VOLUME LXXVIII NUMBER ONE

THE NATIONAL GEOGRAPHIC MAGAZINE

JULY, 1940

32 First Color Reproductions of Masterpieces from the New National Gallery

PUBLISHED BY THE
NATIONAL GEOGRAPHIC SOCIETY
WASHINGTON, D.C.

$3.50 A YEAR 50c THE COPY

VOL. LXXVIII, No. 1 WASHINGTON JULY, 1940

THE NATIONAL GEOGRAPHIC MAGAZINE

Old Masters in a New National Gallery

BY RUTH Q. MCBRIDE

ONE summer day in 1931 the telephone rang in the Washington office of an assistant to Andrew W. Mellon, then Secretary of the Treasury. "A call from Madrid," announced the operator.

An American friend living in Spain said that, because of disturbed conditions following the abdication of Alfonso XIII, the owner of Goya's famous portrait of the Marquesa de Pontejos would now part with it. Permission for its exportation could be arranged with the Spanish Government. There appeared, however, to be one major difficulty. If the transaction were to be carried through, it had to be done that very day!

A Goya Bought by Telephone

Mr. Mellon knew the picture—knew that it was one of the greatest of Goya's works anywhere in the world—a large full-length portrait in delicate whites and pinks. It shows the black-eyed Marquesa, wasp-waisted, bedecked with frills and ribbons, carrying a large carnation as she strolls in the park with her little pug dog (Plate XXV).

Within an hour Mr. Mellon telephoned back to Madrid, and the purchase was made—at a price running well into six figures!

Thus was a noteworthy service performed by the transatlantic circuit between Washington and the capital of Spain.

The transaction—one of many during the forming of the Mellon Collection—was fortunate for all of us because the immortal Goya will now hang in the National Gallery in Washington, D. C.

On March 24, 1937, Congress passed a law which launched Uncle Sam upon a new and splendid venture. He accepted the gift of a monumental building for the National Gallery of Art and a collection of old masters and sculpture such as has rarely been assembled by a private individual.

In thanking Mr. Mellon for his munificent gift to the Nation, President Roosevelt said: "I was not only completely taken by surprise but was delighted by your very wonderful offer to the people of the United States. This was especially so because for many years I have felt the need for a national gallery of art in the Capital.

"Your proposed gift does more than furnish what you call a 'nucleus,' because I am confident that the collections you have been making are of the first importance and will place the Nation well up in the first rank. Furthermore, your offer of an adequate building and an endowment fund means permanence in this changing world."

Andrew W. Mellon's gift comprises his renowned collection of old masters; one of the most beautiful buildings in the country, now nearing completion in Washington at a cost of $15,000,000, in which the paintings are to be housed, and an endowment fund for further acquisitions. The value of the gift to cultural development is inestimable.

Mr. Mellon's "Thousand-Dollar Folly"

This important enterprise, now so significant to the American people, had its modest beginning in 1882. Mr. Mellon was then 27 years old, and his intimate friend, Henry Clay Frick, was 33. They had both been struggling in the whirl of Pittsburgh's industry, but had already attained the early rungs on their long ladders of success. So they decided to take a vacation trip to Europe.

Both had a consuming interest in art. They visited galleries of Europe, and spent hours admiring masterpieces such as then were not to be seen on this continent. Probably at that

Mercury Poised on a Gust of Wind

The messenger of the gods stands on a figurative blast blown from the mouth of Aeolus, god of the winds. Sculptured by Giovanni da Bologna (1524–1608), this famous bronze figure, 5 feet 8 inches tall, will stand in the rotunda of the new National Gallery, atop a marble fountain (p. 27).

time they conceived the idea that some of this beauty should be shared with the New World. Young Mr. Mellon paid a thousand dollars for one painting and brought it home, thinking it would inspire the admiration of his friends and associates.

"But, heavens, Andrew," they protested, "that isn't worth a thousand dollars—no picture is worth that much!" Mr. Mellon smiled, and went back to work. Both men persisted in their dream and both ultimately acquired excellent collections of old masters.

Upon Mr. Frick's death in 1919, his collection was given to the City of New York, together with the beautiful home on Fifth Avenue at Seventieth Street, which has since been enlarged and rearranged to house it.

Mr. Mellon's collection increased from year to year. His standards were rigid; he did not even consider a painting by Titian, Rembrandt, or any other master unless it met three principal requirements. It must, in itself, be a subject of outstanding beauty; it must be one of the master's great works—lesser efforts were not acceptable; and it must be in an excellent state of preservation. In endeavoring to obtain the most highly prized works of art in existence, these standards were never lowered.

A Million-Dollar Painting

The most important single purchase was that from the Hermitage Gallery in Leningrad.

In the summer of 1930 an art dealer in New York found that the Government at Moscow was willing to sell a small number of the paintings in the Hermitage, formerly the imperial gallery of the Russian Tsars. This dealer, seizing the opportunity for one of the greatest art transactions in history, immediately opened negotiations in Russia, which resulted in the purchase from him by Mr. Mellon of 21 outstanding masterpieces (Plates XV, XVII, XVIII, XIX, and XXII).

Some of the prices involved seemed fantastic. Raphael's "Alba Madonna" alone cost more than one million dollars (pages 5 and 50). The sum paid for the 21 pictures was between six and seven million.

One might think that special guards with drawn revolvers would protect such a shipment. In reality the paintings were

Photograph by Volkmar Wentzel

Twelve Tons of Bronze and Steel Seal the Mall Entrance to the National Gallery

The big bronze leaves, 40 feet high, glide noiselessly in and out of their pockets when an operator pushes a button. The Gallery has half a million square feet of floor space, of which about 5½ acres will be devoted to exhibits. It is 785 feet in length—longer than the United States Capitol (page 27).

Model for the Dome of the National Gallery Is the Pantheon at Rome

Panini (1695-1768) painted this "Interior of the Pantheon," portraying a famous structure which is older than the Christian Era. Begun in 27 B. C. by Agrippa, it was completed in its present circular form by Hadrian. Once a temple for the worship of "all the gods," as the name indicates, the well-preserved building became a Christian church, Santa Maria Rotunda, in 609. When Panini painted this picture beneath the huge dome, which rests on walls 20 feet thick, he included himself, in white waist and black robe, in the foreground (Kress Collection).

packed by experts, highly insured, marked for special handling, and then prosaically shipped much as any other general cargo. Since their arrival in America, they have been carefully stored, awaiting their public debut in the National Gallery.

The Leningrad masterpieces are not so well known as those of other European galleries, and will afford a pleasing surprise when the Gallery is opened early in 1941.

Velazquez Wielded a Truthful Brush

Some of them have interesting stories. Pope Innocent X, the reigning pontiff at Rome, had been sitting for the artist for hours and finally gazed upon his new portrait. He frowned and was not at all pleased.

"Too true!" he complained.

For Diego Velazquez, on his second visit to Italy, commanded to paint the portrait, had reproduced without flattery the heavy features, the glittering eyes, the severe expression of the red-robed pontiff (Plate XV).

However, from this original study Velazquez painted one of the world's best-known portraits, now in the Doria Palace at Rome. The study itself, done about 1649, the year Charles I was beheaded in London, sojourned for years in Leningrad before it migrated to Washington. It will hang in the National Gallery—the foremost example of the Spanish School in the Mellon Collection.

The Sevillian master became the favorite court painter to Philip IV of Spain. One day the King saw a picture done by the young artist and at once wrote an order to an officer of the court: "I have informed Diego Velazquez that you receive him into my service, to occupy himself in his profession as I shall hereafter command; and I have appointed him a monthly salary of twenty ducats . . .; you will prepare the necessary commission according to the form observed with other persons of his profession. Given at Madrid on the 6th of April, 1623."

As shown in the portrait of Innocent X and in the many he did of Philip and the royal family, Velazquez was always truthful in his portrayal, his brush flattering no more a prince of the purple than a peasant woman in the streets of Seville.

About 1482, when Columbus was still building forts in Portugal and looking for a sponsor for his western tour, Botticelli painted one of his greatest works, the beloved "Adoration of the Magi."

The "Adoration" has followed the footsteps of Columbus westward to take its place in the National Gallery. It is one of the most highly prized works of art that has ever crossed the Atlantic (page 28).

Here the Holy Family is shown under an arch of a ruined temple, surrounded by groups of kneeling, worshiping figures—a painting brilliant in color, moving, beautiful.

Alessandro Filipepi, known as Botticelli, born at Florence in 1444, was first apprenticed to a goldsmith, but soon developed unique individuality as a painter and was called to Rome by the Pope to assist in the decoration of the Sistine Chapel. While in Rome he painted this "Adoration."

When the Medicis were expelled from Florence, Botticelli lost his best patron and later became interested in the teachings of Savonarola. The reformer's tragic death in 1498, when he was burned at the stake in the Piazza della Signoria and his ashes thrown into the Arno, so deeply affected Botticelli that he spent the remainder of his days in melancholy seclusion, dying in 1510. He now ranks as one of the foremost of the Florentine masters of the Italian School.

Among the most widely appreciated artists the world has produced is Raphael Sanzio. Born at Urbino in 1483, he lived only 37 years, but the phrase, "as beautiful as a Raphael Madonna," is highest praise. Pope Julius II called Raphael to Rome in 1508 to decorate the walls of the Vatican, and the Madonnas he painted at that time brought him everlasting fame.

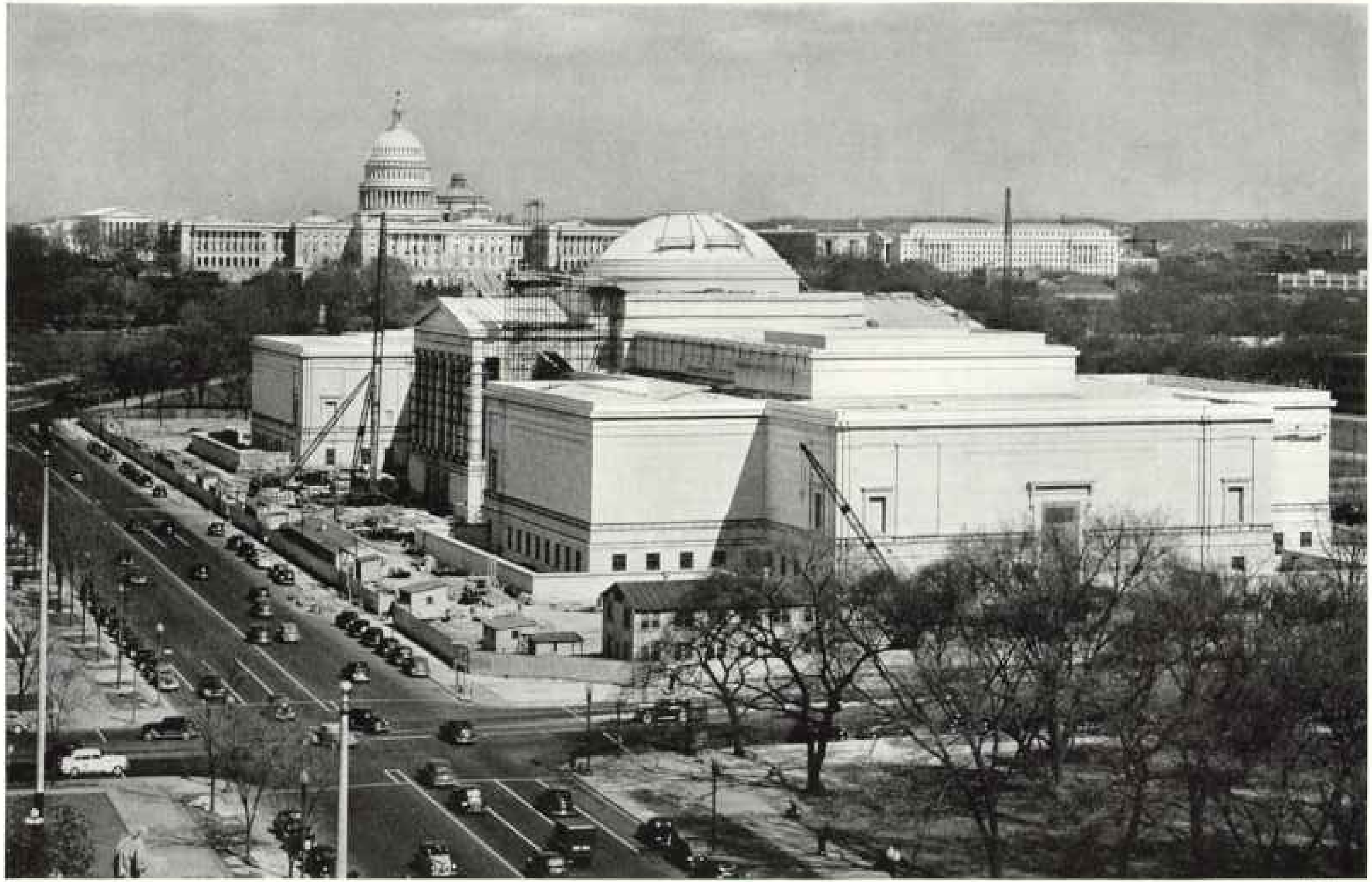
The celebrated "Sistine Madonna" now hangs in the Dresden Gallery in Germany, and another, painted about 1510, known as the "Madonna of the House of Alba," is probably the most famous painting in the Mellon Collection (pages 2 and 50).

It hung over an altar in the village church of Nocera dei Pagani, near Naples, and was later taken to Spain, becoming the possession of the Duke of Alba. Subsequently a banker in London purchased the picture and in turn sold it, in 1836, to Tsar Nicholas I for the Hermitage Gallery.

Another of Raphael's great works, the "Niccolini-Cowper Madonna" (Plate V), was included in the Mellon gift.

Art Surgeons Perform an Operation

Raphael painted the "Alba Madonna" on a panel made of wooden boards. The Hermitage experts, possibly fearing that the rigor of Russian winters would crack the wood, decided upon a major operation to help preserve this art treasure through the ages. They performed the amazing task of transferring the painting from wood to canvas. This feat has been accomplished by expert restorers at various times—also the transfer of a painting from



Photograph by Paul Popper

This Rose-white Marble Treasure Chest Will Hold a Priceless Heritage of Art

Gift of Andrew W. Mellon, the $15,000,000 National Gallery of Art is rising on a site favored by him, on the north side of the Mall near the Capitol. Eight hundred carloads of Tennessee marble, graded in shade to alleviate sun glare, face the building, which will be opened to the public early in 1941.

Photograph by Lotz Morden from Goodyear Aerofilm Service

Between Capitol and Washington Monument, in the Center of the Picture, Rises the Imposing National Gallery of Art

Beyond the gleaming Gallery with its Pantheon dome looms the vast Federal Triangle of new government buildings, between Constitution and Pennsylvania Avenues. Under construction to the right is the new Municipal Center for the District of Columbia.

old, rotting cloth to new canvas—but it requires infinite patience and technical skill.

The picture is first taken out of the frame. A strong adhesive tissue paper or muslin is pasted across the face of the picture to hold the paint in place and to prevent any particle from being lost. Then the wooden panel is reduced by painstaking planing and scraping until it has been removed.

The back of the paint is next covered with a strong mastic solution. New canvas is carefully placed thereon and slowly ironed or pressed to lie flat and smooth. Then the tissue or muslin is removed from the face, and the masterpiece is good for a few more centuries!

Among the treasures from Leningrad are two famous full-length portraits. One by Rubens of his first wife, Isabella Brant, was painted shortly before her death in 1626 (Plate XVIII). The other, of "rabbit-eyed" Suzanne Fourment, a sister of Rubens' second wife, is attributed to Van Dyck.

The Isabella Brant picture was painted in the same studio some five years after the one of Suzanne Fourment, yet both of these ladies wear the same dress of gold and red and the same gold chain around the neck. Even in those days, apparently, stage "props" were used.

The Chemistry of Painting

There is also the wonderful "Annunciation" by Jan van Eyck, who, with his brother Hubert, working in Ghent, founded the Flemish School (page 26). Before their day, artists had mixed their colors with water for frescoes or with the yolk of egg for their paintings on cloth or wood.

One day Jan, using the traditional egg medium, finished a picture on a wooden panel, varnished it, and put it in the sun to dry. It was a hot day and the panel split, whereupon Jan determined to experiment with other mediums. Using at first oil of various nuts, he finally discovered that linseed oil dried quicker and that colors mixed with it were more brilliant and easier to blend.

The Van Eyck brothers, therefore, are known as the "fathers of oil painting." The "Annunciation" shows all this richness in color and is remarkable for the composition and perspective of the architectural background.

Of the Rembrandts—there are nine in the Mellon Collection—the most striking is the brilliant portrait of "A Polish Nobleman" in a high fur hat and a furred coat, painted in 1637. It once belonged to Catherine II, Empress of Russia (Plate XXII). Another, formerly in the Wachtmeister Collection in Sweden, is the "Portrait of a Young Man," painted in 1662.

One of the finest of Rembrandt's many self-portraits, done when he was 53 years old, ten years before his death at Amsterdam in 1669, belonged to the seventh Duke of Buccleuch and was obtained in London. As one looks at this picture, it is sad to recall that Rembrandt, who rose to fame and riches early in his career, spent his last years ill and lonely, in dire poverty. His fortune gone, his home sold, his collection of art treasures auctioned off, he was left bankrupt.

A tiny picture, no more than 7 by 9 inches, undoubtedly will attract much attention—"The Girl with the Red Hat," by Vermeer. The model is supposed to have been his wife, Catherine Bolnes. It is so powerfully painted, with such striking contrast of light and shadow, that the girl seems almost life-size. There are only about 40 authenticated works by Vermeer known today, and three of them are in our national collection.

One of the most charming of all English portraits, and, incidentally, one of the earliest purchases made by Mr. Mellon, is Sir Joshua Reynolds' portrait of Lady Caroline Howard, daughter of the fifth Earl of Carlisle. This was painted in 1779 when she was only seven years old, in a white dress with a blue sash.

Reynolds' contemporary and rival in British portraiture, Thomas Gainsborough, son of a wool manufacturer, became a charter member of the Royal Academy.

His portrait of Mrs. Richard Sheridan (Plate XXVI), popular singer and beauty of her day, was painted about 1785 for her husband, the noted dramatist. When first exhibited it lacked the lambs, which Gainsborough later added to give the picture "an air more pastoral than it at present possesses."

Landseer Edited a Turner Picture

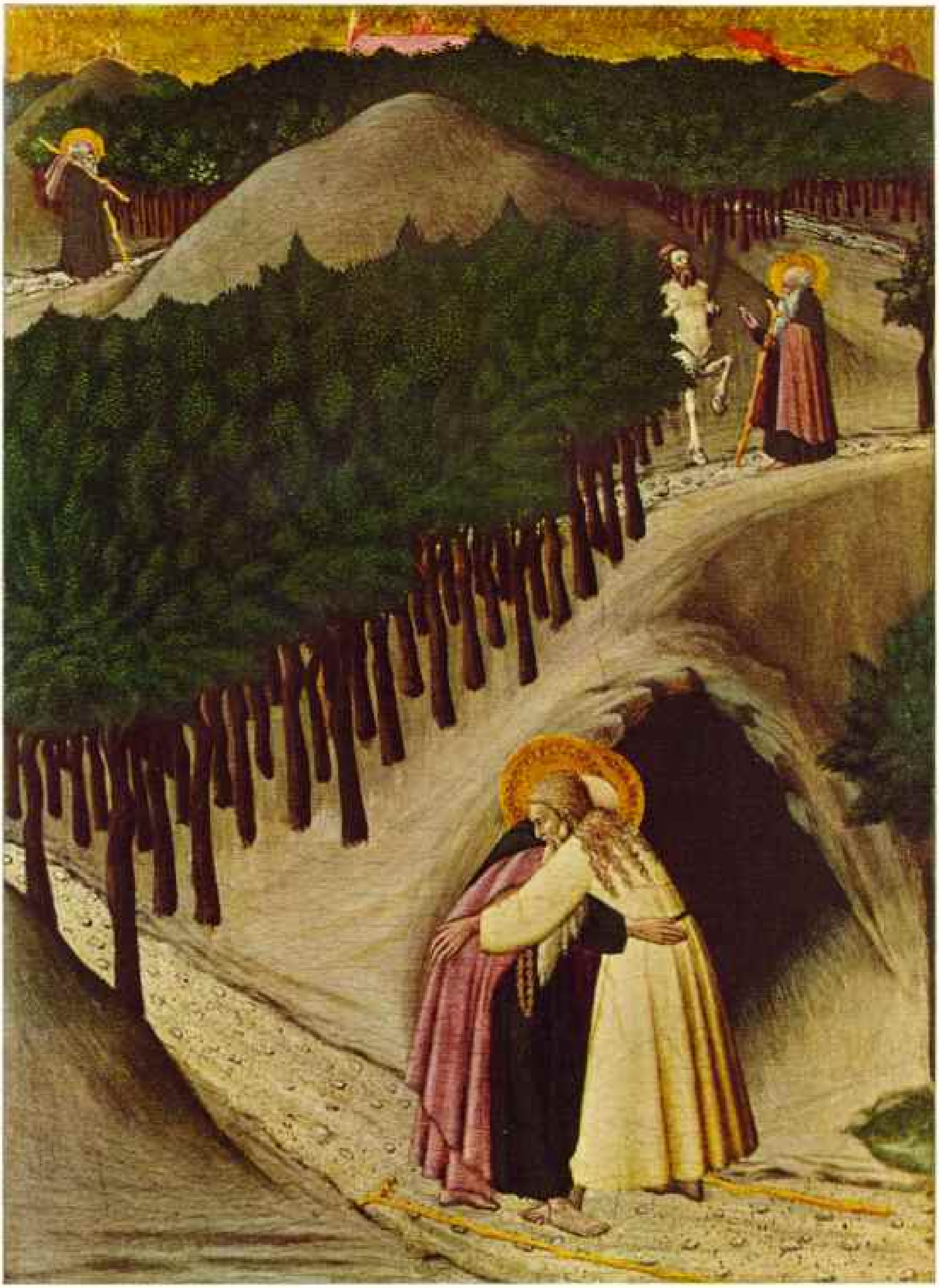
A large, beautiful landscape of Mortlake Terrace by Turner shows the Thames through a row of lime trees bathed in the sunlight of a summer evening. The story goes that Sir Edwin Landseer, viewing the picture with Turner in his studio, felt that it needed some point of focus in the foreground. He painted a little black dog on paper, pasted it in the middle of the picture on the stone wall, and Turner allowed the dog to remain.

The oldest work in the collection is by an unknown master of Istanbul, painted around 1200, before King John of England had granted the famous Magna Carta to the barons, nearly three centuries before America was discovered!

These early Byzantine artists, some of whom came to Italy to decorate churches, brought the traditional, almost Oriental, ideas with

GIOTTO (c. 1266-1336) • Madonna and Child

With this fine example of the work of Giotto, the National Geographic Magazine introduces a series of 32 famous paintings from the National Gallery of Art, Washington, D. C. Many here are reproduced in color for the first time. They offer a preview of the Mellon and Kress Collections soon to be exhibited in the National Gallery, which will be to the United States what the Louvre of Paris is to France. Giotto was acclaimed by Dante the greatest painter of his time (Kress Collection).



SASSETTA (1392-1450) • Meeting of St. Anthony and St. Paul

This Sienese artist (Stefano di Giovanni) painted a series devoted to the life of Saint Anthony, who is shown here at three points of his journey: walking alone, converting a centaur, and embracing Saint Paul. Sienese art of this period emphasized religion, instead of everyday life and science, as did Florentine painting (Kress Collection).

FILIPPO LIPPI (1406-1469) • Madonna and Child

Here the Florentine monk simulates sculpture, framing a Madonna in a marble niche (Kress Collection). The artist's flair for realism is summarized in Browning's famous poem, *Fra Lippo Lippi*:

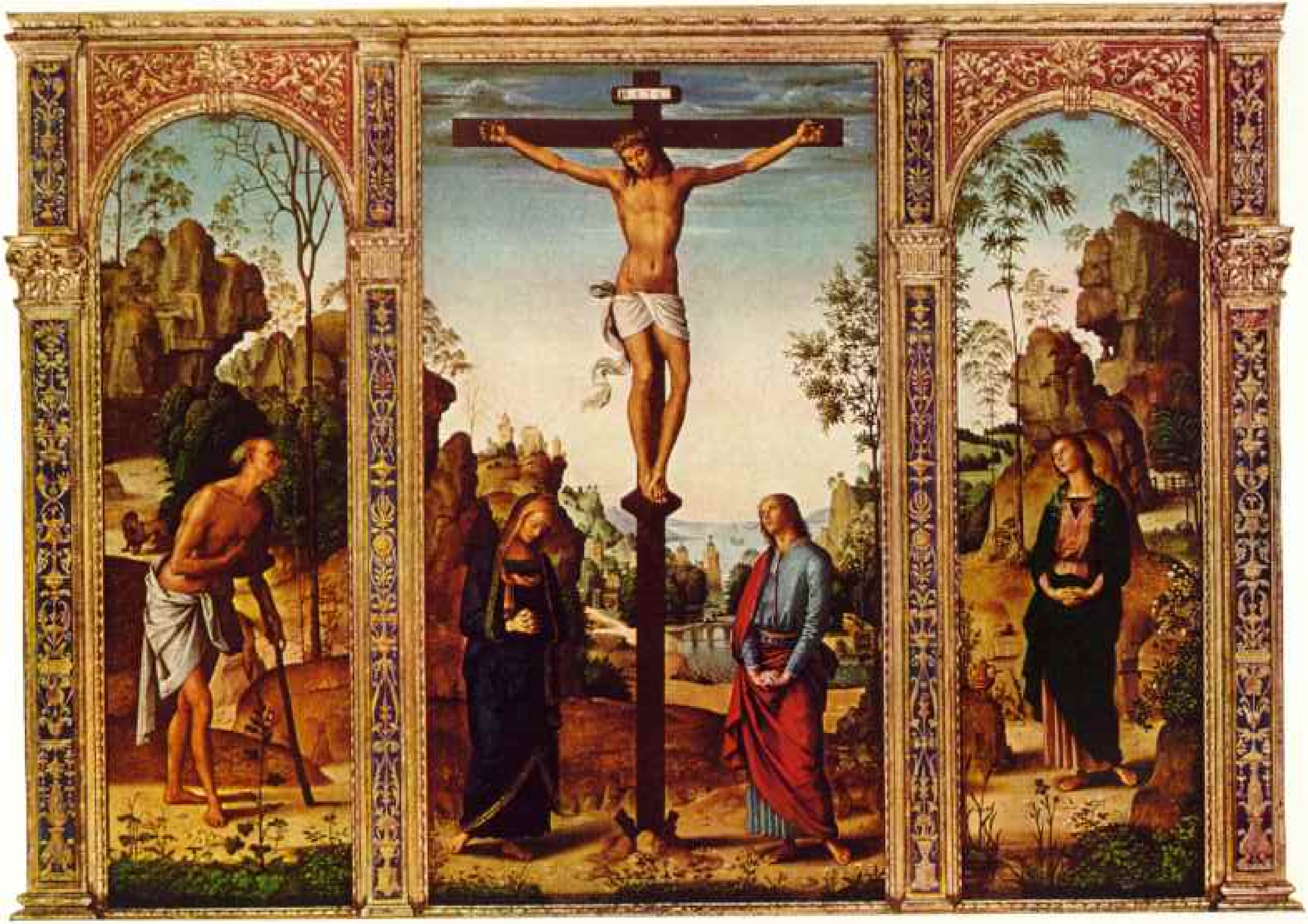
"If you get simple beauty and naught else
You get about the best thing God invents . . ."

PINTURICCHIO (1454-1513) · Portrait of a Youth

Pupil of Perugino (Plate VII, touches of the more tenuous and Raphael, this Umbrian artist was a painstaking technician. He is famed for frescoes in Rome and Siena; portraits by him are rare. He painted the Borgia Apartments in the Vatican (Kress Collection).

RAPHAEL (1483-1520) • The Niccolini-Cowper Madonna

Raphael's immortal Madonnas gave the world its conception of the Holy Family. Painted on wood, when the artist was about 25 years old, this is one of the greatest works of "the most beloved name in art." (Mellon Collection).

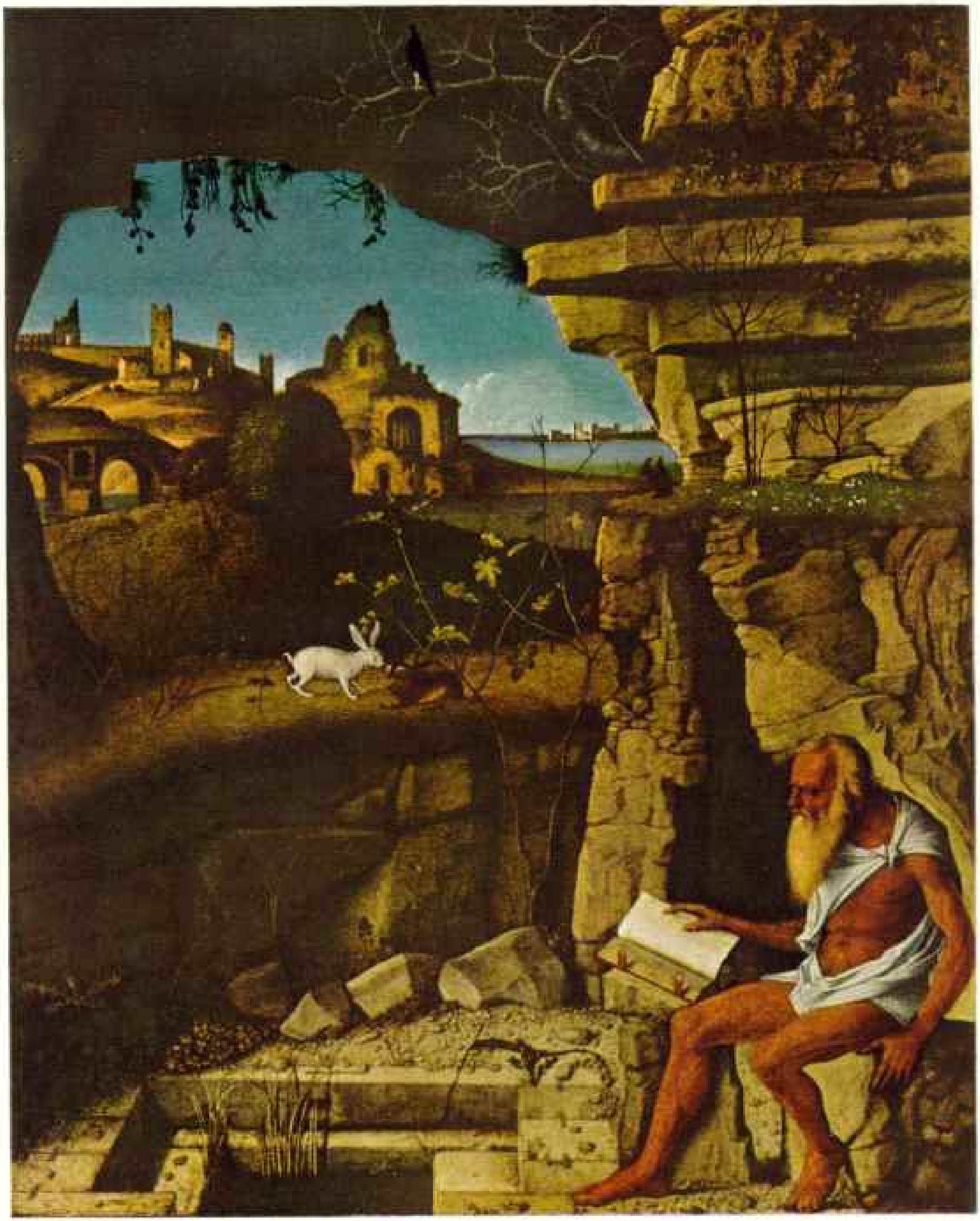


PERUGINO (c. 1445-1523) • *Crucifixion* • *From the Brush of the Teacher of Raphael (Mellon Collection)*

GIORGIONE (c. 1478-1510) · Adoration of the Shepherds · By the Rarest of Venetian Painters (Kress Collection)

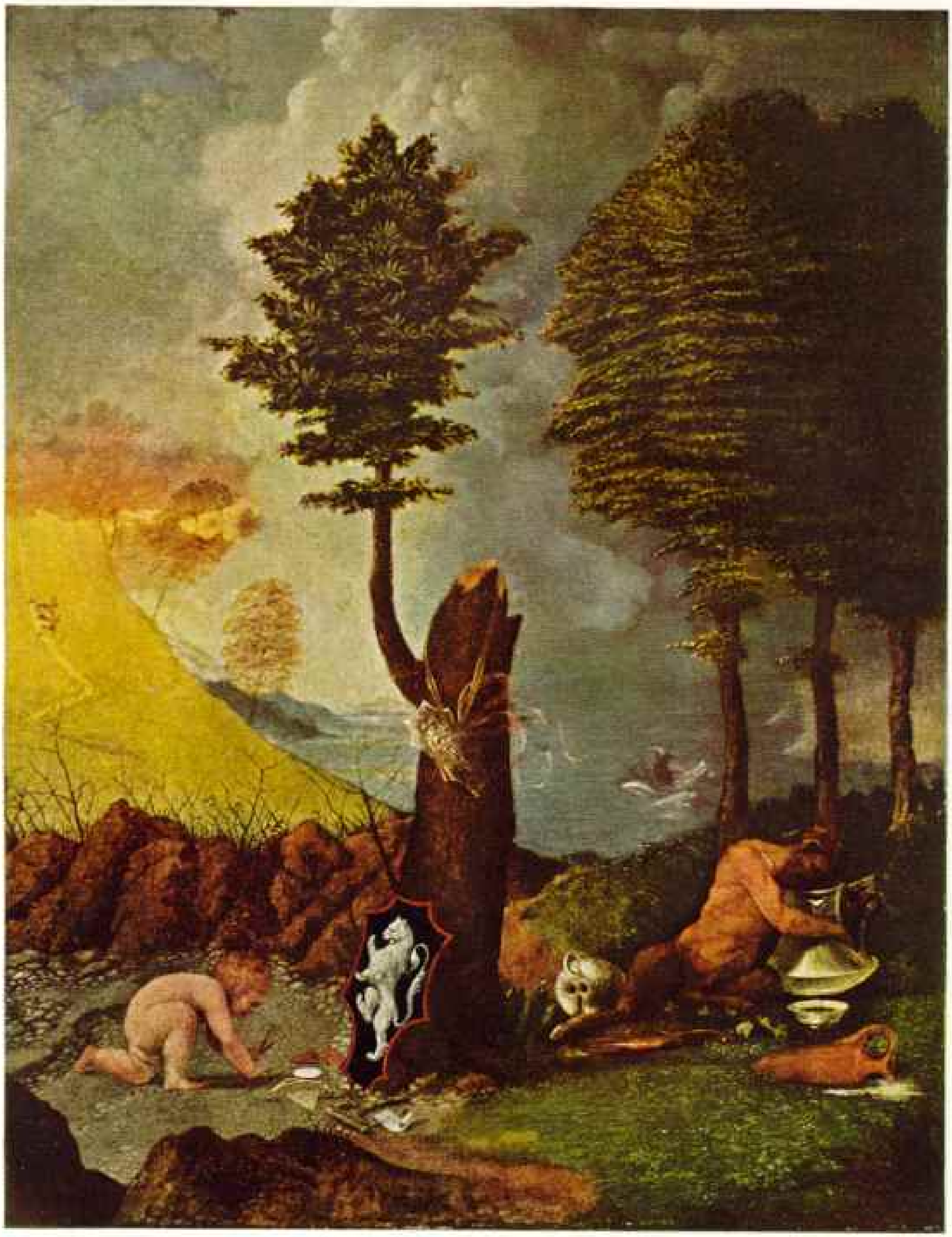
CARLO CRIVELLI (c. 1430-1495) • Madonna and Child

Evicted from Venice, Crivelli, a follower of Mantegna, spent much time wandering among small towns in the north of Italy and along the shores of the Adriatic. In his paintings he used fruits and brilliant fabrics for decorative effect (Kress Collection).



GIOVANNI BELLINI (c. 1430-1516) • St. Jerome Reading

Painting in Venice, Bellini learned his trade from his father, Jacopo, and in turn became the teacher of Giorgione (Plate VII) and Titian (Plate XVI). He was a pioneer in landscape painting, and his poetic fancy is shown in this representation of St. Jerome at the entrance to his cave (Kress Collection).



LORENZO LOTTO (1480-1556) • Allegory

As a cover for the portrait of Cardinal de Rossi, now in the Naples Gallery, the Venetian master painted this romantic landscape in which he portrayed his subject's character. To show the cardinal's love for the arts, a cupid plays with architectural instruments before his coat of arms, and a satyr (right) is a reminder of his gay youth (Kress Collection).

GIOVANNI BELLINI (c. 1430-1516) • Condottiere Bartolommeo Colleoni(?)

This portrait, typifying a strong leader of Venice at the height of her power, formerly belonged to the Earl of Brownlow in England. It is one of the finest paintings in the Kress Collection.

