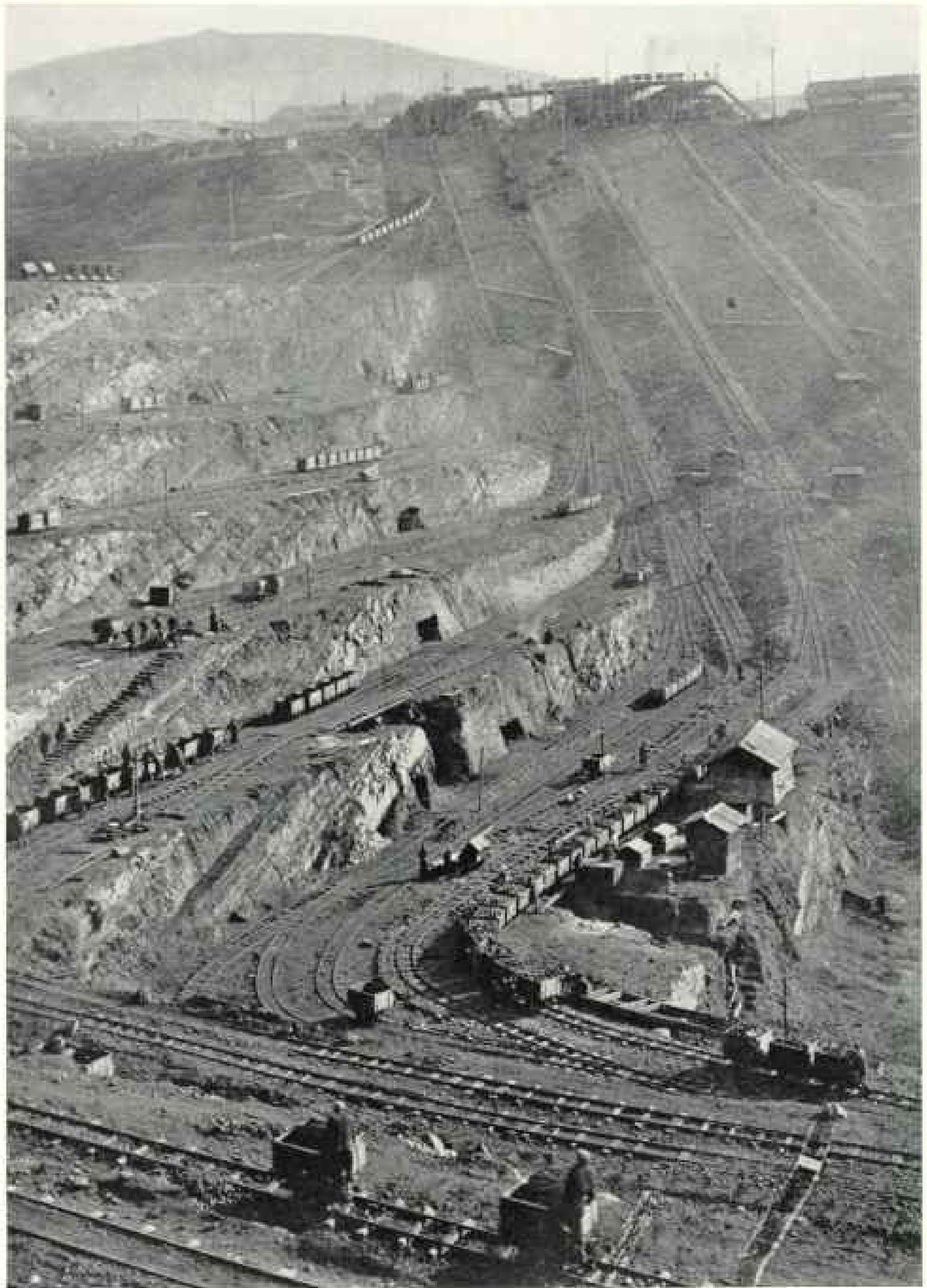
"TRANSATLANTIC NORMANDY"

North America should know; for from the towns clustering around and up and down from the Seine's mouth Normans followed the cod to the west, beyond the sun, to Newfoundland—the Terre Neuve to this day—and to Nova Scotia waters. One old chronicler in Honfleur found, "before ever Columbus was known, permits to fish for cod in the Terres Neuves . . . log books and reports of pilots who had returned from there." The "big fishing" flourished during the 16th century, and before it ended Normans and other Frenchmen ruled the Grand Banks.

Explorers and colonizers, too. Out of Havre sailed Jean Ribault, of Dieppe, "a man in truth expert in sea causes," to claim Florida's "River of May" for France. Pierre Belain, of Allouville, in less than nine years, made the first attempts to colonize the French Antilles. And peerless La Salle, son of Rouen, claimed an empire for France on the Mississippi.

Canada should know! A generation before Jacques Cartier reached the St. Lawrence, Jean Denys, of Honfleur, was there. And though De Monts and Champlain were not Norman-born, the men who helped them plant Port Royal and Quebec were from Honfleur, Havre, Dieppe. Honfleur, in fact, "was always to be one of the nurseries of Canada."

"Can you wonder, then," the Normans ask, "that the St. Lawrence is almost as familiar to us as the Seine? You talk of 'hands across the seas.' They are not only English hands, but Norman. Read what our sons did in New France; read what your own poet says about Evangeline, 'wearing her Norman cap,' and her father singing the songs heard long ago in Norman orchards. Why, our link with North America is so real that some of us still regard a part of it as Transatlantic Normandy."



AT PUSHUN, MANCHURIA, IS ONE OF THE LARGEST COAL POCKETS IN THE WORLD

At this great colliery east of Mulden, high-grade coal is stripped from open cuts by both Chinese and Japanese workers. Manchuria is not only a granary for Japan, supplying quantities of food, starches, and fertilizers, but also a mineral field, yielding coal and iron ore to supplement the scant supplies of the Island Empire.

BYROADS AND BACKWOODS OF MANCHURIA

Where Violent Contrasts of Modernism and Unaltered Ancient Tradition Clash

BY OWEN LATTIMORE

AUTHOR OF "THE DESERT ROAD TO TURKESTAN," IN THE NATIONAL GEOGRAPHIC MAGAZINE

WHEN my wife and I reached Manchuria our plan was to live and travel there for a year. We wanted to see not only the "modern improvements," but the old life that is being replaced by modern civilization.

"Modernization" goes on faster in Manchuria than in China. That is only natural, for in China it confronts the oldest living civilization in the world, the vested interests of more than 2,000 years.

In Manchuria both Chinese and Western civilization are setting to work on thousands of square miles of virgin territory. Here colonists can set up standards of railroad and motor transport, mechanized industry, and high-speed development almost as easily as the ancient standard of cart transport and village industry. Moreover, for 25 years Japanese influence through the South Manchuria Railway and Russian influence through the Chinese Eastern Railway have been giving an example and setting the pace.*

Under a fellowship from the Social Science Research Council, I planned a general survey of the historical background of this fascinating country, with its violent contrasts of advanced modernism and unaltered ancient tradition, its clashes of national aspiration, its medley of races and tribes, and its most stupendous modern phenomenon, the migration, year by year, of hundreds of thousands of Chinese colonists, amounting sometimes to more than a million a year.

LIVING CLOSE TO THE PEOPLE

To carry out our plans, we could not be satisfied with rapid excursions between well-known centers. We wanted not only to see and hear about, but to live among, the events of Manchuria.

In large measure we succeeded. We lived in an outpost town on the Mongol

frontier. We lived in an old-fashioned Manchu village in the heart of conservative Kirin Province. We saw something of the nomad tribes of the vast Barga plateau. We reached the Amur frontier between Manchuria and Siberia and traveled among the shy "Fishskin Tatars."

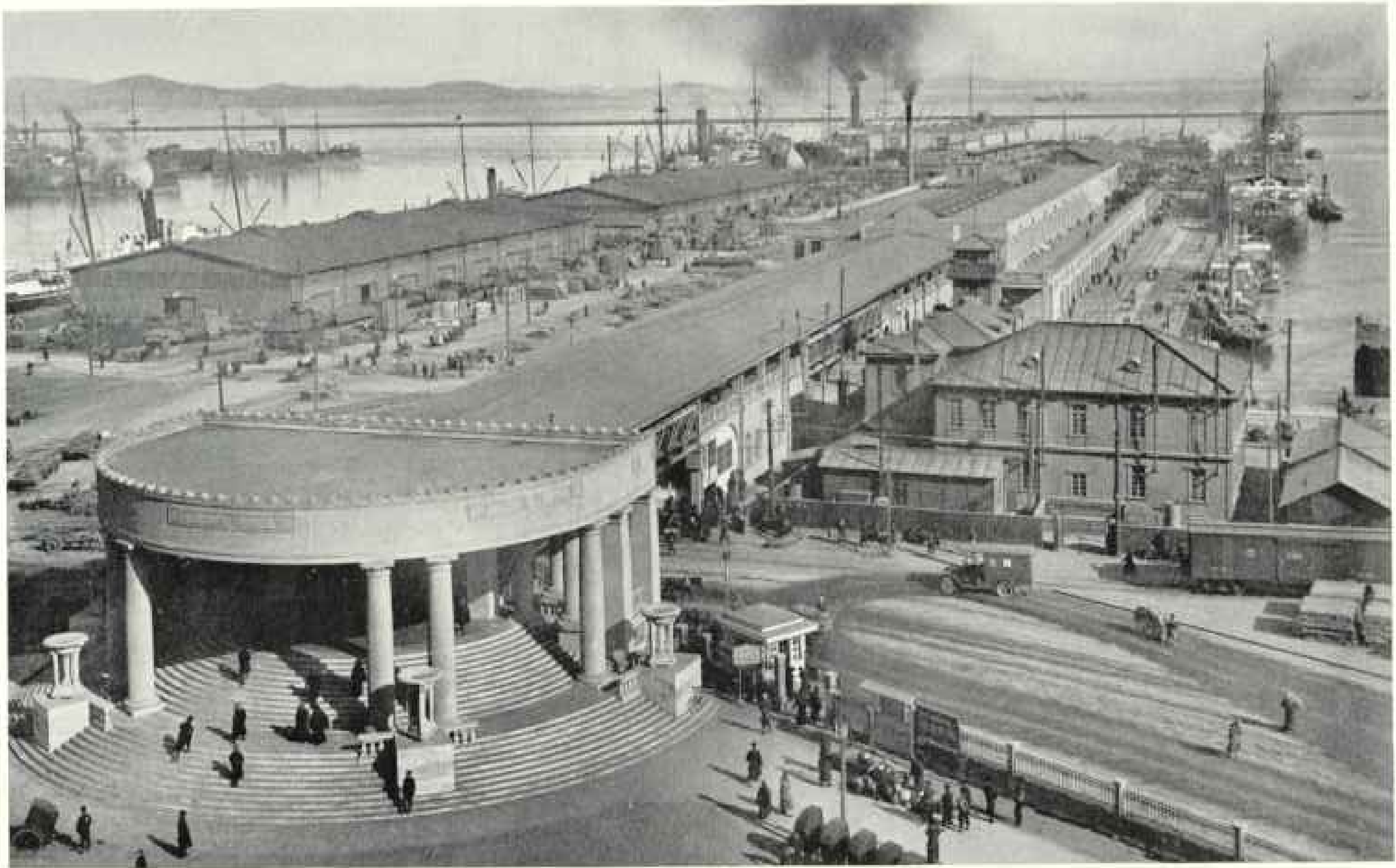
We saw immigrant settlers camped where they had yet to build houses and plow the soil, and prosperous "squires" of the old settled country. We rode with troopers of border patrols; lived in nobly built temples and squalid inns; traveled first, second, and third class on trains; traveled by cart, motor, and river steamer; ate with officials, merchants, scholars, soldiers, and peasants; collected old stories and legends; saw *shamans*, or "medicine men," of the primitive tribes; returned at intervals to the sophistication of Mukden, Dairen, Harbin.

