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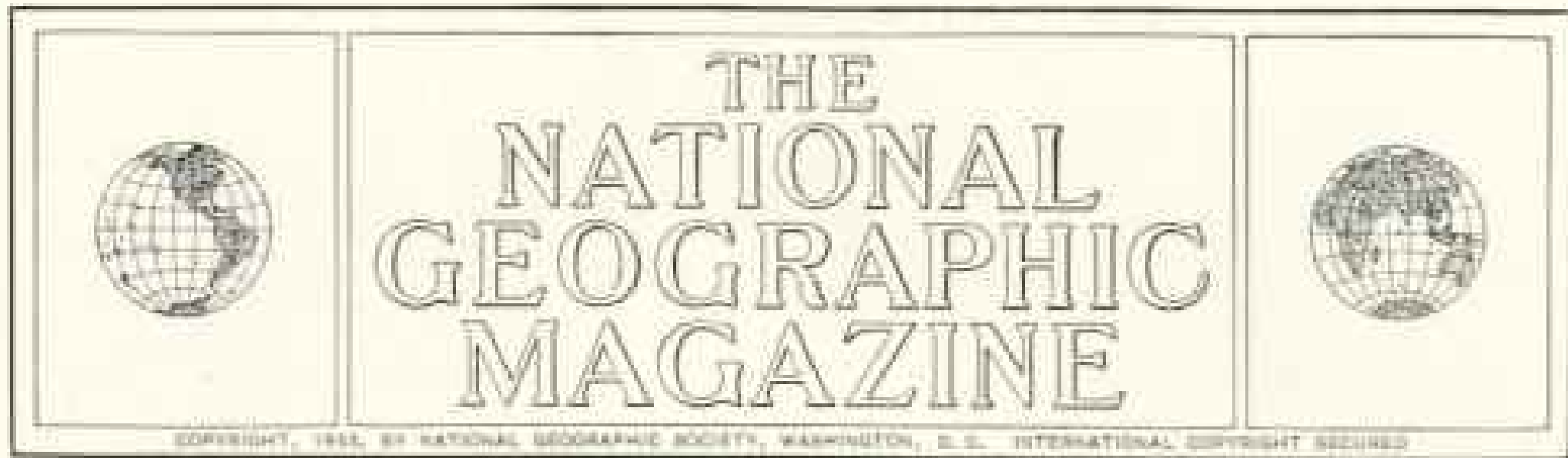
With 22 Illustrations

LAWRENCE A. FERNSWORTH

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EXPLORING THE SECRETS OF PERSEPOLIS

BY CHARLES BREASTED

EXECUTIVE SECRETARY, THE ORIENTAL INSTITUTE, THE UNIVERSITY OF CHICAGO

With Illustrations from Photographs from the Author

INDEFATIGABLE in its quest, science steadily uncovers the secrets of the buried past. Egypt, Syria, Babylonia, explored by the spade of the archeologist, all yield dramatic life stories of races long since swept away. And now comes Persia.

For the first time since Alexander the Great looted and burned it 331 years before Christ, the wonders of the ancient city of Persepolis are being revealed. Men call it Persepolis, or "City of Persia," because its own real name is lost in the mists of antiquity. This we know, that 2,500 years ago it was built by Darius the Emperor, father of that Xerxes who, as so vividly told in all our school histories, sat on a height near Athens and watched the Greek navy destroy his Persian fleet.

Standing in the dry, sun-baked valley of Mervdasht, 38 miles northeast of Shiraz, in Persia, this ruined city of tombs, colossal statuary, harems and palaces, this ancient capital of Darius and Xerxes is now being excavated by the Oriental Institute of the University of Chicago (see map, page 383).

A LIBRARY OF 20,000 CLAY TABLETS

Not only have amazing works of ancient art been found, but Dr. Ernst E. Herzfeld, Field Director of the Expedition, exploring for the Oriental Institute, has also uncovered a body of archives of the Persian kings, containing some 20,000 clay tablets inscribed with cuneiform characters.

This is the first important find of its kind ever made in the old Kingdom of the

Lion and the Sun, which has endured for tens of centuries. What fascinating facts these tablets may reveal, when translated, as to ancient life in Persia cannot even be imagined. It may be, indeed, that here will be found the Persians' version not only of the wars with Greece, when Darius was defeated at Marathon and Xerxes at Salamis, but new facts on Persia's spectacular invasion of Egypt, as well as the graphic record of other dramatic events of those bygone days.

Persepolis itself, as a mysterious and stupendous ruin, has of course been known to foreign travelers and explorers since the 17th century. Scratched high on one of its walls is the legend: "Henry M. Stanley, *N. Y. Herald*, 1870."

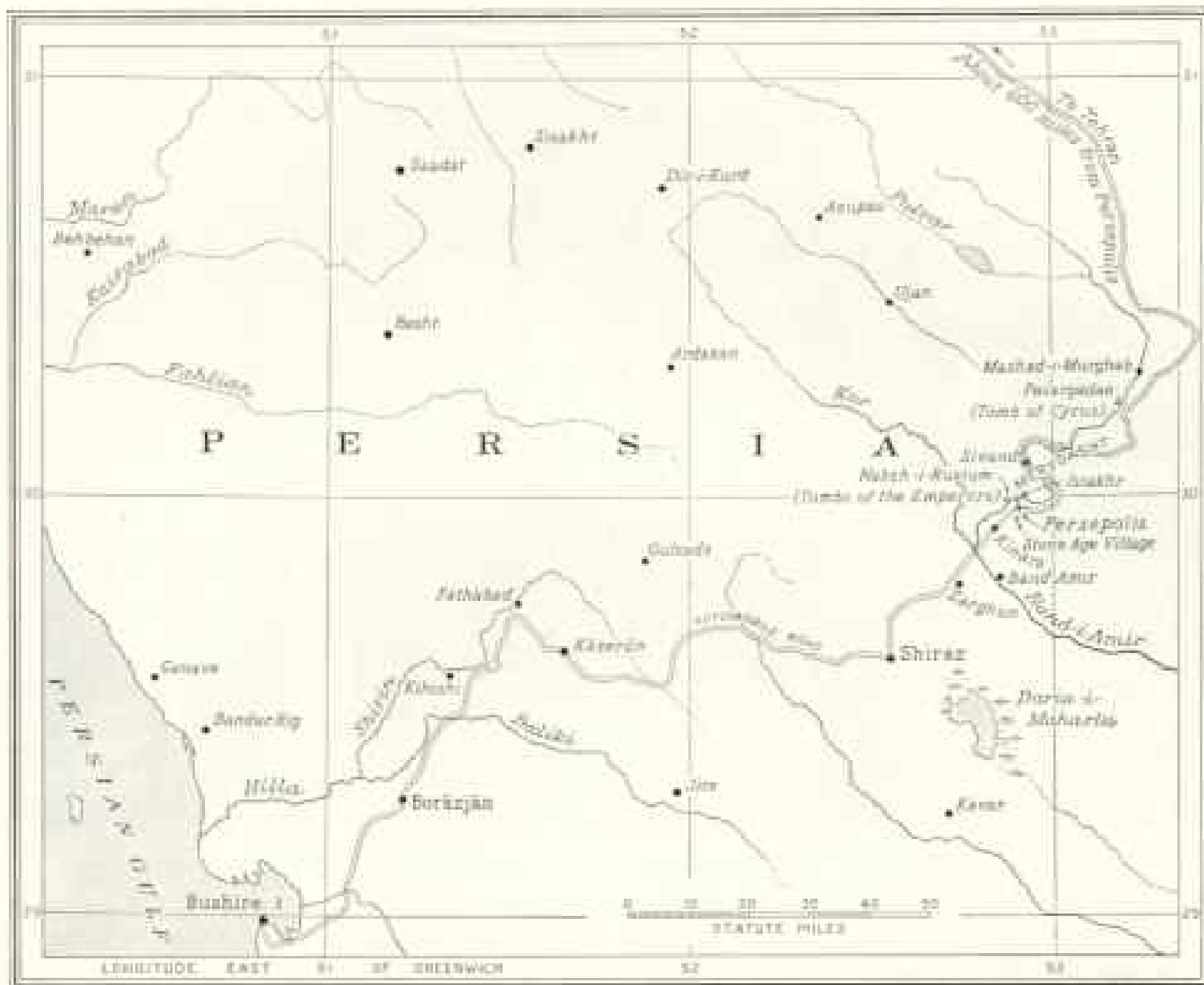
Dismay and uneasiness seized some of the early visitors who first beheld the strange creatures, half man and half beast, which rear their mysterious heads above the ruins, and to this day the superstitious Bactrian nomads who roam these wastes look with awe on the giant stone beasts and gods.

Fryer, an early explorer, wrote: "At the gate we encountered two Horrid Shapes, both for Grandeur and Unwontedness, being all in Armour of Coat of Mail, striking a Terror to those about to intrude; their Countenances were of the fiercest Lions, and might pass for such had not huge Wings made them flying Gryffons, and their Bulk of Hinder Parts exceeded the largest Elephants."



TWO COLOSSAL WINGED BULLS GUARD THE GATE TO THE PALACE OF XERXES.

Persian sculptors borrowed the idea of winged bulls from the Assyrians. Behind the gateway is a magnificent fluted column, one of the colonnade erected by Xerxes to adorn the entrance to his palace (see text, pages 381, 383).



PERSEPOLIS STANDS IN THE DESOLATE MERVDASHT VALLEY, WHERE FINE ESTATES AND GARDENS ONCE FLOURISHED

Shiraz, about 38 miles southwest of the ruins, is the nearest city, and from it the explorers working at Persepolis draw their supplies. Bushire, on the Persian Gulf, is the port of entry for this isolated region.

Herbert, another traveler, describes an image of gigantic size "standing as upright as his deformed posture will admit, discovering a most dreadful visage 'twixt man and beast."

It was the great bulls, with wings, at the monumental entrance to the palace of Xerxes (see illustration, opposite page), which startled these early wayfarers. Standing 17 feet high, in heroic poise and appearance these weird beasts seem to typify the proud challenge of the old Persian emperors whose artists sculptured them.