VERONESE (1528-1588) · The Finding of Moses

Among the glories of Venetian art was the richly decorative style of Veronese (Paolo Caliari). Here the infant Moses is brought before Pharaoh's daughter by one of her handmaidens. This painting, which Watteau studied and probably copied, formerly was in the Crozat Collection in Paris (Mellon Collection).

PETRUS CHRISTUS (c. 1410-1473) • The Nativity

Only 25 or 26 paintings by this early Flemish master are known to exist today. Noteworthy is the elaborate framework, in imitation of sculpture, with figures of Adam and Eve on the two pedestals (Mellon Collection).

HOLBEIN THE YOUNGER (1497-1543) • Edward VI As Prince of Wales

For this portrait the painter received a golden goblet from Henry VIII, who was also pleased with the Latin verses advising the two-year-old to copy his father's virtues! The first lines read:

Little boy, be like thy father
And be heir to your father's virtue:
The whole world holds nothing greater than you.
Scarcely can heaven and nature have produced an offspring such as you.

VELAZQUEZ (1599-1660) · Pope Innocent X

Shown this likeness of himself, Pope Innocent said, "Too true!" The Spanish artist had refrained from flattering his subject, who was not distinguished for good looks. The picture was probably the preliminary study for the full-length painting of Innocent X (Doria-Pamphili Gallery, Rome), which many critics consider Velazquez' masterpiece (Mellon Collection).

TITIAN (c. 1477-1576) • Lady at a Mirror

This picture was painted about 1520 when the artist was at the height of his fame. The woman is thought to represent Venus and the man holding the mirror may be Alphonso I, Duke of Ferrara, for whom Titian was working at the time. The Venetian master continued painting until his death of the plague at the age of 99 (Kress Collection).

them. The figures are cold and devoid of any expression. The National Gallery picture depicts the Virgin, holding the Child, seated upon an elaborate formal throne, garbed in bright reds and blues, against a glittering background of gold. The painting looks as if it were fresh from the studio today.

It was carried to Spain, probably by one of the Crusaders of yore, where it remained hidden away for years, perhaps centuries, in an old convent at Calahorra, and this explains its excellent state of preservation.

Calahorra, the venerable Iberian town which resisted Pompey in 76 B. C. and still boasts ruins of a Roman circus and aqueduct, normally ships quantities of Spanish peppers every year to the American market.

In a roundabout way this sleepy little tile-roofed town in the Province of Logroño also provided us with a 12th-century Byzantine masterpiece.

A rare example in the Mellon Collection is the "Nativity" by Duccio. While Giotto was working in Florence, Duccio di Buoninsegna (active from 1279 to 1319) was starting a new school at Siena in the hills of Tuscany.

The "Nativity," flanked by panels of the prophet Isaiah and the prophet Ezekiel, was given to the Kaiser Friedrich Museum, Berlin, in 1884, by a resident of Florence.

A few years ago, the late Lord Duveen, traveling in Germany, was taken ill and had to leave the train at Düsseldorf. While there he met an old friend who had just been appointed to a high position in the Berlin Museum. The friend told him that they were anxious to obtain more German pictures for the museum and were particularly anxious to get a certain Holbein. Lord Duveen obtained the Holbein and traded it in for the Duccio, which he later sold to Mr. Mellon.

The very catalogue of the National Gallery will be thrilling. Three Raphaels, four Botticellis, ten Bellinis, two rare Masaccios, three Fra Angelicos, six Titians! And not only Italian masters, but also Dutch, French, Spanish, Flemish, English, and American.

In the Mellon Collection alone are some 70 of the greatest names in art—including Rubens, Van Dyck, El Greco, Holbein, Rembrandt, Hals, Vermeer, Gainsborough, Turner—about 120 canvases in all.

Venus Rescued from a Fire

I have mentioned only the paintings. Of sculpture there are 23 pieces representing the Renaissance period, largely from the collection of the late Gustave Dreyfus of Paris—works of Donatello, Verrocchio, Della Robbia, and others.

One of these pieces had a narrow escape. The life-size bronze by Sansovino, of Venus Anadyomene as she rose from the sea, made about 1525 at Florence, was carried to Paris by Napoleon to enrich his national collection. It was part of the plunder from northern Italy after his successful campaign against Austria.

Venus remained in the Palais Royal and was given a Government inventory number ("6316 I. R."), which is still stamped upon the base of the statue. On May 24, 1871, the Commune being in power, the palace was set afire by the mob, and Venus was thrown out of the window just in time to prevent her destruction.

It was during Mr. Mellon's years in Washington that he first thought of a national gallery—an American Louvre to which his and other important collections could be given for the American people.

Choice of a Site and Name

After a long day in his big, square office in the Treasury Department, overlooking the White House, this quiet, patient man of affairs would enter his car alone and say to the chauffeur, "Just drive around." Motoring in the Mall, through the parks, around the Capitol and the Lincoln Memorial, he came to appreciate every aspect of the long-term program for the beautification of the Capital City.

For a gallery building that should be of outstanding architectural beauty and near enough to the Capital to be accessible to visitors, he favored the site on the Constitution Avenue side of the Mall, between Fourth and Seventh Streets, and that location was also deemed the most suitable by Congress.

After retiring from public office as Ambassador at London, Mr. Mellon traveled in Europe inspecting the buildings in which the national collections of other great nations are housed. Numerous sketches were considered, eminent architects in this and other countries were consulted, and finally the conception of his friend of many years, John Russell Pope, was approved.

Mr. Mellon then made one of the conditions of the acceptance of the gift that "the gallery shall not bear my name, but shall be known as the National Gallery of Art, or by such other name as may appropriately identify it as a gallery of art of the National Government, to which the entire public shall forever have access, subject only to reasonable regulations to be from time to time established."

There is pathos in the thought that Mr. Mellon himself never saw the whole collection together nor the completed building. He had the satisfaction, however, of knowing when he

"The Annunciation," Pioneer Oil Painting

Jan van Eyck (1385-1441), who painted the picture, and his brother Hubert, Flemish artists, were known as the "fathers of oil painting." They discovered that linseed oil was better for mixing colors than egg and vinegar, which had been in general use. This famous "Annunciation" was discovered at Dijon, France (Mellon Collection).

died (August 26, 1937), that his great plan was at last a reality. John Russell Pope, who had conceived and designed the building, died one day later.

Congress passed the bill accepting Mr. Mellon's gift in March, 1937, and by June a high board fence had already gone up around the site between Constitution Avenue and the Mall. Soon pile drivers began their metallic clang.

Building Set on 6,600 Piles

Rock level in this section is 150 feet below ground, and therefore the pile type of foundation is necessary for many of Washington's large new buildings. Some 4,000 piles might have been sufficient for the gallery building, but the contractors drove 6,600 into the soft earth.

"We want this building to last a thousand years," they said.

Through the chosen site Tiber Creek, later converted into the Washington City Canal, flowed in earlier days. The area was low and marshy and frequently flooded during a rainy season.

Still later, on this site was built the Baltimore and Potomac Railroad Depot, and here, early on the morning of July 2, 1881, President James Garfield, entering the station arm in arm with Secretary Blaine, was shot by a disappointed office seeker named Guiteau. The depot was not removed until 1907, after the completion of the Union Station.

Early in March, 1938, some 250,000 cubic feet of concrete had been poured for the foundations and concrete piling. By May, 1939, the outside marble wall had risen to completion above the high board fence (pages 6 and 7).

It was planned at the start that the building should be of marble and in accordance with specifications approved by the Commission of Fine Arts, but much thought and study were given to the color of the marble to be used.

Because of the monumental dimensions, pure-white marble would cause considerable glare in the sunlight, and many experiments were made, even to the extent of building sections of the wall one-third the actual size. Finally rose-white marble from Tennessee was chosen.

Great care has been taken in the gradation of color of each individual block, and in the precision of setting each piece of stone in the structure. The lower courses in the building are of delicate rose-pink, blending imperceptibly into nearly pure

white at the top. This slight gradation of color gives a restful appearance, and after a rain the walls take on a deeper shade of rose-pink which is extremely beautiful.

More than 800 carloads of Tennessee marble go into the exterior wall, and this wall, 90 feet high, if placed in a straight line, would be half a mile long.

5½ Acres of Exhibits

The Gallery has a length of 785 feet—longer than the United States Capitol. There will be half a million square feet of floor space, of which some 5½ acres will be used for exhibition purposes—a larger area than that of any other museum in the country devoted exclusively to paintings and sculpture.

The main floor has an imposing rotunda, a hundred feet in diameter, beneath a dome supported by 24 Ionic columns of dark-green marble. In its center a marble fountain will play, surmounted by the famous bronze statue of Mercury made by Giovanni da Bologna about 1560 at Florence (page 2). This work, which came from a Roman collection, shows a graceful youth, one foot resting on a figurative gust of wind issuing from the mouth of Aeolus, so skillfully poised and balanced that he scarcely seems to be in contact with the base.

Portrait of a Gentleman of the Renaissance

Bartolomeo Veneto (c. 1480-1555), who signed himself, "Bartolomeo, Half-Venetian and Half-Cremonese," painted this picture of a member of a cultured Italian family of his day. Veneto was active during the golden age of Venice, when Bellini, Giorgione, Titian, and Tintoretto were painting (Kress Collection).

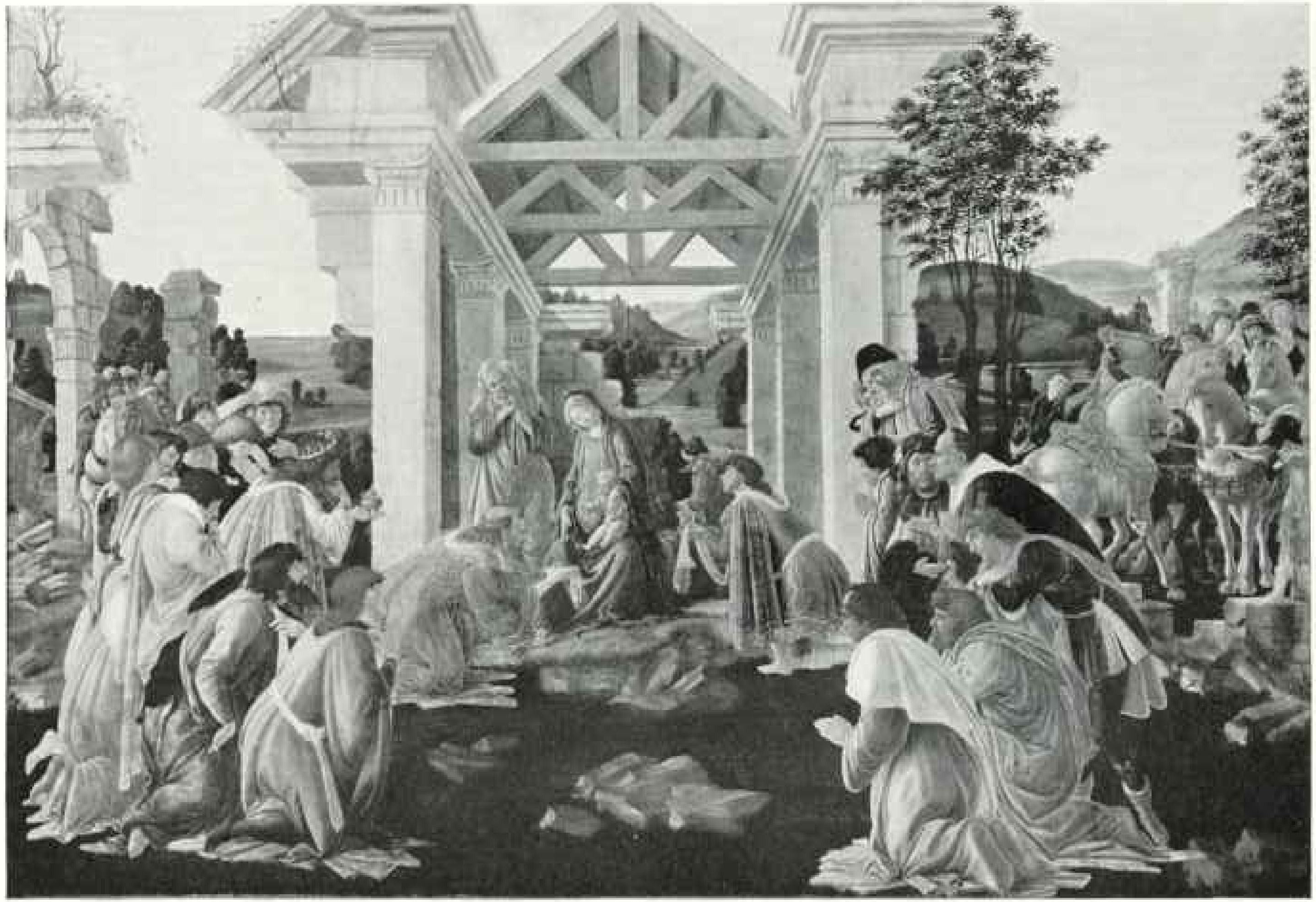
There will be about 100 separate gallery rooms on the main floor, although some of them will remain unfinished at this time, thus affording ample provision for future expansion of the Gallery. The collections will be arranged according to schools, and the rooms decorated in keeping therewith.

Some of the walls of the Early Italian rooms will be of travertine stone and some of plaster, and the later Italian paintings will be hung against textiles.

Rooms for the Dutch and Flemish paintings will be paneled in oak, whereas the later English, French, and American Schools will have walls of painted wood paneling or will be covered with textiles. Restrained architecture for the interior has been stressed; the building itself must not outshine the collections housed therein.

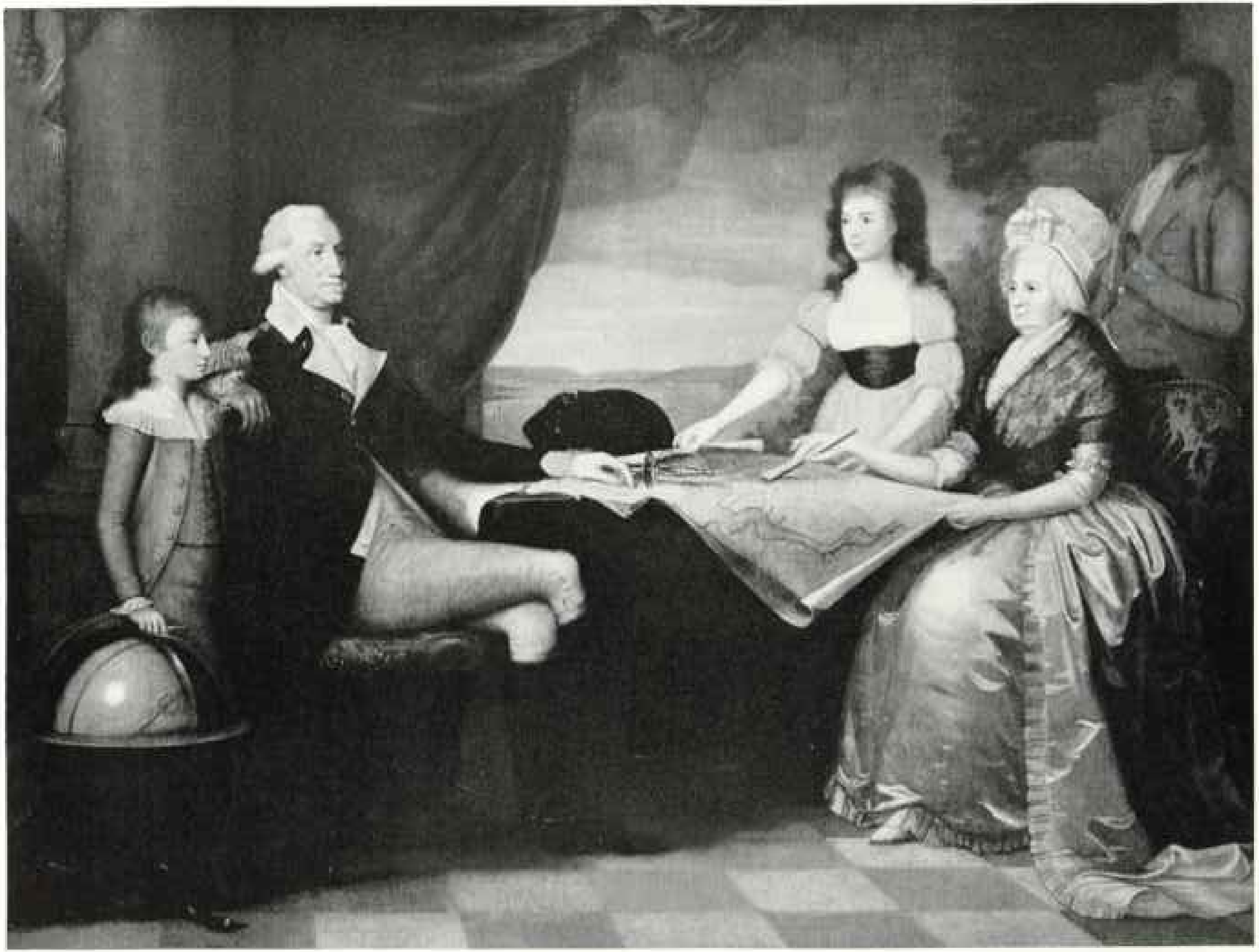
Fountains Recall a Royal Whim

In two large garden courts on the main floor, one in each of the two principal wings, surrounded by large limestone columns, shrubs and flowering plants will grow near playing fountains.



A Master's Brush Portrays an Immortal Theme—Botticelli's "Adoration of the Magi"

Botticelli, the name by which Alessandro Filipepi (1444-1510) is known to the world, means "Little Barrel." The artist, son of a poor tanner, was cared for in his youth by an older brother who bore this nickname, but the youngster adopted it. Nervous, temperamental Botticelli became the great master of the Florentine epoch, painting some of his most celebrated works under the patronage of Lorenzo the Magnificent and a younger Lorenzo de' Medici. He was one of the brilliant galaxy of painters called to Rome to decorate the Sistine Chapel in the Vatican. During his last years he became a mystic. This "Adoration" is one of the most highly prized works in the United States (Mellon Collection).



Edward Savage Preserves for the Ages a Glimpse of the Father of His Country at Mount Vernon

Mostly self-taught, Savage (1761-1817) rose to the foremost rank of American painters. George and Martha Washington are shown here in his best-known work, with their adopted children, son and daughter of John Custis. Billy Lee, negro servant, stands at right (Mellon Collection).

These fountains graced the gardens of the Palace of Versailles in France more than 250 years ago. They were done in 1672 by order of Louis XIV as part of the decoration for the celebrated Théatre d'Eau. One, by Pierre Le Gros, represents two winged cherubs playing with a lyre, and the other, by Jean-Baptiste Tubi, depicts two similar figures at play with an irate swan.

This open-air theater, built for the esthetic satisfaction of Louis XIV, was considered one of the chief glories of Versailles. However, the many fountains throughout the park consumed such a vast amount of water that protests came from adjoining districts which were left high and dry by the diversion of streams for the displays.

The King, respecting the protests, passed word to one of his ministers, so that thereafter he arranged to stroll through the garden only at a designated hour. As he appeared, the water was turned on, and the moment he turned his back it was cut off. Louis is said never to have varied his schedule, nor would he turn his head for a second glance after passing.

In the two garden courts, benches will be provided where visitors on a tour through the extensive galleries may find a restful interlude.

The roof is entirely of wire-woven glass to afford natural lighting. Another layer of glass, several feet below the roof, forms the ceiling of each gallery room; this layer, the laylight, is sand-blasted to diffuse the light.

One day a steel worker on the roof dropped a hammer, which broke a pane of glass in the laylight and crashed through to the floor. This accident set the builders thinking, and as a result a new type of glass was used for the laylights, twenty times stronger than regular glass. If anything hits this shatter-proof glass, it pulverizes and floats down like snow.

All the exhibition spaces will be completely air-conditioned, and museum experts predict that centuries-old works of art thus kept in uniform temperature and humidity throughout the year will be better preserved than heretofore.

The Capital a World Art Center

Illustrated lectures on the collections will be given in an auditorium on the ground floor, and adjoining the central lobby there will be an art reference library including, in time, a large collection of photographs devoted to the history of art.

Thus, with the Library of Congress and the National Gallery, supplemented by the other important collections in Washington—the Freer Gallery for Oriental art; the National Museum and the Corcoran Gallery for paintings, sculpture, and decorative arts; the Phillips Gallery for modern art and its sources; the Myers Collection for textiles, and Dumbarton Oaks for early Christian and medieval art—the Capital City will become a world center for art scholarship.

When asked where a person should study to be a painter, Renoir, the great French artist, amazed that such an obvious question should be put to him, answered, "Why, in the museum, of course!" And Watteau, who became so famous, had little more than promise until the French collector Crozat permitted him to study and copy the works of art in his possession. In this collection was "The Finding of Moses," by Veronese, which is now in our national collection (Plate XII).

In Washington, two centuries later, young artists will find the same opportunities that Watteau once enjoyed in Paris.

Not only did Mr. Mellon request that the building should not bear his name, but he desired also that the paintings given by him should not be segregated as "the Mellon Collection." He wanted them distributed through the Gallery in their appropriate schools.

It was his unselfish hope that the National Gallery would thus attract important gifts from other American collectors, willing to merge their works of art into a great institution for the American people.

This hope is being abundantly fulfilled even before the gallery building has been completed. While the original collection was being formed, another reticent, public-spirited American was quietly gathering together a truly great collection of works of art devoted entirely to the Italian schools.

The Genesis of the Kress Collection

On July 12, 1939, it was announced that Samuel H. Kress, of New York, had given to the National Gallery his collection of paintings and sculpture, acclaimed by experts as one of the finest private collections of Italian art in existence.

The Kress Collection consists of 375 paintings and 18 pieces of sculpture. Practically all important painters of the Italian School from the thirteenth to the eighteenth centuries are represented. Appropriate gallery rooms are now being constructed to house these works, which will be installed before the building is opened to the public.

Born in Cherryville, Pennsylvania, Mr. Kress started his career at an early age as a schoolteacher. Subsequently he founded a stationery store in Nanticoke, Pennsylvania, thus laying the foundation for a chain of 240 stores now operated from coast to coast.

Eyes Blossoming on a Twig Symbolize the Legend of St. Lucy

This picture of the martyr of Syracuse, who lived in the reign of Diocletian, formed part of a polyptych, or series of panels, painted by Francesco del Cossa (1435-1477). After St. Lucy was betrothed, the legend goes, she decided to forego marriage. Her disappointed suitor complained that the maiden's eyes haunted him, so she tore them out and sent them to him on a platter (Kress Collection).

Long interested in Italian art, he generously provided funds for the restoration of numerous historical and artistic monuments in Italy, including rooms in the famous Ducal Palace of the Gonzagas at Mantua and, more recently, for the renowned Mantegna frescoes in that edifice.

Historic monuments in Ravenna, Spoleto, and other places have been restored with funds furnished by Mr. Kress, and he has given more than 75 fine paintings to museums and colleges throughout the United States. He followed with interest the building of a national gallery in Washington and the opportunity it offered as a center of culture for the whole country.

In offering his collection to the Gallery, Mr. Kress explained: "Because the Gallery and the works of art which it will contain will be for the benefit of all the people of the United States and will be accessible to so many citizens of this and other countries visiting our National Capital, it seems most suitable that others should contribute to the collection being formed there; and it is my wish, therefore, that the works of art which I have acquired should become part of the National Gallery collection and be exhibited in the Gallery building now being erected in Washington."

Rarely has a gift of such magnitude been given during the lifetime of the donor.

President Roosevelt, in his letter of thanks to Mr. Kress of July 7, 1939, said: "Not only are the treasures you plan to bestow on the Nation incalculable in value and in interest, but in their bestowal you are giving an example which may well be followed by others of our countrymen, who have in their stewardship art treasures which also happily might find a home in the National Gallery."

A Great Renaissance Painting

Perhaps the foremost painting in the Kress Collection is the celebrated "Adoration of the Shepherds," by Giorgione, which formerly belonged to Lord Allendale of England (Plate VII). This is one of the most beautiful and important paintings in America. It shows the softness and richness of coloring and the pastoral, Arcadian beauty that make Giorgione a figure entirely apart in Italian Renaissance art.

Much of Giorgione's work has been lost or destroyed through the centuries, and barely a score of his paintings are known to exist today. In Venice Giorgione and Titian were students of Bellini and later formed a sort of partnership, sometimes painting a picture jointly.

The young artist from Castelfranco became involved in a controversy that attracted the attention of the whole country.

Verrocchio, also working in Venice, completed a bronze horse for the splendid Colleoni Monument, and his admirers proclaimed that sculpture was superior to painting because it showed all sides of the figure. Giorgione took up the challenge, painted a nude figure near a clear pool with a mirror in the background and a polished corselet at one side. He thus proved that all sides of the figure could be seen in a painting without the trouble of walking around it—and won the argument!

Giotto an Early Naturalist

Giotto's majestic "Madonna and Child" was formerly in the Henry Goldman Collection (Plate I). Giotto, born about 1266, was a shepherd boy who later laid the foundation for Florentine art. He was the first of the Gothic painters to dramatize human figures and to depict action. He painted jagged cliffs, barren hills, and trees almost devoid of leaves. These touches of landscape were innovations in those early days and he was hailed as an amazing naturalist.

Boccaccio writes in the *Decameron:* "Giotto was such a genius that there was nothing in nature which he could not have represented in such a manner that it not only resembled, but seemed to be, the thing itself."

Also a famous architect, Giotto planned the Cathedral at Florence as well as its bell tower. In the tower, which still exists, he carved the first course of stone, depicting arts and industries, with his own hand. Few of his works are to be seen outside of Italy.

Exceptionally well represented in the Kress Collection is the work of Giovanni Bellini, with eight paintings. Bellini's father, Jacopo, and his brother Gentile were both great artists, and his sister married another leading master, Mantegna.

For many years the two brothers helped their father do his large historical scenes, but Giovanni later became one of the most important men in the development of the Venetian style of painting.

"St. Jerome Reading," done in 1505, showing the Saint at the entrance to his cave in a romantic landscape of Venetian hills, is an interesting example of his work (Plate IX).

Among other outstanding masterpieces are the "Madonna and Child," by Filippo Lippi, which formerly hung in the Kaiser Friedrich Museum in Berlin (Plate III), and the "Meeting of St. Anthony and St. Paul," by Stefano di Giovanni, who was known as Sassetta (Plate II).

In this picture the landscape was supposed to represent a desert, but Sassetta pictured it full of hills, lovely trees, and shining stones.

VAN DYCK (1599-1641) • *William II of Nassau and Orange*

William II was about 12 years old when this portrait was painted. Two years later he was married to the 10-year-old Princess Mary, daughter of Charles I of England, and was again painted, with his bride, by Van Dyck. A pupil of Rubens (Plate XVIII), the "courtier painter" sometimes did the faces of his patrons, employing assistants to paint the clothes (Mellon Collection).

RUBENS (1577-1640) • *Isabella Brant*

Great Flemish baroque painter of the seventeenth century. Rubens also designed tapestries and carried out diplomatic missions in Spain and London. This famous portrait of his first wife was painted shortly before her death at 33. The portal is that of the artist's own house at Antwerp (Mellon Collection).

FRANS HALS (c. 1580-1666) • A Naval Officer

The gusto of Hals' sometimes rousterous life is reflected in the swagger of his painting. Although officers and other notables often sat for him, Hals frequently painted everyday citizens. His rapid brushwork and vigorous style have greatly influenced modern painters (Mellon Collection).

PIETER DE HOOCH (c. 1629-1683) · A Dutch Courtyard

De Hooch attained the effect of a scene studied through an open window. Here jug, pipe, and bowl are carefully portrayed. This Dutch "magician of lighting" painstakingly tried to capture on his canvas the contrast of brilliant against softer light (Mellon Collection).

JAN VERMEER (1632-1675) • The Lacemaker

Master of composition and lighting, Vermeer achieved visual accuracy. Only essentials are highlighted; details are suffused. He painted slowly; fewer than 40 of his works are known to exist. Three of this Dutch master's pictures are in the new National Gallery (Mellon Collection).

REMBRANDT (1606-1669) · A Polish Nobleman

This painting once was believed to be a portrait of a King of Poland. Evidently the artist changed its design by lowering the cane, a detail which has now become faintly visible. The greatest painter of the Dutch School. Rembrandt is celebrated for his self-portraits, numbering about 62 (Mellon Collection).

CHARDIN (1699-1779) • The House of Cards

Son of a Parisian woodworker, Chardin painted scenes from everyday life, in contrast to the artificial works of Watteau and Fragonard. This rare portrait of a young boy is typical of Chardin's truthful representation. It is the first of several versions of this subject. As his eyesight faded, he turned from oils to pastels. Ultimately, his passionate devotion to art led to blindness (Mellon Collection).

EL GRECO (c. 1541-1614) • San Ildefonso of Toledo

You might stump "Information Please" experts by asking, "Who was Domenico Theotocopuli?" Yet the novice in art could identify El Greco, "god of the 20th-century moderns." He was to art what Beethoven was to music. Born in Crete, he lived most of his life in Spain (Mellon Collection).

GOYA (1746-1828) · The Marquesa de Pontejos

The transatlantic telephone helped procure this distinguished Goya for the United States. An American friend phoned Mr. Mellon the owner would sell, but the purchase must be made that very day. Within an hour he telephoned a bid for the painting of the slender, dark-eyed lady that ran into six figures.

GAINSBOROUGH (1727-1788) • *Mrs. Richard Brinsley Sheridan*

Mrs. Sheridan was a popular singer, considered by Horace Walpole the foremost beauty of her day. The English master painted this portrait for her husband, Richard Sheridan, the playwright who wrote *The Rivals* (Mellon Collection).

REYNOLDS (1723-1792) • Lady Betty Delme and Her Children

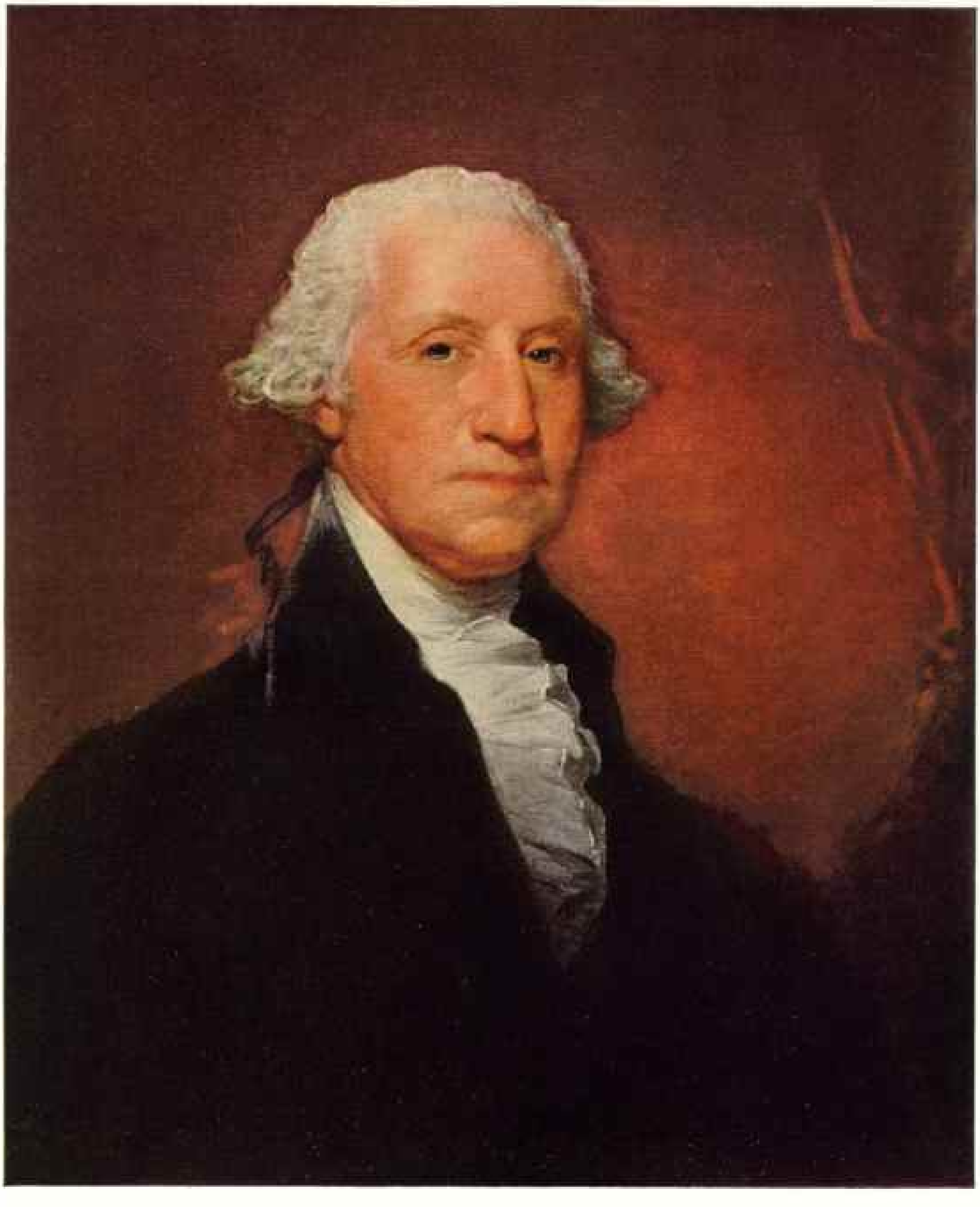
Sir Joshua Reynolds, born only four years before his English contemporary, Gainsborough, was the first president of the Royal Academy in London. This is a typical example of his fine portrait groups of English aristocracy (Mellon Collection).

COPLEY (1737-1815) • Richard Earl Howe

John Singleton Copley, one of the greatest American artists, was born in Boston and became equally famous in England and the United States. This portrait of Earl Howe was painted in London after the Admiral had retired from his command of the British fleet in American waters during the Revolutionary War. Howe, because of his dark complexion, was known in the British Navy as "Black Dick" but Copley flattered his subject by giving him florid rather than swarthy features (Mellon Collection).

RAEBURN (1756-1823) • *Colonel Francis James Scott*

Sir Henry Raeburn, born near Edinburgh, painted miniatures for several years before turning to large portraits. Considered the chief of the Scottish school, he is noted more for his strong portraits of men rather than women, although justly celebrated is his full-length picture of his wife, a wealthy widow whom he married in his 22d year. Most of his work was done in Scotland. This striking example calls to mind the rustic Scottish aristocracy described in Sir Walter Scott's Waverley Novels (Mellon Collection).



GILBERT STUART (1755-1828) • George Washington

After a successful career in Great Britain, Stuart, the foremost United States artist of his day, returned to his native land to paint General Washington. This work, known as the "Sinclair-Mellon Portrait of Washington," is one of his finest versions. Done about 1795, it remained in the possession of the Sinclair family in Ireland until a few years ago. Washington posed for him later and the "Athenaeum" head, now in Boston Museum of Fine Arts, was the result. From his several studies of the First President, the artist made many replicas, 111 of which are still preserved (Mellon Collection).

GILBERT STUART (1755-1828) • Mrs. Richard Yates

Our era is indebted to Gilbert Stuart for his excellent likenesses of many important figures in colonial and early United States history, including the first six Presidents of the United States. He was born at North Kingstown (now Hamilton), Rhode Island, and early went to Great Britain, where he studied under Benjamin West (Plate XXXII). While in Europe, he painted many celebrities and royal personages, including King George III and the future George IV. This portrait of Mrs. Yates, one of the most distinguished portraits of the 18th century, records the feminine mode and manners of her day (Mellon Collection).

BENJAMIN WEST (1738-1820) · Guy Johnson

West is the only artist of American birth to become president of the Royal Academy, London. Guy Johnson, Superintendent of the Indian Department in pre-Revolutionary days, is portrayed here with his Indian secretary, whom he had educated. Niagara Falls appears in the background (Mellon Collection).

It was part of an altarpiece dedicated to the life of St. Anthony. Other parts are in the Lehman Collection, New York, and the Jarves Collection at Yale University.

Mr. Kress has succeeded in keeping in this country many valuable works of art which might otherwise have returned to Europe and become permanently fixed in European galleries. He acquired practically the entire collection of Italian paintings belonging to the late Henry Goldman of New York, including Titian's "Lady at a Mirror" (Plate XVI), and Bartolomeo Veneto's "Portrait of a Gentleman" (page 27).

The public has heretofore known little of the magnitude of the Kress Collection and the remarkable treasures it contains.

One of these paintings, "Interior of the Pantheon," has a peculiarly appropriate place in the National Gallery (page 4). Considered one of the finest works ever produced by Giovanni Panini (1695-1768), it is brilliant in perspective, showing lively groups of people in the spacious rotunda under the wide circular dome. He even painted himself into the picture as a spectator, standing in the central foreground in a white waist and black robe.

A Celebrated Dome

The Pantheon at Rome, where the tomb of the immortal Raphael is located, is one of the oldest roofed edifices in the world with walls, vaulting, and dome still perfectly preserved. It was completed by Emperor Hadrian about 120 A. D. Its low, broad dome with a circular opening at the top is of major architectural importance.