"We" includes not only my wife and me, but "Moses," the resourceful, indefatigable retainer who had accompanied us in Mongolia and Chinese Turkestan.† We had parted from him at a railway station in India in 1927, after completing the journey overland from China, and on our return to China he met us at the steamer, speechless with joy. We went to see his wife and son and the tiny daughter born after his return from his travels, whom he had proudly named World Tour. The neighbors crowded the narrow lane to see the mad employers whom he had so madly followed, and marveled at his readiness to go again. For 17 years he has been a family retainer, first with my father, then with my wife and me; and now he hovers watchfully over the third generation, our little son, born in Peiping (see page 128).

We were not all three together all the time, for occasionally Moses and I would go off on a trip and once I went alone.

* See, also, "Manchuria: Promised Land of Asia: Invaded by Railways and Millions of Settlers," by Frederick Simpich, in the NATIONAL GEOGRAPHIC MAGAZINE for October, 1929.

† See, also, "The Desert Road to Turkestan: Twentieth Century Travel Through Innermost Asia," by Owen Lattimore, in the NATIONAL GEOGRAPHIC MAGAZINE for June, 1929.



THROUGH BUSY DAIREN FREE PORT FLOWS THE SWOLLEN STREAM OF MANCHURIAN FOREIGN TRADE
Suggestive of Hamburg, with its modern docks, railway and warehouse facilities, Dairen is a conspicuous example of achievement in that area of Manchuria which the Japanese lease and govern.



BY THE MILLIONS, CHINESE PEASANTS SWARM OVER MANCHURIA

Many of these home-seekers and field workers come to Dairen by coolie steamer from Shantung Province. Once past quarantine, they ride the crowded trains to the north, where already millions of their race plow, sow, and reap the eye-tiring levels of Manchuria.



PASSENGERS IN AN UP-TO-DATE WAITING ROOM AT THE DAIREN DOCKS

Through the ocean terminus of the Japanese-owned South Manchuria Railway moves a huge volume of men and goods in traffic with Mukden, Harbin, and also with Tientsin and Peiping by Chinese lines.

Our object was not one long journey, but a series of journeys in various directions, broken by long stays at chosen places.

MANCHURIA IS AS LARGE AS FRANCE AND SPAIN COMBINED

Manchuria, where trouble flared up between Chinese and Russians in 1929 and has broken out again in 1931 between Chinese and Japanese, is one of the most magnificent and fascinating regions in the world. Its total area is as great as that of France and Spain together. A country as large as Germany would fit comfortably into the one province of Heilungkiang.

With a history never free of war and conquest, it is yet the scene of the greatest peaceful migration of the modern world—the irresistible expansion of the crowded millions of China. While it contains the richest undeveloped regions in China, it is yet in some ways the most modern and progressive part of the republic. It contains nearly one-half of the total railroad mileage of China, the second greatest port, and by far the highest *per capita* trade.

Nomad herdsmen and scattered hunting tribes are to be found within a couple of hundred miles of modern cities with growing industries and well-endowed schools. Regions which a generation ago could only be reached by slow journeys with carts can now be reached in a few days by rail, river steamer, or motor bus.

All nations have an interest in this great market—America not the least, for America can sell motors and trucks, farm machinery, tractors, railroad material, and electrical apparatus to buyers whose demands increase even as they buy. As for Russia and Japan, whose domains half encircle Manchuria, it is small wonder that they look with a peculiar interest on this treasure ground of northeastern Asia. “The droolers” the Chinese call them in an expressive phrase, picturing them as people whose mouths water at the tempting sight of Manchuria.

When we first came to Mukden we had the good fortune to meet Marshal Chang Hsüeh-liang, the “Young Marshal,” who inherited from his father the government



A HOSPITAL, MAINTAINED AT DAIREN BY THE SOUTH MANCHURIA RAILWAY COMPANY

The narrow zone across southern Manchuria, through which this Japanese-owned railway runs, is policed and its affairs administered by the Tokyo Government. In the territory served by the railway the Japanese have invested more than a billion dollars.

of Manchuria. We owed a great deal to his friendly interest. Having grown up in the army, he knows the whole country well. He is good at golf and tennis, rides well, is fond of dancing, and is a generous patron of the Y. M. C. A., whose aims of idealism and physical fitness he considers appropriate for Young China (see p. 114).

One evening, after watching him play a round of golf, we went home with him to an informal supper. He talks well, with a lively turn of expression, often breaking suddenly from English into rapid Chinese, and he told us amusing stories of different parts of Manchuria.

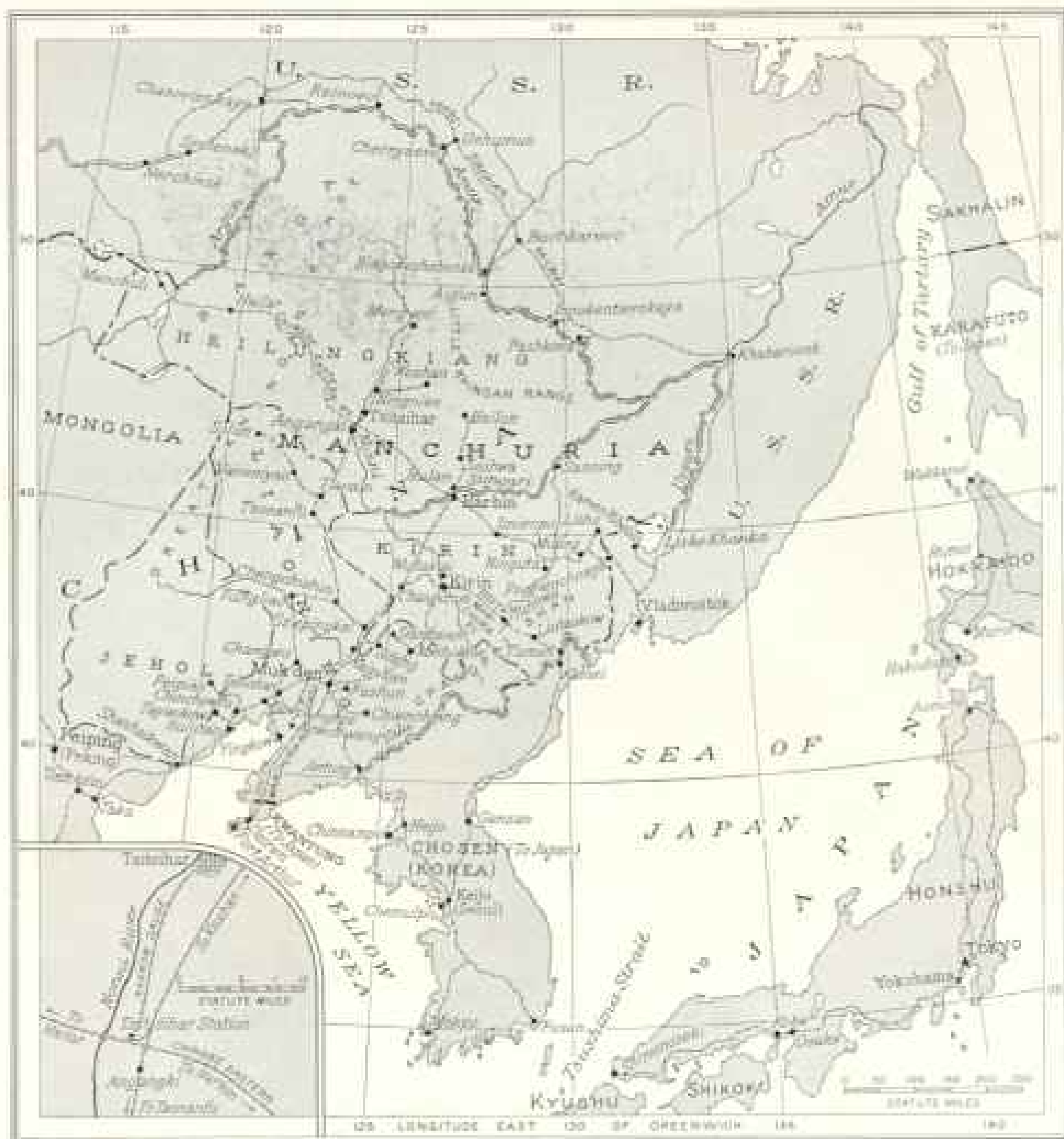
TAOAN IS CAPITAL OF NEW COLONIZATION ENTERPRISE

Our first long stay was at Taoan, the "capital" of the great new colonization enterprise which is opening up the Solun Mountains, a part of the Khingan Range. We stayed here at a tiny inn. It was kept by a burly, handsome man who had once been a brigadier general. After his side

was defeated in civil war, he came to the frontier to start afresh. Manchuria abounds in such men—rich for a few months on boom wealth, then poor again through reckless speculation.

Taoan is a boom town, and our brigadier general innkeeper just suited it. The moment it was light he would begin to bellow, and all day he kept the staff bolting about the premises like rabbits. His particular target was the scullion who looked after our room, a humorous immigrant peasant lad who had exactly the same name as one of China's most distinguished university presidents, for which reason everybody delighted in yelling orders at him.

Two years ago Taoan was only a name on the map, and a doubtful name at that, for it was called Paichengtze and Tsingansien as well as Taoan. It is in old Mongol country. The Mongols once held something like a quarter of Manchuria, extending north to Tsitsihar, the capital of Heilungkiang, and east to the Willow Palisade, which runs within eighty miles of



Drawn by A. H. Bumstead

MANCHURIA HAS AN AREA AS LARGE AS FRANCE AND SPAIN COMBINED

The inset map shows where the railway interests and economic ambitions of Japan, Russia, and China impinge one upon the other. Angangki, two miles south of the Chinese Eastern main line, marks the farthest point north of the Sino-Japanese line from Taomanfu; the extension of the line northward to Tsitsihar and beyond is Chinese-owned and operated. The Chinese Eastern Railway, Sino-Russian operated, is connected with Tsitsihar by a spur track to Tsitsihar Station. The three lines cannot use the same rolling stock. The Chinese Eastern Railway is of 5-foot gauge, the Taomanfu-Angangki-Tsitsihar line is "standard," and the Tsitsihar-Tsitsihar Station line is narrow gauge.

Mukden and right up to Changchun, one of the great modern cities. Most of it belonged to the Cherim League of Inner Mongolia.

THE ROMANCE OF PRINCE HASAR

The tradition of these Mongols is that they are descended from Hasar, son of

Kublai Khan and brother of the Emperor who succeeded Kublai. He grew up in the army, serving on distant frontiers, but at last he was summoned to the capital at Shangtu (Xanadu) by his brother the Emperor. One day he rode into the court of a great building and, looking up, saw at a window a beautiful princess, with whom



Photograph by Burton Holmes from Galloway

HISTORY AND INDUSTRY FOCUS ON MUKDEN

From this city China's first Manchu emperor, about 300 years ago, moved his capital to Peking. Beyond its walls are the fine tombs of other emperors of the Manchu dynasty, China's last imperial line. In the Russo-Japanese War, Mukden was one of the key cities. To-day, though it is surrendering its commercial prestige to Dairen, it is still a busy place. A retail street, with most of the shop signs in Chinese.

he romantically fell in love, not knowing that it was his niece, whom he had never seen before, a daughter of the Emperor. The princess also fell in love with the handsome warrior in silver armor, whom she had never seen before. "She looked at him and was stricken, as if a magic spell had been laid on her."