PLUTARCH'S NARRATIVE VERIFIED

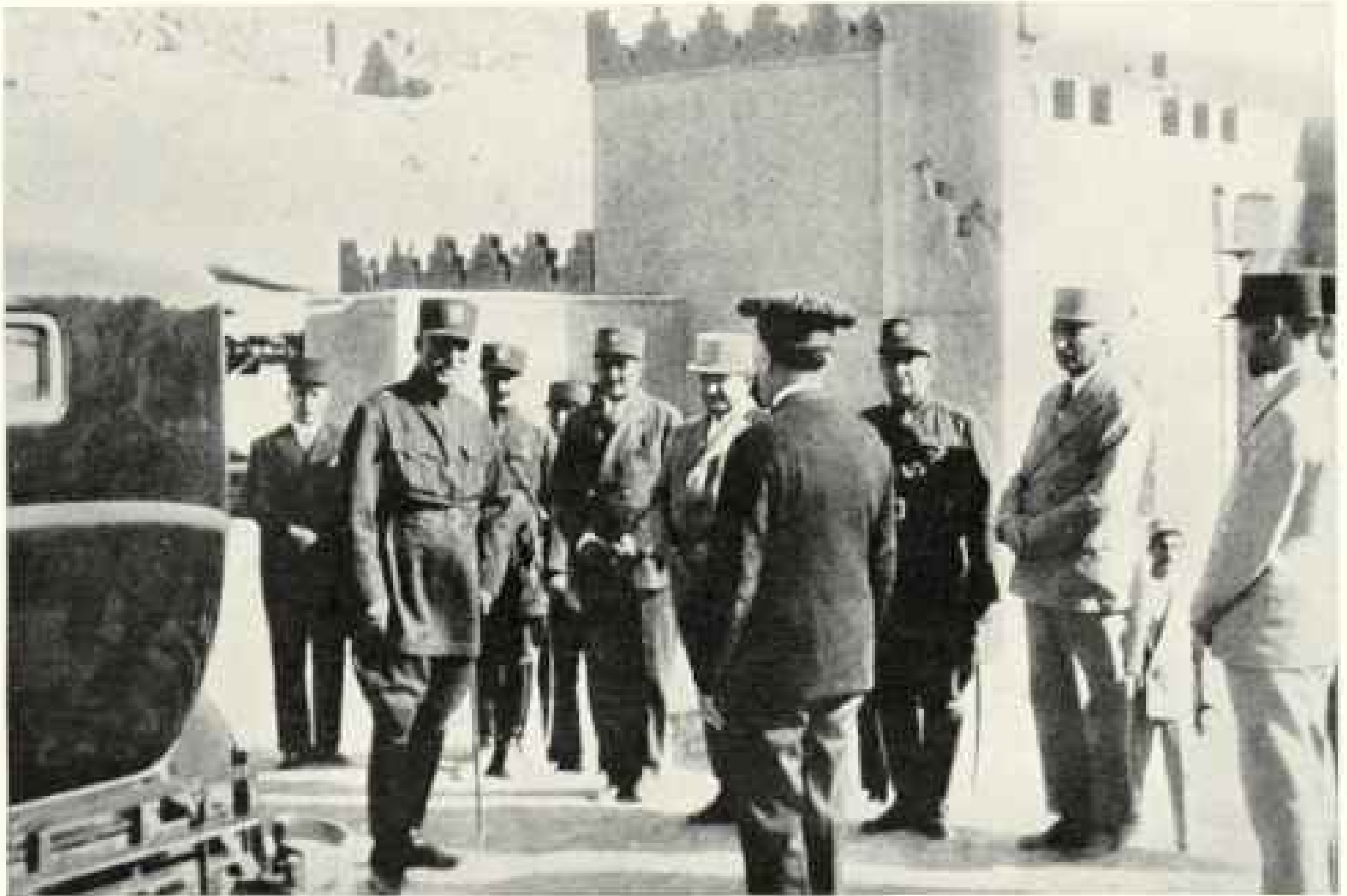
Evidence that Persepolis long ago was gutted by fire, as told by Plutarch in his life of Alexander, was found by Dr. Herzfeld, in the form of layers of ashes and charcoal between the palace walls.

On Alexander's famous march into Per-

sia, says Plutarch, he butchered the people of Susa (Shush), in western Persia, and at Persepolis he found as much coined money as he had found at Susa. "It took 10,000 pairs of mules and 5,000 camels to carry away the other furniture and wealth there."

THAIS, "LIKE ANOTHER HELEN, FIRED ANOTHER TROY"

It was after a merry drinking bout with his companions, wrote Plutarch, that Alexander the Great was led to set fire to the glittering Persian capital. Many women had come to his camp, to meet their lovers and share in the victors' revelry. Most famous among these women was Thais, an Athenian, later the mistress of Ptolemy Lagus, king of Egypt. She, partly in praise of Alexander and partly to make sport for him, as the luxurious revelry continued,



HIS IMPERIAL MAJESTY THE SHAH OF PERSIA VISITS THE EXPEDITION

The Shah, in uniform, is the second figure from the left. Facing him (in center of foreground) is Dr. Herzfeld, Field Director of the Expedition. The Shah is uttering the words, "You are doing a work of civilization here, and I thank you."



WRECKAGE OF THE UNFINISHED TOMB OF DARIUS III

It was customary in ancient times to build a king's tomb during his life. Darius, last of the Persian emperors at Persepolis, was slain by his own noblemen before his tomb was finished. His death occurred 330 B. C., while his army was being pursued by Alexander the Great.

proposed to go out and burn the house of that Xerxes who had previously burned Athens. Other writers, Plutarch points out, say that the deed was premeditated. Apparently Alexander liked the idea, as did his followers, who felt that after the barbarian enemy's capital was burned they might the sooner return to Greece.

The sumptuous sculpture in stone, the tall, fluted columns, the giant stairways and carved stone friezes of course would not burn, but only the wooden roof, beams, other woodwork, and furniture. Also, as Dr. Herzfeld now finds, much adobe brick was used in building

Persepolis; this, crumbling in the winds of time, fell about the bas-reliefs and

sculptures and protected them, so that many are as clean, sharp, and fresh-looking as though chiseled yesterday.

Marauders in plenty have passed this way since the city burned. Tombs carved in the solid rock sides of adjacent hills have been rifled and despoiled.



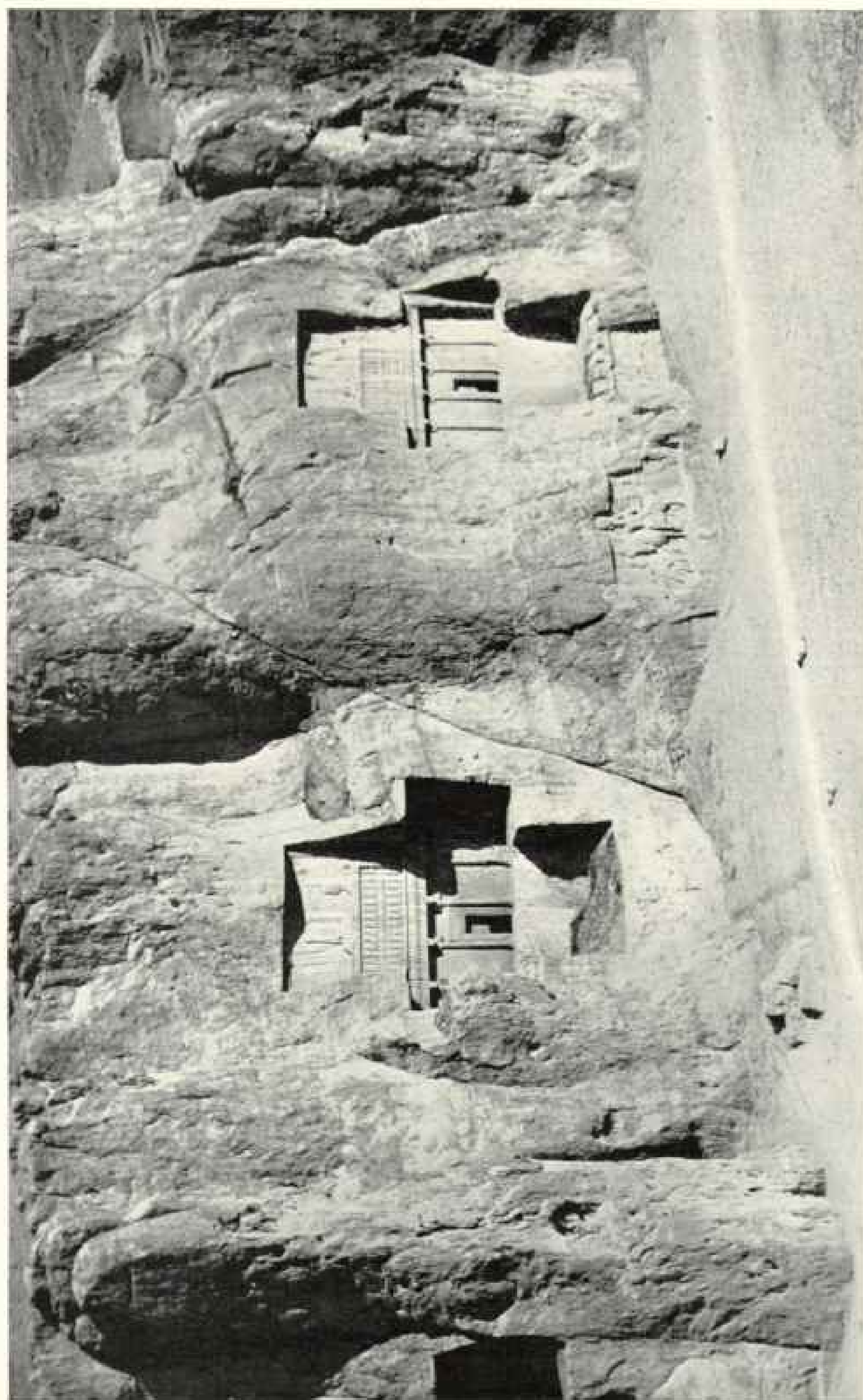
PLAN OF THE GREAT PALACE TERRACE AT PERSEPOLIS

A. Grand stairway entrance; B. Gate of Xerxes; C. The royal audience hall of Xerxes; D. The Hall of One Hundred Columns; E. Harem palace of Darius and Xerxes; F. Entrance gate of palace area; G. Winter palace of Darius; H. Palace of Xerxes; I. Palace of Artaxerxes III; J. Grand stairway to entrance gate of palace area; K. Grand stairway to royal audience hall of Xerxes; L. Grand stairway to royal audience hall of Xerxes.

Nights," were at the zenith of their power. Baghdad was the center of the world's culture, at least in the Caliphs' belief, and its marauding horsemen swept through all settled regions about the Persian Gulf.

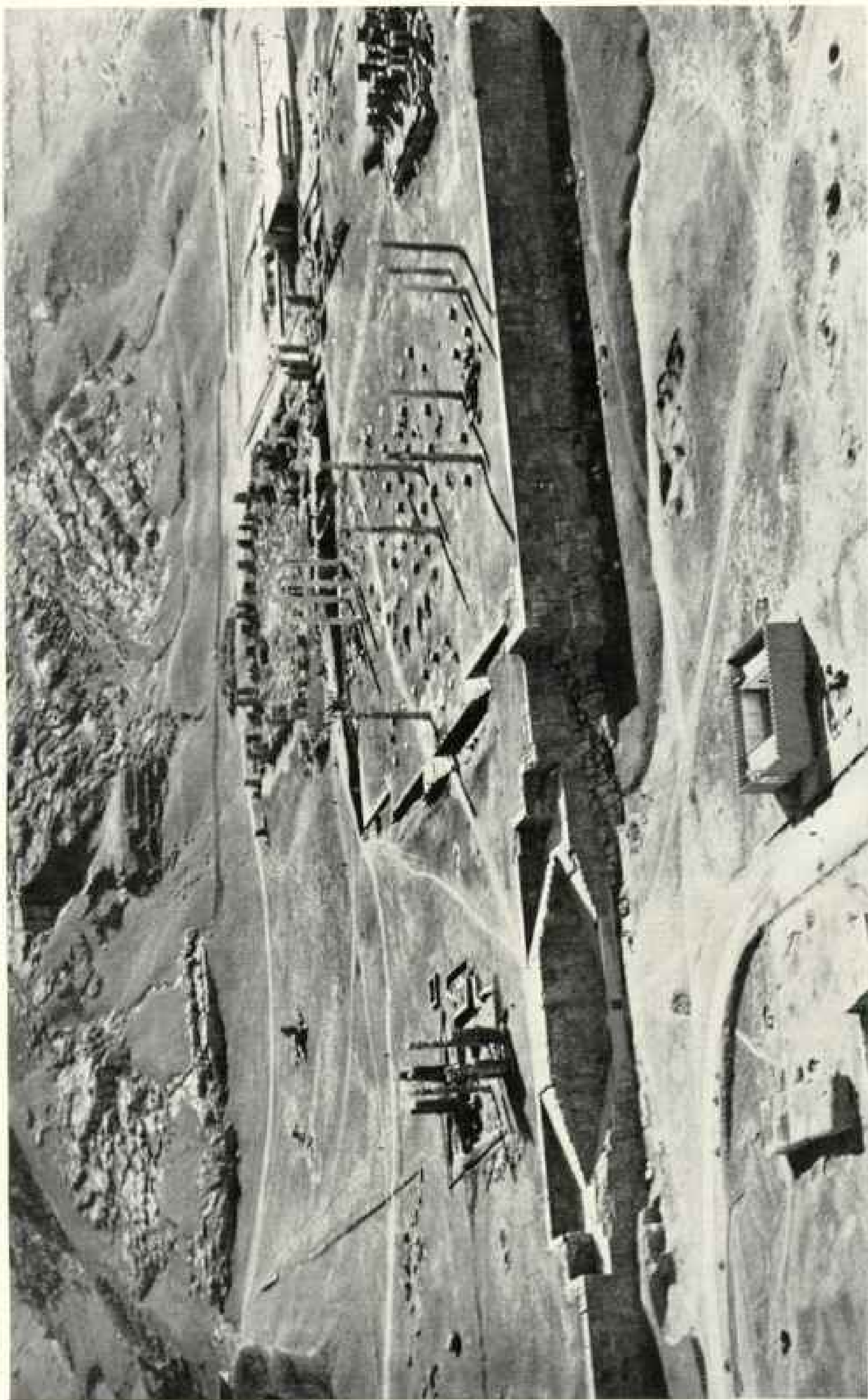
THE HOME PORT OF SINDBAD THE SAILOR

Basra, south of Baghdad and near the head of the Persian Gulf, was the seaport home of Sindbad the Sailor, in the tales of his adventures, and off the Persian littoral lay that treasure island of Hormuz, to-day a rock so bare that it is hard to believe men ever used it as a treasure stronghold.