The shape of this dome is repeated in the famous St. Sophia built by Justinian in 532 at Istanbul. It was also used in our Capitol at Washington as at first constructed, with the low dome rising from a base formed by the Senate and House Chambers. Again this beautiful dome appears—in 1940 A. D.—on the National Gallery of Art in Washington, and is to be used also on the Jefferson Memorial.

In the Pantheon the rotunda is 142 feet in diameter, while the height from floor to oculus is the same, this similarity being responsible for the feeling of space attained. It was in this rotunda under the massive dome in Rome, two centuries ago, that Panini placed his easel and painted his masterpiece—and the work itself now finds its permanent home under a similar dome in Washington.

On February 22, 1940, the National Gallery received its third gift—11 celebrated paintings by early American artists, acquired by Mr. Mellon in his lifetime and now given to the Nation by the A. W. Mellon Educational and Charitable Trust.

Supplementing the other collections, this gift represents the first paintings of the American School acquired by the National Gallery, including prized portraits by Gilbert Stuart, John Copley, Benjamin West, John Trumbull, Chester Harding, Edward Savage, and Mather Brown.

There are five Gilbert Stuarts, one of them the "Portrait of Washington" (Plate XXX) which was brought to this country from Ireland, where it had been sent by Stuart and remained until 1919.

A Historic American Painting

There is also the large portrait group, "The Washington Family," by Savage (page 29). George and Martha Washington are shown in their home at Mount Vernon with their adopted children, son and daughter of John Custis, who was Mrs. Washington's son by her first husband.

Washington's hand rests upon a plan for the "Capital City" which was afterwards to bear his name and along whose main axis the National Gallery is now being erected. At the right stands Washington's negro servant, Billy Lee.

This picture, painted against a traditional background of red draperies and with a view of the Potomac River beyond, accurately portrays the simple dignity of the Washington household.

Another interesting picture in this American group is Benjamin West's portrait of Guy Johnson (Plate XXXII), nephew and successor of the famed Sir William Johnson, beloved champion of the Mohawk tribe and translator of the Book of Common Prayer into the Mohawk dialect. Standing directly behind him may be seen his Indian guide and secretary.

To safeguard the National Gallery from the inclusion of inferior examples in its collection, the law provides that no work of art shall be accepted unless it be of similar high standard to that of the original collection.

The policy of the Gallery will be to include in the permanent collection only paintings and sculpture which are representative of artists whose merit and importance have been generally recognized for more than twenty years after their death.

The law also provides that the Gallery shall be properly maintained by the Government and the works of art regularly exhibited to the public free of charge. When the building is completed, Uncle Sam will take charge and provide for the operation of this new venture.

It is to be administered by a Board of

Raphael's "Alba Madonna"—Beloved Through the Centuries

This masterpiece, costing more than a million dollars, is one of a collection of 21 famous works which Mr. Mellon acquired from the Hermitage, former imperial gallery of the Russian Tsars, in Leningrad. The total cost of the group, purchased in 1930, was between six and seven million dollars (pages 2 and 5 and Plate V). Since their arrival in the United States, the pictures have been stored and will have their public debut with the opening of the National Gallery.

Trustees; composed of the Chief Justice of the United States, who serves as chairman; the Secretary of State; the Secretary of the Treasury; the Secretary of the Smithsonian Institution—all ex officio members; and five general trustees: David K. E. Bruce, who is the President; F. Lammot Belin; Duncan Phillips; Joseph E. Widener; and Samuel H. Kress. Donald D. Shepard is Secretary-Treasurer. David E. Finley is Director of the Gallery; Harry A. McBride, Administrator; and John Walker, Chief Curator.

Thus, next winter, armored trucks will pass through the huge automatic service door of the gallery building, delivering the treasures from the two collections. The registrar will check them in on his records.

Experts will proceed to hang the paintings in the places already determined by the Director and the curators—not with wires, but with toggle bolts extending into the tile walls. Sculpture will be placed in specially designed rooms and niches. Engineers will again test each piece of the elaborate machinery. Eighty guards will don their new uniforms.

There will be a formal opening—and American citizens will begin enjoyment of their National Gallery.

The Celebes: New Man's Land of the Indies

By Maynard Owen Williams

BEYOND Bali peace settled on our little ship after the seekers of rest and quiet, with their bright-labeled baggage, trooped ashore at exotic Boeleleng.

Even then, troubled statesmen at London, Tokyo, and Washington pondered tangled problems of the Pacific and its rich islands, but close-range passengers on the smiling Java Sea were oblivious of overseas concern.

On the breezy deck a traveling hardware salesman discussed orchids with the chief engineer. An aviator and an oil prospector, bound for New Guinea, calmly debated their chances of life amid the fuzzy-haired Papuans.

Only one table was laid and our male group, collars loose, lunched with the officers in their immaculate "whites," while softly throbbing engines drove the *Pahud* north toward Makassar and the Equator.

Great little ships, these of the K.P.M.! They have homelike windows, not portholes. Barefooted Malay boys bring coffee at dawn or rise from sleep in the passageway to serve tea the moment passengers wash away siesta drowsiness by ladling water over themselves from a "Malay tub." Between decks are Chinese merchants amid their stocks, and hundreds of Javanese colonists, leaving their overcrowded island for the jungles of the Celebes, safety valve for population pressure in Java.

Covered-Deck Pioneers

Far astern are the superabundant fields of sugar and tobacco, the geometrical rank and file of coffee and tea plantations, the orderly rows of palm-oil and rubber trees. After teeming cities and paddy terraces of Java, where men mass closer than in industrial Rhode Island, the Outer Districts of the Indies, formerly ravished by piracy and slave trade, will seem lonely to these covered-deck pioneers.

Riding deep water now, we left behind that submerged shelf of Asia above whose monsoon-swept shallows rise the Malay Peninsula and Sumatra, Java, and Borneo.

As we faced the island-dotted deeps between the Indian Ocean and the Pacific, with Asiatic fauna on the left and Australian marsupials on the right, the sea bottom, within anchor clutch all the way from the Asiatic mainland to Java, plunged beyond reach of our cables.

Here, scattered like stepping stones, or island hyphens between two worlds, are the far-flung Netherlands Indies. Writers still quarry facts from Alfred Russel Wallace's *The Malay Archipelago*, published 71 years ago. Scientists argue about the exact dividing line between Indo-Malayan and Austro-Malayan regions, shown by plant and animal types as distinct as if they were separated by half a world.

Wallace himself, who marked the frontier, gave Australia the octopus-shaped Celebes, but was nevertheless puzzled and called it an "anomalous island." It is now regarded as a transition region. The island's plural name recalls how it was at first mistaken for a group of islands instead of one land mass with deep bays and an incredibly long shoreline (maps, pages 56 and 86).

Cruising the "Wallace Line"

From Bali toward Makassar our little ship balanced itself on the Wallace Line.

What Wallace did for the scientists, Joseph Conrad did for the lover of romance in the Malay seas. The slime on the mangrove roots, the response of native praus to paddle and wind, the houses on stilts and the low-bowing palm trees, the light in Malay eyes, the suspicion of the foreigner, the sound of Moslem welcome—here one follows in the wake of Conrad.

Superimpose a map of the Netherlands Indies on that of North America. Put Sabang, fuel depot off the tip of Sumatra, at Seattle. The tropical jungles and glaciers of Netherlands New Guinea will reach well out beyond Bermuda. Batavia will rest in Colorado. The Celebes with its four sprawling arms will extend from Toronto to Louisville, Kentucky.

Census estimators can't keep up with the birth rate of the Malays, but in 1930 the Netherlands Indies had more than 60,000,000 inhabitants, two-thirds of them in Java and its island neighbor Madoera—817 chiefly agricultural people to the square mile.

The Celebes, 41 per cent more extensive, probably has one-tenth as many people. The gateway to this thinly populated and little-known island, long ravaged by pirates and raided for its slaves, is Makassar (page 58).

This metropolis of the Outer Districts booms with trade. Beside the two long landing piers, ships follow in endless procession. Bags of copra or rice are piled roof-high beside spacious sheds. Ebony and kapok stir the imagination. Gum dammar's odor will greet the nostrils of Oriental gods as incense; its gloss will give the Occidental a hard varnish against which to rest his elbow or thrust his toe.

Trucks arrive with rattling burdens of rat-

Photograph by Maynard Owen Williams

"Fresh Fish?" Yes, until the Sun Is High

Beside teeming Lake Limboto, the open-air fish market is an early-morning affair. By nine o'clock only a few remaining dealers wearing palm-leaf hats remain at their bamboo benches.

tan, tightly bound, and with the butts stained red or purple.

Bronze-shouldered porters carry the floppy bundles to where the ship's winch picks them up like so much macaroni and drops them, rattling, into a wide-mawed hold (page 59).

Until the thorny spines are dragged off by pulling the rattan through a tree crotch, the canes repel man's advance into the haunts of jungle beasts of Borneo or the Celebes. Gripping their long sweep, monkeys swing chattering from tree to tree.

Now the rattan is on its way to become deck chairs facing the sea; chaise longues gay with cretonne; tea wagons laden with crumpets; prized Malacca sticks jauntily swung in the Easter parade, or baskets in which shells are placed to be lifted to the breech of a big gun.

Spices from the Moluccas still pass through Makassar. Until recently, bird-of-paradise skins shared space with tortoiseshell, sandalwood, and mother-of-pearl. Thousands of the lovely birds were sacrificed for the export trade. Fortunately, this practice is now forbidden.

Where Steam Meets Sail

At Makassar the Western World touches archipelago life. Alongside modern ships and sheds are sailing craft like those whose milky wakes wove history around Makassar when the Portuguese spice hunters arrived in 1512, and Cornelis Speelman's Dutch won Makassar in 1667.

Floodlighted at night, with its radio relaying a London orchestra's rhythm from Batavia, Makassar's seaside bathing pool is a favorite meeting place for the city's 3,500 Europeans. Sitting there at dusk and seeing the equatorial sun go down behind drooping boughs of the pepper trees, you can set your watch at six throughout the year.

Photograph by Maynard Owen Williams

Like X-ray Plates against the Sky Are the Big Black Bats of Watansoppeng

The stroking of the wings and the bone structure are shown in this high-speed photograph. At nightfall, released branches spring upward when freed from their black, evil-smelling burden of bats. During the day, the squeaking creatures hang like blackened fruit from the trees.

Cool breezes temper the tropical heat, and such hill resorts as Malino or Tjikorok lie within motoring distance.

Picture Makassar in the light of its exports and you imagine an alien world. Yet here come the cameras, bicycles, radio sets, motorcars, fashion plates, gasoline, electric ranges, glassware, aspirin, and teddy bears of our familiar environment. It was in Makassar that I first saw Montagues and Capulets parade in the Hollywood version of *Romeo and Juliet*.

Port of Modern Flying Dutchmen

Makassar, so far away, is neither provincial nor old-fashioned. The antimacassar, designed to keep the Makassar hair oil of our elders off the horsehair furniture, has gone. Having survived such lacework tidies, Makassar absorbs the latest invention, the newest film, the choicest symphony recording, with enthusiasm. Over the prau harbor, crowded with ships like the old Dutch Indiamen of three centuries ago, hover the steady, graceful planes of the K.N.I.L.M.—modern Flying Dutchmen that make port with regularity and dispatch.

Down the streets, walking hand in hand, riding bicycles or being propelled in those speedy tricycles which are the native taxicabs, come the Makassar Malays—men with gaudy sarongs worn over one shoulder, with a disturbing sense of fun, dashing play at games, and a desire for what is new and bright and gay (page 82).

"Their country of land and water—for the sea was as much their country as the earth of their islands—has fallen a prey to the western race," wrote Conrad even before radios, motorcars, and fountain pens came to Makassar.

Before skirting the unbelievable shoreline

Photograph by Maynard Owen Williams

A Malay Racing Prau Is Little More than a Keel for an Oversized Sail

Far-famed in the Malay seas are the slim boats which race on the birthday of the Queen of the Netherlands. Such a prau, with one or two outriggers, may carry a sail whose width is twice the hull length (26 feet) and whose height is 20 times the beam (1 foot 2 inches). Here racing fans inspect the boats at Makassar.

of the Celebes toward the north, I took a car and visited a few of the towns and hill stations of south Celebes.

By day I mingled with the gay groups picking rice or watched the drama of the market place. As the shadows lengthened, we climbed through groves of kapok or *kanari* and at supper, served on the resthouse lawn under the hum of a pressure lamp, it was pleasant to feel the warmth of a sweater across my shoulders. Neat little bungalows huddled under a clear, cool sky whose stars seemed to Conrad "like a river of sparks."

But there is something artificial about a hill station. In it one seems to be playing truant from the teeming world of plain and shore, from Makassar's throbbing Malay pulse.

On the pier, meeting *hadjis* new-arrived from Mecca; on the beach, appraising huge-sailed racing praus; at the wheel of autos built in Detroit; carrying baskets of fish beside the brown bastions of old Fort Rotterdam; wrestling with cane and copra on the landing stages, or sitting in the dark punctuated by the bright glow of their cigarettes, the jaunty, proud Malays are everywhere.

But trade is in the hands of the Chinese; the local barber is Japanese.

Makassar's Prau Harbor

Misty dawn above the horseshoe graves of the rich Chinese has a soft, untropical beauty. The well-kept lawns surrounding the tomb of the old trader known as "Captain China" seem like an oasis amid the fishermen's huts on stilts.

Sooner or later one comes to Makassar's true show place—the prau harbor (page 54).

A few steps from big business and the tiny shops where Kendari silverworkers fashion delicate filigree into silver cobwebs and gold-lace lizards with emerald eyes is the little harbor where are tied up the sailing praus of the Makassarans and the Boeginese, men whose tradition is the sea, whose platform is a tossing deck.

Manned by bronze gods and bulging with gunny sacks, these craft suggest the early ships which rounded the Cape or plotted a new path across the wide Pacific. High sterns are painted like circus posters. At outboard rudders steersmen sit—outside the hull, so that if they go to sleep they'll fall overboard before they can pile up their craft on some such treacherous reef or shoal as nearly wrecked the *Golden Hind*, when doughty Sir Francis Drake passed this way.

Angular, ugly ships, they hide soft curves below the water line. The cluster of their glistening masts is a rabble of mediocrity. But let wide the sails of that gaily painted craft; let fall her long and oarlike rudders; let her ride the waves under the sweep of the southeast monsoon; then the Makassar prau, high-masted, square-bowed, and forward-tilted, has the grace of a bird.

When the sun sinks behind Borneo and sea birds float like shadows against the blazing sky, archipelago life is symbolized by sails, scudding in for a night's rest at Makassar, haven of Malay ships.

Seeing the high-pooped *palaris* in the prau harbor gives one a sense of antiquity, for such ships carried Columbus across the Atlantic, Vasco da Gama around the Cape, and Magellan's men around the world.

A *pajala*, resembling an open Viking boat, becomes a *palari* when the upper works are added. Portuguese colonizers furnished the pattern for this prau design, which still resists the competition of Australian-style *lambos*, although the latter are faster and require a smaller crew.

The Makassar sailor's palari is his home at sea and his club as well. A prau crew is a brotherhood as well as trading company. During many hours spent in the prau harbor I never saw any distinction between captain and crew. Once I had established friendly relations, these sea rovers, descended from pirates, showed a heart-warming cordiality and fellowship.

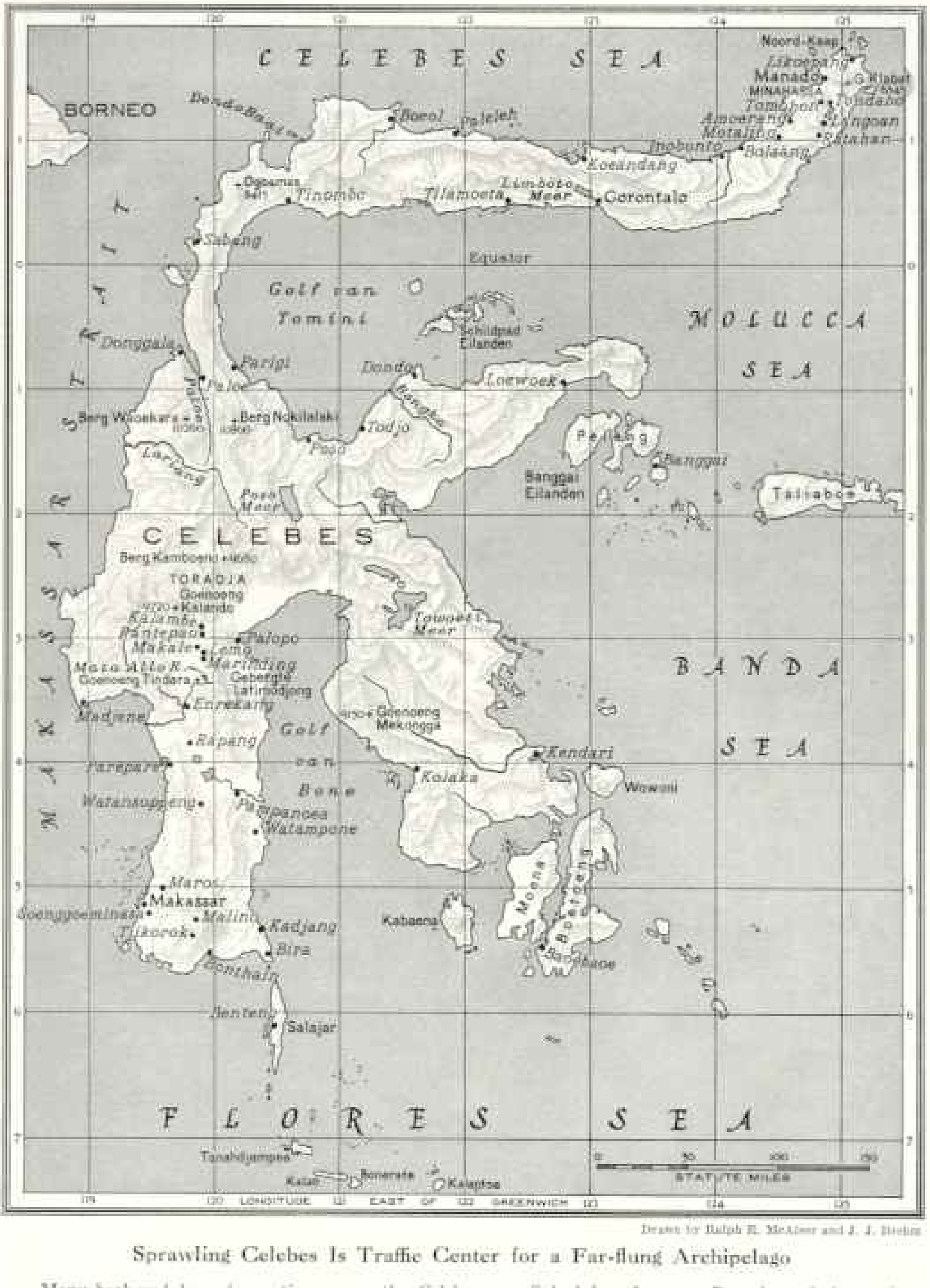
On August 31, the birthday of Queen Wilhelmina, Makassar forgets commerce to give its undivided attention to the racing praus—dugouts as sleek as racing shells and carrying remarkably large sails.

Were it not for outriggers—the *soppé* has one, the *balolang* two—these slender hulls would turn turtle faster than any turtle ever turned. But with a stiff breeze and a trained Malay crew riding the outrigger, a soppé may be the fastest sailing craft afloat.

With wind and outrigger on the same side of a soppé, a skillful helmsman scuds along with the single outrigger high out of the water, much as wartime motorcyclists, leaning far to the other side, lift sidecars over shell holes.

With 1,300 square feet of bellying sail driving a dugout little more than a foot wide, and with several bronze sailors acting as a counterbalance ten feet out from the hull, a Makassar soppé is more like a wild-flying iceboat than a ship.

After seeing these broad-winged racers practice, I was tempted to miss the *Van Cloon*, but compromised by going up into the old lighthouse at nightfall and looking down on the trim racers, almost hidden amid crowds of admiring Malays who were trying to judge how



Drawn by Ralph R. McAfee and J. J. Hicks

Sprawling Celebes Is Traffic Center for a Far-flung Archipelago

Many-harbored base for native praus, the Celebes was linked by planes to Batavia and Amsterdam in 1937. The Celebes is under the rule of Governor General Starkenborgh Stachouwer, personal appointee of Queen Wilhelmina, whose powers were vastly increased when the Netherlands was invaded by Germany. His wife, First Lady of this island empire, was Miss Christine Marburg of Baltimore, Maryland. Early explorers believed the long-tentacled land mass to be a whole group of islands instead of a single one and called it "the islands of the Celebes."

Photograph by Maynard Owen Williams

Sometimes a Skirt, Sometimes a Shawl, the Gorontalo Sarong Is Here a Veil

As an ally of Moslem modesty, the garment is used in many ways. Here a young girl is among friends. In public places the slit is closed to hide all but the eyes. In the fields the fabric hangs free or is wrapped about the body, with or without a blouse (page 62).

to place their bets for the next day's races. Then, for a few weeks, I left Makassar, Manado bound.

$10 Gold Pieces as Buttons

At Parepare the first concern was to land the homesick but hopeful Javanese pioneers. Trooping ashore, they passed through one inspection after another while friends stood guard over their piles of pans and bundles wrapped in sleeping mats, soft in texture but almost paper-thin.

As the ill-clad pioneers scrambled ashore, I caught sight of a Javanese woman who was getting more than thirty dollars' worth of pleasure out of $30 worth of gold. Her high-heeled mules, caught in the rusty iron ladder, were recaptured by flexible, prehensile toes. Her slender hips were swathed in an autumn-brown sarong.

Diamond earrings and a diamond ring set her apart from the colonists. But what she took pride in were three American ten-dollar gold pieces, linked together by beauty chains and worn as blouse buttons. These disks of gold were something she could touch, weigh, and gloat over. Mere metal, they gave her confidence and poise.

Lined up, waiting for the Javanese immigrants, were dozens of American motor trucks. Load after load rolled away, and, as their motors roared and the dust clouds rose like a screen, the ship's officers saw their passengers turn to motorcars for their transportation.

When the monsoon is unfavorable, the steamer wins cargo that would otherwise travel by prau. When storm makes a landing impossible, trucks carry the cargoes. Thus roads wipe out sea lanes—and an archipelago renowned for its sailing craft becomes oriented to land traffic.

Motor routes are now confined chiefly to south Celebes and to Minahassa in the north. Even letters between the two regions travel by steamer. Mail may take 16 days to catch the fortnightly express steamer at Manado and get to Makassar, 820 miles away.

Less than half that time is required for the flight to Amsterdam, 12 times as distant. When I was sending airmail letters from Manado to Washington, I counted Makassar—in point of time—as halfway home.

Soon the road systems of the Celebes may be joined and motorcars will roll all the way from Bonthain to Likoepang. Then, when the monsoons pile up heavy surf on the beaches

Makassar, Chief Port of the Celebes, Is Maritime Center of the Vast Malay Archipelago

Here nature's products meet man's inventions; copra and copal are traded for typewriter and talking machine. Dawn finds the harbor full. By sunset glow the steamers are off for Manado and Manila, Ambon and Ternate, sleepy Bandanaira's nutmeg groves and wild New Guinea's oil fields.

Photographs by Maynard Owen Williams

Minahassa Christians Off to Church by Pony Cart—Near Langoan

One can judge their age by their clothes—black for old folks, bright sarongs and white blouses for women, and one-piece knee-length dresses for girls.

Photograph by Maynard Owen Williams

Jungle-grown Rattan, Raw Material for Summer Furniture, Reaches the Port of the Praus at Makassar

Photograph by Maynard Owen Williams

Nature's Cornucopia Serves as a Paper Bag

Tough, waterproof, and capacious, such a twisted palm leaf makes a handy container for five cents' worth of tiny shrimp. Billions of flavorous *Caridina* appear once every moon and are relished with rice at Gorontalo.

and the boat crews are hampered, travel will turn from leisurely, breezy decks to impatient and dusty roads. But these are delightful days, safe from the piracy Netherlands patience has banished, not yet spoiled by hurry and noise.

On these beautiful but treacherous coasts, the steamer comes into port at dawn, when tropical day is at its best. One rises at five, sips coffee, goes ashore with the boat crew, watches the muscular fellows wrestle rice or copra, visits the palm-shaded beach or seaside town, and returns for breakfast while the ship gets under way and slowly cruises along under the vertical rays of the tropical sun.

Lightly clad, freshly bathed, and fanned by soft breezes, one enjoys a strange detachment and peace.

An iced sherbet on deck, a light lunch, a bit of note taking, letter writing, or reading, and there goes the anchor for another palm-fringed port where one can stretch his legs and imagination before coming back at dusk, with the little ship a black blot against the radiant sky.

I traveled hundreds of miles through the Celebes by motorcar, reaching regions more primitive than any that touch the sea.

But pleasant to remember are the peaceful voyages where cargo, not passengers, paid the piper and set the tune—the tune of slow surf, of muscular backs balancing bags of rice, of white-toothed laughter, of blissful ignorance, of small brown babies chatting with big white cockatoos, of Chinese food carried to cotton-shirted merchants playing dominoes in the between-decks shops which serve these tiny ports.

We steamed north to Donggala whence a motor road crosses the narrow northern arm or tentacle to Parigi, one of the many Tomini Gulf ports at which our ship would stop after a long trip around the North Cape. North Cape indeed! But no midnight sun here, two degrees from the Equator.

Thumbing, Oriental Style

Before swift sunset came I was adopted by a group of laughing youngsters who invited me to play badminton. My last attempt had been on the terraced Lebanon in 1912, but whenever I managed to make a point my ten-year-old playmates cheered lustily and stuck their thumbs up in the Oriental way that means "Fine."

When, as was usually the case, my agile opponent won, I stuck up *my* thumb. So we exchanged compliments by thumbing, without a single hitchhiker in sight.

Even where men earn trifling wages, badminton racquets and shuttlecocks are common, and Malay love of sport finds a fine outlet in this grand game. In lands where coconuts and sago provide easy leisure and where the humanitarian Netherlands Government provides peace, competitive games are a godsend.

At Donggala we were joined by a fellow member who had just received his GEOGRAPHIC, one of the 46 copies addressed to the Celebes. Among the 1,132,277 National Geographic Society members and subscribers around the world, one lives on Midway Island in the middle of the Pacific, another on remote Ascension Island in the South Atlantic.

Photograph by Maynard Owen Williams

She Turns Her Corn Burden into a Golden Crown

Carrying maize, a bottle, and a chicken to market, this girl of Toradjaland keeps one hand free to manage her sarong (pages 65 to 80).

What far-flung adventure it would be to follow the familiar yellow-covered magazine on its monthly rounds, from Finland's 353 members to 2 on Fernando Poo off West Africa, from Afghanistan's 16 to 3 on Napoleon's island of exile, St. Helena! Oxcart or airplane, yak or kayak—how would one reach them all?

After crossing the Equator, we turned from north to east, stopping briefly in the beautiful harbors of Koeandang and Amoerang before reaching Manado, seaport of Minahassa. This region forms the northernmost arm of sprawling Celebes.

As we steamed in, before dawn, the perfect cone of 6,545-foot Klabat split the sky, and down the river and out to sea raced a cluster of dugouts, each bearing its name in bold letters—*Hollandia, Hindia, Oetara, Berlin.*

The customs inspection, for which two search rooms are available, was unusually strict, for opium smuggling has long centered in Manado and the war in China screamed in the local headlines. We were on a Netherlands ship, coming from Netherlands Indies ports, but Manado was going through a war scare and we were suspect.

Manado is a convenient place in which to cogitate over the implications of race. In a predominantly Moslem archipelago, Minahassa is largely Christian. The number of Japanese in the Netherlands Indies is negligible and the retail trade is largely in the hands of the Chinese, more than a million of whom live in Java and Sumatra alone.

The omnipresent Chinese, with their hands

Photograph by Maynard Owen Williams

Legendary Helpers Are White Heron and Ungainly Carabao

Natives say that the water buffalo welcomes the cattle heron because it keeps his hide free from ticks. In any case, the bird is rewarded by insects disturbed by the animal's movements. It took patience to make this close-up photograph after the timid bird had repeatedly flown away.

on the archipelago's purse, are welcome neighbors; the seldom-seen Japanese are considered a menace. And during my visit to Minahassa, headlines from the Far East were doing nothing to cause authorities or subjects to revise their feelings.

Before returning to the Minahassa, I rode on around to Gorontalo where the spine of the peninsula slants steeply to the sea. From the top deck it seemed as if our steamer completely blocked the river mouth.

Veiled Women Watch Modern Movies

Gorontalo Moslem women veil themselves behind a sarong, a most flexible mask (page 57). The slit can be widened until the whole face is visible, or narrowed so that only the eyes are seen. Gazing at modern movies of sarong-clad sirens, Gorontalo's women veil themselves so closely that their own brothers might not know them.

Inland from Gorontalo is Lake Limboto, a shallow lagoon abounding in fish and alive with dugout canoes. A short motor ride carried me to the various lake-side markets and to the weirs where fishermen, swirling circular nets, win rich rewards.

Once every moon—if my informant be accurate—tiny fresh-water shrimp, *Caridina nilotica*, school at the surface and there is cheap food for all. On tasting this monthly ration of the poor, I found it excellent. Lacking paper bags or the baled newspapers which carry American news to people who can't read it, natives fold the slippery mass of tiny shrimp into an accordion-pleated palm leaf which is strong, handy, and watertight (page 60).

Motorcars are not numerous at Gorontalo, but neither are accidents. At the blind curves a line of posts separates the two lanes and even a pony cart or a pedestrian has a chance.

Back of Gorontalo are kapok farms, their trees, leafless when I saw them, loaded with pods full of a silky fiber of a waxy nature. Almost useless for textiles, kapok fiber, which resists vermin and moisture, ranks with cork as a filler for life preservers. Its elasticity prevents it from becoming lumpy.

Men who deplore the overplanting of coconuts predict a great future for kapok. The oil from its seeds is valuable in an age when oil-bearing vegetables strive to outdo one another in providing material for munitions, food, and soap.

Coconut trees fringe the long shoreline of the Celebes, but on the higher slopes kapok

limbs rise like crosses and kapok pods cluster thickly against the sky.

Before daylight we crossed the peninsula to Koeandang, riding out along the bay to gaze down upon it as the sun rose and our little ship came in. The following dawn met us at Inobonto, whence comes excellent copra.

Bullock Carts on Balloon Tires

In many parts of Malaysia the copra is pried loose from its shell and dried in the sun until it looks like a castoff shoe sole, curled by the heat and touched with mold. But between Inobonto and Bolaäing are some coconut estates where No. 1 copra is grown, so I walked between ports while the steamer took on cargo.

Down the long aisles with fronded roofs and slender columns come balloon-tired bullock carts, laden with coconuts.

The load is dumped and on sharp-pointed stakes set in the ground the tough husk is split off. With a long, heavy blade a man in a breechclout splits the brown shells into two hemispheres, spilling the colorless milk and revealing the clean white meat.

Then the copra-on-the-half-shell is dried on a long metal floor, under which blazes a carefully controlled fire of husks. After it is toasted, the meat comes out of the shell more easily and in more uniform pieces. In wide trays it is again dried for days.

Eventually the coconut oil may find its way into soap and margarine for beauty bath or frying potato chips—or into nitroglycerin. Netherlands Indies officials encourage the production of No. 1 copra, with discouraging results, but Minahassan Christians, among the progressives, avail themselves of government advice and aid.

Back at Manado, I obtained an American car for my tour to Tomohon, Tondano, Likoepang, and Ratahan.

"You won't like the Minahassans," said my friends. "They're too civilized. They let one man support the whole family. They copy European dress.

"Give 'em a sarong and a thin blouse, let 'em comb their hair as smooth as oiled ebony and they're fine. But put 'em in patent-leather slippers, a peach-colored dress to their knees, and a permanent wave, and it's no wonder they sing the 'St. Louis Blues.'"

Minahassa welcomed Portuguese priests and Dutch conquest without a fight and settled down to providing clerks and stenographers for Java. The government depends as much on the Minahassa for white-collar workers and clerical skill as it does on Ambon for soldiers.

One reason for the trend toward modern clothes is their cheapness. A really good batik sarong is costly and a chic woman needs many. Diaphanous *kabayas* fastened with gold pieces have a short life and not always a merry one.

Minahassans prefer a variety of modern dresses and the sense of being up to date. The Sunday parade in the highlands shows the trend. The old folks wear plain black; the middle-aged, bright sarongs; the young women, European dress (page 58).

A few months later, when the girls have found jobs in Java and motor up to a cinema palace in Batavia's Deca Park or to Soerabaja's "Hollywood Dancing," they feel at home. If the Javanese fashion plate, with a pleated fold at the front of her hand-dyed sarong, seems more chic, it may be because she has vastly more to spend on her clothes.

One September day I rolled down from the buffalo-grass hills near Ratahan to the Molucca Sea, looking toward Ternate and the Molucca (Spice) Islands. The Government Resident was visiting the region and palm-skirted arches bearing the word "WELKOM" were being built over the road. A holiday atmosphere pervaded this peaceful coast.

Then, down through the coconut grove came a slow procession with men in faded blue bearing a simple coffin on shoulder poles. Those who followed were divided between those in funereal black and the younger men in white ducks.

This Minahassan funeral carried me across time and space to a country church in Wisconsin years ago. The words were different but the music was the same. "He promised never to leave me, never to leave me alone." Long after I lost sight of that sorry little procession, the sound of that Christian hymn continued in my brain, and the exotic scene, by means of this familiar, nostalgic tune, related itself to my own boyhood on a Wisconsin farm.

U. S. Newspapers Go East to Die

The Minahassa has its own colonists who are pushing the Christian front along the narrow peninsula into regions once ravaged by pirates and slave hunters. One day I followed them along the curving road that climbs from Amoerang to Motaling.

Rain drove me back, for the roads are not good, and in the Motaling market place—remote enough—were spread out what my chauffeur asserted were roasted squirrels, lying on a headline background of "Goggin Pleads Guilty," "Seek Escaped Convicts Here," "Brookline Police Sergeant Named at Dedham." Bad news travels far. Old United States newspapers by the ton are shipped to the East as wrapping paper.

Educational center of the Minahassa is Tomohon, cool neighbor of Manado. There, where drying cloves were turning from green to dark brown in the sun, I had arranged for a *tjakalèlè* dance. Wearing conquistador helmets decorated with bouquets of feathers, these men struck fighting poses and looked as ferocious as possible. Their Falstaffian waists were heavily padded with once-bright tapestries.

After the savage tjakalèlè I had seen on the island of Ceram, the Tomohon version seemed tame. But just above the resthouse was a school to whose pupils in gold-rimmed spectacles and European dress this dance seemed stranger than it did to me. So the fierce-faced dancers, helmeted like Pizarro's troops, not only repeated their performance but took real delight in making the young coeds squeal with mock terror at their grimaces.

Head-Hunting for Sentiment's Sake

From Tomohon to Toradjaland is a long jump, from the most progressive region in Celebes to the most primitive, from aspiring stenographers to pagans against whom the charge of head-hunting still lingers.

So far as the traveler is concerned, it is a purely academic question, for unless he betrays a sense of superiority among them, a more friendly group than the Toradjas he is not likely to find (pages 65 to 80). Head-hunting, if practiced at all, is a sentimental adventure, designed to provide the lonely dead with a companion shade, and what kind of companion in Inferno or Paradise would an American writer be for a Toradja mountaineer?

Magnificent scenery, a delightful climate, and exotic appeal make the mountain country of the Toradjas unsurpassed in all the archipelago.

After the corrugated-iron roofs and undistinguished, though often highly comfortable, architecture of the seaports, I was impressed by the long-roofed homes of the Toradjas, shaped like grounded war praus propped up on shore.

Reflected in paddy fields dotted with white cattle herons (page 62), the Toradja villages are as distinctive as the high-gabled kampongs of the Bataks in Sumatra.

The projecting roof, built up of many tiers of bamboo halves, shelters a porch which is both reception room and clubhouse, intricately carved and painted with earthen or bark dyes in red and black. The steps leading to it are vestigial versions of a ship's ladder.

The Toradjas, with a genius for geometrical patterns, scratch and burn intricate decorations onto the smooth surface of bamboo. Rows of human figures, admirably spaced, are separated by bands of pyrographic patterns, the whole working out so perfectly that intricate measurements seem to have been employed.

For the infrequent visitors, Toradja artisans make napkin rings around whose periphery humble artists carry their designs, coming out evenly at the completion of the circle. The same skill is used in larger surfaces. Across whole house fronts tiny scrolls and circles march without once losing step—geometric design effortlessly attaining the required Q. E. D.

Where the whole valley floor is needed for growing food, the houses are built on rocky hillsides under deep greenery.

When the annual fair spreads its exposition stands in Makassar and a government bureau uses miniature paddy fields to teach the Malays better rice culture, no exhibit attracts more attention than the Toradja house, a relatively colorless imitation of the imposing porches in Toradjaland.