Prince Hasar went off again with the army, but the princess fell sick of her secret love, and languished until they were afraid she would die. Then one of her handmaidens told the Emperor, and he shrewdly guessed there was a man missing somewhere.

He sent for the princess and frightened her into confessing. Then, to his horror, he discovered that she had fallen in love with her uncle. In his wrath he laid all the blame on his young warrior-brother

and summoned him to court to punish him. Then he relented. He reproached the young people bitterly for their unholy love, but he married them off to each other just the same. Then, to be rid of the whole business, he banished them to the extreme eastern border of Mongolia.

The marriage, in spite of its dubious aspects, turned out very well indeed. Prince Hasar and the princess had ten sons, and from them are descended the princes of the Ten Banners of Cherim League. They went on into the wilderness until they found Aisin Gioro, ancestor of Nuthachih, founder of the Manchu Empire. Mongols and Manchus then formed an alliance, and together, after many wars, conquered China, establishing the Manchu Empire.

The Chinese, conquerors of a different type, have long been advancing into this



CHINESE JUNKS LINED UP AT A DAIREN WHARF

These vessels are loading soy-bean cake, seen piled like huge wafers or grindstones. In the bean-shipping season, Manchurian rivers, at points like Newchwang, are often so crowded with bean boats that noisy traffic jams fairly block the water front.



A DISPENSER OF "FIRE WATER"

In the main street of the frontier town of Taoan, this Chinese boy carries a "flask," made of oiled paper, full of *shao-chiu*—raw, potent, grain alcohol, derived from kaoliang. The container is corked with a corncob. This liquor is an important article of Chinese trade with the Mongols.



A "MEDICINE MAN" OF THE FISHSKIN TATARS

The shaman, with horned headdress, keeps off the attack of evil spirits with a spear, the shaft of which is covered with the skin of a large snake. His "medicine" is something like that of the American Indian (see, also, text, page 129, and illustration, page 116).

Photographs by Owen Lattimore



Photograph by Owen Lattimore.

PICKLING VEGETABLES FOR THE MONASTERY'S WINTER FOOD SUPPLY

The kitchen staff of the monasteries in the Chien Shan region must begin early in spring to lay up supplies, not only for the monks, who are strict vegetarians, but also for the pilgrims. Vegetables are pickled in earthenware jars, in brine or weak Chinese vinegar, and each jar is covered with a kind of straw hat (see, also, text, page 124).

old Mongol country, and there are now few Mongols to be found east of Taoan. Two years ago a new railroad was planned, to run from Taoan up into the Solun Mountains. Taoan is twenty miles from Taonanfu, the boom town of the previous wave of colonization. At the head of the new railroad and colonizing project is General Tsou Tso-hua (who has recently been visiting America), commander-in-chief of the Manchurian artillery and one of the ablest officials in the administration.

Taoan, accordingly, was booming. There was a whole street of shops built of bricks instead of mud. Silks and satins could be bought; also foreign goods. The high point of sophistication was a restaurant with waitresses. This novel example of the emancipation of women was enough to assure a brisk trade.

Another attraction was a fortune teller, a somewhat furtive young man with a cloak of tarnished elegance and a bewildered girl wife who longed for her native Harbin and lamented the crudeness of the frontier. The fortune teller relied a great deal on the Chinese form of the "ouija board," a tray of sand, over which a stick is held. Incense is burned and "the spirit" is invited to come "out of the mountains." When he arrives he causes the stick to move in the sand, making weird patterns, which then have to be interpreted as Chinese characters, giving cryptic messages.

BANDITS MAKE TRAVEL A BIT FORMAL.

The prevalence of bandits in the neighborhood made the General, who was exceedingly hospitable and kind to us, insist that we should not go out except in his motor cars. Unfortunately, this meant first a motor cycle scouting ahead, then a huge truck bristling with soldiers, and then our car, with us two and another armed guard. With that motor truck plowing ahead over the dusty plain, we looked like motorized Children of Israel following the pillar of cloud by day.

Bandits were certainly about. We frequently heard shots at night, and more than once saw cavalry patrols coming in with prisoners. The cavalry, in two long files, would ride down the street, their trumpets blaring triumphantly before them. Between the files were carts, with the prisoners bound on them. Battered but defiant, they made jokes as they went along,

and every time they passed a shop where drinks, or food, or tobacco were sold, they would demand some. This the soldiers would commandeer for them—a doomed man must have what he asks. The crowd would applaud, for they like to see a bandit who keeps up his bravado to the end, and they laughed and jeered at shopkeepers who hastily put up their shutters, fearing to have a contribution levied on them.

TERRIFIED BY "DREAM MEDICINE"— ANESTHETIC

Later, in the spring, I made a journey far into the Mongol country, traveling part of the way in a crowded truck with some of General Tsou's troops. I carried nothing but my bedding and camera and lived on the same food as my companions. It was pretty poor, for supplies are hard to get, once the farming region is left. Almost the only traffic is by bullock cart. As in many bandit-infested regions, oxen are more popular than horses, although slower and more difficult to handle, because bandits are always wanting extra horses, while they have little use for oxen.

I should have preferred the Mongol winter food of parched millet, dried cheese, and mutton; but the Chinese revolt against this, considering it barbarous. Therefore I lived monotonously on coarse Chinese spaghetti, with an occasional bit of cabbage or potato as a relish.

One of my companions was an officer, a lively little man, horribly scarred. He had been blown up by a shell and should by rights have died. He was patched up by a Scottish Presbyterian Mission doctor whose fame throughout Manchuria is highly picturesque. He owes this in part to the fact that the illiterate classes, who have no way of passing on information except by word of mouth, like to tell a story in such a way that it sticks in the memory.

Many of them admit that they are terrified of a foreign hospital, to begin with. "When you go into one of those places, who knows how you will come out?" Then, they say, the foreign doctor comes and talks to them kindly, and that scares them into fits. They are sure he is hiding the dreadful truth. If it is necessary to give an anesthetic, which they call "dream medicine"—a name of horror, smacking of witchcraft—the doctor tries to persuade



Photograph by Knud Sorensen

HAWKING SWEETS AT A STATION ON THE MUKDEN-TIENTSIN RAILWAY

In Manchuria, as in some Latin-American countries, many travelers depend for food on these station-platform peddlers. Chestnuts, hot tea, pastry, and fruit, including sugared crab apples strung on straws, are common articles in this commerce. This line passes through the most important fruit belt of the Far East.

them it is really not very serious; whereupon they are sure it must be awful. "Alta!" thinks the patient. "Wait till I wake up: I'll find everything gone."

"But this doctor," they say, "he's a wonderful fellow. He's a sly one, he is. In the first place, he's drunk all the time." (This part of the story, when I told it at the mission, was received with huge approval. If there's one kind of story a Scotsman appreciates, it's a story against another Scotsman.) "He carries a bottle around with him, and every once in so often he takes a swig. When he needs inspiration he takes a good, big pull and goes right ahead! If you ask him, 'Doctor, am I going to get well?' he says, 'Take my advice and order a coffin while you can attend to the matter yourself. Whoever heard of a Chinese getting out of a foreign hospital alive?' Then we laugh and feel *much* better. And if we ask, 'Doctor, will it be a bad operation?' he says, 'Bad? You don't know what bad is. I'll take a huge, big knife and make an enormous, great cut right into you, like

that. You've got to see my handiwork to believe it.' Now, that cheers us up, that does."

OPIMUM GROWERS TURNED BANDITS IN WINTER

The little town of Solun, the farthest point that motors can reach, was once a haunt of opium growers—Chinese who rented land from the Mongols at a high price. They made big money by smuggling opium into the towns, but spent it all in dissipation, and most of them turned bandit during the winter. When General Tsou came, he put down the opium-growing and tried to turn the smugglers into colonists; but many of them vanished into more distant mountains, to keep up their old lawless life.

A few settled Mongols also live here, and the administration is trying to persuade others to follow their example, instead of withdrawing before the Chinese advance. It was in this region that Captain Nakamura was killed, by Chinese soldiers, it is alleged—an incident that led up



SOY BEANS READY FOR RAIL SHIPMENT AT TIEHLING STATION, MANCHURIA

The magic increase in Manchurian bean culture, luring millions of Chinese colonists, is comparable in quality and magnitude with the amazing spread of Canadian prairie wheat farms some two decades ago.

to the Japanese action in seizing Mukden and other towns in Manchuria.

A few famine refugees had already been brought in as colonists. They had spent the winter in dugouts, which are easier to prepare and keep warm than houses, and were coming out like prairie dogs as the spring began. Life is incredibly hard for these destitute settlers, but if they can struggle through the first three years they have at least a chance of being more prosperous and secure than in their old homes.

Perhaps their greatest handicap is lack of capital, for which reason they often fall into the hands of landowners and grain companies, in which case they have to pay a crop-share rent of 40 to 60 per cent, and find it difficult ever to get out of debt. There is practically no free land in Manchuria; all the old land grants were taken up in huge blocks, often by officials, and, now that the government is trying to promote colonization, allowance has to be made for these owners.

Usually the best terms a colonist can get are those on which he brings a large tract of land under cultivation, thereby increas-

ing its value, in return for which part of the land is made over to him as his own, if he has not in the meantime fallen into debt.

THE THEFT OF A DOG MEANS A BLOOD FEUD

Back in the mountains are the "Manchu-Mongols," a peculiar tribe. They are descendants of the followers of a Manchu princess who was given in marriage to a Mongol chief. After her death they were given land for themselves. They are rich, progressive, and in proportion to their numbers quite powerful. No bandits dare enter their valleys. The richest men live in permanent camps, while their followers wander about with the flocks. Great dogs accompany the herds of sheep to guard against wolves. This is the nearest the Mongols ever get to the use of shepherd dogs. It is strange that with their many thousands of sheep they have never trained dogs to drive them.

Greyhounds also sometimes accompany the shepherds, and if a fox is disturbed from a hillside they are after him like a flash. Greyhounds are bred in only a few places in Mongolia, and are found also in



Photograph by Owen Lattimore

KEEPING FIT IN MANCHURIA

Young Marshal Chang Hsueh-liang plays golf for several hours a day. He inherited from his father the government of Manchuria, and, having grown up in the army, knew the country well and was of great service to the author in his travels and studies (see, also, text, page 104).

Chinese Turkestan (Sinkiang). They are so highly prized that they are given only as presents, never sold, and to steal one means a blood feud. Portraits of several of them, brought as tribute to the Manchu emperors, were painted by the famous Jesuit artist, Castiglione, and hang still in the Palace at Peiping.

The Mongols of the Cherim League train greyhounds to catch pheasants. In the autumn, after the pheasants have been feeding on berries, they are so fat that they cannot fly far. The dogs keep on after them while they are flying, and when they have to come down, the dogs can outrun them.

Much of the splendid pasture land in this region is badly scarred by prairie fires. The Mongols themselves burn over used pastures for the sake of a better growth next year, but when settlers come in the old hostility between farmer and nomad breaks out, and the settlers burn off everything to drive the Mongols away.

While on the way, as we were negotiating a bad hill—there was no road and the truck was running at random over the

hills—some of the soldiers got out and started a prairie fire. Before we got the truck going properly again, the wind changed, the fire swept round on us, and we got away without too much time to spare. We carried a big load of extra gasoline; some of the cans were leaking, the truck was spattered all over, and with one lick of flame would have gone off in a glorious bang.

When you come near a Mongol encampment the dogs rush out and attack you, often jumping up at the saddle, and you have to be quick with your whip. The people pay no attention. If you are going to stop, you must come within shouting distance and call out, "*Hui! Nohaigan hori!*" (Hi! Look after the dogs!), and then they come out to beat off the dogs. The catch in this is that it is not polite to ride right up to the tent; you should dismount at a short distance, in order to prove that you are not an attacker.