IMPERIAL PERSIAN TOMBS Hewn FROM ROCK CLIFFS NEAR PERSEPOLIS

Of four royal tombs in this group, at Naksh-e Rostam, two are shown, that of Darius the Great (on the right) and Artaxerxes I. Xerxes' tomb, not shown, is farther to the right. At extreme left appears a part of the tomb of Darius II. These tombs look out on ruined Istakhr, now being excavated (see map, page 383; text, pages 406, 409; illustration, page 413).



THE SITE OF THE PALACES AND HAREM OF THE PERSIAN KINGS

The terrace, 50 feet high, was reached by monumental stairways. A proud inscription on the wall of the stairway looks down upon the visitor. It reads, "Darius the king saith: 'This land of Perzia, which Ahura-Mazda has entrusted to me, the land that is beautiful, that hath good people and fine horses—by the will of Ahura-Mazda and my will, it fears no enemy.'" Ahura-Mazda is another name for the god of light, Ormuzd (or Ormuz).



AN AMERICAN CAMERAMAN MAKES A MOTION PICTURE AT PERSEPOLIS

Dr. James H. Breasted, Director of the Oriental Institute, and Dr. Ernst Herzfeld, in charge of excavations, examine the Persepolis finds.

Because it is written in the Koran that all graven images are offensive to Allah, the Caliph's warriors, when galloping through Persepolis, smashed and defaced, with true Moslem zeal, whatever carvings remained above ground.

The road which connects Bushire, seaport of Persia on the Persian Gulf, with Shiraz, 199 miles inland, by tortuous, winding mountain trail, is an adventure for even the hardened traveler. It serpentine its way through three almost impassable mountain ranges, and only a sturdy car can survive the ordeal and achieve at last the level stretches of the wide, flat valley of Mervdasht, desolate now in contrast to its former fertility (see map, page 383).

Some leagues to the northwest of Persepolis, as the crow flies, and a long way by donkey, lie the rich Karun Valley oil fields, made famous in Near East diplomatic annals by rivalry between the Anglo-Persian and other oil interests. To sink wells here, scores of trained drillers were brought all the way from Texas and Oklahoma.

Thus, though normal life moves with customary rhythm and tempo all about it, Persepolis itself, till recently, has played no part in the life of modern Persia. As long ago as 1621, these ruins were identified as those of the great capital of ancient Persia by a Roman nobleman, Pietro della Valle.

But until the Teheran (Teheran) Government, in 1930, authorized the Oriental Institute of Chicago to excavate here, no comprehensive study of Persepolis had been made.

Dr. Herzfeld, the leader of this Expedition, has spent more than thirty years in Persia and has traveled to every part of it. He speaks all its dialects.

HAREM PALACE OF DARIUS AND XERXES

Years ago, he surveyed Persepolis as thoroughly as he could without excavating. It was then that he first recognized one of the better preserved of the ancient structures as the harem palace of Darius and Xerxes.

So it was that when, after many years, he came to dig up and restore Persepolis for the Oriental Institute, he rebuilt the harem first for use as Expedition headquarters (see page 412).

It was a tremendous task, for some of

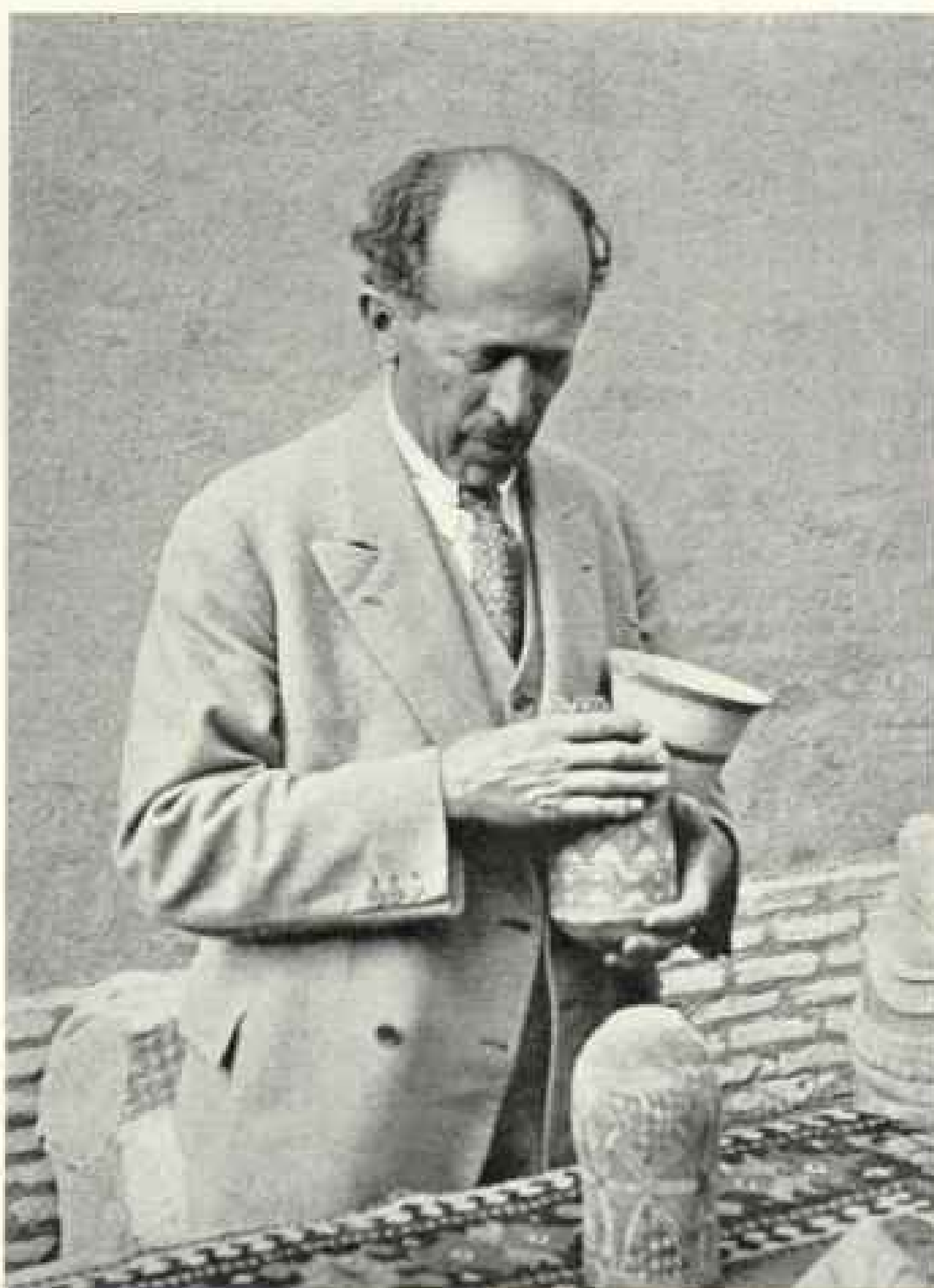
the blocks of stone that had to be replaced weighed 20 tons! There was also much adobe work to do, repairing the fallen walls. While this went on, the staff lived in tents pitched on the terrace, a man-made, platform-like base, 1,000 by 1,600 feet, on which the palaces stood. This terrace, like the palaces and statuary, was made of stone hewn from adjacent foothills (page 387).

Actual digging no sooner began than results of profound interest, from small objects loose in the rubbish to architectural elements, began to appear.

As the *débris* of time was slowly swept from the vast terrace, Herzfeld was able, for the first time, to make an authentic ground plan, showing the architectural relationship that existed among the different palaces (see diagram, page 385).

It was Xerxes who built the gate at the top of the grand staircase which leads from the terrace down to the open plain. The winter palace of Xerxes, and that of Darius, his father, were also identified; and Herzfeld found, too, that these palaces and that of a later emperor, Artaxerxes, together with the now restored harem, had formed a group unto themselves. This group had a gate or entrance hall through which all visitors to the palace area had to pass.

This entrance was adjacent to and roughly between two massive buildings known as *apadanas*, or audience halls. The roof of one of these halls had been supported by a forest of 100 lofty stone columns, all superbly carved and fluted. The roof beams which these columns supported were of wood, as in the other buildings. It is



PAINTED POTTERY FROM A STONE AGE VILLAGE.

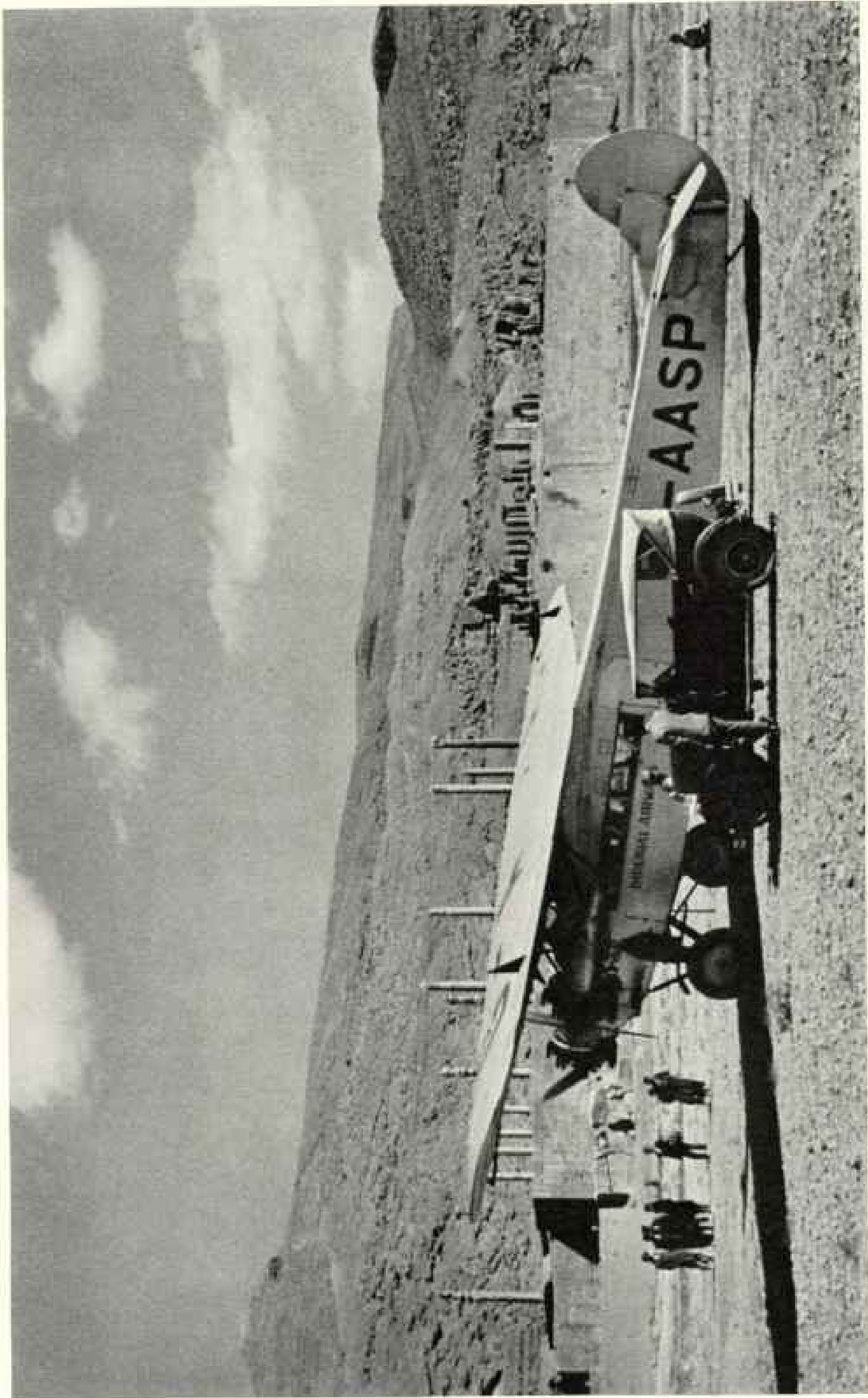
The wide range of colored decorative patterns on this pottery of some 6,000 years ago impressed Dr. Herzfeld with the artistic ability of its ancient makers (see text, page 409).

easy to imagine the roar with which fire swept through these vast audience halls the day Persepolis burned (see page 410).