That the Toradjas are head-hunters, that the strange *tau-taos*, or doubles, on their graves are mummies protected by thick paint, that a lone traveler is in danger—I had no evidence of any of these thrilling characteristics, bequeathed by gossip. But if there is a more thrilling portal to any primitive region than that to mountainous Toradjaland, where is it? Whether one climbs the corkscrew jungle road from Palopo to Rantepao or goes north, as I did, from Parepare, the approach is marvelous.

Up from Rapang and Enrekang we went, deeper and deeper into the mountains, higher and higher above the valleys. In some places the stream is half a mile lower than the road. In other spots they roll along together, side by side.

Big outcroppings of chalky rock are isolated amid green fields and divorced from the long line of the Latimodjong Range. One of them, Goenoeng Tindara, rising above the tumbling torrents of the rain-swollen Mata Allo River, is as erect and smooth as a signboard in a meadow. From miles away it draws the eye. Seeing so massive a bare space going to waste might break a bill poster's heart, but not a Toradja's.

These primitive people, impressed by the wonder of this towering megalith, either cut or utilized a level channel near its base as a place of burial. With field glasses one can see this corridor of prau-shaped coffins long before he comes to it. Later, he can stand beside that swift stream—called "The Eye of the Sun"—with the cliff face rising like a windowless skyscraper before him, and count the heavy

Photograph by Madeline Fischer

Off to Market with a Pair of Squealing Porkers

This Toradja "pig eater" of south Celebes smiles at the weight and protests of those he takes to town. When he reaches the village, he will doff his turban and wear it as a shoulder scarf. To lessen overcrowding in Java, the Netherlands Indies government has brought "garden isle" colonists to the Celebes. This series depicts the lives and strange funeral customs of the Toradja mountaineers, upon whose unfenced lands the new colonists are encroaching.

Photograph by Helen Fisher

On the Way to Market, Toradja Pigs Are Washed and Hung Up to Dry

Suspended from bamboo poles by bamboo strips, these Celebes porkers get a beauty treatment to add to their sales value. Pork is relished by the Chinese and Toradjas of the Celebes, although it is forbidden to their neighbors, the Moslem Malays. Bamboo is here employed as carrying pole, cord, and lattice fence, but it also serves the Toradjas for many other purposes, such as house roofs and walls, water and wine jugs, ladders, and sometimes, when split, as water pipes.

Photograph by Dr. Frank Buechner

Their Ancestors Hunted Heads; These Women Shade Them

The lightly laden Toradja wears shorts instead of a loincloth and his womenfolk carry the main burdens.

Photograph by Maynard Owen Williams

Hand-picked Rice and Softly Woven Baskets Surround a Tribeswoman

Soon her husband will come with a pony to carry home the crop. Good roads and clean resthouses enable outsiders to visit hitherto little-known Toradjaland, whose center is Makale.

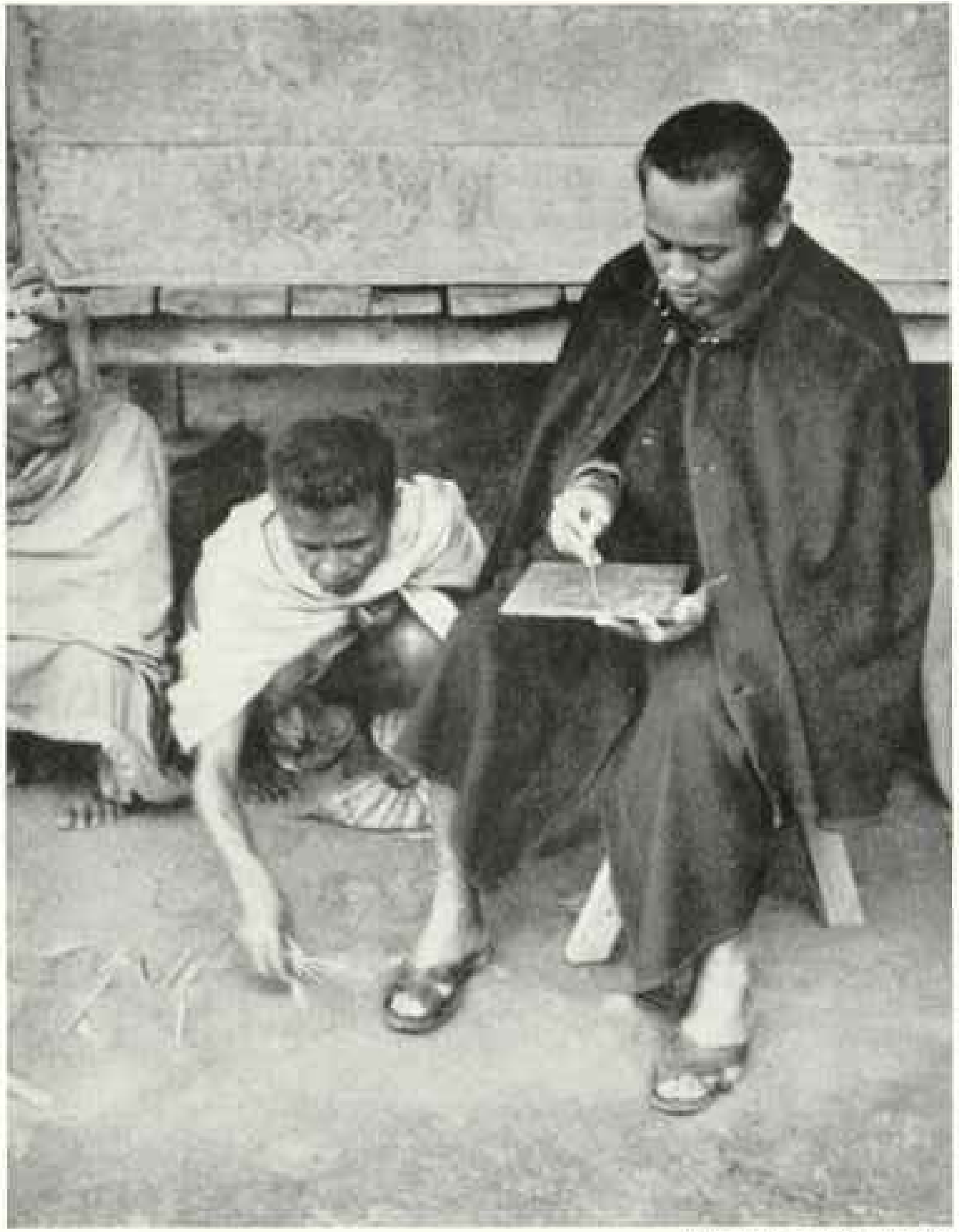
Photograph by Dr. Franz Stoedtner

Jungle Ancestors of Great Suspension Bridges Are Such Swaying Spans above Swift Celebes Streams

By twisted withes of bamboo and rattan Toradja tribesmen solve their problem of how to cross deep rivers.

Octopus and Rice Plants Decorate a Celebes Sun Hat

Because they dislike carrying burdens in their hands, the women combine transportation with millinery and change their hat style with each trip.



Photographs by Helen Florian

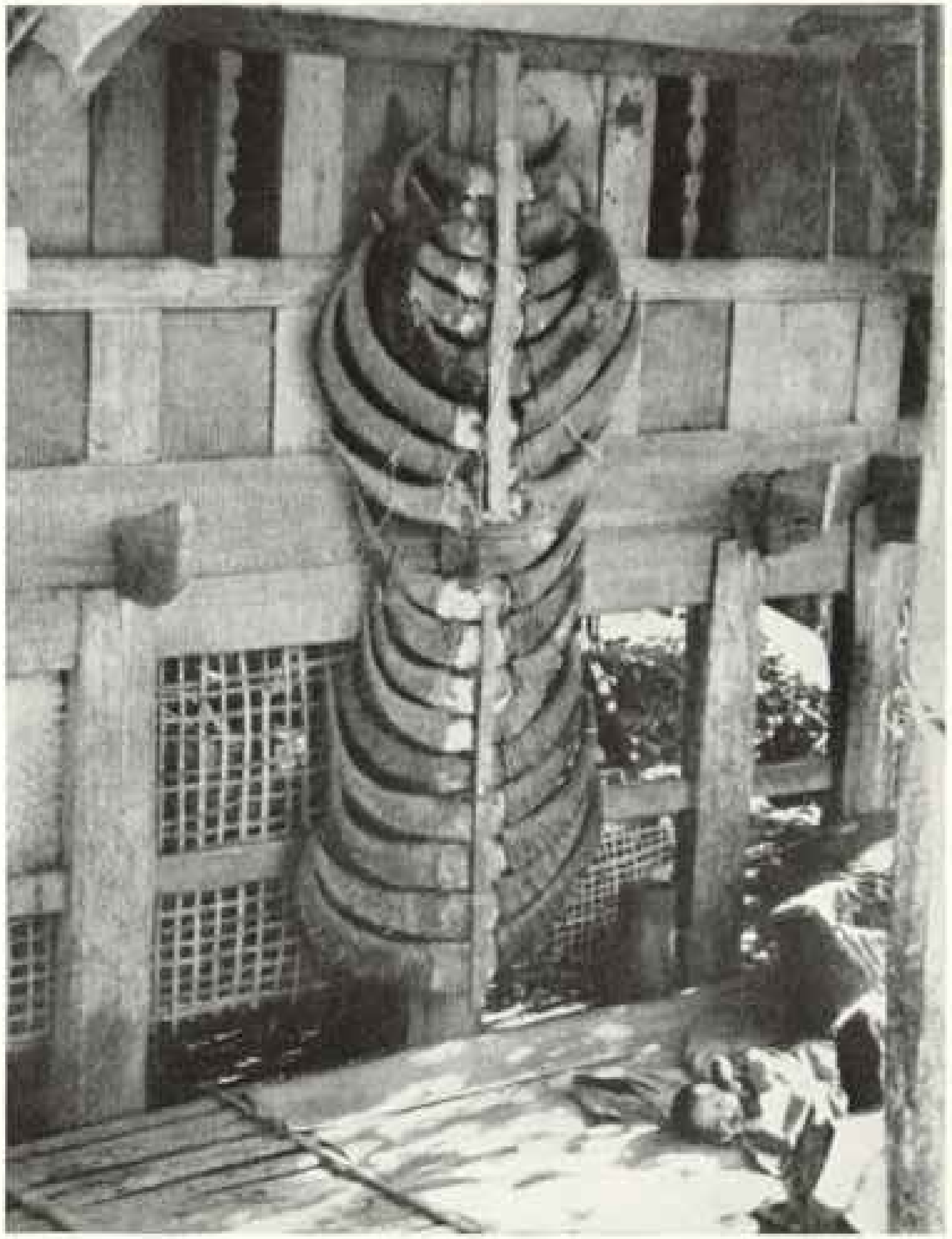
The Roadway Serves a Toradja as a Tax Blank

With small sticks, the mountaineer indicates what property he owns. On a rude slate the tax collector transcribes the number of fields and flocks.

Photograph by Maynard Owen Williams

Clinging to a Hillside above Flooded Rice Fields, This Toradja Village Hides under Bamboo and Palm

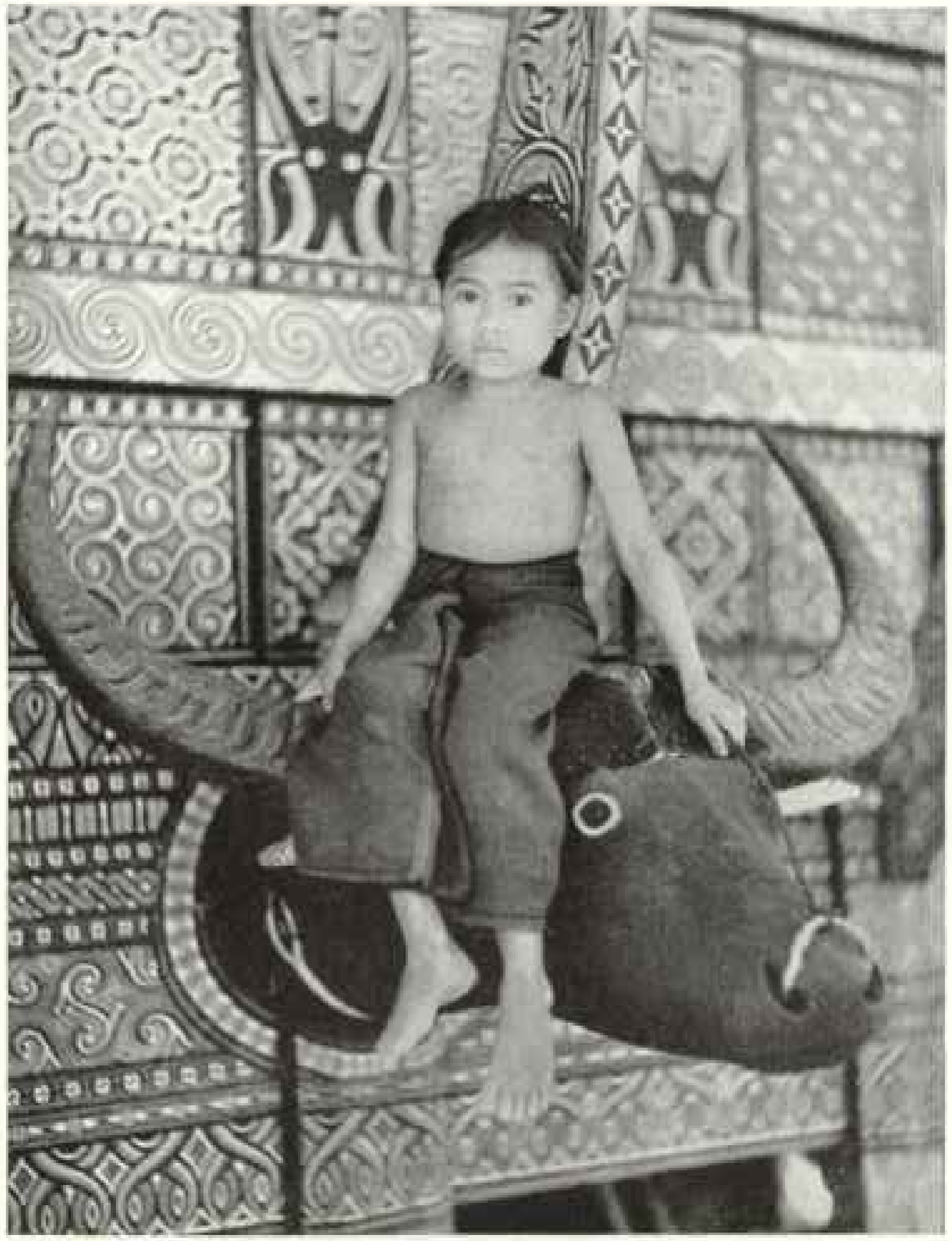
Newest and most ornate of the structures is the granary on stilts (right) belonging to the local chief. Its lower floor is the community clubhouse.



Photograph by Helen Fiedler

Bullock Horns Are Signs of Honor

Instead of sending flowers, friends and relatives bring bullocks to a funeral. The beasts are slaughtered for the feast and their horns adorn the house. This extravagant custom is now curbed by thrifty Netherlands administrators.



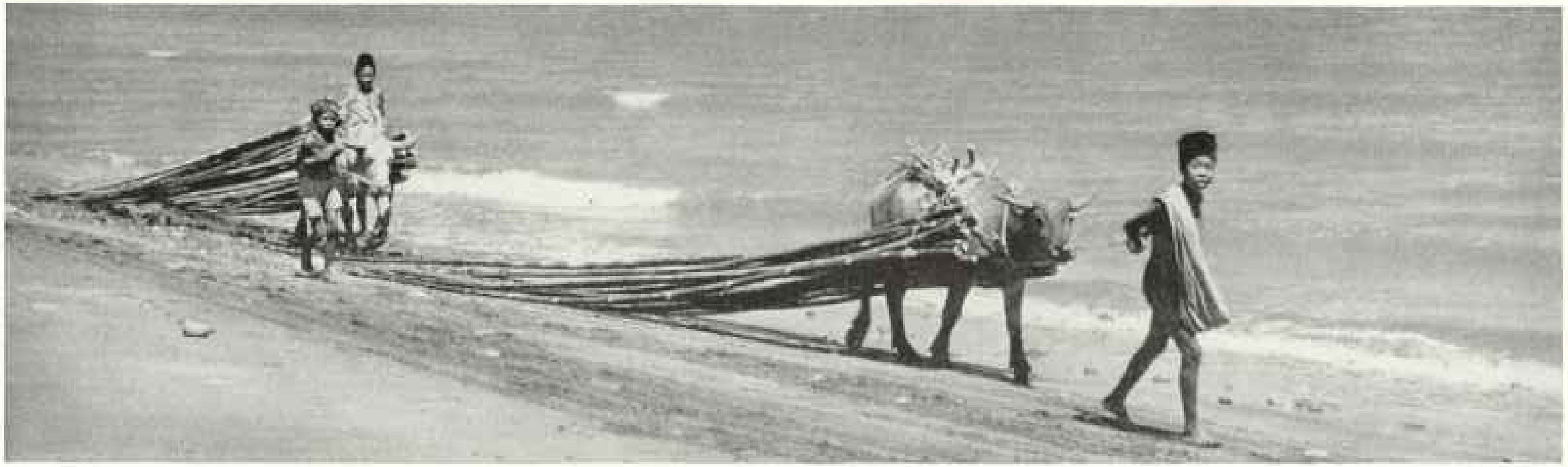
Photograph by Maynard Owen Williams

Intricate Sculpture Decorates a Toradja Home

Sitting on a wooden bullock head and clinging to a real horn, this young girl poses against a background carved and painted in red and black. In this house lives the woman leader of Kalambe.

Eight Sun-bronzed Toradjas Strain at a Harrow in Sticky Mud near Marinding

Like a symbolic mural representing primitive agriculture, they pull and push the high-held whippletree across a paddy plot.



Photograph by Maynard Owen Williams

Bamboo Poles, Dragged by Water Buffaloes, Score the South Celebes Sands near Bonthain

Photograph by Maynard Owen Williams

Are They Thatch-covered Praus or Piles of Bamboo? Neither: Toradja Homes and Granaries

Shaped like long boats under tarpaulins, the houses seem to be shored up ready for launching. Split-bamboo roofs are so thick they resemble lumber piles. The Toradjas are neat and not unfriendly, despite their former reputation as head-hunters.

Photograph by Maynard Owen Williams

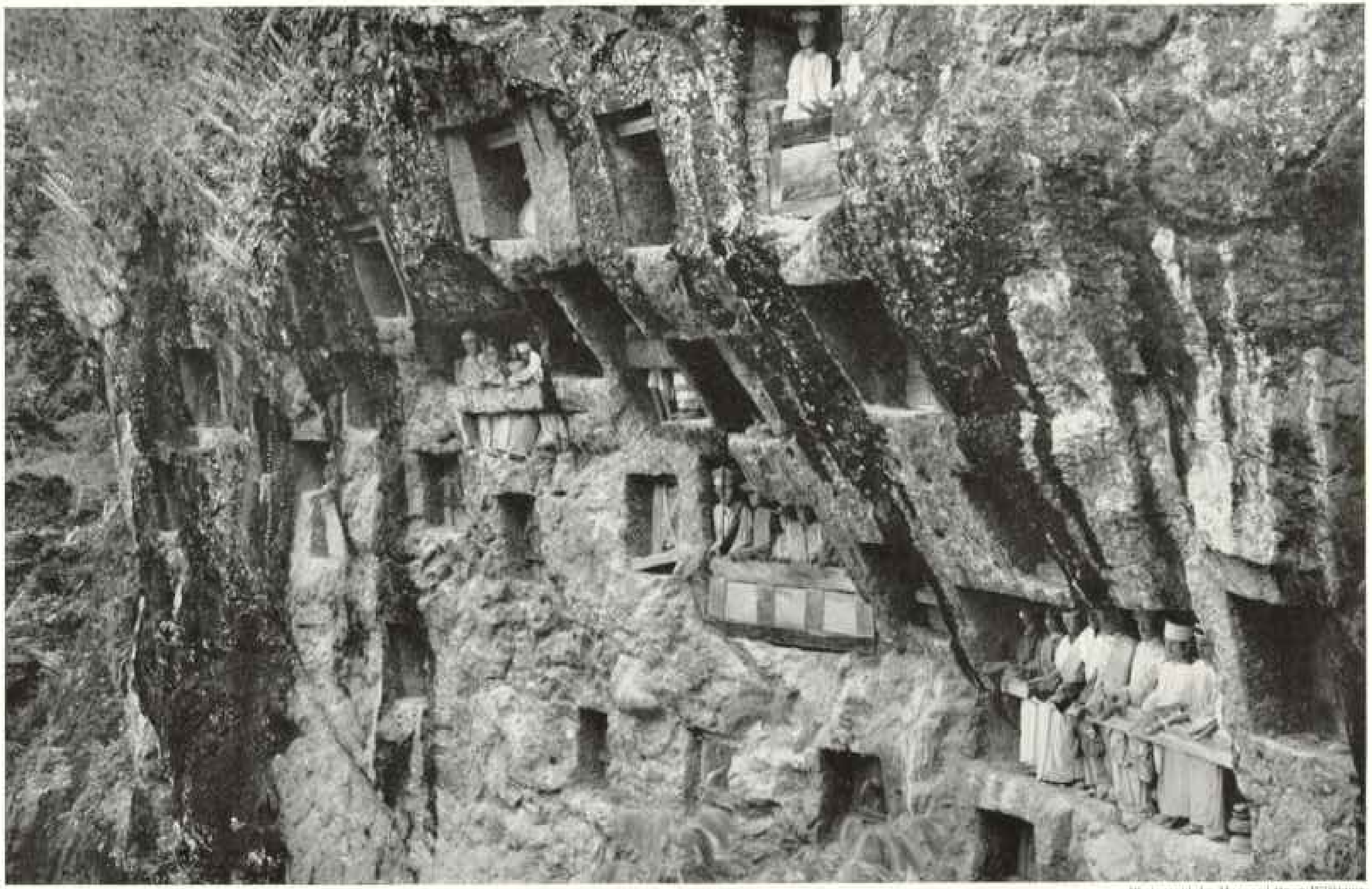
At the Foot of Goenoeng Tindara, a Gigantic Natural Headstone, Toradja Braves Are Buried

From miles away one can see this flat-faced outcropping of rock, appropriated by primitive men as their natural mausoleum.

Photograph by Hilmia Fischer

In a Rock Gallery between Towering Cliff and Rushing Water, Ancient Coffins Slowly Crumble

On a horizontal rock ledge, a quarter of the way to the top and high above the stream, Toradja mountaineers deposited their dead in coffins shaped like boats.



Photograph by Maynard Owen Williams

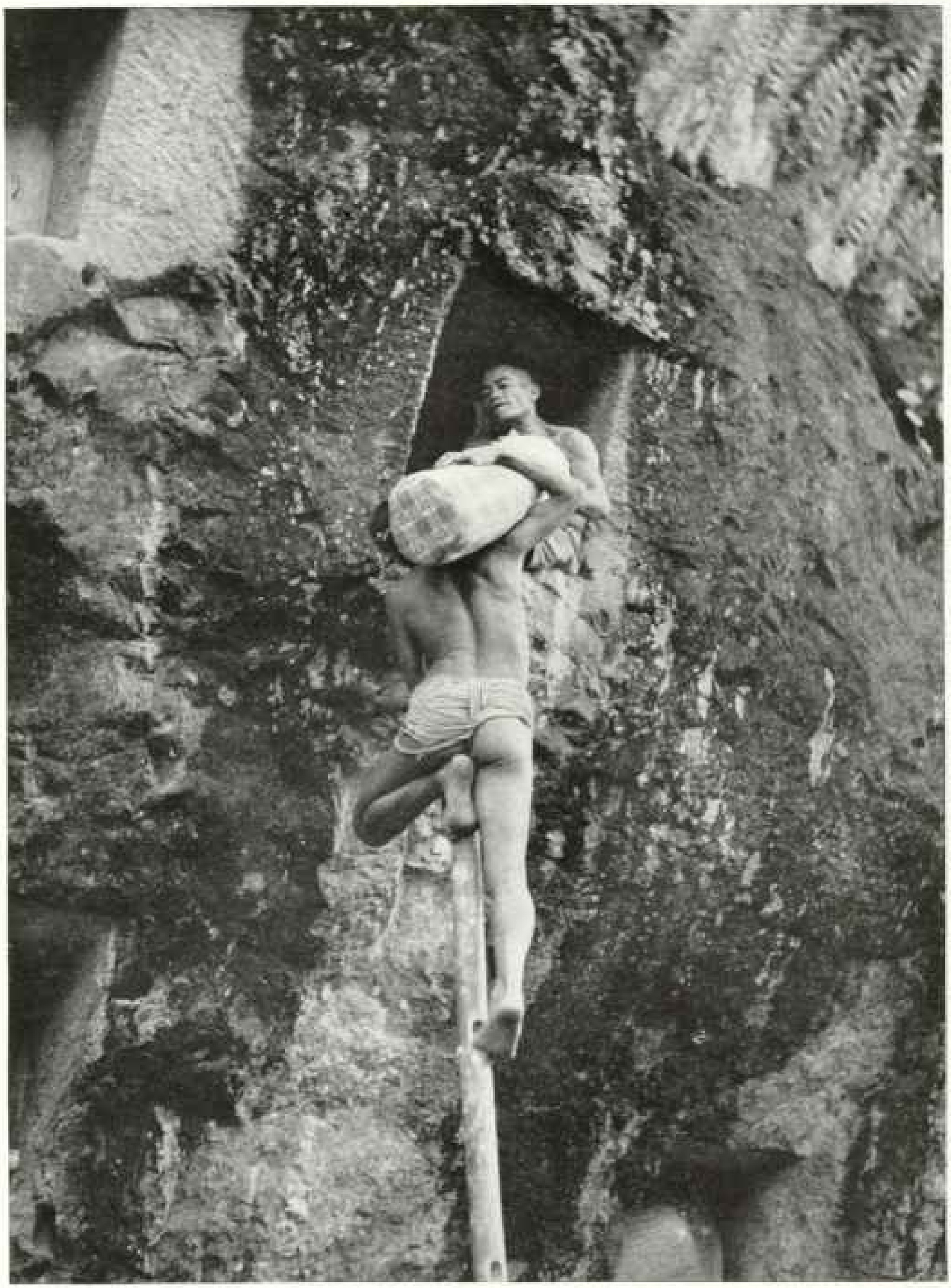
Staring "Doubles" Stand Ready to Welcome New Arrivals at Lemo's Funerary Cliff

When a prominent Toradja dies, his portrait-figure joins the gallery of wooden statues decorating the cliff. Burial is often delayed for a propitious day, the settlement of an estate, or the purchase of enough water buffaloes for slaughter to give full honor to the departed one.

Photograph by Dr. Franz Stoellner

Like Deathless Spectators, Portrait Figures Look Down from the Lemo Rock Cliff

Side by side with burial cells into which Toradja corpses are stuffed are grotesque figures with sleepless eyes, fully dressed and often provided with traveling bags.



Photograph by Maynard Owen Williams

Up Toe Holds in a Green Bamboo, a Lithe Toradja Carries a Body to Its Cell Tomb

With a few broad-knife strokes, a pole from the near-by bamboo thicket becomes a ladder. Up its almost-perpendicular slope the child's remains are being carried in a tight-rolled cylinder covered with bright cloth (page 81). When the gaudily painted doorway is replaced, these two men will descend. Their fire, over which a single carabao is being roasted, will light this shadowy Lemo cliff, one of many rock masses which rise abruptly from the lush green rice fields.

Like a Powder Charge for a Big Gun, the Departed is Borne to the Lemo Cliff

Photographs by Maynard Owen Williams

A Mother's Toil-worn Hand Gestures a Last Farewell

Amid dancing and feasting, the heavily veiled parent kneels beside her eight-year-old daughter.

Ceremonial Mourners Mass for a Long-postponed Burial Entombment in the Cliff

Photographs by Helene Winkler

They Drink a Bullock's Blood to Honor the Dead

Friends arrive from far and near, bringing bulls for the festival. Honored tribesmen slaughter the animals by cutting their throats. While this bull yet struggles, natives with bamboo containers are catching the spurting blood.

caskets, slowly falling to decay in this tunnel-like gash between turbulent water and inaccessible rock face.

Funeral parties carrying Toradja coffins to this last resting place must have toiled like Titans and looked like Lilliputians.

Strange "Doubles" Guard the Dead

Beyond Makale is another rock face closing a side valley, but with trees crowning its top. Converted into a series of vaults, like a colorless copy of those in Petra,* the Lemo cliff is impressive, because, standing like spectators outside the deep pockets in which burials are made, are wide-eyed "doubles" leaning on railings, like sports fans, high above the scene. When a new corpse is buried in a cliff tomb, his double takes its place in the rock gallery.

To photograph these fascinating images as closely as possible, I struggled up through dense jungle growth and emerged on a crag almost level with the portrait figures, their eyes staring in eternal vigilance, their bodies clothed in bright checks and bandanna colors. Some have traveling sacks for their trip to the land of souls (pages 76 and 77).

There was scarcely room enough to set up a tripod, but the cliff was in deep shadow and a long exposure was necessary. Once a tripod leg slipped and the machine leaned toward the void. It was a relief to reach the valley floor again with my camera intact.

Even from close at hand there was no evidence that any of these crude figures were mummies, as I had been told.

Patient inquiries, transmitted through compound fractures of speech from English through Malay to the Toradja dialect, gave no satisfactory clue. If mummified figures instead of portrait dolls ever stood here, the practice is long since extinct.

The Toradjas, far from resenting my presence, guided me up the steep boulders and seemed eager to answer any questions. These I propounded through my chauffeur, with whom I had worked out a fairly satisfactory means of communication with the aid of a little red phrase book.

Swift sunset was upon us when I started to leave, and bright was the fire at the cliff base where some pagan was preparing to roast buffalo meat.

"Tonight," I thought, "when bare-limbed Toradjas cluster here at the base of this tall cliff, and the fires of their feast, illuminating their faces, lift the guardian tao-taos out from the shadowy grottoes and put light in their grotesque, lidless eyes, this will be a memorable scene."

But I had to set out for Makale, where, from a high lawn overlooking a lotus lake, one hears the chatter of the bazaar as a soothing hum, and star dust specks the cool sky until the rising of the moon.

As we entered the already dark tunnel of trees, there came toward us a funeral party. After all I had heard about Toradja graves, I was, quite by chance, to witness a cliff burial. But would my presence and camera be resented?

"They not look your camera; they look your face," said my chauffeur, and as I leaped about on the narrow ledges between the paddy fields one member of the party motioned to me to come closer.

A Child Goes to Her Cliff Tomb

At first sight it did not seem like a sad occasion, for there was dancing and singing. Had a chief been dead, warriors would have sung and danced his praises. Certainly in this case there were some more intent on the feasting than on the burial of this eight-year-old girl.

But as the party swept aside and the cylindrical bundle into which the corpse had been bound was laid on the ground, the heavily veiled mother crouched beside it and threw out expressive hands as if she would cling to her daughter for one more hour (page 79).

The Toradjas used to hold the bodies until a propitious time for burial or until the necessary buffaloes had been assembled for slaughter. By then, sorrow had so yielded to ceremony that special mourners were employed to keep the corpse from being entirely ignored amid feasting which sometimes became an orgy.

But this was a mere child and the presence of only one bullock indicated that the family was poor or the occasion of minor importance. The whole attitude of the mother suggested that the death had been recent, the memory of the daughter fresh and poignant.

The niche into which this little body was to be shoved was perhaps twenty feet above the steep bank and a hundred feet above the rice fields. An agile athlete, having cut toe notches in a length of green bamboo, touched its top to the slightly overhanging cliff and started up the almost vertical pole (page 78).

There was nothing at the top to prevent it from slipping, and the companion who helped balance it seemed unconcerned. But first one, then the other, mounted the slender bamboo rod, squirmed onto the narrow ledge at the

* See "Petra, Ancient Caravan Stronghold," by John D. Whiting, National Geographic Magazine, February, 1935.

Photograph by Maynard Owen Williams

Makassar's Popular Taxi is a One-Man-Power Tricycle

Sometimes this open-top sports model, called "wheels-three," is used by seven passengers, propelled by one pair of brown legs. Such vehicles are seen in Singapore as delivery wagons, but Makassar leads in their use for pleasure rides.

cliff-tomb entrance, lowered the wooden door, and removed the clutter within, the tinsel, if not the dust, of earlier corpses.

Carried between shoulder poles, the tightly packed cylinder, covered with old tapestry, was brought up the steep bank below the gray cliff, and once more the veiled figure of grief spread loving hands upon this human clay.

An Athlete Bears the Body

Slowly and carefully the slim-muscled athlete carried the body up the cliff face while a wrinkled old man mumbled a solemn requiem, and a sea of brown faces looked up at the tall cliff, honeycombed with funerary niches carved in solid rock.

As we moved slowly down to the valley floor, the void was lighted by flickering flames where buffalo meat was being roasted.

A drink was passed around and the sweaty man who had carried the corpse to its niche in the cliff took a deep draught, smacking his lips at an unpleasant task well done.

The noisy scene suggested by my first sight of the barbecue was already developing, but I had not counted on seeing that pitiful little bundle stuffed like a bag of guncotton into a gaping muzzle in that silent cliff of death. Now, as I looked up, the guardian figures seemed to lean forward in their places. Dressed though they were in bright bits of cloth, they had the appearance of watchful mummies, wearing masks with large bright eyes.

On the morrow I started south to Watansoppeng, where trees hang heavy with big bats, to a great cave near Watampone, where brown youngsters, leading the way, carved the cavernous darkness with the sweep of roaring torches, and home to Makassar, metropolis of the Celebes, which spreads wide its sprawling arms in welcome to the Javanese.

A benevolent government, restoring man power to the fertile earth, is creating a new man's land amid former wastes and leaving a bit more elbowroom and breathing space for Java's teeming millions. For them, the unexploited jungles of the Celebes are a safety valve from record-smashing population pressure in the Garden Isle.

Behind the News in Singapore

By Frederick Simpich

"STRONGEST military base in the Far East!" That's what you hear now of Singapore, British-owned island-city off the south tip of snake-shaped Malay Peninsula.

If you could take a 5,000-pound elephant by the tail and throw it 25 miles, then you might sense the power of giant guns that now defend Singapore. I stood below, when they fired one from a hill above me. Overhead the tropic air screamed from friction pains as the colossal shell went growling over mangrove swamps, went howling over distant ships at anchor, finally to splash far out at sea.

Why did the British work 15 years, and spend carloads of gold, to make this tiny far-away equatorial isle so formidable? Because, along with Gibraltar, Malta, Suez, Aden, Colombo, and Hong Kong, it guards her trade routes to the Far East and Australia.

Why do Americans suddenly take such deep interest in Singapore, its shipping, and its defenses? Because Singapore dominates southeast Asia, from which we get *nearly all* our much-needed rubber, tin, quinine, and certain other strategic commodities (pages 106, 107).

14 "Strategic" Commodities

If some unfriendly power took Singapore and the Netherlands Indies and closed American Far East sea lanes to commerce with them, then our position as an industrial nation would be seriously affected. So states our Army and Navy Munitions Board in its study of our raw material deficiencies.

As a geographic unit, the report says, we are more nearly self-sufficient than any other land; yet the Board names 14 "strategic" items as necessary to our wartime defense, our welfare and economic order, "for which dependence must be placed in whole or in substantial part on sources outside the continental limits of the United States."

For some of these essential commodities the United States is now absolutely dependent on lands beyond the Pacific. No wonder, then, we look at Singapore! It is the trade center for that part of the world which would be vital to the United States and Canada should Europe's war spread to the Far East.

Near Singapore, too, lie the rich Philippines, from which we get nearly all our hemp, or "manila fiber," so much coconut oil, chromium, coconut shell "char" (charcoal), and other things. Think again of quinine; 99 per cent of all we use comes from out this way.

Should any power try to cut off our rubber, tin, palm oil, quinine, hemp, etc., we might be forced to defend these sea routes to the East to maintain our industrial life.

The map shows two main gates to the Pacific (page 86). One is our own Panama Canal. The other is the Strait of Malacca, guarded by Singapore.

Steamers between Europe on one end, and Japan, China, Hong Kong, the Philippines, North Borneo, New Guinea, Australia, and New Zealand on the other, nearly all pass this way. But measure the map scale with a desk rule, and you see that Singapore's strength as a naval base lies also in its long distance from any possible foe (map, page 86).

Port's Teeth behind a Smile

Thousands of American round-the-world cruise passengers have seen Singapore. To passing ships it sells silks, silver, jewelry, Malacca sticks, fish, fruit, and 8½ million tons of fresh water a year, pumped 40 miles from the mountains of mainland Johore. Visiting sight-seers roam the bazaars, the night spots, and public gardens; they see the hotel life and the commercial airport; they don't even suspect all the defensive machinery.

Unlike Gibraltar, Aden, or Hong Kong, this low, tree-grown, oval-shaped, 26-mile-long island gives no hint of its deadly striking power. But don't let its serene, Garden-of-Eden aspect fool you!