A NIGHT IN A CHINESE TRADER'S HUT

At some places where the Mongols are in the process of settling down, they keep



Photograph by Owen Lattimore

AN AMERICAN GAME TRANSPLANTED IN THE FAR EAST

Soldiers of the colonization army (see, also, text, page 105), stationed at a Mongol lama monastery, engage in basketball as a recreation. Missionaries, "Y" men, American soldiers, and canal builders have made basketball popular throughout the world.

their *yurts*, or round felt tents, long after they have built houses. As the yurt wears out, they plaster it with mud, until finally it becomes a round mud hut, used as a storehouse.

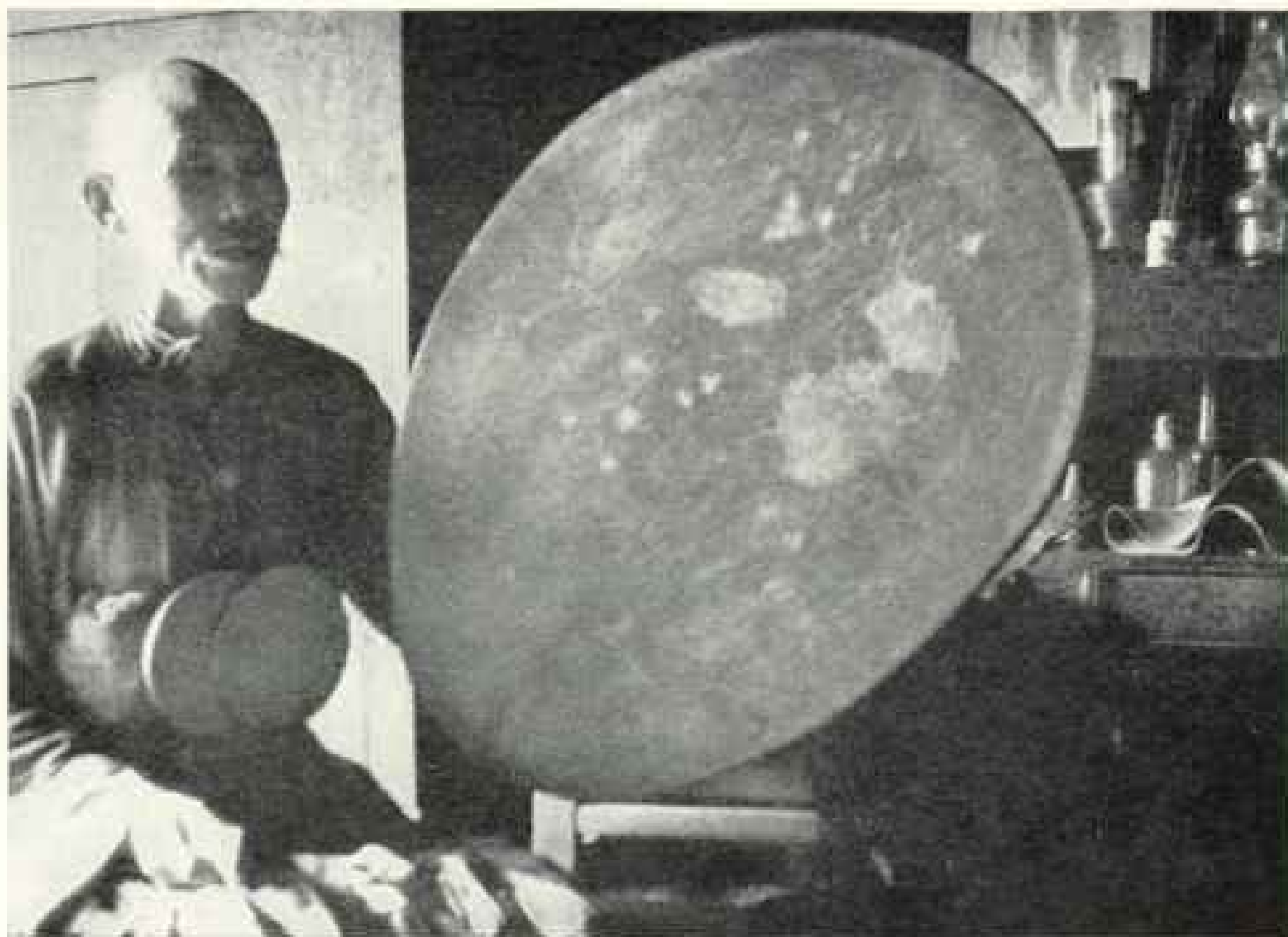
One night I stayed at the hut of a Chinese trader. These were his winter quarters; in summer he followed the Mongols in camp, trading for wool and pelts. A good enough life, he said, but too many fleas. All summer there was a pest of fleas that lived in the grass; nothing to do about it but scratch until the weather got cold. I wondered if it might not be these fleas that convey the dreaded Manchurian plague from marmots to human beings.

I slept on the same *kang*, or heated brick bed, with the trader, a Chinese officer, and a couple of soldiers, and reflected that the cold weather might also have its little disadvantages. Sure enough, before the trader turned in, he inspected his shirt and the waistband of his trousers. Only one or two. He grunted with satisfaction and picked up his opium pipe, which lay ready prepared, so that he could smoke rolled up in his bedding.

"Better have a puff," he said to me affably; "it certainly does keep down the lice." I almost laughed aloud. It was exactly like a man saying, "Have a shot of whiskey. Keep you from catching cold." Any excuse will do for a smoker as for a drinker. Nevertheless, it is very generally believed in those parts, and may quite possibly be true, that opium keeps down the vermin, unless they become addicts, too!

SEEING A TOWN UNDER FRIENDLY OFFICIAL HANDICAP

It was an abrupt change from the snowless cold of the western plains and bare hills to the white fields of Wulakai, in the old Manchu country of Kirin. I had been casting about for a place to begin the study of Manchu. The north was impossible, because of the "unofficial war" then going on between China and Russia over the Chinese Eastern Railway question. Everybody in Kirin recommended Wulakai; so there we went, and it turned out delightful, though it was difficult to get settled (see illustration, page 122).



Photograph by Owen Lattimore

CURING THE SICK WITH DRUMMING

The "course of treatment" given by this shaman of the Fishskin Tatars lasted several days, and included both chanting and drumming. His assistant kept her hands on the patient's back to detect a peculiar twitching which is the response to his "magic" (see, also, text, page 129).

I had called on the Governor of Kirin, a very human, burly old warrior. Like all the high officials I met, he was kindness itself. "Just tell my office whenever you start off for anywhere," he said, "and they'll see that the local authorities look after you."

So my wife and Moses and I piled into one of those motor buses that run erratically all over Manchuria in the winter, when the roads are frozen hard. The front view of it was good old Ford, but the back view was something else again. The custom is to build a kind of Spanish galleon or, rather, Chinese junk onto a Ford chassis. The "seats" are movable. You take the first row of passengers, put them on a bench, and push them up to the front of the car; then you take the next row and push them up against the first, and so on. In this way you can pack an unbelievable number of victims into one car. Or you can put benches down the sides and pile luggage in the middle to wedge everybody

tight. In any case, nobody can get out unless everybody gets out.

We found that Wulakai expected us. The Governor's *yamen* must have passed on the word in some such form as this: "There are a couple of foreigners coming along. They are even more unbelievable than most foreigners, but they are pets of the Governor's, and if anything happens to them you know what to expect." So a policeman and a soldier were waiting for us. The town was ours. They had orders to show us anything we wanted to see. So we started out to try it.

MR. COW COMES TO THE RESCUE

As might have been expected, everything worked backward. At the sight of a couple of foreigners marched along under escort, the whole population turned out to see the fun. Comment buzzed everywhere. We were Russians under arrest. No, we were Americans. We had come to live in Wulakai, to study Manchu. To



TAOLAN EXEMPLIFIES THE RIVALRY BETWEEN ANCIENT AND MODERN TRANSPORT

Motor cycles side by side with donkey carts show how fast modernization is proceeding in this country. To-day, nomad herdsmen and hunting tribes live within a short radius of modern cities, and rail, river steamer, or motor bus reach out to regions which only a generation ago knew only the slow, lumbering cart.



Photographs by Owen Lattimore

BARGAIN DAY IN TAOLAN (SEE TEXT, PAGE 111)

Farmers who have sold their cartloads of grain or hay drive past a silk shop whose sign proclaims a "reduction sale."



Photograph by Owen Lattimore

HORSES DRINK FROM A TROUGH MADE OF ICE

When winter comes and Manchurian rivers are frozen over, they become the highways of the country. Here a man has cut holes in the thick ice of the Sungari and is selling water to a teamster with a load of brushwood fuel.

live? To stay? To study Manchu? Ha! Ha! That was a pretty good one. Who was going to believe a yarn like that! Here China had been a republic for twenty years, and a couple of foreigners come along saying they are going to study Manchu. Pretty rich! Dirty work somewhere. Better keep out of it.

The result was that we could not find living quarters, and all the Manchu teachers were dead. Fortunately, at this point we got hold of Mr. Niu—Mr. Cow, that is—to whom we had an introduction from the husband of a relative of his wife. Mr. Cow was the local lithographer. He did a business in calling cards and advertisements, and sold red paper and gorgeous pictures and door gods and kitchen gods to be pasted up in the New Year season. A dying trade, he said sadly. All the old customs gradually vanishing.

He had a son, three years old, who was the biggest imp I have seen in a long experience, and attractive as could be. He was a cigarette fiend. He had to have a smoke every time he saw anybody else smoking. He preferred to use a cigarette

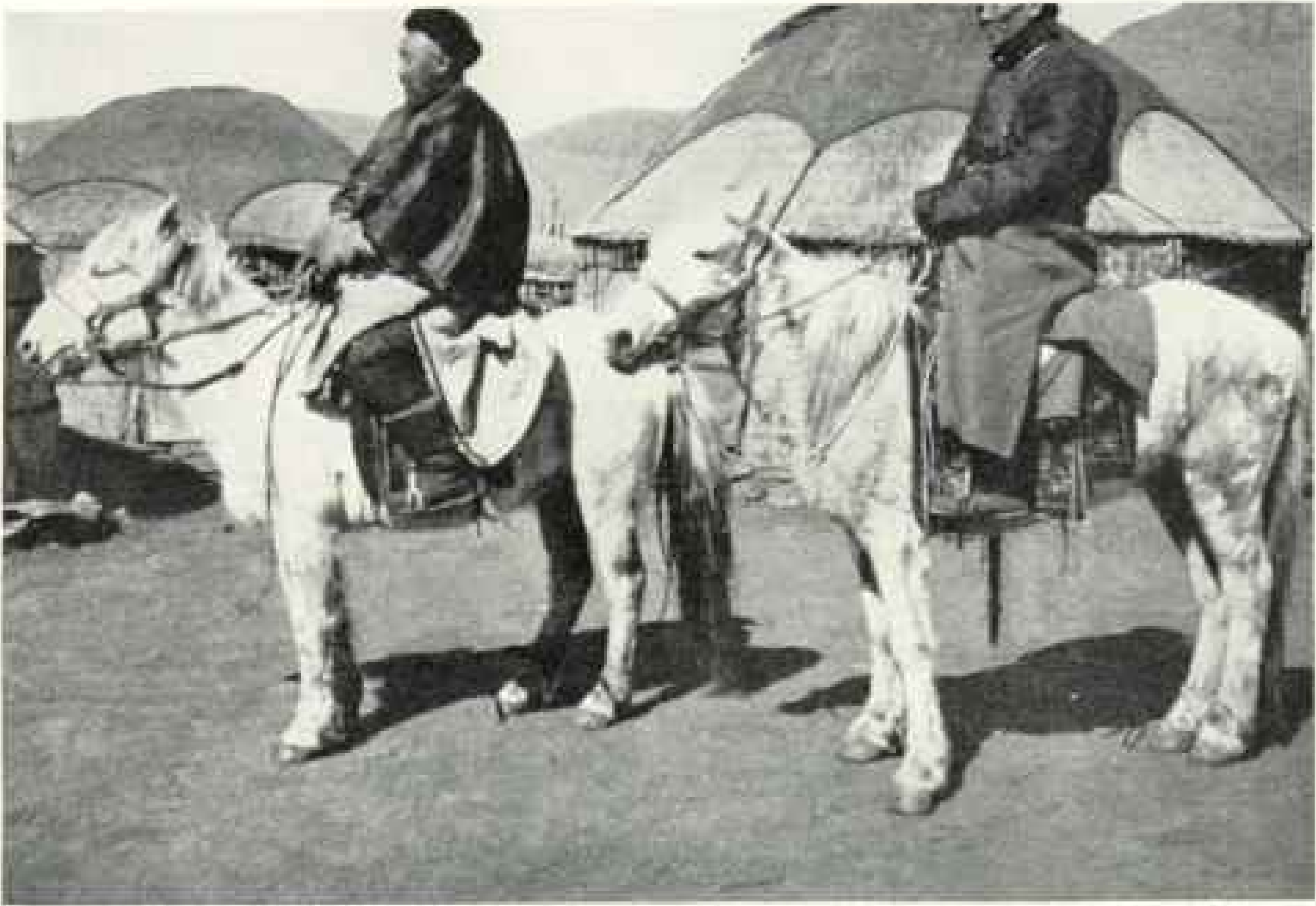
holder of brass, shaped like a miniature pipe. His father patted him fondly as he explained (see page 121).