Herzfeld had underestimated, however, the depth of the *débris* resulting from the destruction and disintegration of the enormous adobe walls. This *débris* had formed a layer of rubbish in places as much as 26 feet deep!

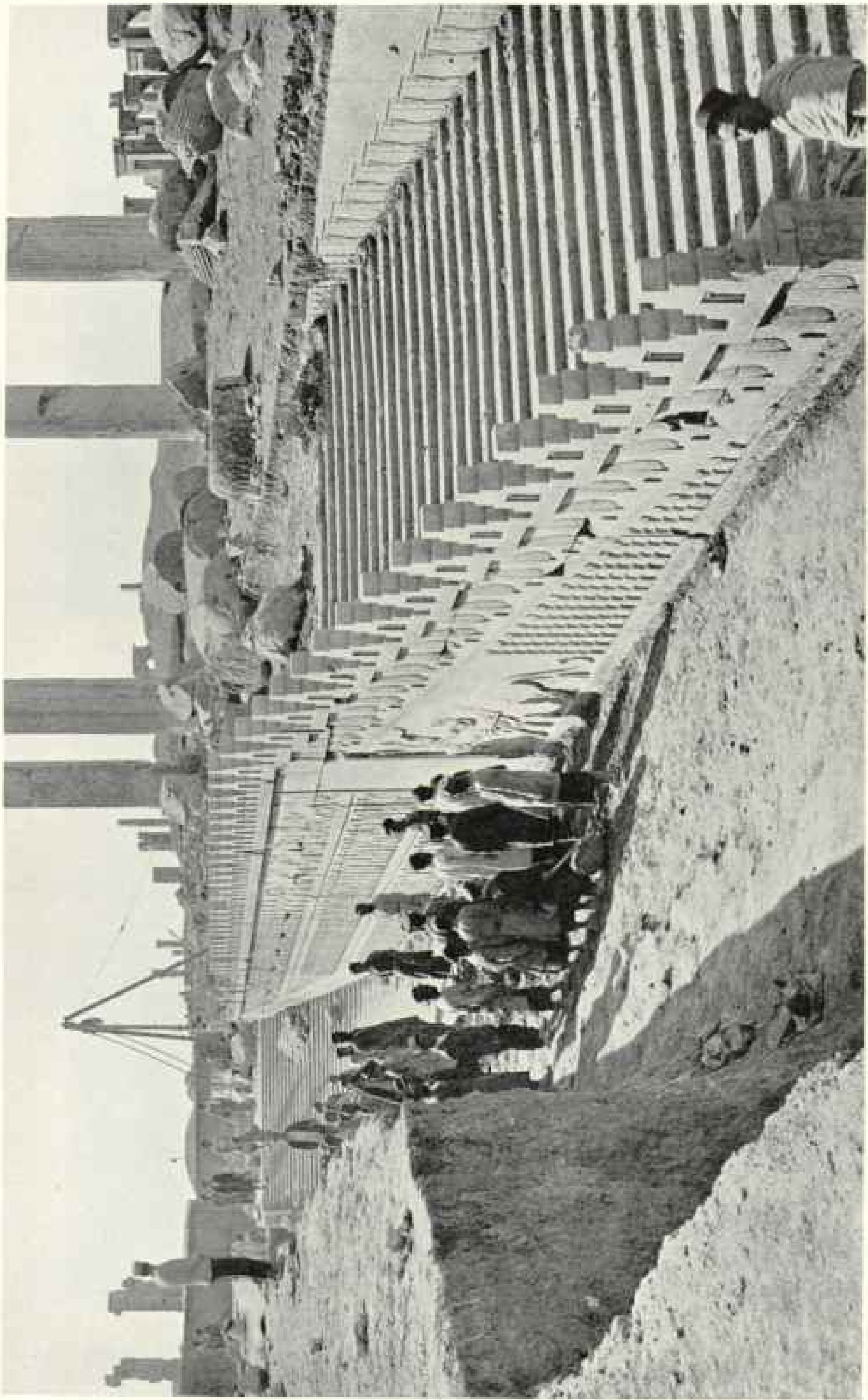
“THERE MUST BE STAIRWAYS”—AND THERE WERE

In almost a year and a half, the clearance has revealed many important finds and during this work it occurred to Dr. Herzfeld that beneath this rubbish there must also lie buried some kind of stairway by



A MODERN CHARIOT OF THE AIR HALTS BEFORE RUINED PERSEPOLIS

The plane is a trimotored, eight-seater furnished by the Imperial Airways, and the pilot was Capt. Gordon P. Otley. In the background are the rocky hills from which stone was quarried to build Persepolis (see text, page 410).



THESE PALACE STAIRWAYS HINT AT THE POMP AND CIRCUMSTANCE OF THE PERSEPOLIS COURT

This is a newly found approach to a royal reception room (see K on diagram, page 385). Many of the crenelations and most of the top row of sculptured stone blocks were lying at the bottom of this trench when the discovery was made. They had fallen in an earthquake which caused the larger number of the columns to tumble many centuries ago. By means of the large metal tripod seen in the left background the Expedition raised the fallen relief blocks and put many back in place (see text, page 389, and illustration, page 416).



AIRPLANE WHEELS MAKE TRACKS IN SAND WHERE WAR CHARIOTS USED TO ROLL
Men and boys crowded about one of the few planes to land in Persepolis, as the people of that sumptuous city once crowded about the horse-drawn war chariots of Darius and Xerxes.

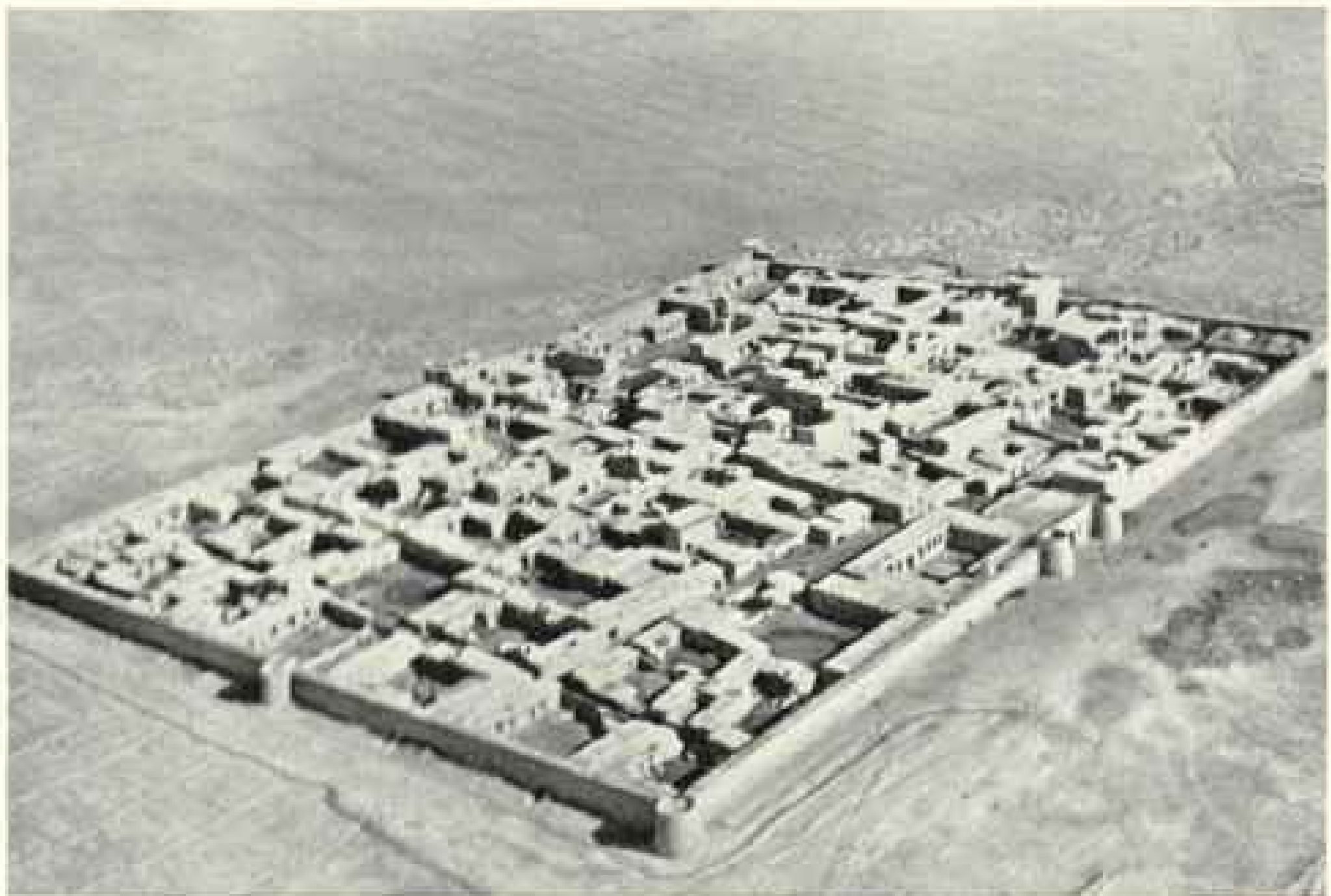


VILLAGE WOMEN AND CHILDREN SQUAT ABOUT THE VISITING AIRPLANE
High winds often sweep down the valleys at Persepolis. To secure the giant plane against sudden gusts, it was anchored with ropes tied to bags of heavy stones.