Those low, pleasant-looking hills that rise above its palms, its pepper and waxy-green rubber groves hold their own grim secrets. So do certain other innocent-looking isles that lie along the channel approaches to the city, on which also you see nothing but still other friendly trees.

Nor do you see the dangerous mine fields that guard the channel. Two ships, a liner and a freighter, hit these and sank while I was there.

What sight-seers don't see at all is Seletar, the mysterious naval base. It hides on the northeast rim of the island, beside a narrow arm of the strait that cuts Singapore off from the Malay mainland.

Few visitors get near it; from the motor causeway to Johore they can see its wireless towers that talk to London. But all they know of its ships and guns, its 1,000-foot graving dock, and that huge floating dock

Photograph by J. Baylor Roberts

Two Royal Air Force Officers Leave Their Headquarters in the Union Building

The Indian newsboy in fez and sarong carries a news flash sheet of the sort displayed in London. All Johore news is important to Singapore, because Johore is the nearest mainland State. The passing trackless trolley bus has first- and second-class seats. In this same Union Building the United States Consul General has his headquarters.

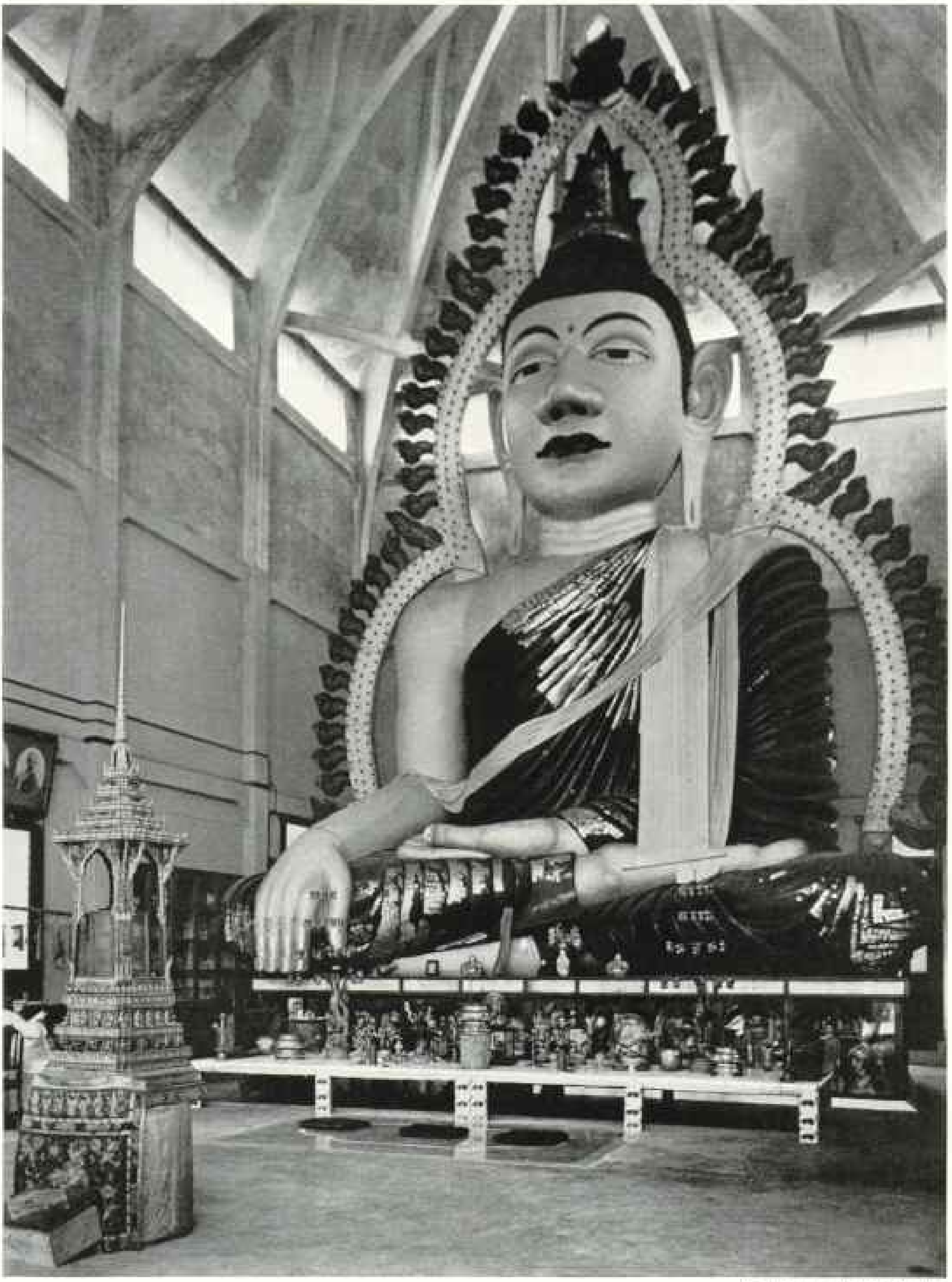
miraculously towed out from England, its oil and munitions storage, is little more than tap-room gossip—and what they can piece together from the sounds of incessant target practice!

Go ashore, and you hear gunfire aplenty. Somewhere, some unseen gunner seems always to be trying out a new cannon. From rooms in Raffles Hotel, guests hear pistol practice in near-by barracks, and any night the air may be full of roaring planes simulating enemy attacks, while a score of long searchlight beams scour the skies looking for the "enemy."

By day snappy young aides whiz about in baby Austins. Troops fresh from "home" or India pitch their tents among the palms and rubber trees.

Lunch with officers of the Hyderabad Regiment and you meet a fine lot of tanned, forthright young stalwarts; for generations their fathers have served England in India. On messroom walls are old colored prints showing their fancy uniforms in years gone by. Here and there are trophies, scrolls, and other mementos of this famous regiment's feats in the long ago.

Most of Singapore's 600,000 people are not at all warlike. Despite army and navy works, this is still a city of shopkeepers. And, except



Photograph by J. Baylor Roberts

To This Gilded Buddha Singapore Siamese Pray in Their Tiger Temple

Forty feet high and built of concrete, the flesh-colored image is decorated with gold leaf and hung with yellow silk. In a cellar beneath this sitting idol is another, in reclining position. Singapore's polyglot peoples pray to dozens of different gods.

Drawn by Ralph E. McAfee

Singapore, on the Strait of Malacca, at the South Tip of the Malay Peninsula, Stands Beside the Crossroads of the Eastern Seas

for a few thousand white civilians, practically all its permanent residents are Orientals. Chinese vastly outnumber all others, who include assorted races, from Persians and Sikhs to Tamils, Javanese, and even Tibetans.

Come back, as I did after years of absence, and you see how like magic this town's tin and rubber booms have paid for filling its swamps and raising up magnificent banks, ornate office buildings, government palaces, and sumptuous homes of miners, planters, and traders.

Years ago I rode from the beach into town over a causeway through foul-smelling swamps. Now all that's filled in and covered with shops and warehouses. Planes light at the city airport on a vast, hard field where once only ducks could light, and sky riders spend the night now in luxurious hotel comfort where alligators used to doze.

So much is written about how Sir Stamford Raffles founded Singapore in 1819 that many think its history began then. The best of it did. But students who dig deeper say the place is many centuries old—that it may have been the Zaba of Ptolemy. Records prove the Javanese sacked and butchered here in 1377. That fight, say Malay annals, left a bloody curse on the soil, which is why no rice grows on this island.

Then Came the Spice Hunters

Portuguese were in the Strait of Malacca by 1511. Sir Francis Drake, first "round-the-world cruiser" under the British flag, crossed these Eastern seas in 1579; Cavendish and Lancaster soon followed.

Then was to grow here the spice trade, that romantic far-flung adventure which so profoundly shaped the course of maritime history for generations. When Europe got its first taste of pepper, spice, and nutmegs from Malaysia, it went on an exploration and sea-trading spree.

Largely to get more spice, England in 1600 set up that most powerful trading venture the world ever knew, the East India Company. Its merchants, sea captains, and soldiers actually fathered the present Indian Empire, of which till 1867 Singapore was part.

So much has happened here!

The *Alabama*, historic Confederate cruiser, held many American ships hereabouts in 1863. When the Suez Canal opened in 1869, Singapore quickly leaped to world prominence. Today it is truly the crossroads of the seas, with nearly 30,000 ships a year calling here. Yet it's now only 100 years, exactly, since the first London steamer got here via Cape of Good Hope.

Look now at all its great banks, hotels, factories, and trading firms (pages 90 and 93). Compare this with its past—when piracy was a brave and honorable way of life, and sordid commerce was beneath a Malay gentleman's contempt.

Hear what a Malay historian wrote of Singapore in pirate days: "All along the beach there were hundreds of human skulls, some of them old, some fresh with hair still remaining, some with teeth still sharp and some without teeth."

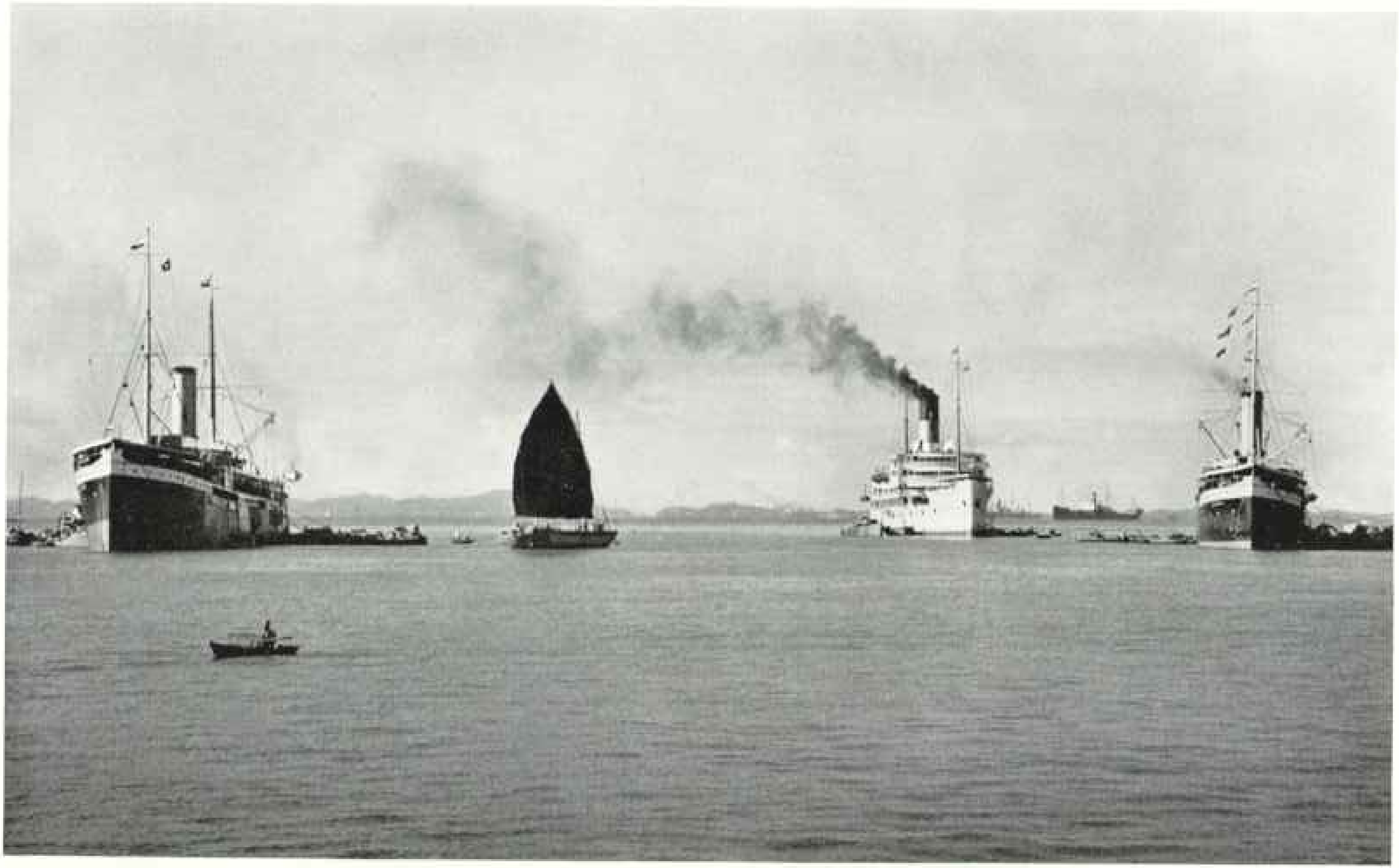
Police records reek with pirate reports. It used to be so bad between here and Hong Kong that pirates would go aboard a ship as passengers, with guns in their hand baggage, and then at the right moment shoot their way to the bridge and seize the ship. They would even report by wireless to company agents, giving false position and saying, "All's well."

Then, at the right place, they'd run the ship inshore and loot it. So highly organized was

Photograph by J. Baylor Roberts

Strangers Marvel at Their First Glimpse of This Startling Hindu Temple

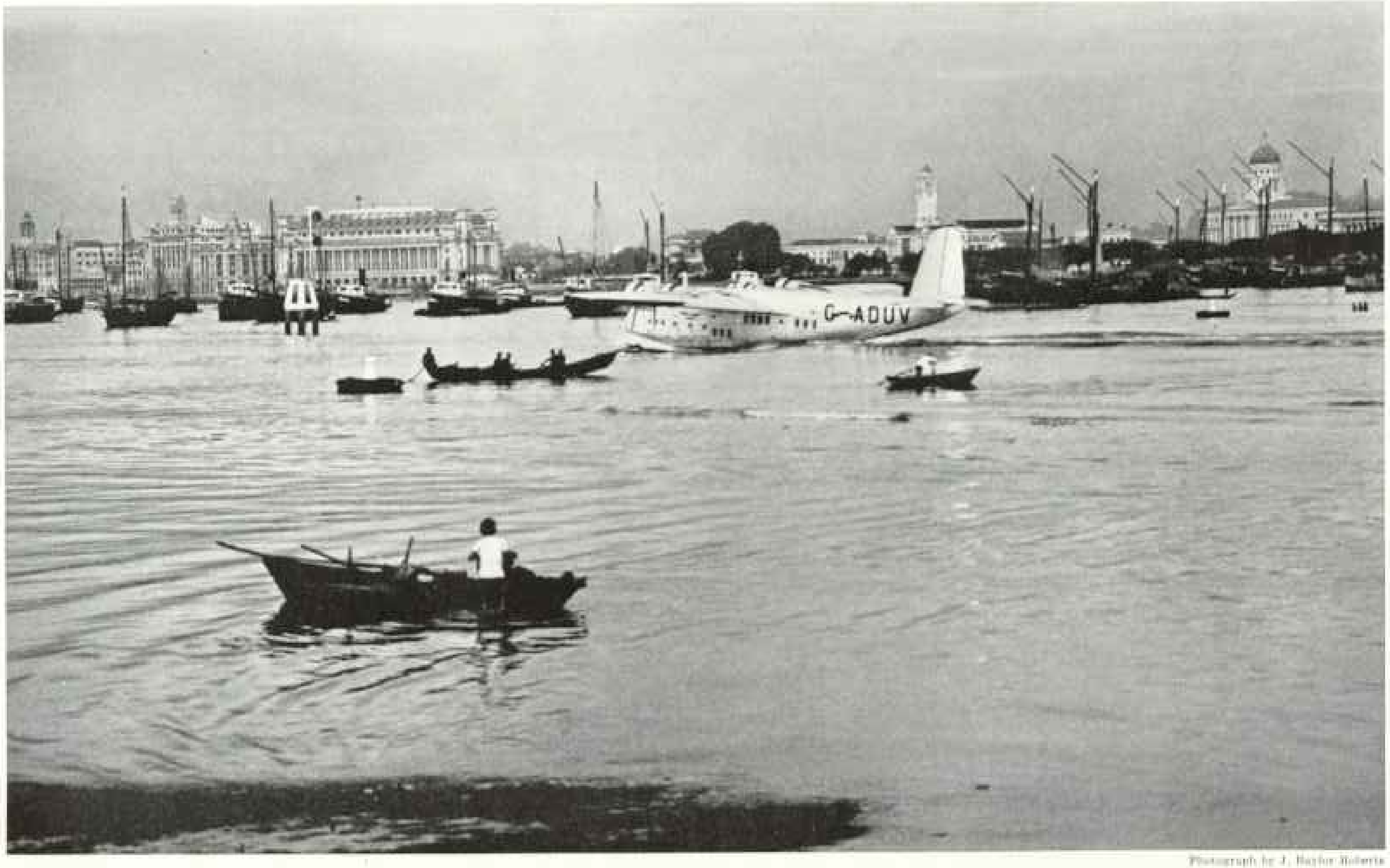
You stare at it and recall Doré's painting of "The World Destroyed by Water." Naked men; cows with flowers about their necks; soldiers in uniform with guns, like the turbaned guard at lower left; girls with parrots and fly swatters; girls with their feet in their laps—all such bizarre sculpture covers the tower over Sri Mariamman Temple. Inside its compound each year, fanatics walk barefooted through pits of red-hot embers.



Photograph by J. Baylor Roberts

Steamers of Eighty Different Lines Serve the Busy Port of Singapore

Some ships tie up at docks. Others drop their "mudhooks" here in the Inner Roads of Collyer Quay. Then junks and lighters swarm about to handle their cargo. On islands seen in the background, Singapore's famous tin smelters are built; certain islands also carry coast-defense and antiaircraft guns.



Photograph by J. Baylor Roberts

From the Civil Airport an Imperial Airways Seaplane Taxies Out to Take Off on its London-Australia Flight

From her boat a girl picks edible seaweeds in Singapore's harbor. Buildings seen across the water are, from left: shipping and banking offices facing Collyer Quay; Fullerton Building; in center, clock tower on Victoria Theater. At right, dome of the new Supreme Court.

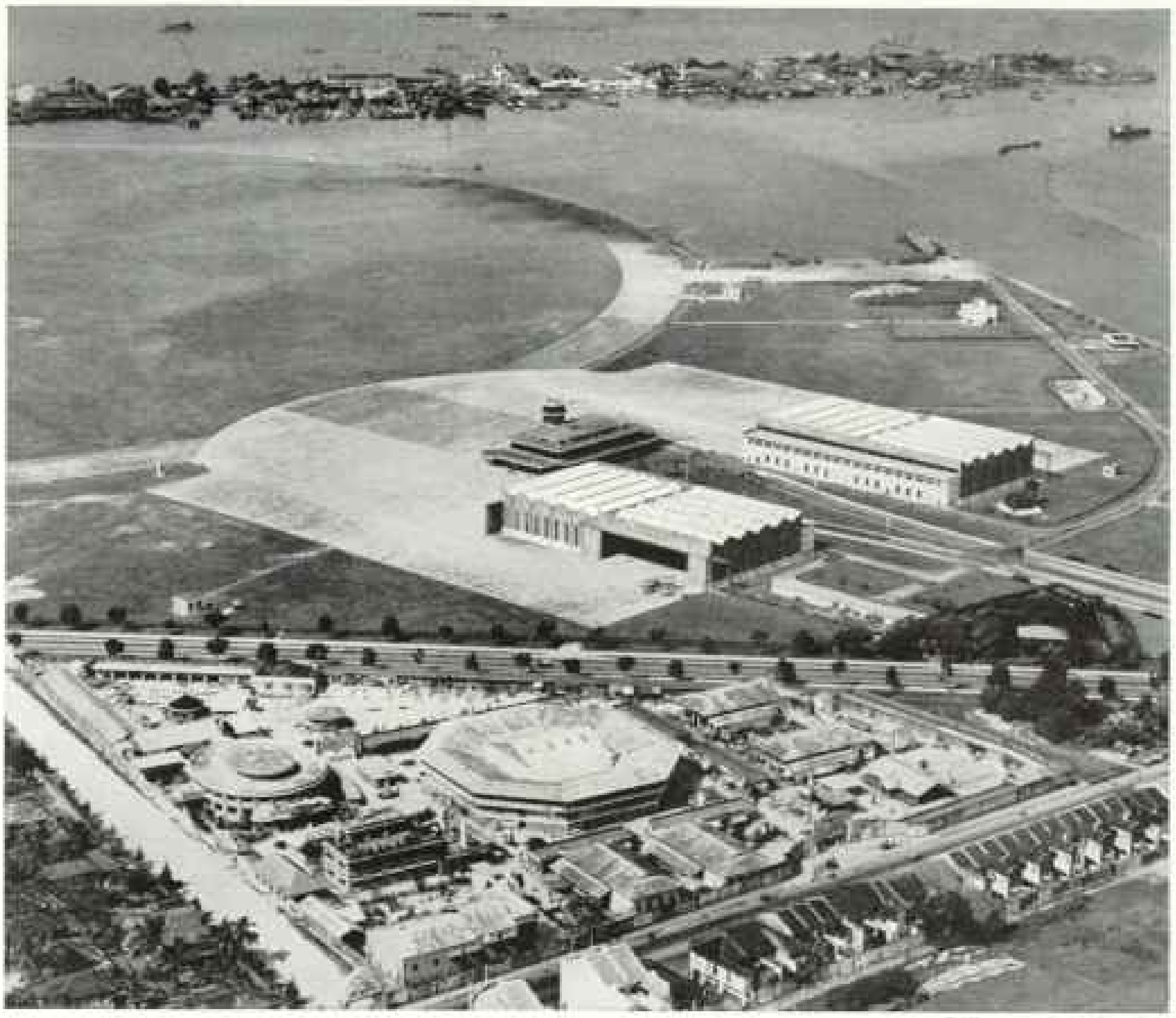
Photograph by J. Baylis Roberts

Londonlike Raffles Place Forms the Heart of Singapore's European Business District

Sir Stamford Raffles, founder of Singapore, prophesied it would become the Orient's "great emporium"—and here it is! Within two blocks of this plaza are most of the city's important traders.

Magnificent Clifford Pier, Sheltered from Equatorial Sun and Rain, Gives Easy Access to the Heart of Singapore

Busy steam launches ply between this pier and ocean liners anchored offshore, hauling the thousands of travelers who annually visit this crossroads of the Orient. Swept by cooling breezes, the vast steel-concrete structure is a convenient gateway to the Lion City's banking, shipping, and shopping centers.



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Parks and Airports Hum Now Where Pirates and Tigers Used to Lurk

"Happy World," in the foreground, is a noisy, colorful Coney Island-like playground of theaters, side shows, dance halls, restaurants, shooting galleries, and mild lottery and gambling games. The Civil Airport reveals fine hangars and a control building (with tower) which also houses excellent hotel quarters for transient air riders. Seaplanes tie up in the background, just off the beach suburb of Tanjong Rhu (page 95).

this piracy that, says one authority, Chinese merchants here and in South China financed these pirates for a share of profits! At Hong Kong piracy still flourishes; down here, patrols have quelled it.

But now new kinds of deviltry rise to worry the law. Singapore has scores of Chinese secret-society feuds, oriental gang warfare; the use by fugitives of false passports and duplicate auto-tag numbers; white slavery, opium smuggling, and other assorted sins.

Dramas of the Courts

"You must have the gift of tongues to be a good reporter in this town," said the Singapore *Tribune* man who showed me through Police Courts. "Besides English and French, I often have use for Malay, Hindustani, Chinese, and a little Burmese."

I found Singapore court dramas much like our own. When a doll-like Chinese flapper, in yellow pajamas and long green earrings, took the stand and burst into tears, the gallant judge weakened and waved her to freedom with a kindly warning!

Less of an actress, another and older woman fared worse. When she heard the decision against her, she told the court in eloquent Chinese what she thought of white man's jurisprudence; when an inspector sought to calm her, she first butted that astonished dignitary square in the stomach with her head, and then jerked off one slipper and tried for a haymaker on the magisterial button!

At one session I sat with a group of Singapore newspaper reporters, all writing in English, and all Malays, Chinese, or Eurasians. The judge himself was a Eurasian, though

Sampans, Shaped Like Wooden Shoes, Add an Oriental Touch to Singapore's Bund

Fort Canning rises at extreme upper left, with Police Headquarters just below. Then Elgin Bridge spans Singapore River. Tower of the Episcopal Cathedral rises at upper right, with the "Padang," or public playground, beside it (page 96). At the left of the Padang, in order, are the Municipal Court, Supreme Court, and Victoria Theater buildings. Along the waterfront are stores, banks, and steamship offices. From Clifford Pier (right foreground) passenger launches ply to and from ships anchored in the channel (page 91).

some police officers were English, and an English lawyer appeared for a Chinese defendant.

When a Christian witness took the stand, he swore on the Bible. A sign read: "It is unnecessary to kiss the Bible." The familiar form of oath, calling for "the truth, the whole truth, and nothing but the truth," is printed on a big cardboard, for guidance of a Christian witness. For Malay and Moslem Indians the Koran is used instead of the Bible.

Some Chinese, firm in old beliefs, take the oath by breaking a plate or cutting off a rooster's head! But this is done in a temple, chosen by agreement, not in open court; it is more of a challenge than an oath and is a long, involved ceremony.

Best court yarn I found comes from British lawyer Roland Braddell's fascinating book about his life in this colony, *The Lights of Singapore*.

"Recently I noticed in the Supreme Court a most evil-looking man sitting at the back of the bar table with his eyes fixed on the empty seat where the Judge was about to appear. I asked who he was, and was told by a lawyer's clerk, 'Oh, he's a *pawang* come to bewitch the judge. But it's all right; he's on our side!' "

Since this town is 80 per cent Chinese and all Chinese born here are British subjects and entitled to travel on British passports, you can imagine the confusion, especially with the whole Orient now suspecting that any traveler may be a spy or secret agent!

With the Honorable A. B. Jordan, Secretary for Chinese Affairs in this Colony, I talked about the work of his department, known as

© Julius F. Friend

Big Billboards Flash News of Bargain Sensations

Here a Chinese sign painter copies from a miniature design held by his assistant. Paper posters are seldom pasted on Singapore billboards, since frequent rains and tropic heat soon damage them. All over the Orient outdoor pictorial advertising is much used, because many potential customers can't read newspapers.

the Chinese Protectorate. It is housed in a vast, courthouselike structure, with a long bench for judges or umpires who listen as Chinese waifs, workers, deserted wives, slave girls, immigrants, and others excitedly shout their tales of woe.

It made me think of scenes on our southern border when Mexican revolution sometimes drives hysterical thousands up and across the line against our immigration inspectors.

This Protectorate tries to regulate the hundreds of Chinese secret societies, some of which are incredibly lawless and vengeful. It controls immigration; settles labor troubles, strikes, etc., adjudicating wage and hour disputes, much on the order of our Labor Relations Board. Most humane and appealing is its work in behalf of sick, lost, or impoverished women and children, and its protection of the numerous *mui tsai*, or female bond servants.

A mui tsai is defined as an unmarried female domestic servant under the age of 18 years, the custody, possession, control or guardianship of whom has been acquired by purchase, gift, or inheritance, or as a pledge for debt.

"Our problems arise out of China's customs and plan of civilization," said Mr. Jordan.

"We have lots of passport and other problems arising out of the ancient institution of polygamy. Other odd cases come up. Private Chinese law has to do with marriage, adoption, etc. They all rise up to worry us: rescue of slave girls, suppression of prostitution, and control of secret societies.

"Such societies started the Taiping War and the Manchu trouble. Singapore is honeycombed with them."

One boy Mr. Jordan told of stole the keys, robbed his planter-boss's safe of a large sum in bills, and started bicycling out a lonely jungle road. He figured his boss would telephone ahead to police to seize and search him. So he got off, cut open his bicycle tire, stuffed in the big bills, patched his tire, and rode calmly into the police net. They had to let him go; no evidence. Long afterwards, when arrested on another charge, he boasted how he had formerly outwitted the police.

Respectable, successful Chinese, on the other hand, form the backbone of Singapore life. They head the charity lists; their clean-cut, alert, and intelligent youngsters reveal

the modern Chinese people at their best.

The Straits-born Chinese girl looks to London or New York for the style of her haircut or afternoon frock—and not back to China.

She plays tennis or basketball, rides her bike, can walk with easy grace in high-heeled shoes, and in a ballroom knows the steps when the orchestra starts a popular dance number.

Of dance halls Singapore has the Orient's gaudiest. As in Manila and Shanghai, here, too, you meet the taxi dancer. She's a strange, moody social product of the changing East.

Among Singapore's many noisy night spots is the "Happy World," a vast Coney Island, its noisy, glittering streets lined with every catch-penny device from shooting at clay tigers to dancing on a raised platform, Malay style, with Malay girls (page 92). In this dance one never touches one's partner; toward the end of the long, exhausting dance both face each other at close quarters and jump up and down as fast as possible—but get nowhere.

Photograph by J. Baylis Roberts

"Could I Wear My Hair Curled in That Paris Fashion?"

Singapore sisters in slit-side Shanghai frocks admire latest French hairdressing styles in a beauty parlor's show window. They spend as much time and talk about their looks and dress as do their European cousins. Toeless are the shoes of the slim girl in white.

Chinese families sit about drinking copious draughts of fruit juice and eating sliced papaya and nuts.

Theaters of all kinds roar with drums and shouts, Hindu, Chinese, and Malay (page 103). Big signs read "Sunlight Pills for Men," "Moonlight Pills for Women."

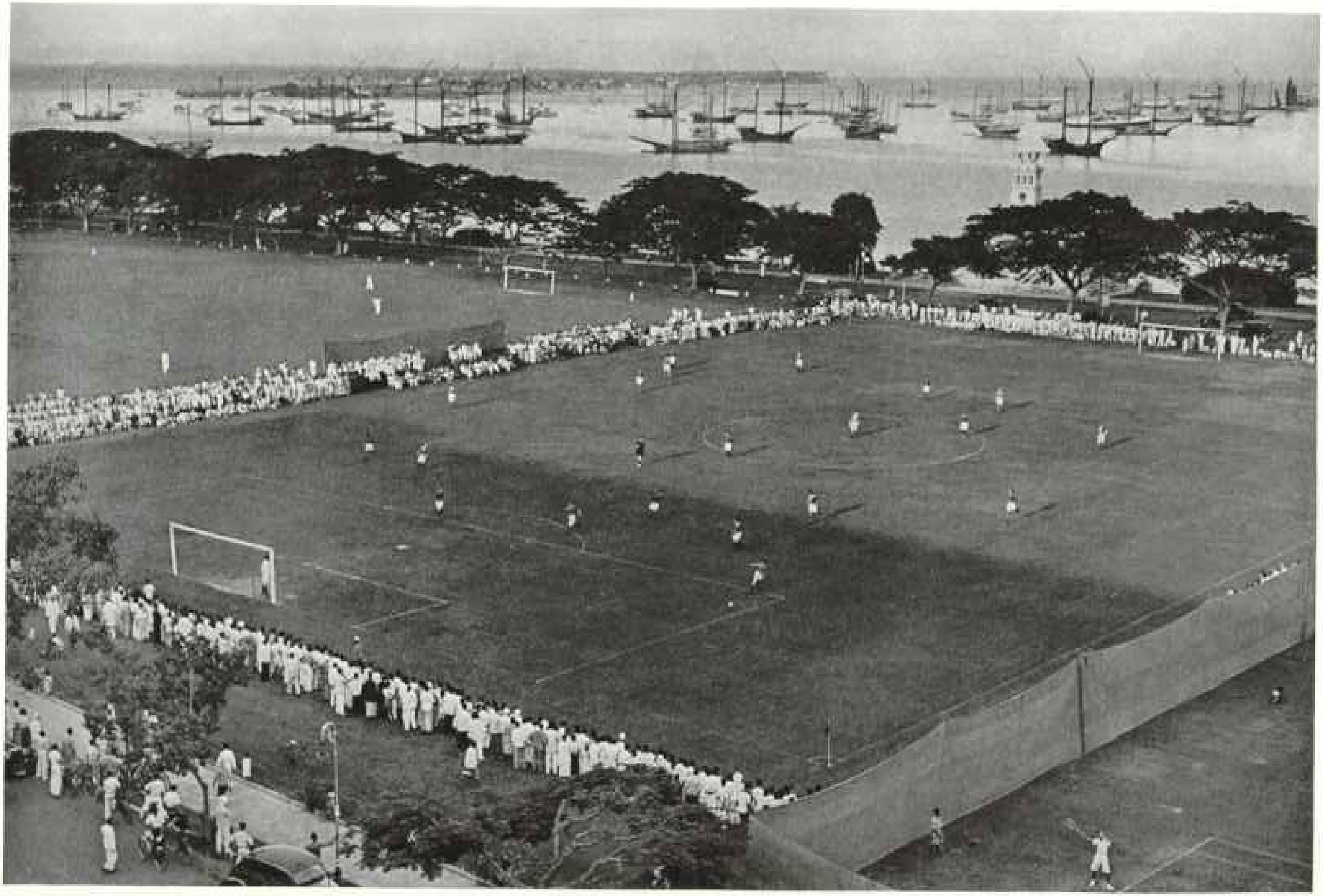
Strolling British military police keep a watchful eye on soldiers of the King, especially the pink-cheeked lads newly here from England.

When I saw such rookies wading about camp in morning mud and hanging their rain-soaked bedding out to dry, or sitting naked to the waist under a palm and fanning their sweating faces with a sun helmet, I wondered what their impressions were of Singapore and its climate, so different from England's!

Winter Never Comes

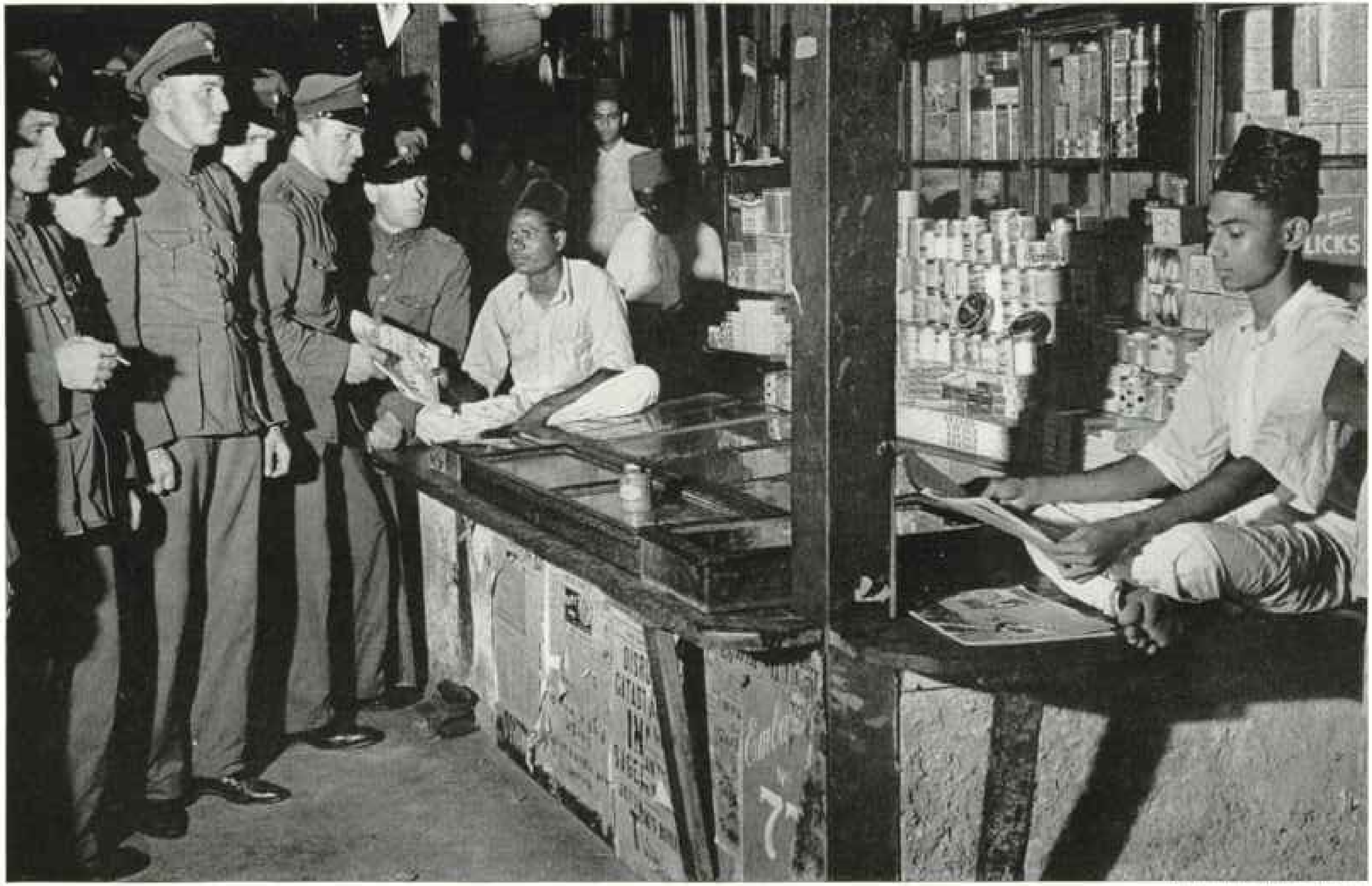
Nobody here says "last winter" or "next spring." There are no such seasons. Every day, the year round, is like New York in a heat wave; people estivate the year round, but are healthy.