THREE MONTHS' MANCHU COURSE LEARNED IN ONE NIGHT

Through Mr. Cow we found quarters in one of the local schools, closed through the long winter holiday. This just suited us, as it meant we did not have to intrude on anybody. After some difficulty, I also got a teacher. The first one resigned. He wanted to teach me the alphabet and take three months to do it, the time allotted in the old official schools.

Manchu is not, like Chinese, written with characters, but with an alphabet. It is derived from the Mongol alphabet, which was derived from the Uighur, which was derived from one of the scripts used by Central Asian Christians in the Middle Ages. It is thus related to Semitic forms of writing and, in fact, very distantly, to our own.

The traditional method of learning is to memorize every combination of letters. When you have learned that *a-b* is *ab*, you



Photograph by Owen Lattimore

NEITHER FAT NOR CLOTHES IMPEDE A MONGOL IN THE SADDLE

The *Talan*, or chief of the "Manchu-Mongols," although bundled up in his best clothes, mounts easily and lightly. His people are descendants of the followers of a Manchu princess who married a Mongol chief. They are rich, progressive, and powerful (see, also, text, page 113). In the background are Mongolian dwellings.

are not expected to strain your intelligence by assuming that *b-a* is *ba*. You learn everything separately. By this method, a perfectly simple alphabet is turned into a "syllabary" of about 1,300 syllables, requiring three months of painful memorization!

By the end of the first lesson, I began to see the light. I told the teacher to leave the book with me. The next morning, when he came, I horrified him by proving that I had "learned" the whole lot and could write down any sound! Ghastly! He resigned in a hurry. That was all the Manchu he knew, and he had never counted on having to teach me anything else.

We lived in a room 10 feet by 12. Most of this was taken up by a raised kang heated by a flue from the fireplace. This left a strip of floor 3 feet by 12 in which to move around. Here Moses cooked for us, and I studied Manchu, and here we received visitors and slept. If ever I went out alone, it was a signal for women to come flocking to call on my wife. With their old-fashioned Manchu headdresses

of styles that have long disappeared from Peiping, they looked very gay.

As Chinese New Year approached, at the end of January, gaiety and excitement increased. People lost all shyness of us. Children would follow us, pelting us with cabbage stalks or gabbling in "foreign language," so that we could not hear ourselves speak.

There was a great contrast between the rowdyism in the streets and the cultured dignity of the courtyard houses of the old, wealthy families. In one of these lived a delightful elderly gentleman who had been a member of the last Imperial Embassy to Tibet to announce to the Dalai Lama the accession of the Boy Emperor. He had remained at Lhasa until the Chinese Revolution in 1911, when the troubles that broke out made him flee to India, so that he eventually came back to China by sea.

We found that we had at least one mutual acquaintance in Sir Charles Bell, who played such an important part in improving the relations between India and Tibet. Meetings like this, which throw a sudden



Photograph by Eleanor Lattimore

MOSES CARRIES THE NATIONAL GEOGRAPHIC SOCIETY'S CAMERA FOR THE AUTHOR (SEE TEXT, PAGE 101)

Behind him is a cart with a "body" of matting on it in which loose grain is transported.

personal light on the vast territories and momentous history of China, are part of the charm, hard to put into words, of living and traveling in that land.

A MIRACLE ONCE SAVED WULAKAI

The old gentleman's family had been nearly ruined when the great, noble house, with its many ample courtyards, had been the center of a celebrated bandit exploit a few years ago. The head of the family had been carried off and had died in captivity.

Wulakai has been sacked several times, but the most famous episode in its bandit history was when it was saved by the direct

interposition of the God of War, in 1877. A celebrated bandit, called Ma the Fool, with 1,200 men, had set out to capture it; but on the night march they turned back at the sight of a great army, with spears and armor glancing in the starlight and horses trampling and drums booming.

The people of Wulakai did not know how they had been saved until the next morning, when the priests of the Temple of the God of War, outside the walls, came excitedly to say that in the night the big drum and bell of the temple, each in a separate tower, had begun to sound, though no one was visible.

The priests, in fright, had prudently bolted their doors. In the morning they found that the great figure of the God of War himself was streaming with sweat, while the two enormous mounted figures at each side of the gateway also looked hot

and tired, and their horses were lathered as if they had been galloping all night!

The main street of Wulakai is one great market at the approach of New Year. Whole deer are brought in from the mountains, and hundreds of pheasants and occasionally a wild boar. Once Moses came in with a splendid pair of stiffly frozen pheasants, but when we thawed them out we found that one consisted largely of cabbage, over which the skin and feathers had been carefully replaced and frozen fast. With a grim look on his face, Moses went back to the shop. There was a violent debate, in which, according to custom, every passer-by was entitled to participate.

It appeared that many pheasants were caught by hawks. Often the hawk would eat a lot of the pheasant before the hunter could recover it. The hunter, however, had no objection to selling cabbage at pheasant prices, if he could get away with it; so he put in cabbage and smoothed over the skin and feathers. With great difficulty, Moses got a small rebate on the price.

THE FEAST OF LANTERNS

On the fifteenth of the first moon, the first full moon of the year, comes the Feast of Lanterns. A monster dragon is carried undulating through the streets. His sides are made of cloth, and a row of young men, walking with their heads and shoulders inside this cloth tunnel and carrying lanterns, give the impression, with the shuffling of their multitudinous feet over the glimmering snow, that the dragon is some anomalous centipede of heroic arctic size, erratically lit up. The head, however, with yellow eyes and lolling underjaw, is as dragonish as can be.

On the same night all the shops are lit with lanterns. Many have moving figures, made to revolve by the heat of a candle. The two prize magic-shadow pictures were a grim-looking lady banging her "old man" lustily on the head, and a mule who tirelessly kicked a man in the seat of the pants.

We went along with the wife of my Manchu teacher. She was a hale old lady who always knew what she wanted and made it plain to other people. She was, in fact, typical of the older generation of



Photograph by Eleanor Lattimore

LITTLE MASTER COW, THREE-YEAR-OLD SON OF MR. COW
(SEE TEXT, PAGE 118)

His favorite relaxation is a good cigarette, which he smokes in a brass holder!

Manchu women, who were much more assertive and free in their manners than Chinese women of the same class. She was a better escort than the police, but even so we were bound to attract notice.

A man pushed past her and shouted, "Big Noses! Look at the Big Noses!"—a common name for Russians throughout Manchuria. In the same way, Japanese are called Little Noses when they aren't called Dwarf Slaves. "Those aren't Big Noses," said another man; "those are Old Hairies"—another common name for Russians. "You *are* a country bumpkin," said the first. "Don't you even know Big Noses *are* Old Hairies?"



Photograph by Owen Lattimore

WHEN WINTER COMES TO WULAKAI

Substantial houses, with walled courtyards, line the streets of this town in the old Manchu country of Kirin Province. Here the author went to study the Manchu language (see, also, text, page 115).

"Hi! Get out of the way!" said our old lady. "What are you pushing and shoving for? Can't you let people walk in peace?"—at the same time shoving and pushing harder than anybody else.

"OLD HAIRY" ALLOWS THE CROWD TO DECEIVE ITSELF

At last we reached the shop with the celebrated lanterns, and nothing would do but we must go in. The old lady had a grandson with her, a stolid youth aged about four. It was a wonder how he survived being hauled through the crowd, but he seemed mildly pleased with it all. I picked him up and charged at the door of the shop, yelling to people to be careful and not trample a little child to death, and that was how we got in through the struggling mass.

In front of the lanterns, I planted the child between my knees and began shoving backward as hard as I could, to keep us both from being crushed. Word had gone round like lightning, "The foreigners have brought their baby! Come look at the foreign baby!"

You would have thought, after we had lived in such a small place for a month, that people would know we had no baby, especially since it was the first question that most people asked us. That was nothing, however. "Who ever believes the answer to a polite question?" asks the peasant knowingly. "Besides, you never know what these foreigners are up to. They are a crafty lot."

A man wriggled under my elbow and began questioning the baby excitedly, but the stolid infant remained stolid. The man lowered his head and shouted back between my legs, "Can't understand our language!" The excitement increased. A hand appeared at the other side and grabbed the baby by the chin. "Here, let's have a look at you!" said a voice belonging to the hand. The infant squirmed, but remained stolid. "Come on, say something!" commanded the voice. "Give us a bit of foreign talk to hear."

"Well," said another voice, in reluctant admiration, "for a foreign kid, that's not a bad kid. Looks quite like one of ours. You wouldn't think an Old Hairy could



A HERD OF MONGOL CAMELS AT HAILAR

Though relieved of his pack where trains and trucks haul goods, the camel still works hard in roadless Eastern lands. In fact, growing tonnage lauded at rail's end has, in many regions, increased the work of camels and mules.

have a kid like that, now would you?"—which was not surprising, considering that the infant was moon-faced, rubber-nosed, shoe-button-eyed, and dressed, in honor of the festival season, in a gala costume striped yellow and black, to imitate a tiger skin, the whole set off by a bonnet with ears like a tiger's head.

By this time the old lady and my wife had succeeded in struggling to my side. "You are all wasting a lot of talk," she said masterfully. "That's not an Old Hairy kid; that's my grandson. Belongs to the Te family; you all know them; they live by the firewood market." A happy shout went up from the crowd. They could all see the joke. The hand that still held the baby by the chin gave it an indignant jerk and dropped it. "Why couldn't you speak up, then?" said the voice. "Wasting my time!"

Away from still snowy Wulakai we turned toward the south and the spring, going first to Dairen and Star Beach, the seaside resort of the Japanese Leased Territory of Kwantung. Then we came back, along the South Manchuria line, which is

like a strip of another world running through China. This railway, which is always generous to students and research workers, had given us first-class passes, which made the contrast even more acute.

Turning aside from the railway, we found ourselves plunged once more into China, and an old and conservative China. We were in the region of earliest Chinese settlement, in the Liaoyang region. The legends of the villagers go back to the glorious Tang dynasty, a thousand years ago, and its wars against the Koreans, for Korean tribes at that time occupied much of eastern Manchuria.