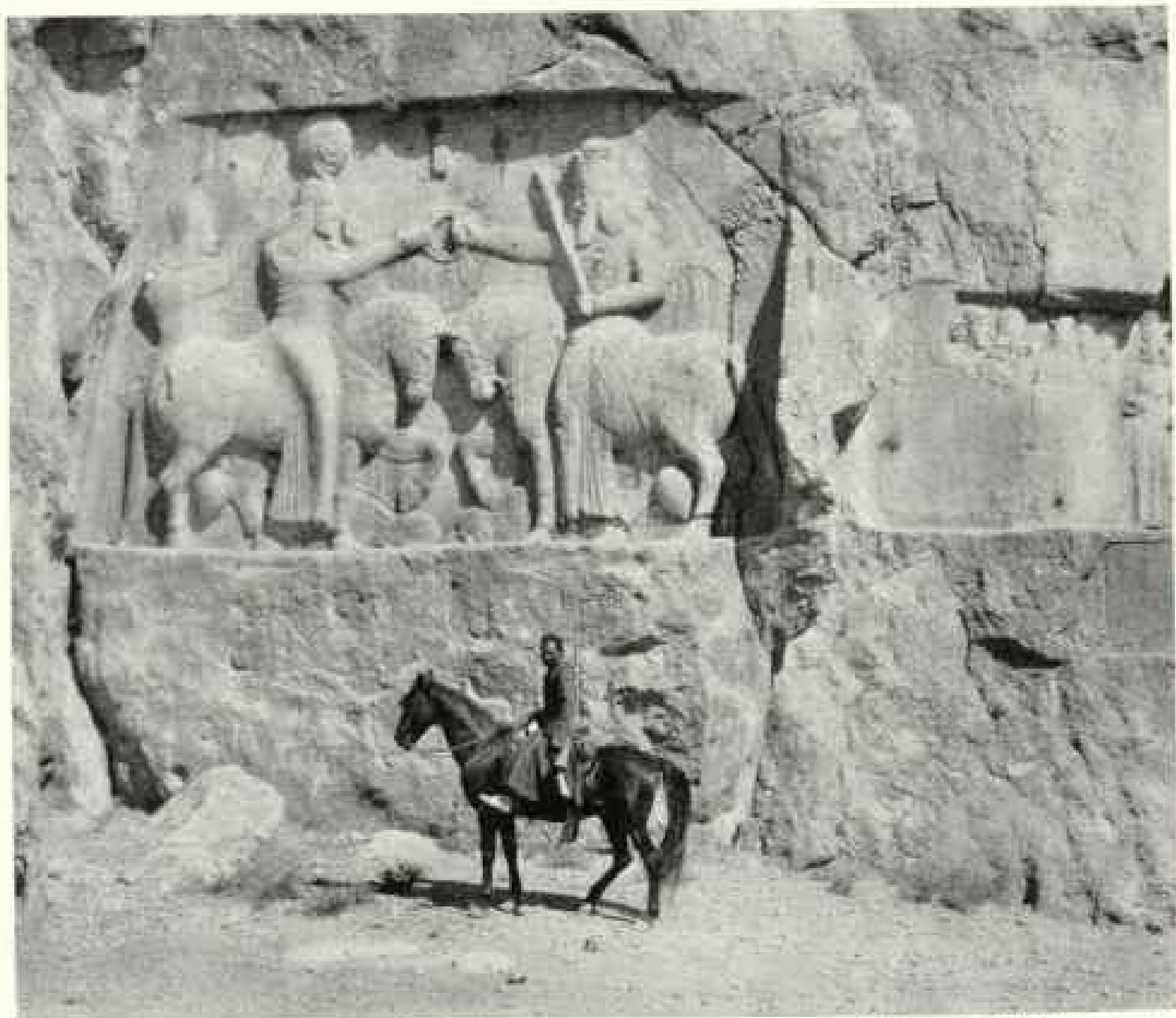
PERSIAN MUSICIANS GATHER TO ENTERTAIN THE EXPLORERS

One small boy, pounding with his hands on a drum, sang in a high nasal voice. Workers sing as they begin their toil, and all sing again at quitting time.



WALLED VILLAGES PERSIST IN MANY PARTS OF PERSIA

With sentry towers and massive gates that close against attacking enemies, these villages shelter tradesmen and town people, and also the herdsmen and small farmers.



Photograph by W. Robert Moore

ABOUT SEVENTEEN CENTURIES AGO SASSANIANS CARVED THESE FIGURES ON THE WALL OF ROCK

The carving is near the tombs of Darius and Xerxes. It shows Ardashir I (A. D. 226-241), the founder of the Sassanian line, mounted on horseback and receiving from the god Ormazd a diadem that symbolizes the gift of sovereignty. Trampled beneath the feet of the king's horse lies the form of Artabanus IV, the last of the Parthian dynasty.

which the emperors entered the audience halls. He was right. The result was the clearance and discovery of two superb sets of double stairways leading to the audience hall of Xerxes and the gate to the palace area, a discovery which constitutes by far the most significant find the Expedition has yet made (see K and J, respectively, on diagram on page 385).

In fact, in only a few days' time Dr. Herzfeld had laid bare a series of wall reliefs and sculptures which almost doubled the volume of such ancient Persian art known up to that time.

The stairways were double so that formal ceremonial processions could divide to right and left, away from each other. After they had moved up in opposite directions to two

landings at opposite sides, a second flight on either side led them up to a central landing at the top, where the processions were reunited (see pages 391, 416).

The audience hall stood on a secondary terrace or base. The side walls of this base, together with the breasts and balustrades of the stairways, were adorned with some of the most superb reliefs and carvings which have come to us from the ancient world.

These carvings depict a "durbar," or royal levee (see pages 402-405, 411). It includes all of the Persian emperor's troops stationed at the palace, among whom were the Imperial Guard, known by the Persians as the "Immortals." Advancing to meet these troops are numerous Persian and



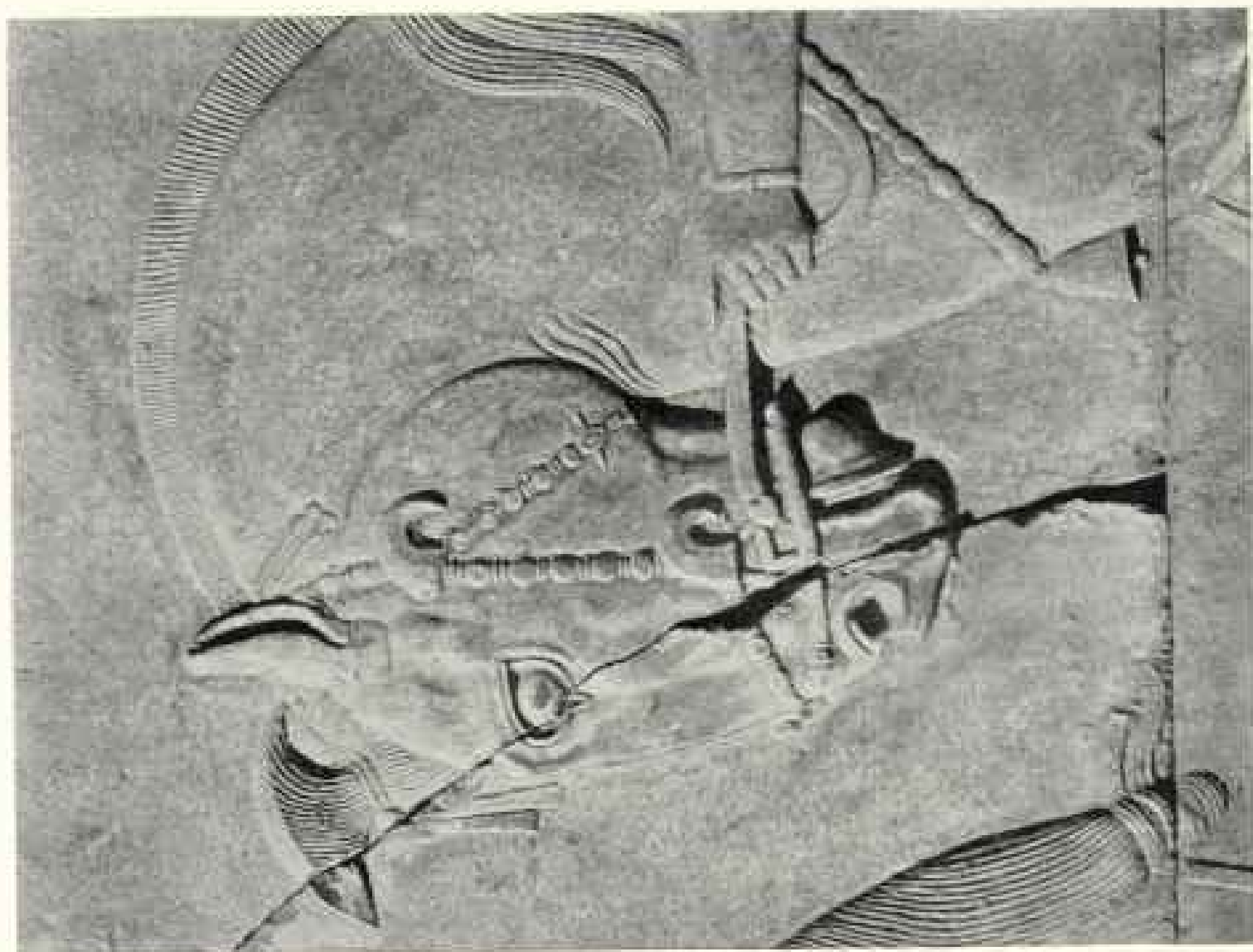
FLYING INLAND FROM BUSHIRE, THE AUTHOR'S PARTY CROSSED HIGH, SNOW-CLAD RANGES ON THE WAY TO PERSEPOLIS

Three efforts, on three successive days, were made before it was possible to penetrate the cloud mantle and find a safe landing place at Persepolis. Under such weather conditions, the pilot must fly high to be safe from any crash in crossing the rocky ranges which lay across southwest Persia (see text, page 410).



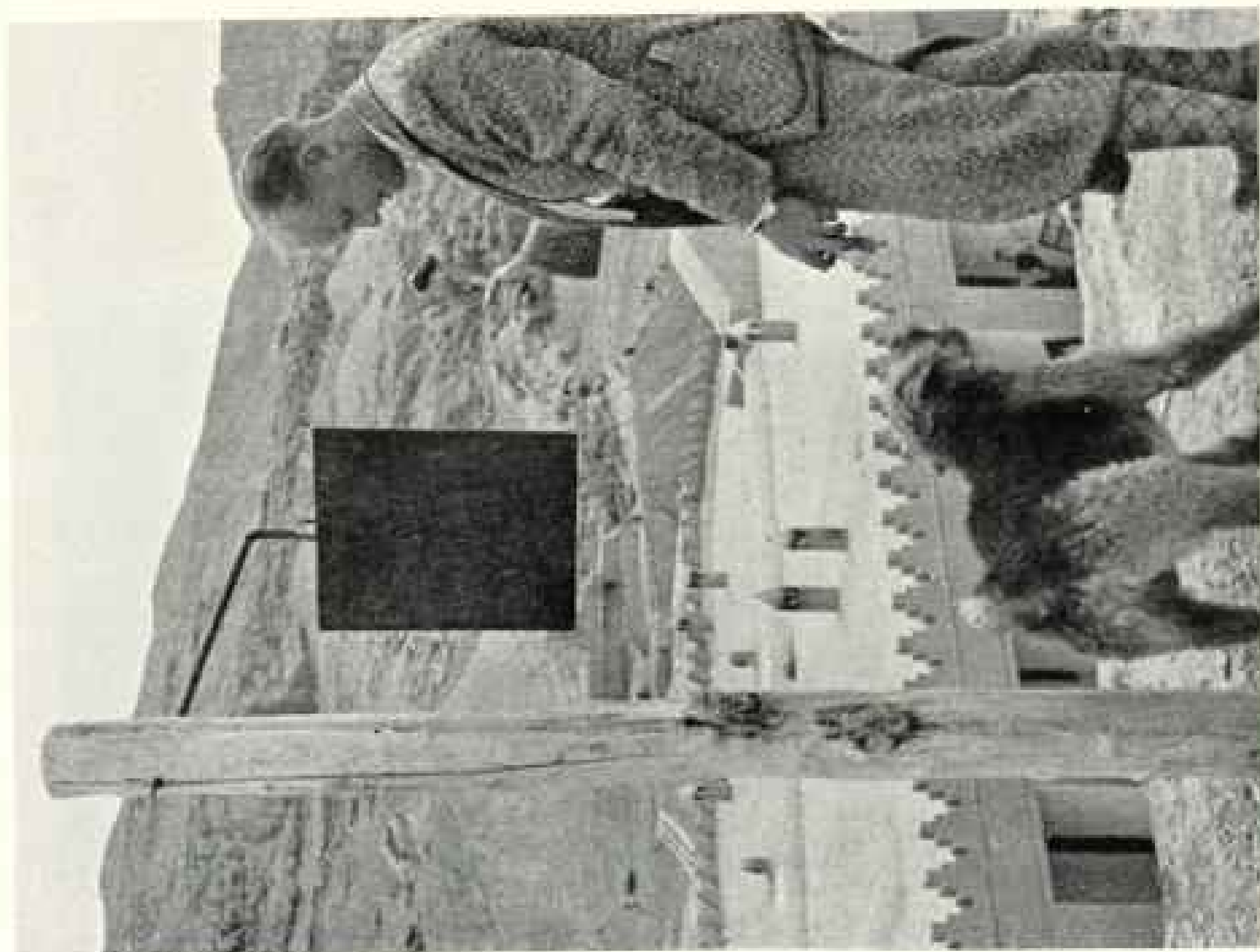
WITH A RIPSAW WORKMEN MAKE BOARDS TO REPAIR AN ANCIENT HAREM

Walls are made of adobe, in the reconstruction work, since timber is scarce in this part of Persia. The harem of Darius was rebuilt to afford quarters for the staff of the Oriental Institute (see illustration, page 412).