Hurricanes never blow, but they do have monsoons that shift twice a year, and "Sumatras," or local rain squalls. In the Raffles



Photograph by J. Baylor Roberts

Wherever Anglo-Saxons Colonize, They Start Playing Games with Some Kinds of Bats and Balls—the Padang, Singapore



Photograph by J. Baylor Roberts

Dutch Soldiers, en Route to Java, Patronize a Money-Changer before Starting Out to See the Town

Like those Christ drove from the Temple, professional money brokers keep shop wherever Old World travel streams meet. To get business, they'll shave the bank rate, or charge more if the customer is bewildered by the mysteries of fluctuating exchange.

Photograph by J. Baylor Roberts

Scared by the Camera, She Started to Cry

But her baby brother, sucking on his rattle, stared back with all the sangfroid of an actor! They live near Singapore's Kim Kiat Temple, and must walk a mile to market.

Hotel I slept in a big, towerlike corner room, open on three sides with a dozen hinged windows.

Every night the winds blew and rains came. In the wet gale my mosquito net bellied out like a spinnaker, and small seas swept over my shoes, my trousers, my typewriter, my cheroots.

Methodically, when my Canton boy brought morning papaya and coffee, he silently mopped up and hung things out to dry. "No comment," ever, from Chinese servants.

Clip a local paper for a few weeks in any city, picking out only the human-interest items, and you soon get a vivid cross section of neighborhood life. These were cut at random, not hand-picked:

Orient's champion wrestler, Wong Cheong, due in Singapore.

Nudist colony can't stand Singapore's equatorial sun.

Seventy men sleep in one small lodging.

Postman, his monthly pay $9, fined 7½ cents for carrying mail barefooted.

Old Chinese woman lives in worn-out trolley bus.

Band of Argyll and Sutherland Highlanders beats "retreat" on cricket field; program includes such drum and bagpipe pieces as "Highland Laddie," "Young Ronnie," and "The Braes of Auchterarder."

Hollywood cables for two young she-elephants, for use in new picture.

Small live carp shipped here from China and raised in tanks.

Local Japanese beat Singapore Americans at Sunday baseball. American Consul General Patton umpires.

Fishing by Ear

Malay fishing is full of odd tricks. To set one kind of net, an expert dives and listens; *he can hear fish*, and so tells where to set the net. A skilled listener can even tell *what kind* of fish he is hearing!

Another trick is to swim under water with goggles; a line of such swimmers, dragging a long rope with white rags tied on it to scare the fish, will locate a school and herd it into a waiting net! Just as our Montana mutton men drive their sheep into a corral.

Want ads also reflect the tempo of the town. Baby buggies, shotguns, saxophones, cameras, motorcars, guitars—Singapore buys, sells, and swaps.

"Lady hair-stylist from Bangkok" wants work; so does a Britisher who "speaks Malay fluently, 16 years' experience on plantations; willing to go anywhere" . . . "Wanted, girl pen pals" . . . "To rent, a badminton court" . . . "Wanted, Chinese amah for small children going to England."

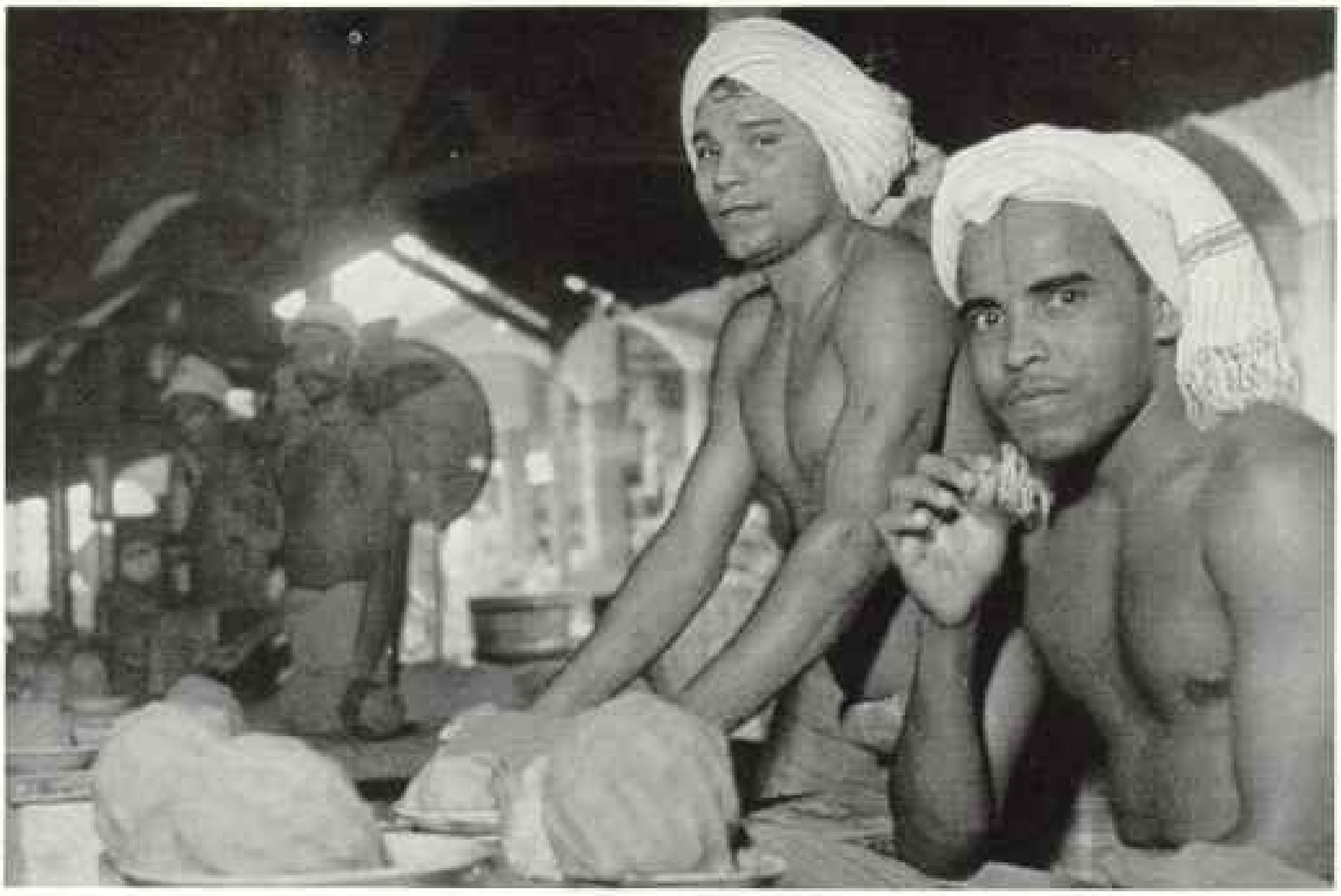
"Need clever private detective immediately" . . . "Lady going home wants fur coat" . . . "English soldier, 21, wants to correspond with American girl; exchange photos" . . . "Naidu, 20, independent, seeks bride, any caste; loan required."

"Educated Indian gentleman, 40, wants to meet homely widow; reply with photo." (Homely has another meaning here!) . . .

Photograph by J. Baylor Roberts

As if Responding to a Curtain Call, Servants in a Singapore Home Take a Bow

Capable, polite, contented, they are, from the left: cook, house cleaner, nurse, laundress, chauffeur, and gardener. Yet all six cost less than one good cook in California or New York!



© G. R. Metcalf

Muscular Hindus Mix and Roll Singapore's Mouth-scorching Curry Balls

Curry and rice, curried prawns, chicken livers, mutton—all these dishes of Indian origin are popular on Straits Settlements tables. Many a tough meat morsel is disguised by this burning-hot, finely ground pepper. To counteract its sting, grated coconut, Bombay duck, and mango chutney are usually served.

Photograph by J. Baylor Roberts

Hands against Cheeks, Chinese Girls Watch Air-Raid Protection Show

In white sport shirts and knee skirts, in socks and rubber-soled sneakers, these husky, wholesome girls are typical of Singapore's younger Chinese generation. On Y. M. C. A. tennis courts off Anson Road, they're looking and listening during a noisy demonstration of what happens when air bombs fall and burst.

"Christian wishes to marry rich widow or spinster, irrespective caste or creed."

Lying awake, hearing strange sounds, you think Singapore never sleeps. All night wooden shoes slap the pavement with a rhythm like jailbirds pecking rocks, only faster. Strange yells come, faintly, from far away. Late motorcars whiz by like owls on wheels. It thunders.

Then come long squeals of pain; some small creature is killing another. What is fighting for its little life—a monkey, a rat, a mongoose? Or what is it lives here that has that small shrill voice?

Bicycles and Rickshas

Finally rain comes and morning, and thousands of Hindus and Chinese on bicycles go pedaling to work or ride in hooded rickshas, the soaking-wet coolies trotting like automatons, uncomplaining, even cheerful. By thousands these silent workers swarm; then, magically, they disappear through doors, through factory gates.

Walk about town and look at all the work they do. They make soap, furniture, rubber shoes, cigarettes, soft drinks, pottery, biscuits, boxes, candy, coconut oil. Labor is abundant, skillful, cheap. Tamil and China women compete with men. When 8,000 ricksha men went on strike, their delegates boldly sat down on the roof garden of a swanky resort to hear the dispute.

Filipinos from Manila bring their orchestras here to work in hotels. At night Scots officers in white mess jackets, kilts, red and black plaid hose, and brass-buckled patent-leather pumps dance in the Raffles ballroom.

Small boys, flat on their naked brown stomachs, lie in the park poring over American "funnies" in local Sunday papers. This form of our culture covers the earth!

Again headlines intrigue you. Singapore must like these human-interest stories.

"Fatally Bitten by Cobra . . . the old man was bitten while driving chickens to the fowl house. . . . Despite a Malay bomo's prayers and chants, the old man died."

"Dumb Speak, Lame Walk, When Singapore Healer Raises a Hand," says the Sunday *Tribune*. "Afflicted humanity and even animals daily file past bespectacled 65-year-old Swami Kalian. Here is Singapore's counterpart of Lourdes. Some bring their blind and sick domestic animals. The swami treats them all. No fees, no tips. *Kramat idop,*

Malays call him, which means 'living saint.'"

Sight-seers in Singapore point their cameras at the snake charmer's cobra, at smiling girls who sit on balconies and play guitars, at heathen temples, and at monkeys loose in the Botanical Gardens. Some monkeys here have to work. They pick mangoes and coconuts for the Malays.

Working Monkeys Take Orders

Now comes a botanist who has trained two or three of these *berok* (coconut or pigtailed) monkeys to help him collect specimens from tall trees. Read the Straits Government's Gardens Department Report for 1938 and you find the whole astonishing story.

Not only do these intelligent monkeys work high up in treetops, collecting and throwing down desired herbarium specimens, but they also understand certain orders spoken in Malay. One knows the meanings of 18 words.

"Indeed, to work with a clever berok," says one writer, "is like fishing in the treetops . . . This monkey offers the ablest assistance the student of trees can have in the high forest." He quits work only to come down for a drink of water!

Malays hold odd beliefs about monkeys. Roland Braddell, Singapore lawyer-author, says he once saw a crowd waiting at police court to hear a monkey testify in a murder case! It seems a pet monkey was the only living creature found at the scene of a murder, and the police casually took it away to keep it from starving. But villagers got the idea a *pawang*, or witch doctor, had persuaded the monkey to tell the story of the crime—and the crowd was there to hear it.

What a surprise ending Poe or Maupassant would use here! A suspect under arrest is terrified when he hears the monkey *has already talked*. Hysterically, when brought before the judge—and even before the charge is read—he cries, "I'm guilty! Guilty! The monkey saw it all. It's telling the truth!"

Not a breath of air stirred in the deadly wet heat of an equatorial Sunday morning. All in tropic white uniforms, His Majesty's officers took the pews held for them in Singapore's Cathedral.

With his aides came the Governor General, and the Chief Justice; and there were pews labeled for the staffs of British banks and trading houses.

"From the crafts and assault of the Devil," came words from The Litany. "From battle . . . from conspiracy and rebellion." Rebellion of an Indian regiment once killed many in Singapore; tablets on the Cathedral walls carry their names.

In the public pew by me were Americans. They had started from California on a round-the-world cruise, but war in Europe was turning them back at Singapore. They heard the clergyman reading: "Preserve all who travel by land, by water, or by air."

This Church of England has long arms. Wherever British colonists build a fort, they also build a house of prayer (page 93). Long ago the East India Company founded Singapore's great Cathedral; it is unique, because it was built with convict labor.

Motorcars and Pagan Gods

Yet few Christians live in Singapore. Most of its 600,000 are heathen. They take over the Christian's radio, airplanes, motorcars; his motion pictures and his many ways of playing with bats and balls—even his latest dance steps. But for the most part they keep their graven images and their own pagan gods.

Astonishing Sri Mariamman Hindu Temple is called the finest in all Malaya (page 87). Life-size cow figures, some with wreaths about their necks, lie around on top its walls. Over the gate to its compound rises a high tower, tapering upward, set with life-size sculptures of men, women, and beasts.

In amazement you count literally hundreds of these bizarre figures, all in colors. You see a girl holding a green parrot on her wrist; other girls hold what look like torches and fly swatters. A blue-garbed woman has her left foot in her lap; a blue man has four hands. You see a mustached man with wings, and girls with wings, and soldiers in what seem to be British uniforms and caps, carrying rifles; people playing harps and violins, and flutes; nude men with spears and tridents and green parasols.

One turbaned figure aims a pistol at street crowds below. This curious ensemble looks like an outdoor waxworks.

Hindu spectators scream with excitement when their co-religionists cross a pit of red-hot coals in the annual fire-walking ceremony at this Sri Mariamman Temple.

Incredibly fantastic is this feat. Both sexes participate. Some run barefooted over the fire, their arms upraised; some walk calmly.

Heat from the pit is so intense that to endure it men who rake the embers with 10-foot poles have to splash water on their bodies.

Once across, most actors dip their feet into a bath of mud and goat's milk. Others, overwrought, fall in a faint and are carried out.

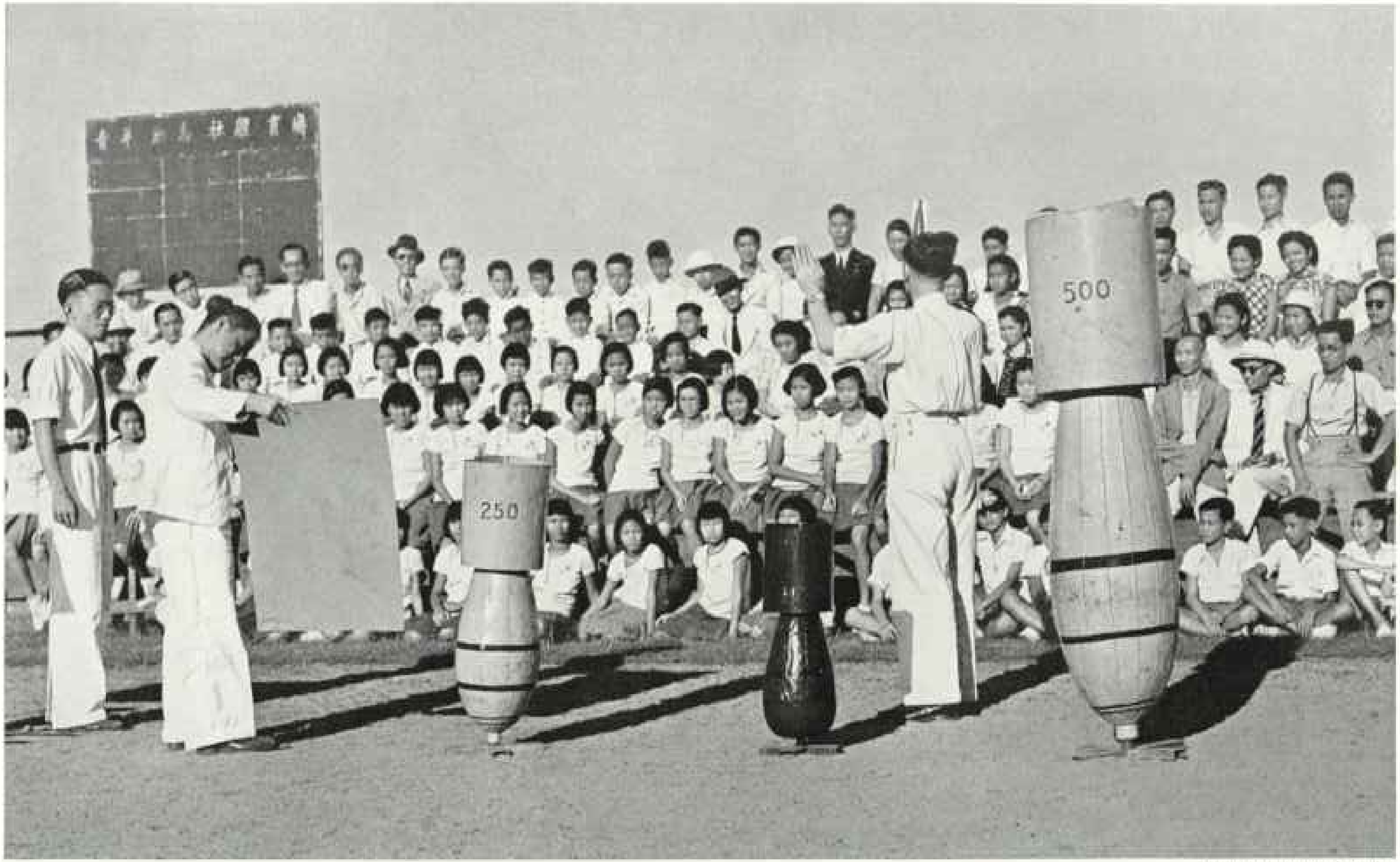
© G. H. Metcalf

Under Umbrellas Robed Buddhists Bless a Feast for Mourners at the Funeral of a Rich Chinese

You can almost smell the rich, savory food on these heavy-laden tables. Everything good, from rare fruits and fancy cakes to a goat roasted whole! With all these delicious viands in sight, even professional mourners find it hard to keep on crying until Oriental etiquette says, "Now dry your tears and start eating."

No London or New York Theater Lovers Could Listen with More Rapture to the Stage's World of Make-Believe

Some Chinese plays are "continued stories" that run for weeks. To many foreigners they are mere shrill shouts, awkward posturing, and bad "music." To Chinese, they are fascinating, full of human nature, comedy, and tragedy. The author found all seats sold for ten days ahead at one Chinese theater in Singapore.



Photograph by J. Barlee Roberts

Using Full-sized Dummy Air Bombs, an Air-Raid Protection Corps Shows What to do "In Case"

These wooden dummies represent real bombs of 100-, 250-, and 500-pound size. On the card at left, held up to the girls, is a chart that shows how bombs work. In this demonstration the lecturer ignited a small quantity of the incendiary material used in the bombs to show its effect on metals and its indifference to water. Black-out drills are also held periodically, and often at night searchlight beams and antiaircraft gun practice wake up the whole island.

Photograph by J. Baylor Roberts

"Right Here's Where the Bullet Hit That Killed This Tiger—Right Where My Hand Is"

Timidly, children watch a dealer in wild-animal skins as he hangs up new stock. Belts, handbags, seat covers, and rugs are all made from the ornate epidermis of the big striped cat (page 107). Tigers are so common here that sometimes a well-cured skin costs more than a live animal. The pigtailed lass biting her thumb is the daughter of an American who buys rubber here for Goodyear.

Photograph by Alfred T. Palmer

Freshly Cast Tin Ingots Shine in Bright Sun Like Silver Bars

Stacked on the dock at George Town, in near-by Penang, this newly smelted tin awaits shipment to New York. Much tin comes from Bolivia, and a little from elsewhere; but without Malaya's big supply our industrial machine might have to slow down (pages 83 and 107).

Better to see this strange ritual, many spectators climb up the temple tower, holding on to the effigies of sacred cows and nude divinities; some remain so motionless it is hard to tell them from the life-size sacred statues of men and women about them.

Another shrine, or Tamil *kramat*, swarms with people praying for luck. Gamblers are in the majority, but the daily crowds also include the sick and jobless. Girl taxi dancers from the cabarets drop coins into a money box beside a lamp and pray for rich dancing partners.

Sometimes, for some reason, men appear here carrying roosters, whose heads are chopped off in sacrifice.

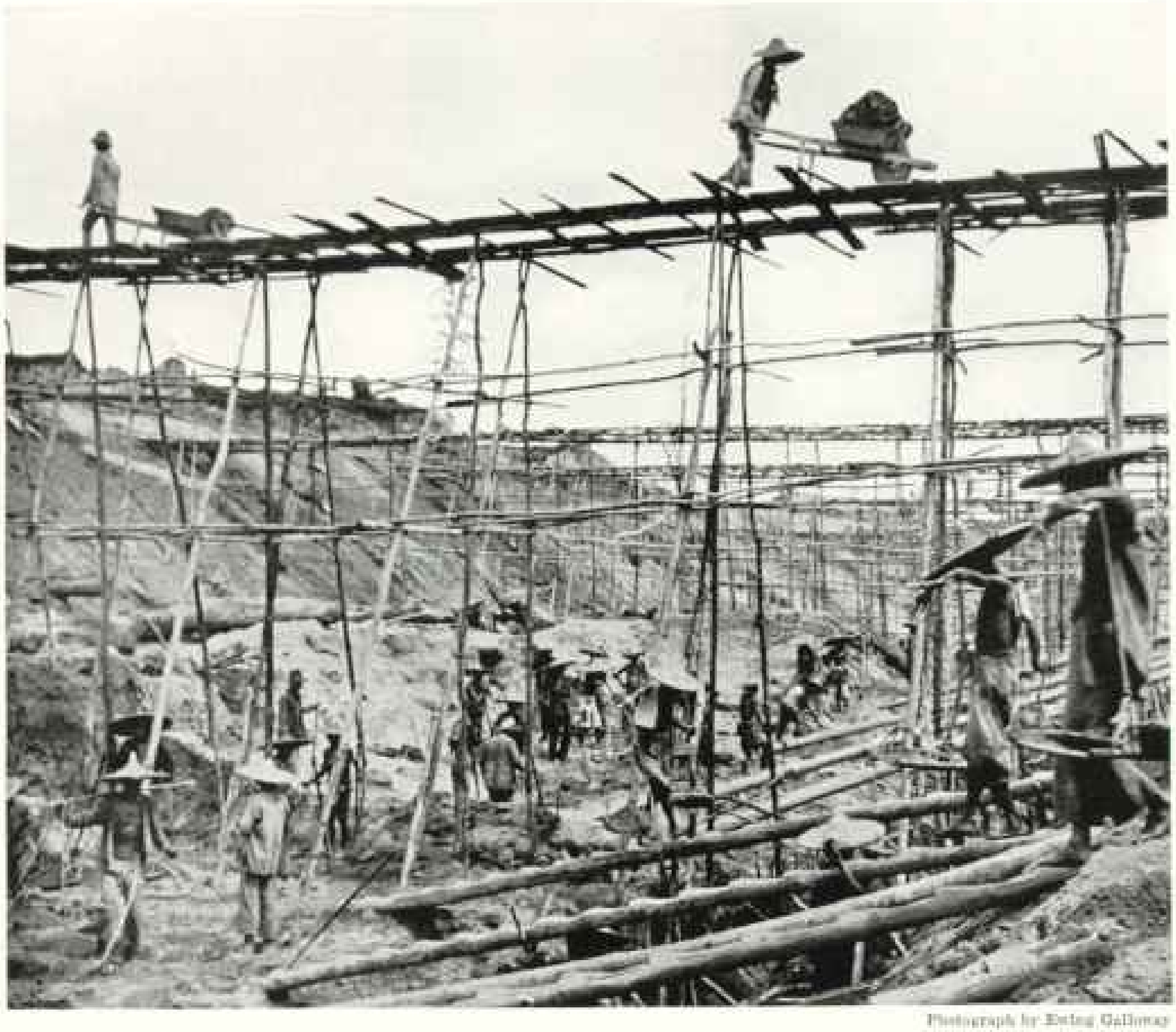
Then there's the Malay kramat of Habib Noor, a saintly Arab. Prayers are made here, money paid, and pigeons sacrificed or let loose to fly away.

Habib Noor died years ago, but his memory is green. Men say he had the strange power of transporting himself, bodily, but unseen. Says the *Tribune*: "It is related that on one occasion Habib went to see some people off who were leaving Penang by boat. But on the ship's arrival in Singapore, Habib was already there to meet them."

In one Chinese temple, at a statue of the Mercy Goddess, Chinese women pray for children. Here are set rows of baby shoes. Sometimes a shoe thus deposited is borrowed by a barren woman and kept by her till her prayer is answered. Then she returns it, together with a new shoe.

Pilgrim Port of the Islamic World

Big excursions run once a year from here to Mecca, since most Malays follow the Prophet Mohammed. When rubber is high, pilgrim



Photograph by Ewing Galloway

Like Aerial Acrobats, Tin Miners Push Wheelbarrows over Dizzy Trestles

Chinese in big hats have swarmed into Malaya by millions. Abundant cheap labor makes possible the tremendous growth in tin mines and rubber estates. Here the coolies, with primitive hand tools, barrows, and rude scaffolds, work an open tin mine at Taiping, in Perak. Notched logs, lower right, serve as stairways for barefooted workers.

crowds are largest. On specially chartered steamers thousands sail for Jidda. To look after them, the Straits Government sends a pilgrim officer, a Malay, who lives in Jidda, where pilgrims disembark for Mecca. They call him the "Malay consul."

Singapore has more than 40 licensed pilgrim brokers who sell round-trip tickets to Mecca for about $400. Since the Koran sensibly forbids anyone to borrow money for a trip to Mecca, many of the Faithful who work for a few cents a day must rake and scrape pennies for a long lifetime to make this trip.

I once went to Jidda on a pilgrim ship. A few hours before we got there, the ship's whistle blew a warning. Then all pilgrims washed and put on their white, seamless, two-piece *ihram*, and cried over and over again, "Coming, my God! Coming!"

A big yellow tiger 40 feet long jumps right at you as you step ashore at the dock—from a billboard. He advertises "Tiger Balm," a patent medicine that Chinese use for every pain from heartache to housemaid's knee.

Wild-Animal Tales

Dining at Flagstaff House with the General, I heard a guest relate: "Years ago I was pigeon shooting in Johore. Armed only with a shotgun, I turned a bend in a bush path and came upon a tiger eating a deer. We both left. Since then, I've hunted tigers with all the usual preparations, but never saw one."

"Nevertheless, you can still shoot tigers within 25 miles of where we sit," insisted Dr. F. N. Chasen, noted naturalist at Raffles Museum. "Once they were so numerous on this island itself that they killed an average

Photograph by J. Baylor Roberts

A First-born Gets His First Haircut

On a sidewalk in Singapore this Tamil barber keeps his open-air shop. The Chinese mother, barefoot and wearing lounging pajamas, holds a mirror so baby can watch.

of a man a day in Singapore suburbs (p. 105).

"There is a tale that tigers swam over from Sumatra. Wild pigs regularly swim at certain seasons from one island to another in these Singapore waters. Their movements are so well known that some hunters wait for them in the water.

"This town used to be a big wild-animal market. It was most disgusting, being conducted without any regard for the humanities. Once I saw 15 full-grown orangutans locked in a garage here, dying like flies from poor treatment. If the dealer could land only one alive in Europe or America, his profit was more than high enough to compensate him for the loss of all the rest.

"Now, happily, this wild-animal trade is dealt with by law; it isn't one-tenth what it was. Netherlands Indies and British laws complement each other. No wild animal can be imported here whose export is forbidden by Dutch law. Action was taken just in time, too, because the trade in orangutans had become so brisk it meant their extermination, nothing less.

"This whole Malay Peninsula is the home of many kinds of large mammals," added Dr. Chasen. "We can't estimate how many—they're hard to see. I have been in the middle of a herd of elephants—elephants all about, some within a few yards of me—but in the dense jungle I could not even see their outlines.

"Big mammals here include the elephant, two species of rhinos, the wild ox or 'seladang,' tigers, leopards, panthers, tapirs, bear, etc.

"All are decreasing at such a rate that unless rigid protection is continued their extinction is absolutely certain. Herds get smaller as new roads and more and more jungle cleared for farming militate against them. We try to save our animals by game reserves, but we have found out no more here than they have in other parts of the world about how to preserve big wild mammals side by side with farmers."

Almost daily while I was there Singapore papers printed news about wild elephants destroying farm crops in Johore.

Some farmers bought Very pistols, such as sailors use to fire distress signals, and tried to scare the big outlaws away at night with these colored flares. Others tried to save crops by putting electrified wire fences about the fields.

Just outside the city some newly caught tigers were held in cages. Three young ones were ominously vicious. To torment them a Malay pounded on a tin can and threw water in their angry faces. They growled and snarled and leaped like lightning against the old bars of their none-too-solid pen. I backed

off, so that, if the bars should break, they'd get first at their Malay tormentor.

One British aviation officer told me that at Johore a captive black panther had mauled him so badly he had to go home to London for treatment.

Pythons as Rat Exterminators

Gardeners at Government House killed a big python the day I lunched there.

"Yes, for publication," said the Governor, Sir Shenton Thomas, "it was 20 feet long! The boys smoked it out of a drain and tied a rope on it."

Next day in the police station, patrolmen killed another enormous serpent.

"Pythons live for years in our city drains, eating rats and frogs," a scientist said. "There was a resident population of pythons here. As Singapore gradually grew and cut into the jungle, they were pushed back. I could probably go out any afternoon and catch a python or two, outside the suburbs. Snakes scatter when you clear a piece of jungle."

Tigers, snakes, elephants, all make talk here—even leeches! Walk through jungle, or shoot snipe in swamps, and they're soon busy on your arms or neck. They're so gore-famished that from fishworm size they can swell up big as a fat, ten-cent cigar! At dusk lizards squawk at you from walls and trees. Bats dart like black rags in whirlwinds.

Photograph by Maynard Owen Williams

This Chinese Girl Earns a Living Enlarging Pictures

Give her any old photograph of Uncle Bim or Aunt Min, and watch! She's not only a fast commercial artist, but a clever diplomat. Her enlargements skillfully reveal traits of beauty or airs of distinction which surprise even the subject's critical kinsfolk. She knows how few really wish to be "painted as they are."

Singapore changes its spots as darkness falls. Places that look quiet and empty by day take on new, sinister life. From shadowy doorways perfumed, slant-eyed girls in European dress laugh loudly and call out in English. Quest for evildoers takes plain-clothes men to native hotels, gambling schools, opium dens, owl cafes. Listen to police officials; their calm recitals surpass even the yarns Scheherazade told her sullen sultan.

But night shows all Oriental cities at their worst. Dawn clears the air, morning glory breaks in a purple east, and sunrise shows a fresh, better world cleansed by night rains. On such a morning I saw Raffles College, and sat with a class in geography.

Girls filled the front seats; some 40 boys the rear benches. "New England" was the theme—Boston Harbor, Mount Washington, the Connecticut Valley, early migration to the West, the mill districts, even to the summer boarders in New Hampshire, and the purchase of abandoned farms as playgrounds by New Yorkers. It was *good;* the only smile I got—and I caught one back from the teacher—was a student's remark that "In New England frosts are common"!

Photograph by Lillian Bellamy

Among All Colonial Fighters, None Outshines the Indian Sikh

These bearded, belted giants in striped turbans and brass-buttoned khaki are part of Singapore's efficient police force. Many are ex-soldiers. Likewise alert, watchful, yet invisible, is the powerful special or secret police, led by experienced British and Indian army officers. Nobody may land at Singapore without passing rigid passport and immigration tests, and nobody may remain without reporting frequently to the police.

Somehow, I got a big kick out of seeing those Chinese, Hindu, and Malay girls writing so furiously, setting down lecture notes on New England. That's the way in schools. Just as in youth we studied about the Malay Peninsula, with all its rubber, tin, and tigers!

Now front-page news carries again the very same Singapore story we studied in school geography: that this crossroads of the sea and its rich Malay hinterland, so important to the British, is also important to us; that from it we get things of strategic necessity for our industrial existence.

Two-way News

Today in Singapore you see also how world news streams flow both ways.

To keep Malays informed on war progress, news in Romanized Malay is printed in English newspapers, to be clipped out by readers and passed on to servants and Malay members of their households.

Loud-speaker vans also broadcast news for the masses. In each van is a Chinese, a Tamil, and a Malay announcer. "Dissemination of news in this way," says a local paper, "has done much to clarify the war situation among illiterate classes, and to dispel rumors. . . . One Tamil announcer said his vocabulary was fairly elastic, but he was stumped to find a Tamil word for the English word 'tank.'"

Cautiously your ship feels her way out, past unseen, menacing harbor mines. Off to your right you can see Dutch-owned isles—the romantic "isles of spice." From somewhere south, maybe from Java, comes a seaplane for Singapore. From somewhere come yet more growls of hidden cannon.

Inevitably, the destiny of Eastern nations must some day be shaped by the guns of Singapore.

The Index for Volume LXXVII (January-June, 1940) of the National Geographic Magazine will be mailed August 1 upon request of members who bind their copies for reference.

Greenland from 1898 to Now

"Captain Bob," Who Went North with Peary, Tells of 42 Years of Exploration in the Orphan Island of New Aerial and Naval Interest

By Robert A. Bartlett

With Illustrations from Photographs by the Author

THE first voyage I made to Greenland was in 1898 with Admiral, then Commander, Robert E. Peary in the old *Windward*. At that time the "island of desolation," as people used to call it, was just a jumping-off place for the North Pole, and I hardly expected to see the day when it would be anything else.

Since that first visit I have made more than 30 exploratory trips to Greenland in the last 15 years, taking with me on my schooner *Effie M. Morrissey* lads from the preparatory schools and colleges and gathering data and specimens for the Smithsonian Institution and other scientific societies, as well as birds and animals for zoos.

I have observed the development of the country's resources under the intelligent management of Denmark, have seen the Eskimos gradually adopting white men's ways of living, and have learned that the snow fields of the icecap, the open land along the shore, and the sheltered fjords provide excellent landing fields for airplanes and hide-outs for war vessels.

Each summer Danish ships have brought tools, foodstuffs, and clothing to the people of Greenland. Who will furnish these supplies now?

To keep the United States Government informed on conditions on the "orphan island," Mr. James K. Penfield has been appointed the first American consul to Greenland. On May 10 last, accompanied by Mr. George L. West as vice-consul, he sailed on the U. S. cutter *Comanche* for Godthaab (page 117).

An Island without a Country

When Germany entered Denmark, the question arose whether this "protectorate" extends to Denmark's island of Greenland, and, if it does, what the effect will be on North Americans.

The answer, it seems to me, is found in geography. If military forces come to Greenland, they will find a diverse island, beautiful, amazing, difficult, icebound; yet a place which might very well serve as a year-round base for air operations and in summer for maneuvers by sea and land.

The distance from the west coast of Greenland to Cape Dyer, Canada, is less than 200 miles, and northern Greenland is only 12 to 14 miles from Ellesmere Island. It is only 200 miles as the sea bird flies from Greenland to Iceland, and from there 500 miles to the British Isles, 625 to Norway (map, pages 118-9).

Thus, while Greenland belongs to North America, it is actually a convenient stepping-stone for airplanes flying to this continent from Europe.

Before I set down my notes of specific voyages, I wish I could put on paper the wonder and bafflement I felt when, as a newcomer to the North, on my original Peary expedition, I saw the picture of just what Greenland comprises.

First, it is an island, the largest in the world, and one of the most sparsely inhabited. In the interior is the vast, forbidding waste of ice which has been accumulating in mystery and splendor since the beginning of time, or, at any rate, since blind Nature in the glacial period set her inscrutable machinery to work.

A Mammoth Ice Cake

It is more than three times as big as Texas. But a good four-fifths of its 827,300 square miles lies mute and frozen beneath the icecap which has filled the dead valleys and made them level with the mountain tops.

All the visible land of Greenland is a sort of uncovered band, stretching about the coast, 4 to 20 miles wide, but in a few places widening to as much as 112 miles on the west coast and to 180 or so on the east coast.

Interior Greenland today is a majestic plateau of ice. Over this plateau in the old Peary days, we made our sledge journeys across the icecap a full 6,000 feet above the level of the sea. What sleds from the sky may alight there soon I can only conjecture.

The snow of the Arctic has not changed, nor have the ice-locked mountains of Greenland; but the changes which have come over the Eskimos are profound.

In the old days Peary compared the Greenland Eskimos as he had found them on his first trips, with the Eskimos as he left them when the great venture of the North Pole had

Captain Bob Is Still Mother's Boy

Every summer before starting his cruise to Greenland, he visits her at her cottage in Brigus, Newfoundland (page 114). She is now 88 years old, yet retains a youthful spirit and reads her Bible without aid of glasses. Next to her explorer son, her pride is her lovely garden, which she tends herself.

been won. Peary said that on his arrival in Greenland few Eskimo men had a knife and few women a needle—a steel needle, of course he meant. Bone needles they fashioned for themselves from animal bones.