It was in this region that the still primitive Manchus, coming out of the northern forests, began to mingle with the Chinese, so that by the time they conquered China itself they were already to a great extent Chinese in civilization and outlook.

A VISIT TO THE THOUSAND MOUNTAINS

Traveling by cart for a day, we came to the Chien Shan, or Thousand Mountains, whose broken outlines, abrupt slopes, and trees hanging over ledges look like a



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TSITSIHAR BUSTLES WITH WAR AND BUSINESS.

This capital of Manchuria's largest province was recently captured by Japanese forces. Railroads have brought progress and modernization, and to-day the city is fast on its way to becoming one of the country's chief industrial centers.

landscape reproduction of a Chinese landscape painting.

Both Taoist and Buddhist monasteries, many of them very ancient, stand back in the valleys. Most of the priests come from Shantung, a tradition which attests that the great modern migration from Shantung to Manchuria is no new thing, but goes back to ancient times, when the junk voyage across the Gulf of Pohai (Pechihli) was easier and safer than the long overland trek through the Great Wall at Shanhaikwan.

Many of the priests are hermits, living in cells high above the monasteries. Down below live those who till the monastery fields and carry on its workaday business, for such monasteries own land and are often wealthy. The huge kitchens can prepare meals for several hundred at a time, in pilgrimage seasons. Vegetables were being pickled in scores of tall earthenware jars, in brine or weak Chinese vinegar, each jar covered with a kind of straw hat as its contents matured, to be stored away for winter supply (see page 110).

Back once more on the railway, we traveled along its narrow ribbon of Japan to

Mukden and Changchun, where we changed from the Pullmans of the Japanese line to the broad, lumbering Russian wagons of the Chinese Eastern Railway and began to travel along a ribbon of transplanted Russia. Chinese and Russians mix better than do Chinese and Japanese, and a queer half-Russian, half-Chinese world not only lives all along the railway, but migrates by water in the paddle-wheel steamers of the Sungari, extending all the way to the Amur and the frontier between China and Siberia. Here, however, there is an abrupt cleavage, for communications between this Chinese-Russia and the Sovietized Russia of Siberia are wary and suspicious.

A VOYAGE ON A SUNGARI RIVER STEAMER

Steamer navigation was opened by the Russians, but later the Chinese forbade Russian navigation, and all steamers are now under the Chinese flag, though many Russians continue to work on them.

A journey on one of these river steamers is one of the quaintest experiences to be had in China. A first-class cabin is about as wide as two bathtubs, if you can

imagine sleeping in one bathtub and storing your things in another. It is also about two bathtubs high, as there are both upper and lower berths. There is a window about a foot and a half square, but usually the atmosphere is so close that one cannot stay in the cabin for long.

The decks are three or four feet wide, and thronged all the time with third-class passengers, who are not supposed to be there, but who, China being the most democratic country in the world, are there just the same.

The third class is fitted up with shelves, three feet or so above each other, and the shelves are marked out into sleeping spaces about three feet by six. The wretched passengers are so packed that if they were but shackled to their sleeping places the atmosphere of an old-time slave ship would be easily reproduced.

There is one "saloon," about 20 feet by 14, which is dining saloon, bar, lounge, and everything else in one. Here people sit all day, eating, drinking, gambling at mah jong, and smoking opium. Important people and their bodyguards often camp right in the saloon, instead of taking a cabin.

As one drifts down the muddy river, the wheezing steamer passes a strange world. On each side are cut-over forest lands, rich farms, and occasional villages, but halfway down to the Amur this gives place to endless plains that are half marsh, half prairie. At "ports of call" the steamer is simply brought alongside the mud bank, a gang-plank is thrust ashore, and there you are.



Photograph by Owen Lattimore

AN OLD NEWSPAPER MAKES A GOOD WINDOW

Pasted over the doorway of this Fishskin Tatar house is an American newspaper. Quantities from the Pacific coast are imported into Manchuria and find their way to the most remote places.

Everybody hangs over the rail, hoping that something will happen, and frequently something does.

A FUTILE EFFORT TO EJECT A STOWAWAY

At one small village a squad of police came aboard with a runaway wife and her lover. They were to be taken back to the husband's village. "They'll catch it," said everybody, with approval. In these remote parts a woman is still practically a form of property and can be haled back by force if she runs away. "She's a fool, anyway," said somebody. "Her lover would only have sold her down the river, where women are scarce."

At another place the ship's police, for all ships carry a guard against river pirates, tried to throw a woman stowaway off the boat. She cursed and bit and scratched. The police called her some remarkable names, but they were nothing to the names she called the police. She was evidently a young woman who had knocked about a bit. The shore police looked on with disapproval. They were not keen on having an obviously undesirable woman landed in their village.

Then the crowd, as always, began to interfere. People pointed out that, as the woman had got aboard without detection and had not been discovered until after the ship sailed, she ought to be considered "safe on base."

The purser appeared with the printed regulations and waved them at the police. The police nursed their scratches and shrugged from ears to hips. "Look at public opinion," they said, "or try throwing her off yourself. Besides, she's hysterical now; she might throw herself into the water and drown, and then the shore police would swarm aboard and you might be here a month."

Grunts of resignation. The woman was left alone, and after that she swaggered around the ship, sometimes begging and sometimes joking meaningly with the men; only the women would have nothing to do with her.

Once, when we could not tie up at a village because the landing place had fallen into the river, we tied up about a mile away. On shore somebody found a body of a man with bullet-holes in him. People speculated on it, but without a great deal of interest. A few went ashore and prodded the body with their feet. Some thought it was a bandit; others thought it was probably a bandit's victim. A philosopher summed up: "Plenty of both in these parts. Not our business, anyhow."

AMERICAN AROUSES CURIOSITY

Of course, when we were steaming down the river, the foreigner aboard was a great center of interest. In the first place, a foreigner who was not a Russian was something to talk about. In the second place, a foreigner who could talk Chinese was a rare phenomenon. The Russians, in spite of their reputation as linguists, talk Chinese very badly when they learn it at all,

while all through the north of Manchuria many Chinese can talk fluently in a horrible corruption of Russian.

In spite of the fact that I spoke Chinese, the third-class passengers, spending an idle day in the first class, thought it a matter of course to gather around and discuss me as if I were an animal in a cage.

Once an old woman was brought along to stare through my cabin window. "Of course he's a Russian," she said. She reached through the window and poked me. "Hi! Russian?" "No," I said; "I'm an American." She paid no more attention to me. "There, you are! Didn't I say he was a Russian? Hairy like a Russian, devil's eyes, and a huge, great nose, just like a Russian." "But even so, he's not a Russian," put in some one. "He just said he was an American. Didn't you hear him?" He in turn reached in and stirred me up. "Didn't you say you were American?" "Yes," I admitted.

"MANY KINGS IN AMERICA"

The old woman pondered this. "Well, what *are* Americans?" she asked after a while. "A tribe belonging to Russia or a tribe belonging to us?" "They're a separate country."

Once more a hand came through the window and shook my shoulder. "Hi! You people are a separate country, aren't you?" "Yes," I said patiently.

This kept the old lady thinking a long time. At last she got it thought out. "Well, then," she asked, "if they are a separate country, with nobody ruling them, are they afraid of us or are we afraid of them?" In that sentence were packed hundreds of years of the history of this land of conquest, migration, and racial conflict.

The well-informed man intervened again. "They have no cause for fear," he said. "America is the richest country in the world. Don't we all know that? They have a Kerosene King and a Motor Car King. In their country they spend nothing but solid gold coin, but when they come to our country they force us to accept their paper money. (An echo, this, of the teachings of Sun Yat-sen.) They have no soldiers. When it comes to a war, they just hire other nations to fight for them. They're well off, all right. Have you never heard of Ling-k'en, Hua-sheng-tun, and Wei-erh-hsun? (Lincoln, Washington, and



Photograph by Owen Lattimore

TRANSPORTATION BY JOLTS AND JERKS

Moses and the Russian-style cart with which he and the author traveled among the Fishskin Tatars of the Sungari-Amur region, between Manchuria and Siberia.

Wilson). They were the ones who thought that up. Weren't they?" he asked, prodding me again. "Yes," I said meekly.

DIVINE ORIGIN OF THE MANCHUS

One of the great towns on the Sungari is Sansing, where the Mutan enters the Sungari. Its name is a translation of the Manchu *Ilan Hala*, which means Three Clans. It is a very old Manchu center, now being swamped by the tide of Chinese immigration.

The legend is that Aisin Gioro, ancestor of the Manchus, was born at the source of the Sungari, in the Changpai Shan, or Ever-white, Mountains. His mother, a divine maiden, bore him after eating a red berry brought to her by a bird. In spite of this, she thought her child might cause a bit of comment, so she put him in a birch-bark cradle and set him floating on the Sungari.

He floated down to Sansing, where the men of three clans were fighting. When they saw the cradle with the child in it, they stopped fighting and said, "Let us make peace, and take this child and make him prince over all of us"; and that was the beginning of the Manchus.

Just above Sansing there is a tricky bit of navigation, where the river is full of rocky shoals. The name of this is *Man-tien-hsing*, "The Sky Full of Stars." According to legend, the rocks are meteorites that fell from heaven. Moreover, the people of the region firmly believe these are "living" rocks. Whenever the authorities try to blast a passage through them, they grow back again.

The first time in every season that a steamer passes the shoals, incense is burned on the bridge and quantities of firecrackers are let off to appease the spirits of the rocks. The Chinese claim that even Russian captains do this. "When they come as far as this," they say, "their Russian gods are no good. They have to respect our spirits."

This legend of the meteorites is undoubtedly connected with the name of the river itself, for "songgari" in Manchu is the name of what we call the Milky Way and the Chinese call the River of Heaven.

Nearly 400 miles down the Sungari, near its junction with the Amur, is the great town of Fuchin, which has grown up recently as the center of a flourishing agricultural district. It was bombarded



Photograph by Owen Lattimore

HOME IN PEIPING

"Mrs. Moses" holds the author's son, and "Moses," a family retainer for 17 years, holds "Miss World Tour Moses," his tiny daughter, born after his return from his numerous travels (see, also, text, page 101).

by the Russians in 1929, and a Russian landing force carried off great stocks of grain, wrecked the wireless station, and burned down all Government buildings. They are reported to have seized all the money in the banks, which they used in paying the coolies who loaded grain into ships for them.

According to local stories, they behaved with strict discipline, and had Chinese with them who explained everywhere that they were only fighting the Government, not the people. Between the time the Russians left and the Chinese troops came back, however, somebody set fire to several quarters of the town as a cover for looting, and a great deal of damage was done.

The Chinese river fleet suffered heavily in this "war." Some of the warships were sunk by the Chinese themselves in a vain attempt to bar the river channel against the approach of the Russians, while others were blown up by the Russians.

Across the river and a little downstream from Fuchin is the settlement of Aolimi, near which Morgan Palmer, an American who had long been in the service of the

Chinese Government, once farmed a great "ranch" as an experiment in the settlement of famine refugees and the introduction of large-scale farming with machinery.

Palmer was killed by bandits when going to the aid of a village that had been attacked. He lies buried there, under a great tree which had been a favorite during his lifetime. The grave has fallen into disrepair, but some Russians, who were working not far away in the service of the provincial government, told me they were going to repair it. Near by is the village of Pa-erh-mo Tun, named after Palmer, in which live some of the people who once worked on his farm.

AMONG THE FISHSKIN TATARS

In this region and on down the Amur live the remnants of the tribe whom the Chinese call Fishskin Tatars and the Russians Goldi, but who call themselves Héjé. They are closely related to the ancient Manchus and, though rapidly being overwhelmed by the Chinese, they still retain their own language, which is practically a dialect of Manchu. At one time they lived

chiefly by fishing, and they are called Fishskin Tatars because of the summer garments they used to wear, made of the skins of a kind of salmon, which are light and waterproof.