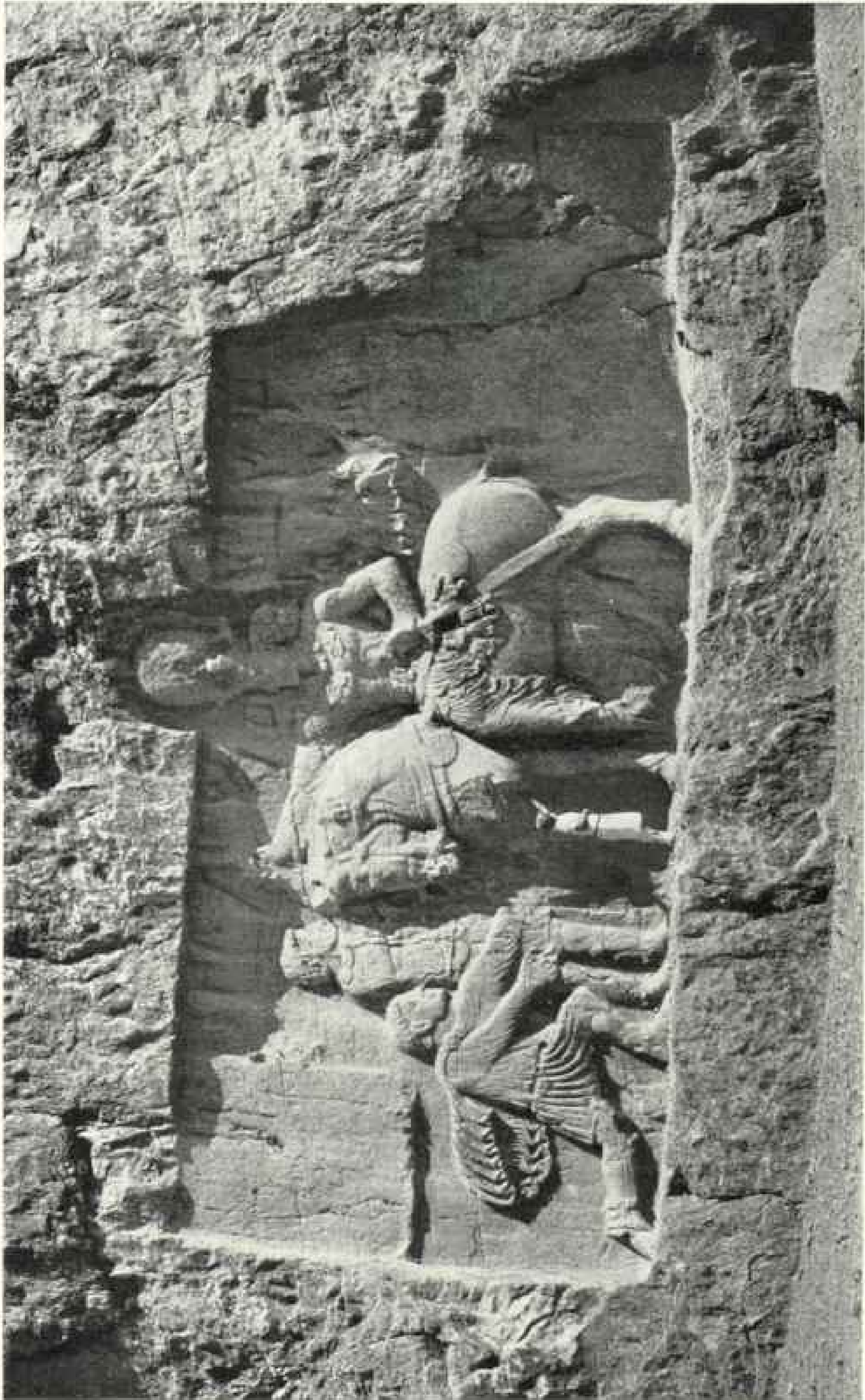
THE HEAD OF A KING'S FAVORITE MOUNT

The bridle, with its reins, curb, headstall, and throatlatch, is made almost exactly as certain bridles are made to-day. The fancy forelock knot and tiny bell differ, of course, from our modern horse gear.



A SHEET OF IRON IS POUNDED TO CALL WORKERS TO DUTY

Dr. Friedrich Kreefter has been in charge of the engineering work. He has replaced stone blocks weighing as much as 30 tons. The Airedale with him has worn its teeth chewing rocks from the ruins.



Photograph by Lillian Schoedler

ONE OF THE BAS-RELIEFS CUT BY THE SASSANIAN KINGS IN THE FACE OF THE HUGE CLIFF THAT HOLDS THE TOMB OF DARIUS

Wonderfully carved and unusually well preserved, this figure represents King Shapur I triumphing over his foe, the Roman Emperor Valerian, who kneels supplicant at the victor's feet. This carving, one of seven cut into this cliff, is below and just a little to the left of the opening of Darius' tomb. The human figure standing in front of the horse gives an idea of the size of the stone figures.



A PERSIAN BEAUTY, DAUGHTER OF A VILLAGER FROM NEAR PERSEPOLIS

Median officials, among them the ambassadors from twenty-eight of the subject nations of the Persian Empire. These envoys are all bearing gifts and tribute to the Persian emperor. They bring furniture, gold, objects of ebony and ivory, feathers, live animals, including cattle of all kinds, lions and lions' cubs, and chests of fine raiment.

The occasion for all this celebration was New Year's Day of the Persian Empire's calendar, which fell on March 27 of our own calendar.

The average height of all these sculptures is more than six feet and their total length is nearly a thousand feet; if they were set together they would form a panel of superb wall reliefs nearly 7,000 feet square.

Some idea of the delicacy of the carving can be gained from the fact that the pin running through the axle of one of the chariots is carved to represent the figure of a girl. Her face is no larger than a postage stamp, but the carving is wrought with the delicacy of a cameo.

Although the shock of the tumbling walls here and there injured the upper tiers of the reliefs, or even hurled them down, the carvings as a whole are as fresh to-day as when the Persian sculptors finished them. Great sculptors of to-day would be proud to produce such work.

EXPLORER'S SPADE VERIFIES A LEGEND

Several extensive inscriptions are included among this tremendous array of wall reliefs, but they are for the most part duplicates of inscriptions already known.

It is a notable fact, corroborated by modern archeological discovery, that in almost every historical legend, such as that surrounding Troy, there is contained some element of truth. The legend of the destruction of Persepolis by fire has now been proved wholly true. Had Persepolis merely fallen into gradual decay and not been suddenly thrown into ruin by fire and the tumbling in of the tremendous walls, these amazing sculptures might never have been so perfectly preserved for us.

We are frequently asked why we do not employ steam shovels and other machines to make digging easier at the old towns being excavated to-day by Oriental Institute expeditions in the Near East. The answer is simple. Every ounce of earth removed from an ancient site, especially such a one



WORKMEN USE SMALL BASKETS TO REMOVE DÉBRIS FROM THE RUINS



WASTE MATERIAL MUST BE EXAMINED TO AVOID LOSS OF ANY SMALL TREASURES
When all such debris has been sifted and sorted, it is thrown into dump cars and hauled away.
Burros, in the background, forage for food on the lean hillsides.



DUMPING WASTE REMOVED FROM THE RUINS

A light tramway, easily moved and relaid wherever needed, and small dump cars are used for this work. Before it is thrown on the dump, every shovelful of débris is carefully sifted for any possible treasure, large or small (see illustrations, page 399, and text, page 398).



TYPES OF LOCAL PERSIAN VILLAGERS EMPLOYED IN RESTORING PERSEPOLIS

This is the morning hour, when work begins. Overcoats indicate a chilly day. On the base of an old column, in the foreground, is seen the workers' lunch.



FROM THEIR PALACE STAIRWAY ANCIENT EMPERORS ENJOYED A MAGNIFICENT VIEW OF DISTANT MOUNTAINS

Mountain chains lie all about Persepolis. The city itself was built of stone quarried from mountain sides. When wintry winds chilled the palaces of Persepolis, royalty used to take vacations, visiting the more balmy land of Babylonia.

as Persepolis, must be thoroughly sifted and examined. Otherwise, priceless small relics of all sorts—beads, bits of gold, pieces of bronze, pottery ware, bits of jewelry, and all manner of other things—might escape us and become reburied in the tremendous dump heap of useless *débris* brought out at any excavation (see pages 399, 400).

The actual work of excavation is invariably superintended by a member of the Expedition staff or by the field director himself. At Persepolis, as elsewhere in such work, a little narrow-gauge field railway with dump cars is employed; into these dump cars laborers throw the earth after it has been either carefully examined or sifted, as described. The field railway carries the *débris* away to a dump area, which has already been carefully chosen, to make certain that nothing of importance is being further covered by waste material.

In the course of the excavations that led to his discovery of the amazing array of relief sculptures, Dr. Herzfeld came upon the entrance to a large stairway descending into the terrace. This passageway had filled up with *débris*, and when cleared it was found

to lead into a vast and complicated system of huge sewers or subterranean canals, through which the drainage from all the palaces was carried away. One can walk for several miles through this labyrinth to-day. Dr. Herzfeld was reminded of the great sewers beneath the modern city of Paris, through miles of which one may walk.

CITY PLANNERS HELPED PERSEPOLIS GROW

The total length of all the drainage tunnels beneath the Persepolis terrace has not yet been ascertained, but their presence proves one thing: the palaces and the entire terrace itself were not built at random and did not grow up "like Topsy," but were all constructed in accordance with plans carefully prepared in advance, which Darius the Great must have approved.

Modern architects would give a great deal if the general plans, elevations, and details worked out by the ancient Persian architects were available to-day.

The Persians must have learned much regarding such sanitary arrangements from the Assyrians in what is to-day northern



STUDYING THE RELIEFS OF AN AUDIENCE HALL STAIRWAY

Dr. James H. Breasted, Director of the Oriental Institute, and Mrs. Breasted take their first stroll along a thousand feet of old Persian sculptured friezes. This grand stairway led to a vast apadana, or reception hall, where emperors received guests, ambassadors, and official representatives of subject races—most of whom appeared bringing gifts (see pages 403-405, 411).



CAMELS AS PICTURED ON PERSEPOLIS STAIRCASE WALLS ARE USED TO-DAY BY BACTRIAN TRIBESMEN

Iraq and from the Babylonians in southern Iraq. The Oriental Institute's Iraq Expedition, working at both of these places, has found at Tell Asmar, 50 miles northeast of Baghdad, an ancient Babylonian city level dating from the 26th century B. C. It has a sewer running under an important street, which is connected with bathrooms and toilets by tile pipes to lead away the sewage.