Few of these isolated Cape York, Greenland, Eskimos had kayaks, or skin boats, and the man who had a spear or a harpoon shaft made of a single piece of wood was rich. But when Peary said goodbye to Cape York and his Eskimo friends, he left them almost miraculously wealthy—for Cape York.

There were knives and needles of steel, and almost every man and half-grown boy had a kayak. They also had seal spears and sledges and wood for lance making. The wealth that Peary scattered in tools produced other wealth, until the Cape York Eskimos were improved in every phase of their lives.

They had all the food they could use; their better weapons saw to that. They had many more dogs and better dogs. And the improved diet showed, in the years during which Peary took observations, a marked decrease in the death rate and a sharp rise in the birth rate.

All of this Peary noted with pride and a warm heart, for he loved these sturdy, independent men of his North.

White Men's Ways and the Eskimos

What, I often wonder, would the great Peary say if he could observe the Greenland Eskimos we see each summer when the boys of the *Morrissey* fare forth again along the water highways sailed by him?

In place of the old-fashioned stone igloos of the early expeditions, he would see Eskimo houses of wood. In them he would hear the blare of the radio and the monotonous droning of the gramophone.

Where, forty years ago, Peary saw Eskimos eating a soup of seal meat and seal innards, with a porridge composed of the ground bones of animals—happily smacking their lips and rubbing their bellies—today he would see them in store clothes dropping in at the trading post to buy the white man's tea and coffee and imported biscuit!

Instead of the old animal-skin boots, patiently sewed by Eskimo women from skins their men had taken from the animals they had killed, the Admiral would see his brown friends pull on knee-high rubber boots on a wet day, or store-made leather boots for dry weather.

One of my boys, R. F. Dove, during the 1936 expedition, made a rather careful study of the Smith Sound Eskimo, who lives between Greenland and Ellesmere Island, with special regard to "tuberculosis and the sun." Sadly enough, this white man's disease has come to Peary's Eskimos, together with the white man's tobacco and devitalized flour.

An Eskimo Boy Salutes the Explorer

He had been out fishing in his kayak and was returning to Angmagssalik with two fine cod when he saw the *Morrissey*. Of course he was brought aboard and entertained royally by the boys from faraway United States.

Driftwood for Houses

The kind of house an Eskimo builds depends almost entirely on its location. In east Greenland, the section we studied in 1939, native homes are built of Canadian driftwood. Rivers draining down from the Canadian northwest, a richly forested section, bring quantities of driftwood dancing along the tides. These rivers empty into the Polar Basin and their water is carried around the north of Greenland, thence down the east coast by the Arctic current.

Thus the east Greenland Eskimo has plenty of lumber for his house, though the houses we studied used only a small amount in the roof.

But only a little driftwood travels along the currents around Cape Farewell, or up the west coast. Consequently, the Smith Sound Eskimo builds for his house a stone igloo.

The roof is made of flat stones, with a back slope. The house is about 12 feet wide in front. The height just permits a man not too tall to stand upright. A narrow house passage, eight feet long or so, forms the entrance. A low platform of stone fills the back of the house completely.

Dry grass is laid on the stone and on this are piled many soft bear or reindeer skins.

Then, above the passage, at the front of the house, is the single "window" made of gut. Through this the light filters weakly.

This Eskimo house is a jolly, familiar, sociable affair. As in the Bible, the Eskimo father may explain, "My children are with me in bed," for the platform is the family bed by night, and the family chair, table, and drawing room by day. I nearly omitted ventilation—a puncture in the roof about the size of a man's arm, in which in time of storm or high wind is placed a sod which stops all chance of air circulation.

In Smith Sound the Eskimos who live in houses like this have four months of almost continual sunshine. Then two months of alternating sun and twilight preface the winter darkness.

During this third period, for three and a

Photograph by David Nutt

The *Morrissey* Anchors in the Harbor at Brigus, Newfoundland

Home of the Bartlett family for 150 years, this town has fine traditions of sailors and fishermen. Captain Bob's mother lives in a cottage hidden by trees in the center of the photograph above the inlet (page 112). The whitewashed fence shows the street side of the gracious old dwelling. Brigus is now booming because war has raised the price of salted codfish to high levels.

Under Foresail Alone, the *Morrissey* Makes 10 Knots off Cape Farewell

No need for the Diesel engines for which oil is carried in the casks lashed along the rail. With a near gale dead aft, the little schooner scuds along through mighty seas. Captain Bartlett likes to give his boys the thrill of sailing as in clipper ship days.

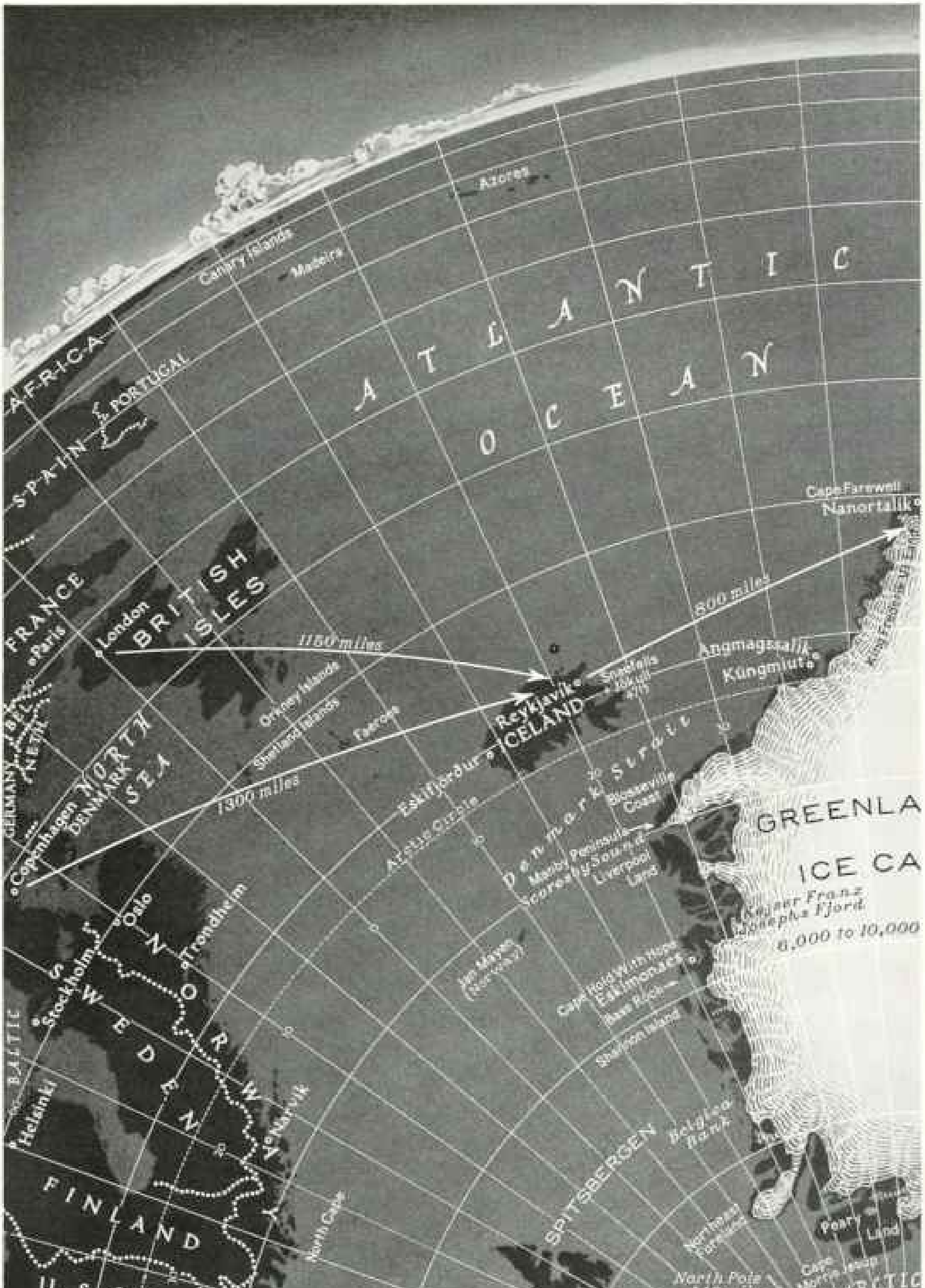
The *Morrissey* Passes on the Weather Side of a Huge Iceberg

Estimated to be about 300 feet above the sea and to cover three acres at the water line, this glacier fragment, encountered in the summer of 1935 near Upernavik, is one of the largest Captain Bartlett has seen. He once sailed dangerously close when such a mountain of ice fell from its parent glacier into the sea. The splash created waves 40 feet high, and the ship might have perished had it been a few hundred yards nearer.

Photograph from Roger Nielsen

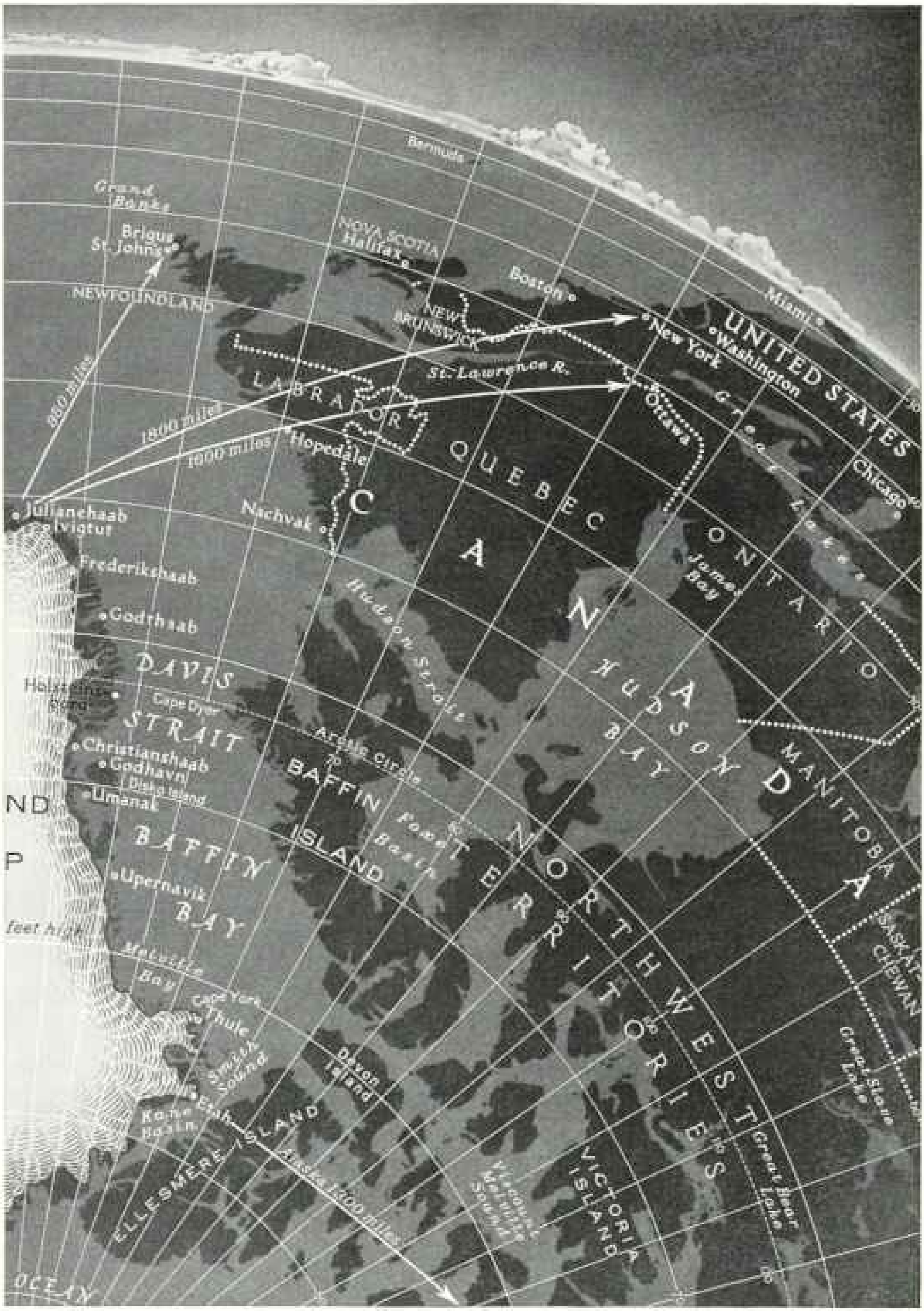
King Christian of Denmark Paid Occasional Visits to Godthaab, Southwest Greenland

Here he is on his way to church in the thriving town of 1,500 population, which owes its prosperity to intelligent management by the Danish Government. To this little city James K. Penfield, first U. S. consul to be appointed to Greenland, sailed with Vice-Consul George L. West early in May (page 111).



Looking toward the Atlantic from 5,400 Miles above the North Pole

If an aviator with far-seeing eyes could fly to that imaginary spot, this is what he would see. Clearly depicted is the vast white icecap, which smothers Greenland, 50 times the area of Denmark. At the North Pole every direction is south, a fact emphasized here by the longitude lines leading to the horizon.



Drawn by Norman Rockwell

You See Greenland as a Steppingstone between Europe and North America

Admiral Peary emphasized the strategic importance to North America of Greenland, with its smooth snow landing fields and deep fjords for summer bases for big ships (pp. 111, 140). Eskimos on the Greenland east coast (left) build their houses of driftwood carried across the polar sea by currents from Canada and Siberia (p. 113).

Photograph by Robert E. Peary

Peary's *Windward* Was Balked by Ice in 1898

Here she finds the going hard off northwest Greenland, at the entrance of Kane Basin on the Smith Sound side. Captain Bartlett was mate on the ship for this voyage; his uncle, John Bartlett, was captain. The bark was given to Peary in London by Sir Alfred Harmsworth, later Lord Northcliffe. Not having engines of enough power to drive her through the frozen seas, she was forced to winter at Ellesmere Island. That winter Peary lost some toes by freezing in a cross-country trip.

half months, they see no sun at all. And, in these months, the white man's germs and the white man's tuberculosis arise and flourish.

Household Heat—and Smells

Certain rather interesting facts turned up as the Danish doctors considered the rise of tuberculosis among the Eskimos. First, the investigators exploded our old idea that the Eskimo by nature is capable of bearing more intense cold than white men. If he does so, the authorities concluded, it is because he dresses for the cold and eats fat, fuel-charged foods to stand him in stead during his extreme winter.

When this theory seemed to be established, however, the contradictory fact was revealed that the Eskimo can stand a degree of heat in which white men wilt and suffer.

Nobody can fully imagine the heat and the smells of an Eskimo house quite so realistically as the man who has borne the heat and smelled the smells. The houses are heated by seal-oil lamps. These are rather flat stone vessels, with wide moss wicks which, when properly trimmed, burn the seal oil with a wide, white flame. The heat in the house becomes tropic—and so hygiene perishes in the midst of food scattered about among the fur skins, of dogs here and there, of all too little attention to sanitation. When tuberculosis comes into an Eskimo settlement, it runs rampant.

In the old Peary days such a germ would not have been so serious, for the Eskimos then lived in stone igloos which they abandoned from season to season; or in houses which, grown damp in spring, could have their roofs lifted to let in all the bright and cleansing sunlight from the generous heavens.

But when wood was substituted for stone blocks, making the house a permanent year-round dwelling, the evil was done. Deterioration and disease clamped down upon men who were experiencing a particular scourge for the first time in the history of their race.

For this reason the Danish Government barred all visitors to Greenland except reputable scientific expeditions.

In the Peary days no wild animal was beyond the skill of the Eskimo, though the hunter was armed only with the most primitive weapons.

Then came firearms. One result was the destruction of herds of animals—needless and

An Ugly Customer Was This Polar Bear Cub Caught for the Philadelphia Zoo

When the boys approached, it ran away from its mother instead of staying with her as most of its kind would do. They had a real battle to lasso it and get it aboard. Here it is snarling defiance as it stands tearing at the ropes which have hauled it on deck.

wasteful destruction. Initiative, independence, the old upstanding qualities of the Peary Eskimo, seemed to pass.

Resources of Greenland

Probably nobody yet knows the economic possibilities of Greenland, but the known resources, for 900 years since the outlaw Eric visited the island, have kept merchants and traders busy with a fairly rich commerce plying between Europe and the largest ice-locked island in the world.

On my first trip to Greenland, Admiral Peary told me that when men set out on the Crusades, ivory from walrus and narwhal tusks was sent to Europe as the pious gift of Greenland Christians.

Salt fish, seal and cod oil, sealskins, eider down, ivory (the tusks of walrus and narwhal) and furs, blue and white fox, have for long years formed a large part of the trade between Greenland and Denmark. Later, cryolite mines were developed in southwest Greenland. The town of Ivigtut came into being, as did many a boom town and city of our own mining West.

Ivigtut, the port, is near the cryolite mines, and cryolite is one of the most unusual minerals in nature. Chemists tell us that cryolite is a sodium-aluminium fluoride. It looks like hard-packed snow. And where it is found, almost exclusively at Ivigtut in Greenland, other bright-tinted minerals more or less nameless occur along with the cryolite.

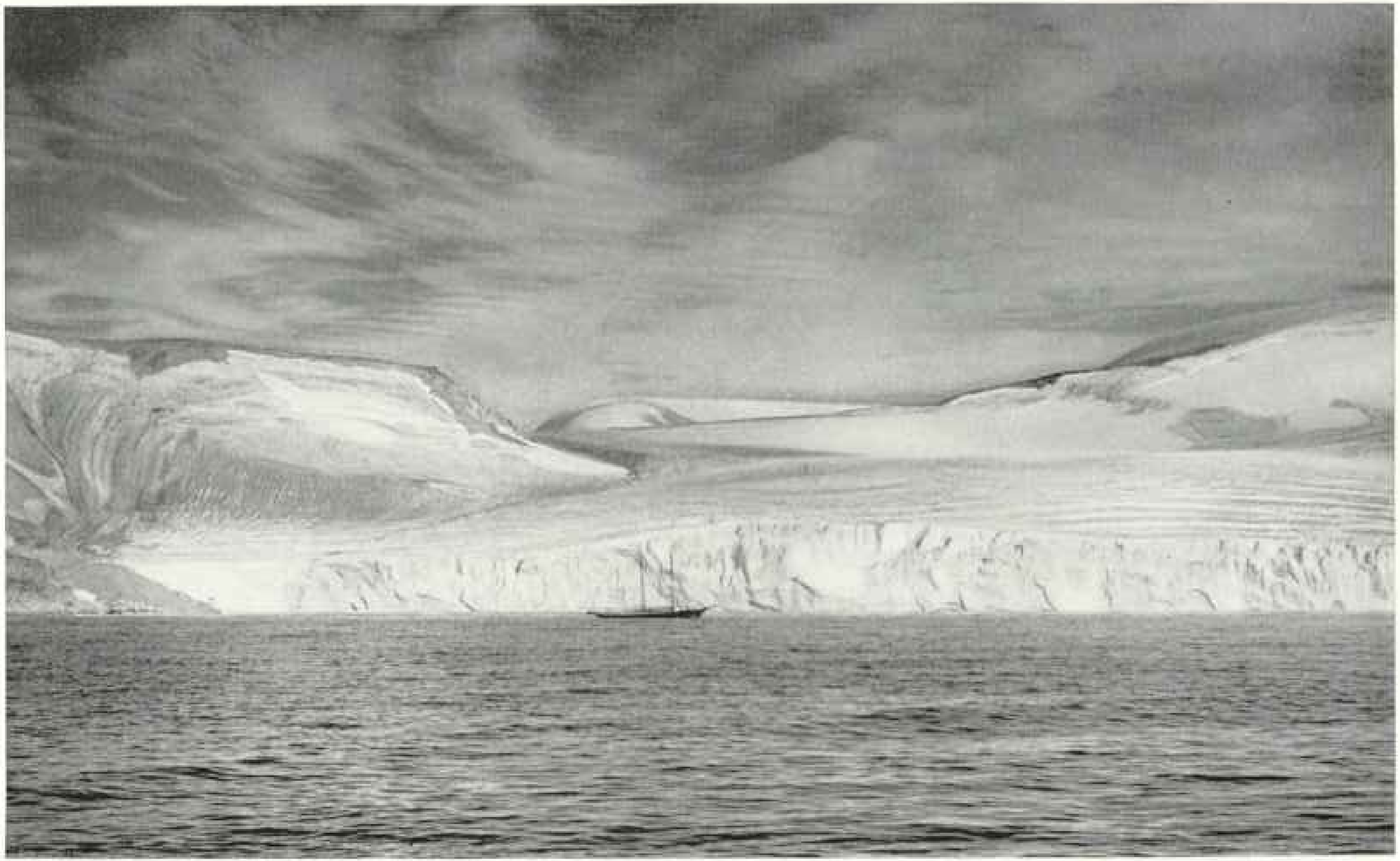
The known mineral wealth of Greenland is not extensive. In addition to cryolite, there are coal mines on Disko Island; also some coal has turned up recently on the east coast. Graphite is abundant near Upernavik, and copper has been observed in a few places.

Front Porch of North America

But I must come back to Greenland as the next stop to North America. Peary told me this one too, one night when we were gathered in his cabin aboard the *Hope* after we of the *Windward* had made rendezvous with him at Cape York.

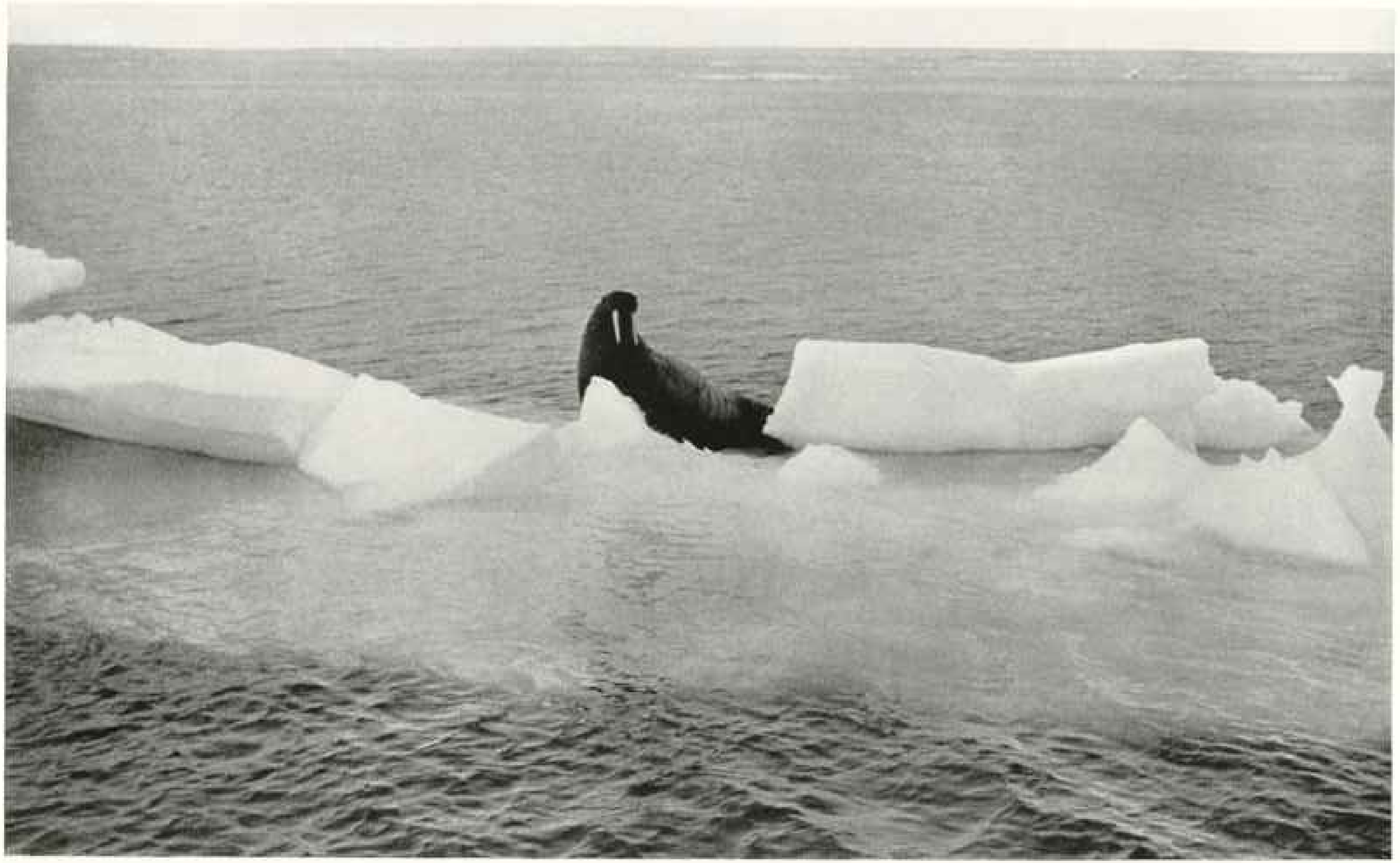
Leif, he said, son of Eric the Outlaw, the real discoverer of Greenland, used the island as a base for *his* visit to North America.

In the early days of Greenland's history, the far-venturing Norsemen had seemingly colonized Greenland in fairly large numbers. Old records tell us how, after the Black Death in Europe, a brace of enemy ships bore down



To Cape York, Northwest Greenland, the *Morrissey* Came to Honor Admiral Robert E. Peary

Up the slopes of this glacier all material used in the monument to the discoverer of the North Pole was carried five miles to the top (upper right), 1,575 feet above sea level (page 124). The cement, lumber, and two-and-one-half-ton metal cap were landed on the beach at left, loaded on sledges and snaked by power of a small engine to the edge of the ice, then hauled to the site by dog teams. Stone was quarried near by, but sand had to be obtained from a stream six miles away. The monument was unveiled by Peary's daughter, Marie Peary Stafford, who was born in Greenland.



Eskimo Staff of Life Is the Walrus—Flesh Serves as Food, Hides for Leather, and Tusks for Carving

Hunters stalk the walrus by paddling near a herd in their kayaks. At the right moment they harpoon the animals, which immediately sink. Inflated sealskin floats, attached to the harpoon lines, prevent loss, and the carcasses are hauled up on the ice and cut up. Later a large umiak, or skin boat, loaded almost to submersion, carries the meat, hides, and tusks to shore. Every part of the animal is saved, even the intestines, which are used for windowpanes.

The Peary Monument on Cape York Can Be Seen from 30 Miles at Sea

The two-and-one-half-ton metal cap, kept highly polished by wind, snow, and sand, glows like a lighthouse beacon. Save for the sand, stone, and water for mixing the concrete, all materials for building were brought in the summer of 1932 to this lonely spot in northwest Greenland by the Admiral's skipper, Captain Bartlett, in his schooner *Morrissey* (page 122). As a labor of love, Ootah, last of the four Eskimos who went with Peary on his North Pole expedition, cares for the memorial. Captain Bartlett appointed him custodian at the time of the dedication and told him, "When you go to the happy hunting ground, you are to appoint someone else to do the work."

upon Greenland and spirited away many colonists to make up for Europeans laid low by the terrible scourge.

Whether this is fact or fable, the ancient Norse who possessed Greenland before the Danes came in left behind the remains of stables, churches, and houses, and seemingly some sort of Nordic town meeting house to bear witness to that first colonization.

The watchful Danish Government has guarded the old ruins with antiquarian jealousy; but the ruins may still be visited—or could be up to the 1939 trip of the *Morrissey*.

In southern Greenland near Julianehaab are the ruins of Eriksfjord, now called Tunugdliarfik.

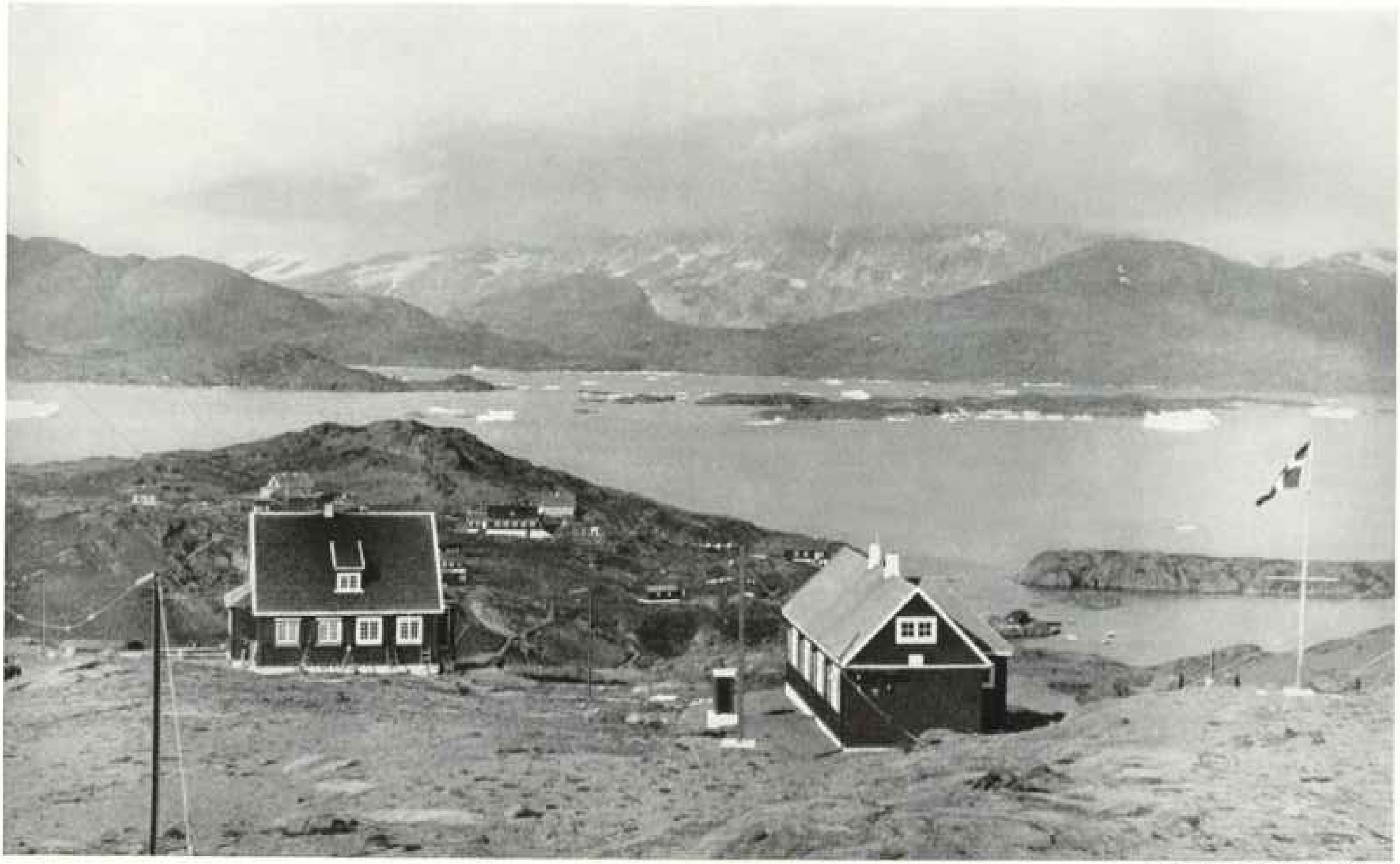
Beyond a high range of hills separating two sides of a fjord, the ancient town of Brattahlid had its day not so far from its sister town of Gardar. To this day the boys of my little *Morrissey* may see the aged church—its walls, at any rate—hoary and in rather good repair, gray against the green hillside of southern Greenland.

Sewing the Sealskin Covering, Women Make a Watertight Kayak

After several days of labor the man has turned out a strongly made frame of driftwood at Kûngmiut, east Greenland. His wife and daughters meanwhile have been preparing the leather for the sheath, chewing it to make it soft and pliant, and stretching it so that it will not sag when wet (pages 113 and 128).

Rupert Bartlett Presses Plants Collected for the Smithsonian

In 15 years the boys of the *Morrissey* have brought back to Washington thousands of botanical specimens.



Neat Houses in Angmagssalik Are Built of Wood Brought from Copenhagen

In this prosperous town there is a large radio station. Coal and stone are available, but there is no timber save the little that drifts in on the ocean currents. Colonel Charles A. Lindbergh and his wife, Anne Morrow Lindbergh, visited here when they went "Flying Around the North Atlantic" (National Geographic Magazine, September, 1934).

Cliff Walls of Saunder Island Are Literally Alive with Murres

These little birds lay their eggs on every tiny ledge, and sit closely packed. From this rookery near Thule and others in northwest Greenland, Eskimos obtain quantities of both eggs and birds for food. They tan the skins with feathers attached to make linings for their sealskin garments.

A Peaceful Convoy of Kayaks Leads the *Morrissey* to Angmagssalik

Eskimos make the approach of the *Morrissey* as thrilling as the entrance of a World War hero into New York Harbor. They escort the schooner to her anchorage with happy shouts, and holiday reigns in the village. Women and children watch from the cliffs, while others paddle the large umiak at the left. If a wave turns a kayak over, the paddler rights himself adeptly and is protected from getting wet by the skin cover which fits tightly around his waist.

Eskimo Women of Kûngmiut Enjoy Modern Comforts in a Cozy Permanent Home

Instead of the old gut windowpanes, they have glass, and a phonograph grinds away in the living room. In summer many wear cloth dresses. Two or more families live in one house. In early days stone igloos were used for only a season, then abandoned (page 120).

Polar Bears Are as Much at Home in the Water as on Land or Ice

They swim very much like a dog and are sometimes found miles from the pack ice. Their principal food is seals, which they catch on the ice. Nowadays the Eskimos shoot bears with rifles, but in the old times they used dogs to surround and worry a bear until the men could come up and lance him. Captain Bartlett has roped and caught many, including the famous Silver King of the Bronx Zoo.

On shore the remains take on more of the appearance of ruin. Up and about the sturdy stone walls the whortleberry, the juniper shrub, small willow trees, and many species of vine and weed, entangled, keep company with such familiar American wild flowers as buttercups and dandelions.

Traces of Norse Civilization

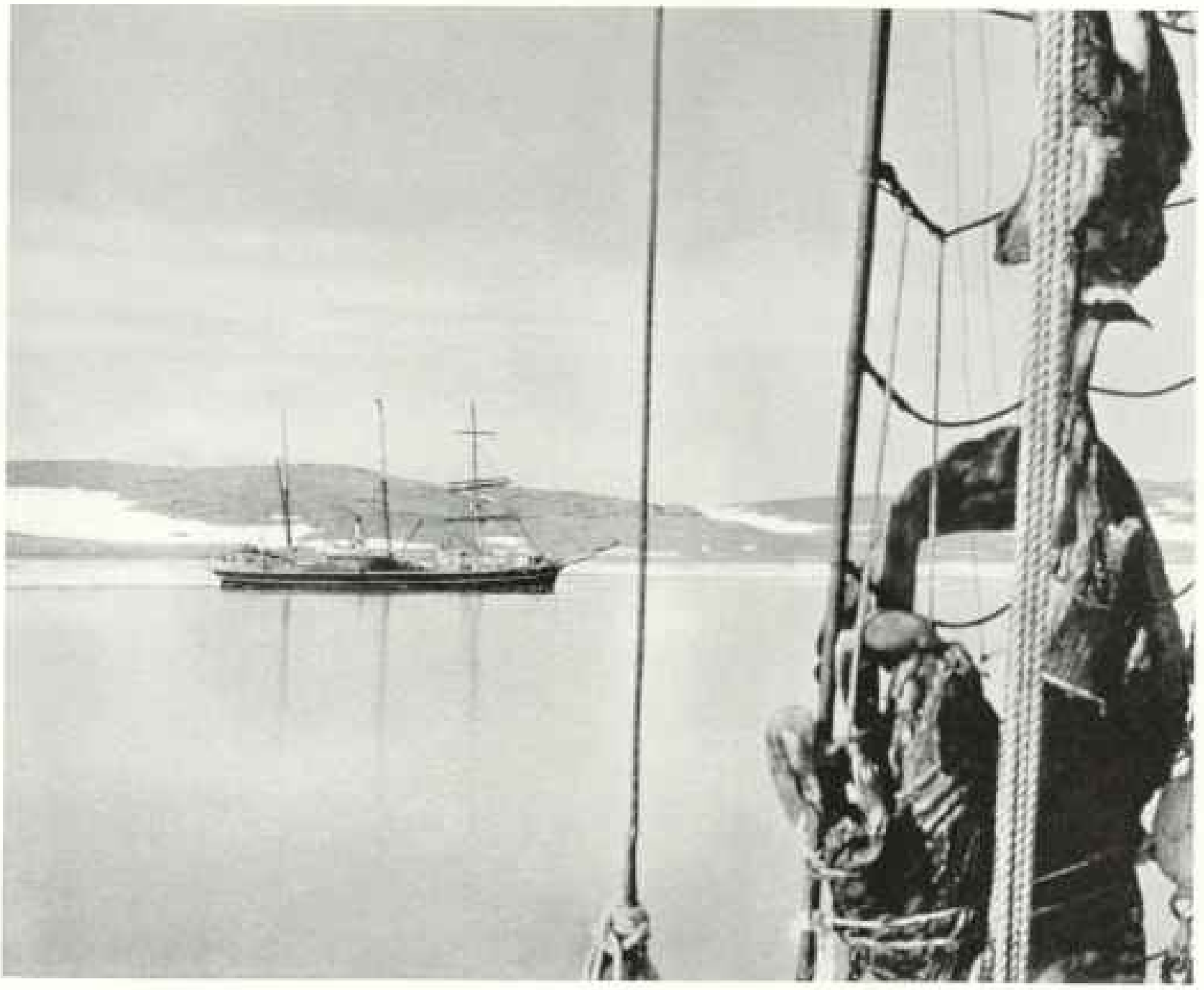
When I went exploring, years ago, about the ruins of the hoary old Norse town of Kakortok at Julianehaab, it wasn't so hard to grasp the picture of an old and orderly life under the Norse back in the days when all the implements of the Blitzkrieg still slept in the limbo of evil things not yet conceived.