The Fishskin Tatars, like the Manchus, eat raw fish, not prepared as the Japanese prepare it, but made into a kind of salad with vinegar and plenty of relishes. It is very good and has even become popular with Chinese all through the Sungari region.

Nowadays they depend largely on hunting, going on journeys to the distant mountains, where they shoot elk (the Asiatic wapiti), whose new horns, covered with "velvet," are in great demand among Chinese as a medicine, which reminds one of the "hartshorn" of old English medicine.

On their hunting journeys they use a tent very much like an Indian tepee, and in winter they use skis. Until quite recently they used dogsleds for winter travel, and this form of transport would still be very useful, but they say that they have given it up "because the Chinese laughed them out of it." Formerly they also had birch-bark canoes, and they still use light canoes, with both double and single paddles, for traveling and when harpooning fish.

In the old days the Fishskin Tatars used to kill bears in single combat—one man, with only a spear, matched against the bear. Some of the bear spears can still be seen, beautiful pieces of workmanship. The blade of the spear has a slight curve.

The hunter skirmishes with the bear until he attempts to charge; then, bracing the spear against the ground, he aims to catch the bear in the throat. If his aim is good, the curve in the spearhead makes it thrust upward, throwing the bear over on his back. If he miscalculates, the bear may sprawl forward, reaching and killing the hunter, though mortally injured himself.

THE SHAMAN EMPLOYS A DRUM IN TREATING HIS PATIENT

Undoubtedly the most interesting custom of the Fishskin Tatars is their shamanism, which is something like the American Indian "medicine." Like "medicine," it has a religious aspect as well as that of healing sickness. Shamans are found among Mongols, Manchus, and, in Manchuria, even among Chinese.

In a shaman ceremony that I saw among the Fishskin Tatars the shaman was giving

a "course of treatment," lasting many days, to an old woman who looked as if she had tuberculosis. Incidentally she said that she had felt much better since the treatment began. The shaman, with his drum, sat near a window in the little hut. The patient was also seated, with an old woman behind her who acted as the shaman's assistant (see pages 109 and 116).

As the shaman began drumming he fell at once into a sort of rapt trance; then he chanted in a compelling, somewhat monotonous, rhythm. As he went on drumming and chanting, the sweat streamed from him, and his upturned face looked drawn and tense with effort. The patient sat as if in a dream.

The assistant kept her hands on the patient's back, to detect there a peculiar twitching which is the response to the "magic" of the shaman. Occasionally she would call to the shaman, who would alter his chanting until the response was right. The chanting and drumming went on and on until, at last, in exhaustion, the shaman broke off.

I have never known anything more wild and exalting. I have seen a woman shaman in Chinese Turkestan who stabbed and cut with a knife within the fraction of an inch of her patient's face and neck; but even that did not compare in wildness with the deadly simplicity of this old Fishskin Tatar's chanted magic and the insistent throbbing of his drum. At the end of the ceremony strength seemed to have gone out of the shaman, who was quite exhausted, into the sick woman, on whom a serene peacefulness had descended.

After a long journey upriver, back from the regions of the Fishskin Tatars, Moses and I went off westward into utterly different country. A night and a day on the Chinese Eastern Railway took us through the forests of the Khingan Range and out on to the Barga plateau.

This, the most northwestern extension of Heilungkiang Province and Manchuria, is chiefly a Mongol region; but on the edge of it and in the mountains are also such Tungusic tribes as the Solons and Orochons, and even a few Russian settlements. Dahurs are also found here, as well as near Tsitsihar. The strangest thing about the Dahurs is that, while their spoken language is practically a dialect of Mongol, their written language is Manchu.

It was difficult to travel out from Hailar, the "capital" of this region, because of banditry. Most of the bandits were desperate Russians. They claimed that they had become naturalized Chinese in order to escape from the control of Bolshevik Russia, but that the Chinese had failed to protect them, and during the "unofficial war" between Russia and China a number of them were carried off into Russia; therefore they had turned their hands against all men.

FINGERS OF MERCENARIES CHOPPED OFF

Many bandits had served as mercenaries in Chinese armies. At the tumble-down but comical inn called the Golden Horn, where I stayed, living on beef, cabbage, bread, and thin Russian beer, was a decrepit billiard table. Russians, Chinese, and Mongols played pool there all day. Among them was a Russian who was remarkably skillful, in spite of the fact that on each hand he had only the thumb and little finger, the other fingers having been chopped off. This, I was told, was because he had been a soldier in a Chinese army. In the course of a civil war it was not uncommon, when any of the dreaded Russian mercenaries were taken prisoner by the other side, to cut off their fingers in this way to make sure that they would never handle a rifle again.

It is ironic that the river which divides this territory from Russia, the Amur, should have received its name from a Mongol word meaning "peace." The Chinese name, Black Dragon River, seems more appropriate. The Russians first appeared there at the very time the Manchus were conquering China, and, though at first the Manchus beat them off, the Russians have come back again and again.

The Chinese name for brigands, *hung ju-tzu*, meaning Red Beards, undoubtedly goes back to early contact with the lawless Cossack adventurers, who appeared like red-bearded devils to the Manchus and Chinese. This name is never used in China proper; but both the name and the brigands mean so much in Manchuria that people do not like even to pronounce the name in outlying districts. Frequently I have seen a man point to his upper lip (meaning "mustache") and say, "There are lots of those about," meaning that brigands had been seen in the neighborhood.

In spite of the unrest near Hailar, I

managed to visit a camp of Buriats belonging to a part of the Buriat Mongol tribe who had migrated from near Lake Baikal, preferring Chinese to Russian rule.

Here, also, was a shaman, a pathetic and interesting old man and a genuine lover of his art. Like many other shamans, he used for certain ceremonies an iron head-dress representing the horns of an elk. Most shamans wear about them quantities of metal ornaments and sometimes a girdle of iron bells which weigh a great deal. In spite of this, they dance to the beating of the drum, the dance working up gradually to a whirling frenzy. At such moments they are apt to believe that they are being attacked by evil spirits.

The Fishskin Tatars defend themselves from such attacks with a spear, which is usually sheathed in the skin of a snake. This Buriat shaman, however, relied on a magic whip. Frequently he would consult it, first driving the handle of it violently into his own ribs, then holding it to his breast or forehead, so that it might "inspire" him.

Although a man of more than seventy, he could still dance and drum. He frequently drummed and chanted, not for any special healing or religious ceremony, but for the company and consolation of his "spirits." After one or two taps of the drum he would be in a trance. When a man is old, he said, and near death, the spirits are always at hand.

Before beginning his big ceremony he drank about a pint of Russian vodka, raw—enough to stupefy most men if drunk like that in a few gulps—but after a little drumming he rose up under the weight of his costume and moved with almost the sureness and lightness of a young man.

Returning once more to Harbin, I started another trip, northward; but here fate overtook me. A too light-hearted habit of eating raw Chinese salads at inns buzzing with flies let me in for an attack of dysentery, and I went back to Peiping, where my wife had already gone, to find us a Chinese house in which to settle; but, though burdened with enough journals and notes to keep us busy for a long time—the dull aftermath of travel—we both look forward to some hopeful future when we can travel again in Manchuria, with its strange American contrasts of pioneer settlements and great modern cities, and its "melting pot" of diverse races.

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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.

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GOES WITH GATTI IN SEARCH
of the
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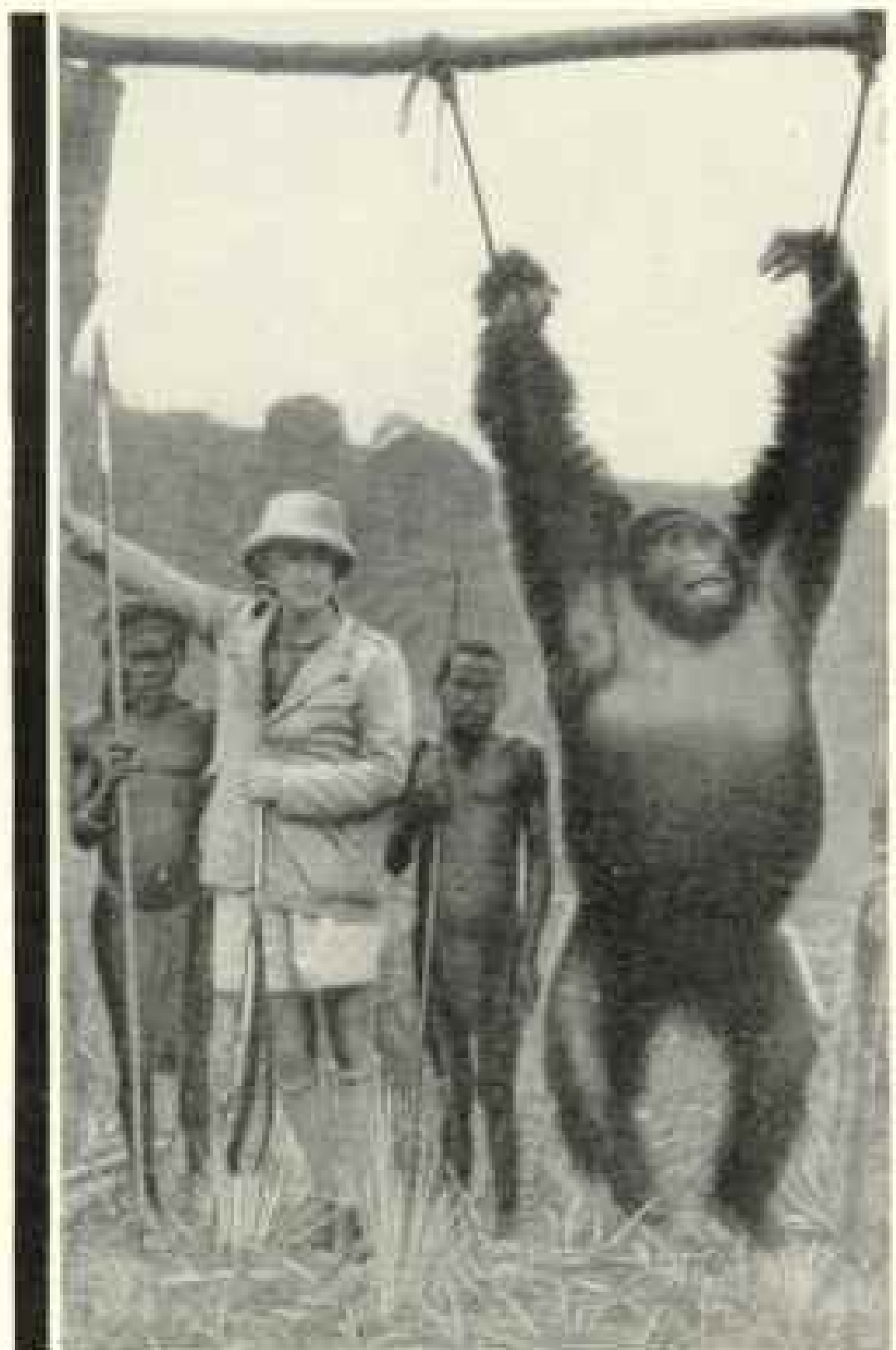
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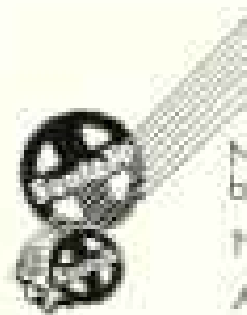
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About Appendicitis

**In the presence
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- 1-Give no food, water
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- 2-*Never give laxatives***
- 3-Call your Doctor**

Recently a letter came to us from a mother who had lost a fine, strong boy of twelve from acute appendicitis. She wrote, "If I had run across just one article on appendicitis I feel sure we would not have had this sorrow. An advertisement of yours would save many, many lives. Please give this your earnest consideration."