FEW NATIVE WORKERS KNOW WHY THE DIGGING IS DONE

At Khorsabad, near Mosul, in Iraq, where the Institute is excavating the palace and city built by the Assyrian emperor Sargon II, it has found in the mountains near by what was at first thought to be a bridge built by Sennacherib about 700 B. C. But this is now proved to be the oldest surviving aqueduct of which we have knowledge. It brought water down from the mountains for the irrigation of the fields and gardens of Nineveh, which Sennacherib greatly extended.

Workers at Persepolis are recruited from villages scattered through the valleys, and are directed by foremen whom the European staff has trained with especial care. These workers have no understanding of

what all this digging is for, nor do they realize that they are helping recover their own family and national history.

At sunrise their task begins, and they continue until noontime, when a gong in the shape of a steel plate is pounded to represent the noon whistle. Promptly they stop work, sing a song, and then spend half an hour eating their simple fare of bread and cheese and water and possibly goat's milk or clabber. When the gong is rung again, they sing another song and return to work until sunset (see page 396).

Ordinary workers receive from ten to twenty-five cents a day; the foremen sometimes get thirty cents. In Egypt little boys who carry the earth from our excavations to the dump cars receive sometimes two and a half to five cents a day. For most of these people this is regarded as prosperity, and so it is, for their wants are simple and they otherwise seldom see any money at all.

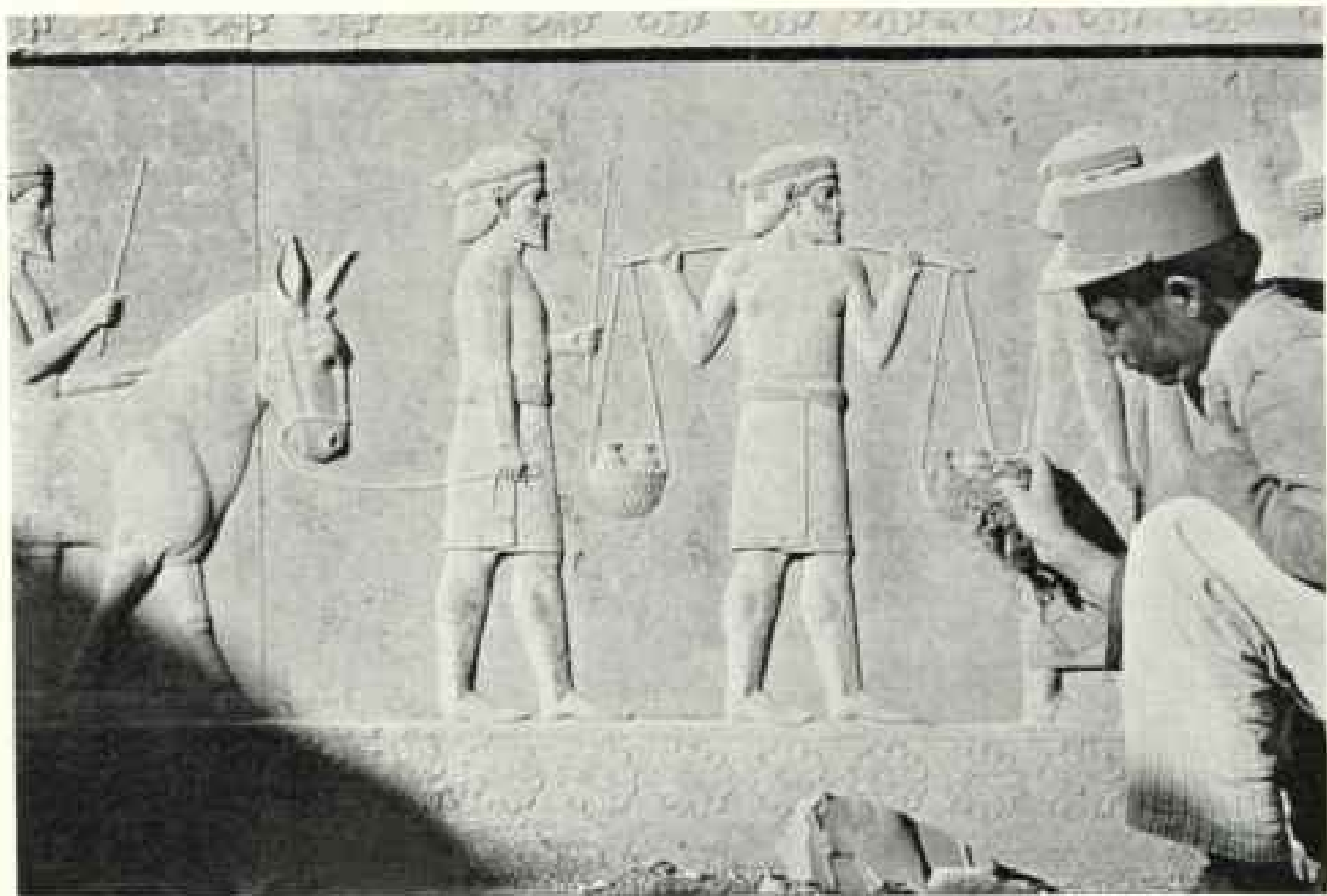
ERSTWHILE HAREM NOW SHELTERS SCIENTISTS

The staff of the Persian Expedition consists only of Doctor Herzfeld and four assistants. They live very comfortably at the harem palace. For a time one of the



WHAT LOOKS LIKE A HUGE PAIR OF FIELD GLASSES IS A MONARCH'S CAMP STOOL

Carved on this staircase panel, at the right, is also the king's horse. Other panels show long lines of ambassadors and agents from many countries conquered by Persia carrying tribute to the Emperor (see illustrations, opposite page, and pages 402, 403, 411).



A YOUNG PERSIAN WORKMAN CLEANS THE RELIEFS ON THE APADANA STAIRWAY

The mud of the adobe brick wall which settled against the reliefs and preserved them had to be carefully removed. Many carvings are as sharp and clear as though done yesterday.



DECORATIVE PANELS IN BAS-RELIEF EXPOSED WHEN A STAIRWAY WAS UNCOVERED

The upper panel shows the ancient Susians bearing gifts of bows, long darters, and a lioness with two cubs to the Emperor. Below, Armenian subjects are seen bringing a stallion and an amphora (vase).



SYRIAN SUBJECTS BRING GIFTS OF HORSES, BRACELETS, AND VESSELS OF GOLD

From remote antiquity those paying visits of courtesy and respect to reigning monarchs in the East have brought gifts, and the custom still prevails.



THE CURIOSITY OF CHILDHOOD IS UNIVERSAL

When the Expedition's photographer discarded a piece of red paper from a film pack, it was retrieved by this seven-year-old Persian boy and minutely examined.

staff had his wife with him. She was probably the first woman to be sheltered by this harem building in more than two thousand years! (See page 412.)

When we flew over Persepolis last spring, our impression of the site was awe-inspiring. Where once had dwelt pomp and circumstance, with all the bickering and intrigue, the ambitions and the loves and hates surrounding one of the foremost capitals of all time, there was now only brooding desolation and silence, broken by the noise of workmen singing, by the shouting of orders, and the general hubbub of an archeological expedition hard at work.

CHICKENS ROOST IN THE PALACE OF DARIUS

In complete contrast to this first impression were the domestic scenes which greeted our eyes after we landed. Dr. Herzfeld had imported a flock of chickens, which now roosted in a corner of the palace of Darius the Great. In this classic henhouse they furnished eggs and fried chicken for the Expedition mess. It seemed almost ridiculous to stroll through these vast palace halls that once echoed to the trumpet or to the

sweet strains of harps and lutes, and to hear to-day only the raucous crow and nervous cackle of roosters and hens restless in this strange environment!

Geese, too, have been imported for food. One mother goose hissed us angrily as we tried to shoo away her goslings. A little pool has been built beside the harem for the ducks that also are part of this domestic scene. It was Persians who first brought to Europe the East Indian ancestors of our own common domestic chicken, once a jungle fowl in India.

Although Persian chefs are fairly adept, the available food is none too good and must be brought by truck from the bazaars of Shiraz, 38 miles to the southwest, over plain and mountain. No fruit or vegetables grow now at Persepolis, though at Istakhr, five miles to the north, there is every reason to believe that estates and gardens flourished in the days of the Persian emperors (page 413). To the newcomer in Persia, the item of food hardest to become accustomed to is the *mast*, or goat's milk clabber.

The native workers drink enormous quantities of hot tea and eat mainly bread and cheese. They seldom have meat, which is



TWO PERSIAN MAIDENS AND THE EXPEDITION'S AIR PILOT

Persians to-day are largely a mixture of races. Their language, "New Persian," dates from the ninth century and is written in Arabic script. In it is recorded the work of Omar Khayyam.

scarce. All of them smoke, and tobacco is one of the items given out by the Expedition staff as a prize for labors well performed.

Fly over Persepolis and at a distance to the east you see wide, shallow lakes, bordered by marshes, near which are villages and fertile, irrigated fields. As in our own Southwest, the lack of water hereabouts is the chief deterrent to farming.

Villagers elsewhere in this region eke a bare living from small herds, from gathering wood, and from trading goods by caravan from one town to another, sometimes traveling long distances. It is 800 miles from Bushire, on the Persian Gulf, to Tehran, the modern capital, in the north.

THE TINKLING OF THE CAMEL BELLS

In summer, to avoid the intense heat of midday, caravans frequently travel at night. To the newcomer it is pleasant to hear the bells from a caravan of a hundred camels, as it creeps slowly through the night along the road past Persepolis.

In former days these caravans ignored Persepolis; in fact, few travelers of any kind went out of their way to visit the ruins.

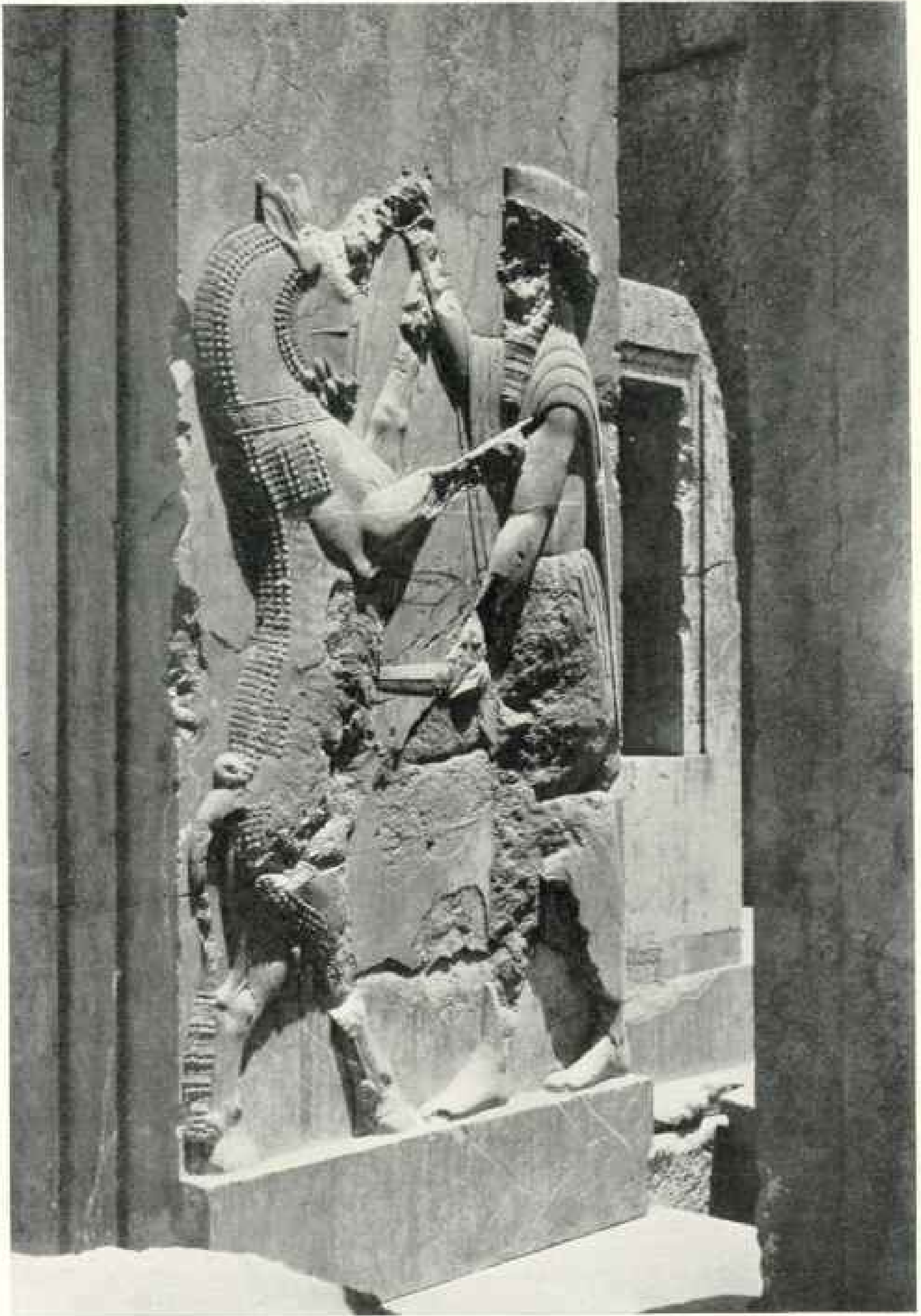
Now, since the advent of the Persian Expedition of the Oriental Institute, its visitors increase. Some are important.