Stumbling about among the ruins, in that year at the turn of the century, and, later, with my boys on one of the *Morrissey* expeditions, I examined the remnants of the church and two other buildings, wall enclosed, whose outlines were no vague imagination. They were there for us to trace.

Some of the walls rise to fully 10 feet. I imagined a triangular bit standing above the main wall had probably been a gable. And here and there I was sure the cement used to put the stones of the walls together had been made of native blue clay. Even today that cement has a blue tinge.

Much could be written of these interesting remains, but I'll hurry on, merely adding that some of the boys, recalling their history books, had a hot discussion when at night we were all snug again in the cabin of the *Morrissey*.

The boys said they had made out an "almonry"—whatever that may be; they vowed one house near the church ruins had belonged to some ancient bishop of the pious Norsemen. Other remains farther up the hill, they said, were plainly houses of old-time governors and other officials.



The Danish Supply Ship *Gustav Holm* Brings Food, Clothing, and Lumber

As the *Morrissey* approached Kejser Franz Josephs Fjord, east Greenland, in the summer of 1939, she spoke this heavily laden craft, which normally carries building materials and other necessaries to the Eskimos and returns to Denmark with sealskins, fish, oil, and furs.

The walls of some of the ruins were four feet thick. One ruin had been, almost certainly, a round tower. Its diameter was 48 feet, by measurement of the ruler brought from the *Morrissey*.

Last of all, we lingered over the old, gray, crumbling churchyard. Only one stone showed traces of its inscription. We tried hard to make out what was carved on that stone, but it defied even the bright eyes of my boys. However, an old book I once came across states that within recent years this inscription was found on one stone:

"Vigdis, daughter of M—, rests here.
May God rejoice her soul."

This, the books say, was carved in runic characters. It is just as well; for even had we made out that inscription, none of the boys, not even the lad from Dartmouth, could translate runic.

I put in this bit about the ruins for what it is worth. It may not be exploration exactly—or, again, it may be. But if I had ever had more time to spare from the actual job of sailing the ship in my jaunts about Greenland, I should have given those ruins around and about more thorough observation than I have yet managed.

A Question Settles a Dispute

Several years ago Norway and Denmark got into an argument about which country had the better claim to parts of eastern Greenland. I received a cable from The Hague asking me to come there to testify before the arbitration committee.

I cabled back, "Impossible to come. Were modern Norwegians ever in Greenland?"

This question on my part was merely a request for information; and I was astonished to receive in reply a letter from the authorities at The Hague thanking me for settling the question!

"Treasures of the Sea Are Buried Deep," but the Otter Trawl Nets Them

With the *Morrissey* moving slowly in 25 fathoms of water off the entrance of Kejser Franz Josephs Fjord, the boys let down the long net till it reached bottom, dragged it along for two hours, and brought it up with a collection of marine life, much of which was brought back to the Smithsonian.

Captain Bob Tells Angmagssalik Boys about the Musk Oxen

Around their home village the animals are not found, and the skipper's story of how he captured calves for the Chicago zoo fascinates the youngsters. The bearded man at the captain's side, a member of Jean Charcot's last expedition, was waiting for the ill-fated *Pourquoi Pas* to come for him. The vessel was wrecked on the Iceland coast in 1936.

The Norwegian claim, based on colonization so far in the past that it has left only a few scattered ruins, was overruled, and Denmark was given the decision.

My most recent voyage in the *Morrissey* was in the summer of 1939. Late in June we sailed from the McWilliams shipyard on Staten Island bound for Nantucket, Massachusetts; Brigus, Newfoundland; and Kejser Franz Josephs Fjord, on the east coast of Greenland.

Our party consisted of 11 boys, a radio operator, and a doctor. We have a completely equipped hospital to provide for proper care and treatment of the boys. We even have X-ray equipment.

We are in constant radio communication with New York. The folks at home know what we are doing, and we get the news of the outside world. On our broadcasts the boys can send messages to their homes.

Some of the boys have been with us for four or five trips and have become so interested in certain subjects that they make collections. In likely places they go ashore with their camping outfit and canoe, putting in a day or two gathering birds, eggs, and nests of the migratory fowl. While in the field, they make a picture record of their work.

We always get permission to do this through the State Department in Washington. Sometimes the bird specimens go to the Cleveland Museum of Natural History, the U. S. National Museum, the Academy of Natural Sciences, Philadelphia, or the American Museum of Natural History, New York.

Frank Foster of Phoenixville, Pennsylvania, who has fine dairy cattle, gave us a fresh heifer and a young Guernsey bull which we were glad to take along.

Seven thousand gallons of Diesel oil, a thousand gallons of gasoline, two 24-foot whaleboats, two dories, two canoes, and the equipment which we use for shoving about the ice when we are in the North leave very little room on deck.

We carry a Frigidaire which takes 1,200 pounds of meat and a couple of hundred pounds of fish. We also take along several cases of oranges, apples, and grapefruit. These are put on board an hour or two before we

Greenland Women Have Worn "Shorts" for Ages

Ending above the knees, these sealskin pantaloons are tucked into the tops of long boots. Both shorts and boots are colorfully decorated with strips of white leather and fur and bits of brightly dyed sealskin. The shirt is of gingham or flannel purchased at one of the Danish stores. Formerly seal, bird, and fox skins were used for these. Her hair is arranged in the old style, now used in Greenland only by the older women. It is combed straight up, bound tightly, and secured by a small leather belt or by ribbons. This sometimes causes the women to become partly bald over the ears.

sail and, since we soon reach cool weather, they keep nearly to the end of the voyage.

The night we left New York, going out of the sound, the wind was strong from the east, and a heavy rain was falling. With the ebb tide against the easterly wind, there was quite a sea in the Sound. Some of the lads had been celebrating commencement with too much rich food, and, although they had good sea legs, they were soon blue around the gills.

I shall never forget the anxiety of that night. The clouds seemed almost to rest on the spars of the *Morrissey*, and it was as black as an asphalt street. The rain fell in a veritable tropic downpour.

About midnight when I made my hourly call of the names of the boys on duty, one of them did not answer!

A Boy Lost—and Found

You can imagine my worry. We searched all over the vessel, from one end to the other, but could not find him. Fortunately I caught our radio operator in time to prevent him from sending out the news.

Just at dawn my brother Will happened to look down into the box where the heifer and bull were kept, and there was the missing boy, fast asleep. He had evidently felt cold and seasick and crawled down there for warmth and comfort.

We stopped for a couple of days at Nantucket, and there, through the generosity of Bassett Jones, electrical engineer in charge of the lighting at the New York World's Fair, we acquired an otter trawl, which later enabled us to bring back a wealth of specimens from the floor of the ocean.

From Nantucket to Brigus, Newfoundland, is about 1,200 miles, and by the time we got there our boys were almost as good sailors as the seasoned fishermen who leave T Wharf in Boston to go to the Grand Banks.

Of course, the boys are not all my crew. In the 15 years that I have had the *Morrissey*, I have always employed a few men chosen from the fishermen and seal hunters around my native village of Brigus (page 114).

People ask me, "Bob, how is it that you still look in good physical condition, mentally active, and always keen to go on these trips?"

My dear Mother, who is now 88 years of age and still retains a glorious crown of white hair and a figure which any debutante would envy, and who reads without glasses the small print in newspapers or the Bible better than I can with my lenses, told me to associate with young people, get their sentiments on the way to live (page 112).

"In this fast-changing modern world," she said, "you have just got to move with the times."

This is why I carry the boys on the *Morrissey*. I want to go as long as I can; I really hate to think that the day will come when I can no longer go to the North. We always stop to pay Mother a visit, and she waves goodbye to us from her garden as we turn our faces toward another adventure.

Before leaving Brigus, we put on our extra whaleboat, sent aloft our crow's-nest, filled up with Diesel oil, and also filled our tanks and extra barrels with water.

A Remarkable Polar Mirage

Our next stop after Brigus would be Kejser Franz Josephs Fjord on the east coast of Greenland (page 131). From Newfoundland to Cape Farewell we had adverse winds and some rough water. Nearing Cape Farewell in the fog, we suddenly found ourselves among heavy ice, but luckily for us it was not very wide.

I had been many times to the North and had never before seen such open conditions. The east coast of Greenland is a difficult place to reach and in some years ships cannot get in at all. I had been worried about whether or not we could get in. However, everything was fine and, although it was foggy and we could not tell our position exactly, we knew we were close to land.

We saw a remarkable phenomenon in Denmark Strait, midway between the tip of southern Greenland and Iceland. The date was July 17, and all our observations were made in brilliant sunshine. Our position was latitude 63° 42′ N., longitude 33° 42′ W.

The ship's three chronometers had been checked daily by Naval Observatory signal. The air was calm and the sea smooth. At 4 p. m., with the sun in the southwest, an amazing polar mirage appeared in the direction of southwest Iceland, showing clearly the Snaefells Jökull (4,715 feet).

There were other well-known landmarks, all of which were familiar to me as well as to my ship's officer. At the time, I asked him how far he thought we were from this land. He replied, from 25 to 30 nautical miles. As a matter of fact, the position of the *Morrissey* showed that these features were some 300 statute miles distant.

One of our boys, Doran Warren, had a birthday on July 6, and I presented him with a very fat envelope which his mother had given me for the occasion. He had already borrowed against its contents in Brigus. We had a party for him, all of us giving him some foolish present.

David Nutt and the cook made a cake—a really professional job with all the fixings. David had experience which prepared him for this job; he once made a cake for President Hoover in Cleveland.

One of the most interesting phases of our activities is the job of tossing drift bottles overboard. This is done for the Hydrographic Office of the Navy Department, to gather data on currents. The drift bottles are picked up all over the world; one of ours, in fact, was recovered on the coast of Africa. We also gathered data on temperatures and ice conditions, as I have done on all other trips.

Coming into a school of porpoise, we took some excellent pictures and shot two of the creatures to obtain their skeletons for the Smithsonian. At latitude 58° 41′ N., longitude 44° 15′ W., we got into tide rips and found numerous hagdons, noddies, kittiwakes, parasitic and pomarine jaegers, and Arctic terns and murres (page 127).

Each lad who is interested in the birds has a card with the names of all the species likely to appear. During his watch, armed with binoculars, he will put down the names of birds seen, with latitude, longitude, weather, wind, conditions of sea, and other data. His notes are entered in a book at the end of the watch.

Late one afternoon we saw a purple sandpiper, a phalarope, and a turnstone. Two lads went out in a canoe and brought in fulmars and gulls.

We were now near the fishing banks between the northwest coast of Iceland and the east coast of Greenland; the fish smell told us that as plainly as if it were written on the water. We got good hauls with the plankton net; sounded 100 fathoms, no bottom; saw a large school of bottlenose whales.

A Bit of Rough Weather

Next day the barometer began dropping fast and the wind was strong from the northeast, with a heavy sea coming from the southeast. The barometer went to 29.44, very low for this time of the year, and the ceiling was also very low.

At noon we lowered the mainsail and jib, making them fast, and hoisted the storm

Bare Ground Too Warm for Them, Musk Oxen Sleep on the Snow

They graze on the vegetation brought out by the summer sun; then take an after-dinner nap in cool comfort. Hundreds of them range over this country around "Musk Ox Fjord" in east Greenland. On the 1939 expedition of the *Morrissey*, Captain Bartlett and his boys obtained four calves for the New York Zoo (page 137). Because it had been agreed that no adult animals would be killed, the task of capturing the little fellows was difficult. They had to be chased away from their parents and lassoed. Once on board ship, they responded readily to kindness.

trysail. At 5 p. m. we were near ice. There was a big swell on the weather edge. As we gradually worked in through the ice, the water became smoother, and the wind was going down among the ice but still blowing a gale outside in open water. The sky was dark with heavy, ominous clouds.

In the fast-diminishing light we saw a schooner, two-masted, with a barrel on her foremast. When we got close to her, we saw that she was loaded with seals, deck to water. She lay there as if anchored. Hunting hooded seals—the Norwegians call them "bladder nose"—is a profitable industry as carried on in normal times by the Norwegian motor-driven vessels.

In a gale among the ice we lost our foresail and had to bend a new hemp sail. Nevertheless, we obtained specimens of hooded seals for the Smithsonian.

The morning after the gale was beautiful, the sky blue as the Arctic, bluer even than in California.

Steaming along by Blosseville Coast in a mist which the sun was quickly dispelling, we saw mountains capped with new-fallen snow thrusting up through haze, touched with blue and purple tints. The colors were gorgeous.

On July 23, 17 days from Brigus, we anchored in a fjord at Manby Peninsula. Here we collected birds and flowers and discovered a hot spring.

Red and Green Snow

As we crossed Scoresby Sound—named after old English whalers—there was no ice. The sound was almost as free as the Potomac is today. We steamed close by the coast of Liverpool Land and saw the red snow, about which Dr. Erzsebet Kol of the University of Szeged, Hungary, had asked us to procure information. The color is due to the presence of a plant. I have also seen green snow in the North.

Along the Liverpool coast thousands of little auks were enjoying the warm, brilliant sunshine. Exquisite colors brightened the face of the cliffs. Marble from similar cliffs on the west coast of Greenland has been used for buildings in Copenhagen.

Because we found the fjords were still ice-bound on July 26, we could not get into Kejser Franz Josephs Fjord. The ice was close in to Cape Hold with Hope, named by Henry Hudson; and we went eastward for 10 miles, meeting slack ice.

We worked through this and into Loch Fyne near Eskimonaes. It was here that we captured our musk ox calves—four of them for the New York Bronx Zoo (pages 136, 139).

Going in, we shot two polar bears (pages 121 and 130), also several squaretlippers, as we Newfoundlanders call bearded seals, for specimens. The meat of young polar bears is almost as good as pork, and we used it for our meals. Some of the boys stored a quantity of the meat in the Frigidaire and took it home as a treat for their families.

We passed Eskimonaes, on the southernmost point of Clavering Island, a base of Dr. Lauge Koch, who for several years has carried on extensive scientific research both with ships and with airplanes along the east coast of Greenland.

Flowers and Birds of the North

Steaming in the sound, we saw musk oxen roaming the hills and valleys (page 136). Here in this beautiful country, only 1,100 miles from the North Pole, flowers bloom and the grass grows knee-deep. We saw barnacle and pink-footed geese, plovers, and songbirds.

The slopes of the mountains were green, black, dun, russet, and brown. Newly fallen snow capped the mountains and a blue haze made a symphony of color.

The boys scattered far and near, collecting birds and flowers. In ten days we obtained for the Smithsonian thousands of plants, representing several hundred species (page 125).

I had been wanting to use the otter trawl on the Belgica Bank and hoped with the good ice conditions that we might be successful. The weather changed and became warm and rainy, with poor visibility.

We passed the Bass Rock close, later catching a sight of Shannon Island. It began to get really foggy; but there was no ice, and we kept going. The water temperature showed around 39 to 40 degrees F.

In fog the thermometer is the seeing eye and feeler. We watch the readings carefully, and when the mercury goes to 35 degrees or lower, we know that we are getting close to the ice. At such times we haul out until we get thermometer readings up to 38 or thereabout, then continue on our course.

Guided thus, we followed the straight edge of ice which parallels the east Greenland coast. It was provoking and tantalizing to have fog, for we had hoped to see the land and ice, polar bears, birds, seals, etc.

About midnight, when the light was not so sharp, I saw a polar bear asleep on a sheet of ice. Since the wind was blowing away from him, he did not get our scent. We shot by so near that I could almost kiss him from the quarter of the *Morrissey*. The slaty color of the bear and the ice blended into one.

Jim Dooling Feeds Two Walrus Pups Bear Meat; Betty Waits for a Share

For 15 years this Brigus sailor has gone north on the *Morrissey* with Captain Bob. He knows how to handle the animals caught for zoological gardens. The Chesapeake retriever is useful in gathering bird specimens. Unmindful of the icy water, she goes overboard and brings them to the ship's side.

In a locality where we expect to see bears, lots are drawn among the boys for a shot at one of the animals. This was John Howard's chance, and he was fortunate in having his watch on deck. Before the bear reached the opposite side of his ice refuge, we headed him off, and John, being a good shot, got his trophy for a museum.

Ice in Big Sheets

As we worked north, we found the ice heavy and in big sheets. The wind veered to the northeast, driving the ice upon the land. For this reason we had to work to the eastward and try for open water.

Once in the clear, with the wind blowing a gale, we reluctantly abandoned the trip to the Belgica Bank. The season was getting well along into August, and by the look of things we might be several days waiting for the wind to let up.

We squared away for Angmagssalik, and off Shannon Island procured for the Smithsonian two magnificent specimens of the hooded seal. Around midnight of August 15, we steamed close to the Liverpool coast.

On our trip north much of the coast below Scoresby had been covered in fog and mist. Now it was clear and free of ice. We kept close to the shore and saw some of the most beautiful scenery in the world—cliffs going up straight from the water 3,000 to 5,000 feet, glaciers, ravines, cascades.

Bird rookeries filled the air with life and noise. The sun, coming out at times behind the clouds, would strike the white breasts of the auks and murres so that they looked like big snowflakes. Around us were huge icebergs of all shapes and sizes. We wormed our way in and out through a galaxy of white and blue cathedral spires, Lincoln Memorials, and Chrysler and Woolworth Buildings.

My chart of the Angmagssalik coast was on a small scale, and the approach to it was in fog. The next morning with the rising sun the heavy fog began to disappear. First we saw the peaks and contours of its ranges, then the glaciers and deep ravines, and finally the shore line.

Cape Dan enveloped in fog, and the autumnal tints—russet, brown, yellow, and some places red—were a real joy and drew from us loud expressions of pleasure. Somehow I could not find the opening into Angmagssalik Fjord. I realized afterwards that in the fog I had passed it.

Two Musk Ox Calves Enjoy Luncheon on the *Morrissey*

On an expedition several years ago, Captain Bartlett captured these animals and brought them to the United States. The calves were fed from bottles.

As the day wore on, the clouds broke away and we had a deep-blue sky; the brilliant sun, warm and comfortable, cheered us up mightily.

Eskimos Welcome Friend *Morrissey*

Moving up the fjord, we saw kayaks belonging to the Eskimos of Kûngmiut; they were seal hunting. We were delighted to see them, and they caused considerable excitement among the boys when they came alongside.

Presently more and more left the village and soon we were being escorted to our anchorage in a welcome that would make the greeting of a conquering hero entering the gateway to New York a minor affair.

As we came to anchor, the shores were lined with men, women, children, and dogs. The clothes were all colors of the rainbow—reds, blues, yellows, and greens, with red predominating.

We were invited ashore, and the boys went with a bountiful supply of sweets, colored ribbons, bright shirts, and gaudy handkerchiefs for gifts.

The whole village was in a holiday mood that fine Sunday. We invited the Eskimos on board later in the afternoon and treated them to biscuits, cakes, tea, coffee, and grape juice. They showed their deep appreciation in their peals of laughter and self-abandonment.

In the early hours of the following morning we sailed away and arrived at Angmagssalik around 11 a. m. (pages 126 and 128).

There we took advantage of a chance to get some codfish, the Eskimo boys bringing it to us in their kayaks. We also sent off our own whaleboat with lines and hooks and a trout net. The net we set at the mouth of one of the small rivers and procured a lot of salmon trout. The Eskimos also speared a number, picking them out of the pools farther up the river.

Because of the lateness of the season, our stay in Angmagssalik was short. This was my fourth visit to the charming and prosperous village. Many of its old people have gone to the happy hunting grounds since my first visit ten years ago.

From Angmagssalik to Cape Farewell we had fine weather and good visibility, no drift ice. We kept in with the shore.

Along the King Frederik VI Land one does not see the towering, saw-toothed peaks. Much of the inland ice comes close to the water, where it forms the glacial front and, breaking off, becomes floating icebergs. There are hundreds and thousands of bergs along this coast, especially when strong offshore

winds send the ice to the eastward (page 116).

An onshore wind blowing hard creates a big sea, which rolls in and lifts up the glacial front. This releases the bergs, which come south with the southbound Arctic Stream from the Polar Basin. The glacial streams for months send vast rivers of water into this same southbound current.

Last summer I saw bergs 50 miles distant from the south end of Cape Farewell. Some of these bergs swing around the cape and get into the northbound branch of the Gulf Stream, following or paralleling the coast and moving up with the bergs that come out of the big fjords of south Greenland.

As they work north, they begin to leave the coast and move across Davis Strait to Baffin Island and southbound Arctic currents. It would be interesting to tag these bergs as we do birds and fishes. There is no question that they come, many of them, right down to the Banks of Newfoundland.

We put in a very busy day in one of the fjords running in from Cape Farewell, catching many fine cod with the jigger, and then lowering the otter trawl and obtaining a good lot of rich specimens. Some of these, while not unknown, were the first ever delivered to the Smithsonian.

In seven days we crossed the North Atlantic to Brigus and every three hours we made plankton hauls. We kept our thermometer readings of the surface water and put overboard bottle papers for the Hydrographic Office of the Navy Department at Washington.

During the morning of August 28 we ran into a heavy gale. The vessel was shipping much water. Our musk ox calves became uncomfortable as water began coming into their box. We wrapped them up with plenty of sail canvas, cut up strands of rope, and made them a comfortable bedding. Water on their long, heavy hair is bad for musk ox calves; it may cause pneumonia.

Sunday, September 3, we heard that England and France had declared war upon Germany.

Peary's Estimate of Greenland

My old commander, Rear Admiral Robert E. Peary, wrote in 1916 an article advising Greenland's purchase by the United States, and from this document it seems fitting here to quote a part:

"Geographically, Greenland belongs to North America and the Western Hemisphere, over which we have formally declared a sphere of influence by our Monroe Doctrine. Its possession by us will be in line with the Monroe Doctrine and will eliminate one more possible source of future complications for us from European possession of territory in the Western Hemisphere.

"Greenland is comparatively near to us. For years American ships have conveyed cryolite from the Ivigtut mines to Philadelphia. There are coal and cryolite, graphite and mica, possibly gold, in its rocks. With our unlimited means it may, like Alaska, prove a sound and most valuable business investment.

"The abundance of native coal and the numerous glacial streams which come tumbling into the southern fjords from the great interior ice sheet represent enormous potential energy which might be translated into nitrate and electrical energy to make Greenland a powerhouse for the United States. Greenland represents ice, coal, and power in inexhaustible quantities.

Base for Airships and Navy

"And stranger things have happened than that Greenland, in our hands, might furnish an important North Atlantic naval and aeronautical base. A North Pacific naval base for the United States in the Aleutian Archipelago is a recognized possibility. Why not a similar base in the North Atlantic?

"Cape Farewell in Greenland is but little north of Sitka. It is in the same latitude as St. Petersburg [now Leningrad]; Christiania [now Oslo]; Great Britain's naval base in the Orkneys; and the northern entrance to the North Sea, which Great Britain has patrolled with her ships, incessantly now, summer and winter, for two years.

"There are fjords in southern Greenland which would hold the entire Navy, with deep, narrow, impregnable entrances. Thirty hours' steaming due south from Cape Farewell by 35-knot war craft would put them in the transatlantic lanes midway between New York and the British channel. With the rapid shrinking of distance in this age of speed and invention, Greenland may be of crucial importance to us in the future.

"The present war [the first World War] has shown us most strikingly how far flung may be the regions having a bearing on the struggle.

"Great Britain's coaling station in the Falklands spelled destruction for Germany's squadron of commerce destroyers. Russia's port of Archangel [Arkhangelsk] has been an invaluable gateway for her. Greenland in our hands may be a valuable piece of our defensive armor. In the hands of a hostile interest it could be a serious menace."

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In addition to the editorial and photographic surveys constantly being made, The Society has sponsored more than 100 scientific expeditions, some of which required years of field work to achieve their objectives.

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In Mexico, The Society and the Smithsonian Institution, January 16, 1939, discovered the oldest work of man in the Americas for which we have a date. This slab of stone is engraved in Mayan characters with a date which means November 4, 291 B. C. It antedates by 200 years anything heretofore dated in America, and reveals a great center of early American culture, previously unknown.

On November 11, 1935, in a flight sponsored jointly by the National Geographic Society and the U. S. Army Air Corps, the world's largest balloon, *Explorer II*, ascended to the world altitude record of 72,395 feet. Capt. Albert W. Stevens and Capt. Orvil A. Anderson took aloft in the gondola nearly a ton of scientific instruments, and obtained results of extraordinary value.

The National Geographic Society-U. S. Navy Expedition camped on desert Canton Island in mid-Pacific and successfully photographed and observed the solar eclipse of 1937. The Society has taken part in many projects to increase knowledge of the sun.

The Society cooperated with Dr. William Beebe in deep-sea explorations off Bermuda, during which a world record depth of 3,028 feet was attained.

The Society granted $25,000, and in addition $75,000 was given by individual members, to the Government when the congressional appropriation for the purpose was insufficient, and the finest of the giant sequoia trees in the Giant Forest of Sequoia National Park of California were thereby saved for the American people.

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Printed in U. S. A. Entered at the Post Office at Washington, D. C., as Second Class Mail Matter. Acceptance for mailing at special rate of postage provided for in Sec. 1103, Act of October 3, 1917, authorized July 1, 1918. Cover design and contents registered in United States Patent Office. Marca Registrada.

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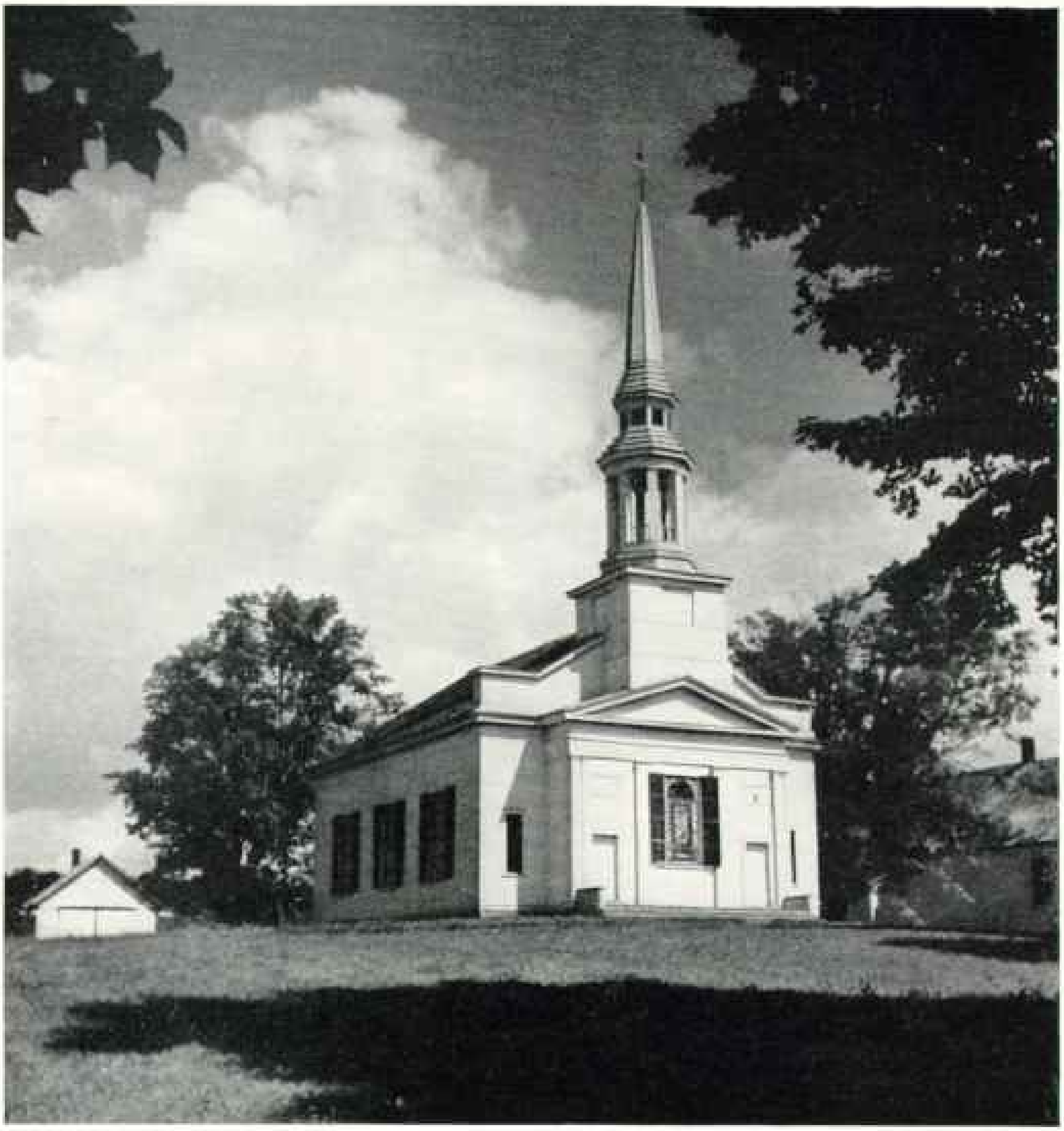

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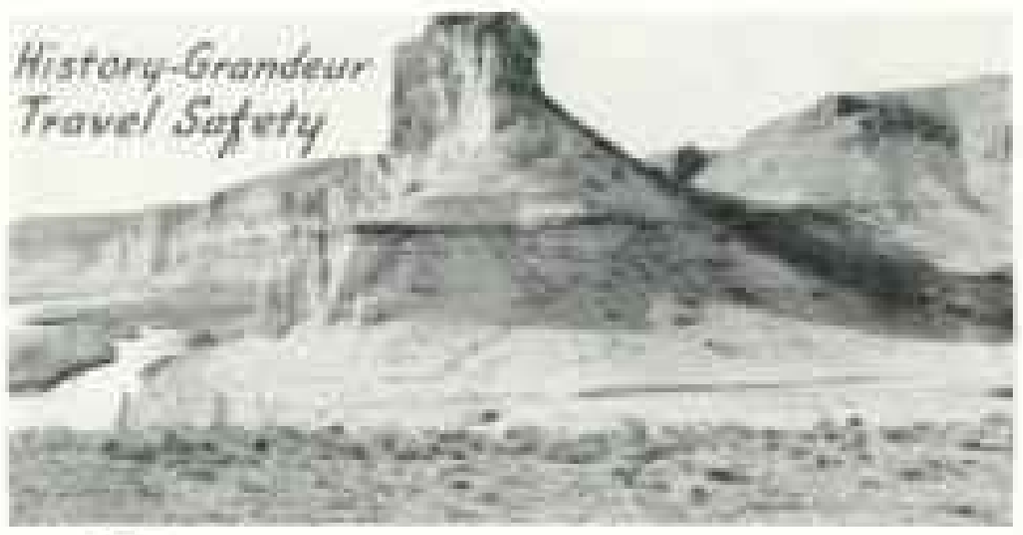

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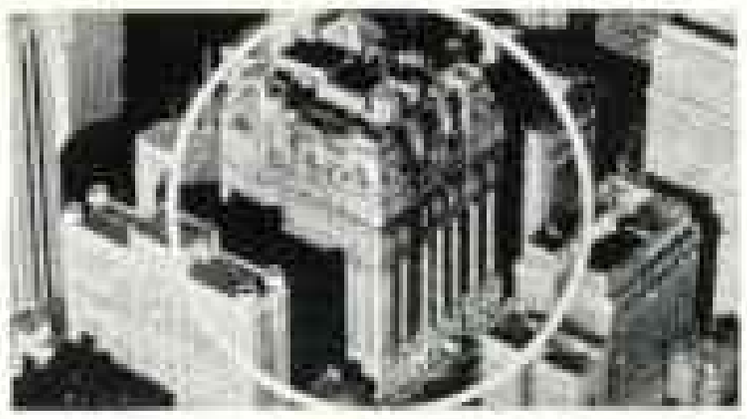

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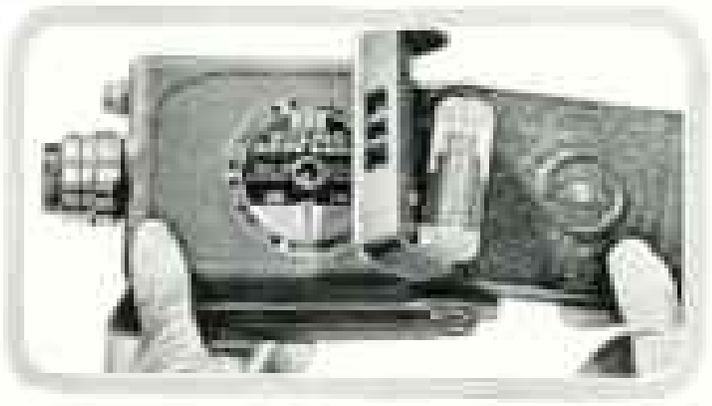

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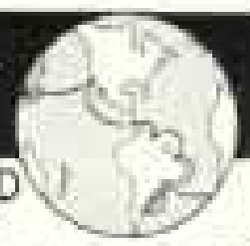

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THE WORLD'S BEST — BY ANY TEST

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A "STOMACH-ACHE" means *something*'s wrong.

True, it may be nothing dangerous. But because it can be very serious, no one should treat such a warning signal lightly.

▶ All too frequently a severe so-called "stomach-ache" means an acute attack of appendicitis—one of the more important causes of death among children, adolescents, and young adults. Yearly it takes some 15,000 lives in this country.

▶ Many of these lives are lost as a result of "self-treatment." Many could be saved if the following three-point safety rule were observed whenever intense abdominal pain persists for more than an hour or two:

1. Call a doctor.
2. Apply an ice bag and remain quiet.
3. Do *not* take a laxative, food, or medicine.

The importance of prompt medical attention is clearly indicated in a recent survey of appendicitis cases made by medical authorities. It reveals that the death toll, among those who delayed going to the hospital from two to three days, was from *three to four times greater* than among patients admitted to a hospital within the first 24 hours. The survey further shows that fatalities, among those who had taken a laxative after pain developed, were more than *three times greater* than among those who had taken none.

▶ Even if a persistent "stomach-ache" is not appendicitis, it cannot safely be considered innocent. It may mean one of a number of other serious diseases.

▶ When in any doubt whatsoever about abdominal pain, call your physician for *safe* guidance—and call him in *time*. Then if serious disease is indicated, an early diagnosis and treatment may speed recovery, reduce the cost of illness, and decrease the possibility of dangerous complications.

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A pinch of salt and a little wheat, barley, and rice are placed in a large sieve. The baby is put in, too, and a woman shakes the sieve.

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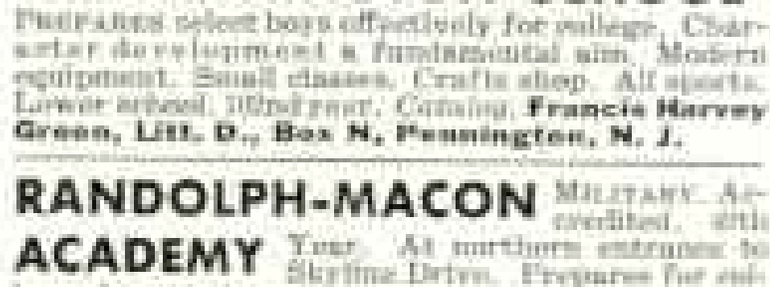

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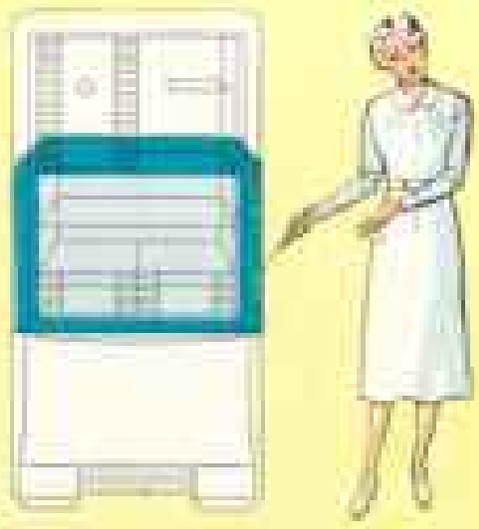

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