Because her request voices a widespread desire to know what to do when appendicitis attacks swiftly, this announcement is published.

The deathrate from appendicitis in the United States has steadily increased during the past ten years. But it will be reduced and reduced rapidly when people learn what to do and particularly what not to do in case of an attack.

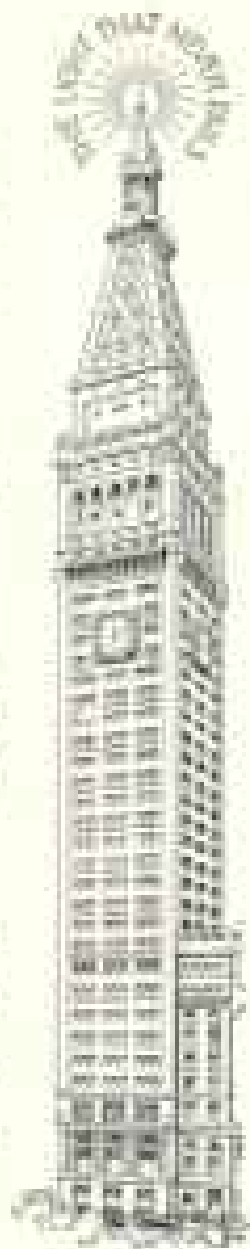
The symptoms of appendicitis vary. But almost always, continued pain and tenderness in the abdomen are the first indications of an acutely inflamed appendix.

There are two most important things to remember in event of an attack of acute appendicitis:

First:—Never use a laxative to relieve acute abdominal pain. If the pain means appendicitis, a laxative, instead of relieving the condition, is likely to spread the inflammation, to cause the appendix to burst or to induce peritonitis.

Second:—Send for your doctor immediately. In making his diagnosis he may decide that no harm will come from taking time to make a blood test to confirm his opinion. He may say that the attack can be relieved without operating. Or he may order an operation in the shortest possible time.

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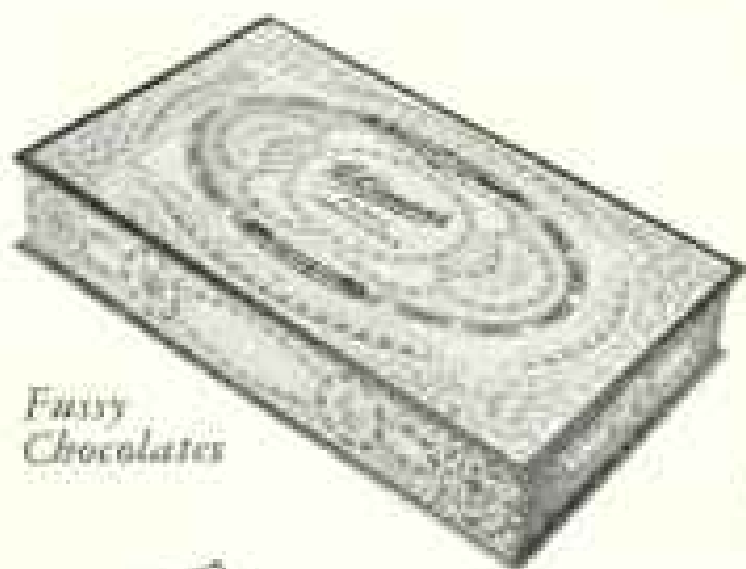


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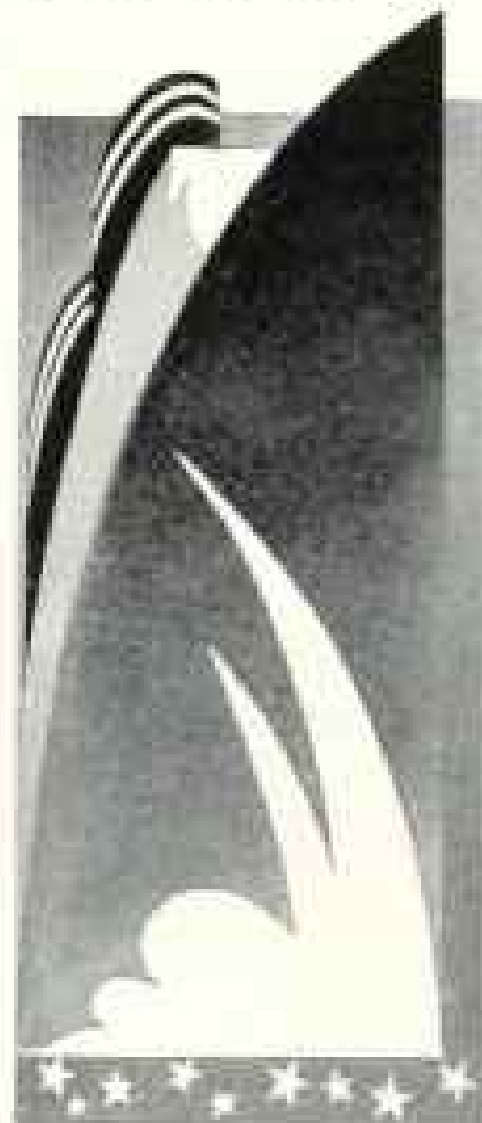
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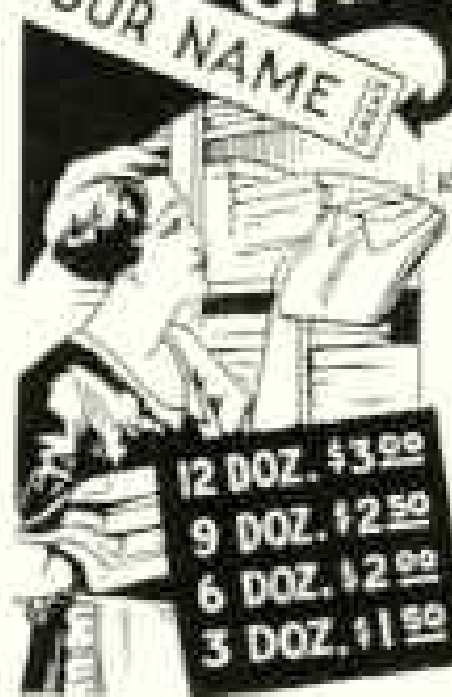
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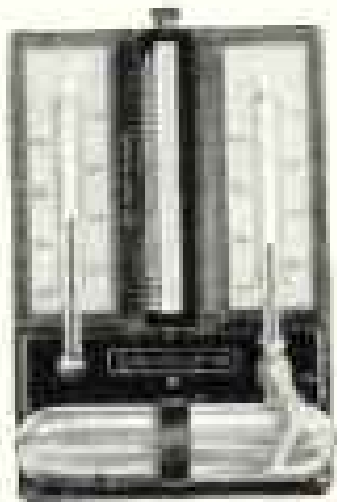
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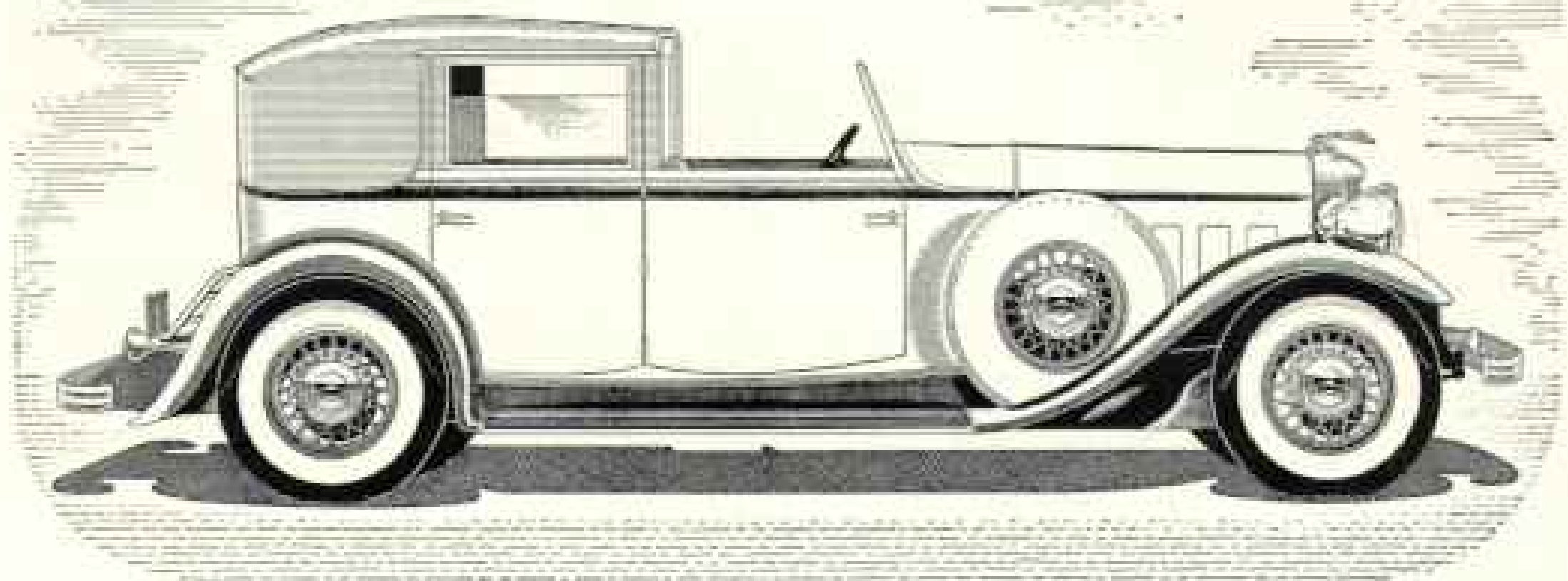
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Transmission equipped with a special synchronizing unit to facilitate gear shifting. Helical second-speed gears insure quiet operation. Wheelbase, 145 inches. Tread, 60 inches. Brakes equipped with vacuum booster to augment foot pedal pressure. Thermostatically controlled radiator shutters and hood ventilators. Springs semi-elliptic—rear, 62 inches; front, 42 inches. Welded steel-spoke, one-piece demountable wheels, diameter, 18 inches, with 7 $\frac{1}{2}$ -inch tires. Steering of worm and roller type. Twenty-three custom and standard body types are offered.

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Pictorial interpretation of embedded dirt left in your rugs after ordinary double-action cleaning (suction plus sweeping). Double-action cleaning also fails to reach buried grit.



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Pictorial interpretation of Hoover triple-action cleanliness (suction, sweeping and exclusive beating action, Positive Agitation). This patented principle removes one-third more dirt.

You want the cleaner that gets the most dirt. Find out *how* a cleaner cleans and you can tell how *well* it cleans.

There are three different types of cleaning action. Single-action cleans by suction alone, or suction plus a scraping brush.

Double-action cleans by suction and a motor-driven brush.

The third type—represented by The Hoover alone—offers a radically new triple-action—suction plus sweeping plus Positive Agitation. Five years ago Hoover abandoned the motor-driven brush, not only because its action was only partially efficient when the machine was new, but because, as the brush became matted with thread and lint and the

bristles wore down, it became less and less efficient.

In place of the motor-driven brush, The Hoover has an *Agitator*, with polished metal beater-bars that gently tap out the hard-to-reach, rug-destroying grit. Because of Positive Agitation, The Hoover removes 33% more dirt. This figure was determined by tests, whose method and procedure were investigated and approved by Pittsburgh Testing Laboratory.

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