The Shah of Persia, Reza Shah Pahlevi, with his staff, called upon Dr. Herzfeld and carefully examined the activity there. "You are doing a work of civilization here, and I thank you," said the Shah to Dr. Herzfeld when the inspection was done (see page 384).

In such surroundings it is easy to see why Herzfeld's study or office is unlike any other anywhere else in the world. He simply moved into one of the larger rooms of the harem palace of Darius and Xerxes. Now its walls are hung with Herzfeld's own superb collection of ancient Persian carpets, which also cover the floor; in spaces between the wall rugs stand bookshelves containing his personal library, at the disposal of all visiting scholars.

Winters in Persepolis are cold; in fact, the region is sometimes covered with heavy snows. On such winter days and nights the doctor has a grate fire.

On the walls and lying upon tables are fascinating original drawings and reconstructions made by himself and his staff as



Photograph by Lillian Schoedter

THIS CARVING DECORATED THE DOORWAY TO DARIUS' PALACE AT PERSEPOLIS, AND SHOWS A COURTIER SLAYING A HEIFER



DR. HERZFELD REPAIRING A LIONESSE SCULPTURED ON THE ROYAL STAIRWAY

a result of the ever-increasing discoveries of the Expedition.

In and out of his study run Herzfeld's two pet dogs. They accompany him wherever he goes to inspect the progress of the work. A third dog belongs to Dr. Friedrich Krefter, a gifted young architect, who is responsible for the replacement of the vast blocks, as slowly and painstakingly the Expedition is redeeming Persepolis from its age-long oblivion. Dr. Krefter's dog is forever picking out bits of broken stones from the ruins. He munches these stones until his teeth are worn down like those of an old Eskimo! (See page 396.)

The original concession, as granted by the Persian cabinet to the Oriental Institute for work at Persepolis, has now been extended to include a circular area which is some 13 miles across. So the concession now includes not only the ancient capital city of Istakhr (see pages 406, 413), but a number of other sites as well. These include the tombs of Darius I, Xerxes, Darius II, and Artaxerxes I and their successors (p. 386). These tombs are cut in the solid rock of the mountain side on the north edge of the valley in which stands Istakhr.

Such beauty, such superb artistry as is symbolized by Persepolis, could not have sprung forth overnight. Behind it must

have lain a long, long development, of which Persepolis was only the ultimate expression. Startling evidence of this comes now from one of the smaller sites included within the concession. In it Dr. Herzfeld has now cleared up some of the earlier chapters of this human development which led up to Persepolis.

THE WORLD'S FIRST KNOWN WINDOWS

At a distance of only two miles from the palace terrace he had observed in the plain a low mound some 600 feet long and half as wide. This little mound, when excavated, proved to be the oldest Stone Age village yet discovered in the Orient. It dates from about 4000 B. C. (p. 417). Its walls, six or seven feet high, contain the earliest windows of which we have any knowledge. Some of these walls were painted with red ocher, and on the floors of the rooms were found pottery vessels decorated in painted patterns of lovely design—the earliest *painted* pottery ever discovered (page 389).

In some of them were found flint knives, with which the inhabitants killed and ate their last meal. Even the picked bones of the animals they last ate still remained in some of the dishes. A narrow, winding main street wanders through the center of this village.



TWO MEN AND A DOG EXAMINE THE BASE OF AN ANCIENT COLUMN

Originally this was one of the gigantic columns that formed part of the "Hall of One Hundred Columns," an audience hall of the emperors. Only a few of the fluted columns, which were more than 70 feet high, are now standing (see text, page 389).

Here, around 4000 B. C., dwelt the ancestors of these all-powerful Persians who 3,500 years later lived in the capital city of Istakhr, and whose royal family luxuriated at Persepolis, its Potsdamlike suburb.

It is not unlikely that within the Institute's enlarged concession may be uncovered still earlier chapters in the eventful history of Persia. Yet we shall probably never know why this little Stone Age village was thus preserved to us, or whither the inhabitants fled. We only know they left their dinner dishes with food still in them; that at last, when the roofs fell in and the walls had disintegrated, their village took

on the appearance of a low, wind-blown mound on the plain.

This Near East, where civilization first arose, is a vast storehouse of buried cities and towns. They are filled with fascinating evidence of how humankind lived untold thousands of years ago. The excavation of these ancient sites has hardly been begun, despite all the stories regarding new discoveries which almost every day fill the press.

A LABORATORY OF CIVILIZATION

The Oriental Institute is a vast laboratory established for the study of how man rose from savagery to civilization.

To-day it is patiently, carefully enlisting the coöperative assistance of every branch of science in assembling the evidence for writing what it is hoped will be *the* authoritative and interpretative history of man's rise to civilization.

Along a far-flung front of nearly 4,000 miles, from Turkey on the north, through

Syria, Palestine, and Egypt on the south, and Iraq and Persia to the east, the expeditions of the Oriental Institute are strategically distributed to gather the evidence needed for the compilation of this vast epic.

To bring the interesting explorations of its expeditions vividly before the American people, the Institute has organized a motion-picture department. This is under the direction of the writer.

An 8-passenger monoplane was chartered in the spring of 1932 from Imperial Airways, Ltd., of England. With Capt. Gordon P. Olley, senior charter pilot, Mr. Reed N. Haythorne as cinematographer, and the

writer, the Expedition took off from Heliopolis airdrome outside of Cairo and flew over Palestine, northern and southern Iraq, across the northern end of the Persian Gulf to Bushire, in Persia, and then across three ranges to Shiraz and Persepolis (page 395).

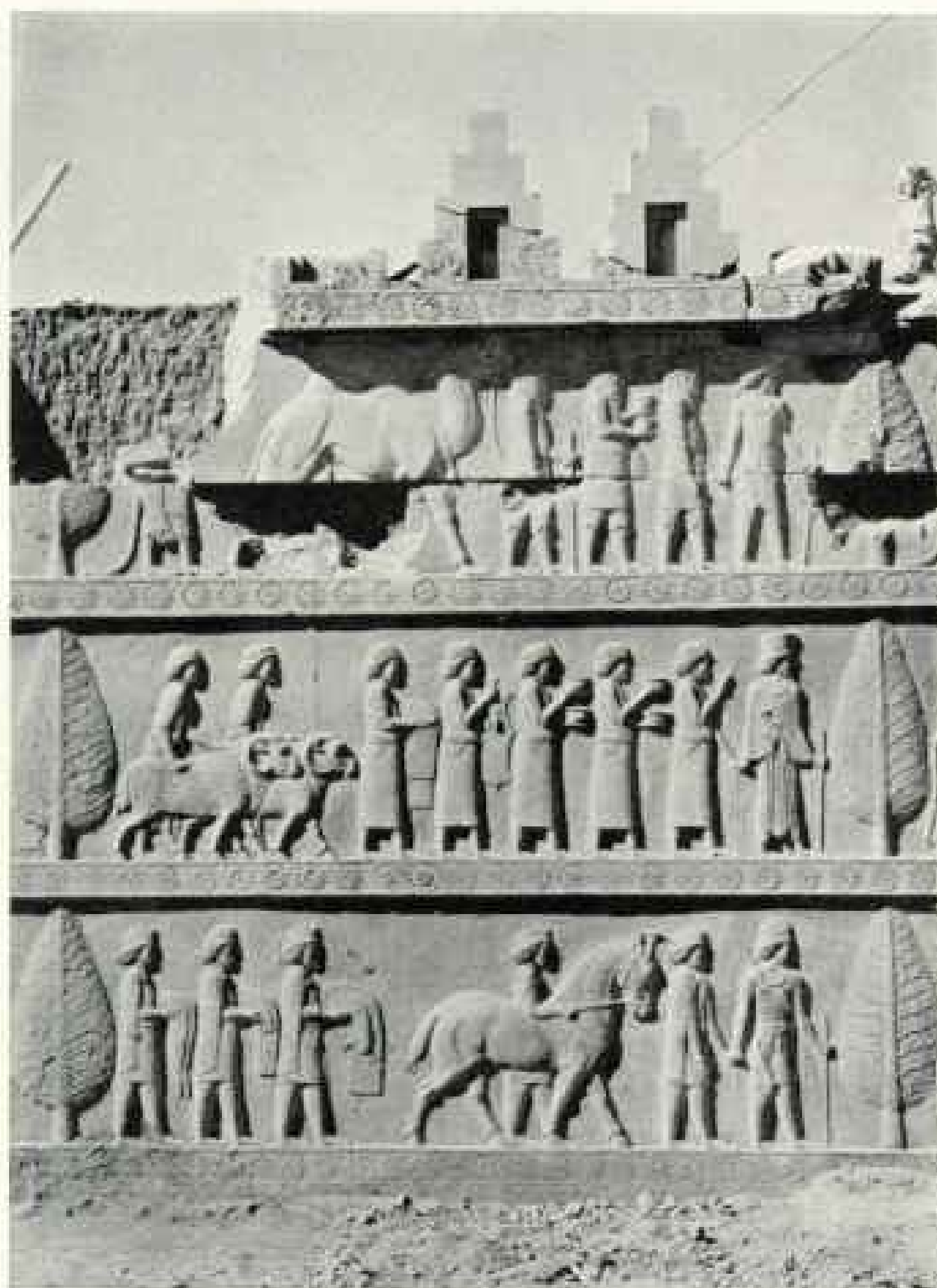
The flight was begun in March, 1932. At this season the dust storms over Trans-Jordan, Iraq, and indeed most of the Near East, were already at their worst. The plane carried, in addition to the veteran pilot (Captain Olley has frequently flown the Prince of Wales, the King of Spain, and the King of the Belgians, as well as other crowned heads of Europe), a radio operator and a mechanic.

DUST STORMS MENACE AIRPLANES

The radio operator was in constant communication with Imperial Airways radio stations along the route. Day in and day out the wind blew a hurricane, and the dust was so thick that the plane flew "blind," depending entirely upon the Marconi direction finders, which had only recently been installed along the Imperial Airways route from England to India.

Iraq dust, in a fierce storm, rises to 15,000 or more feet; so, as a rule, planes do not endeavor to fly above it; instead they wait for the storm to abate and the dust to settle. The latter happens very quickly, so that while one day may be impossible, the following day may be bright and sunny, though a little Arabian real estate always remains in the air.

The prevailing wind in summer is from

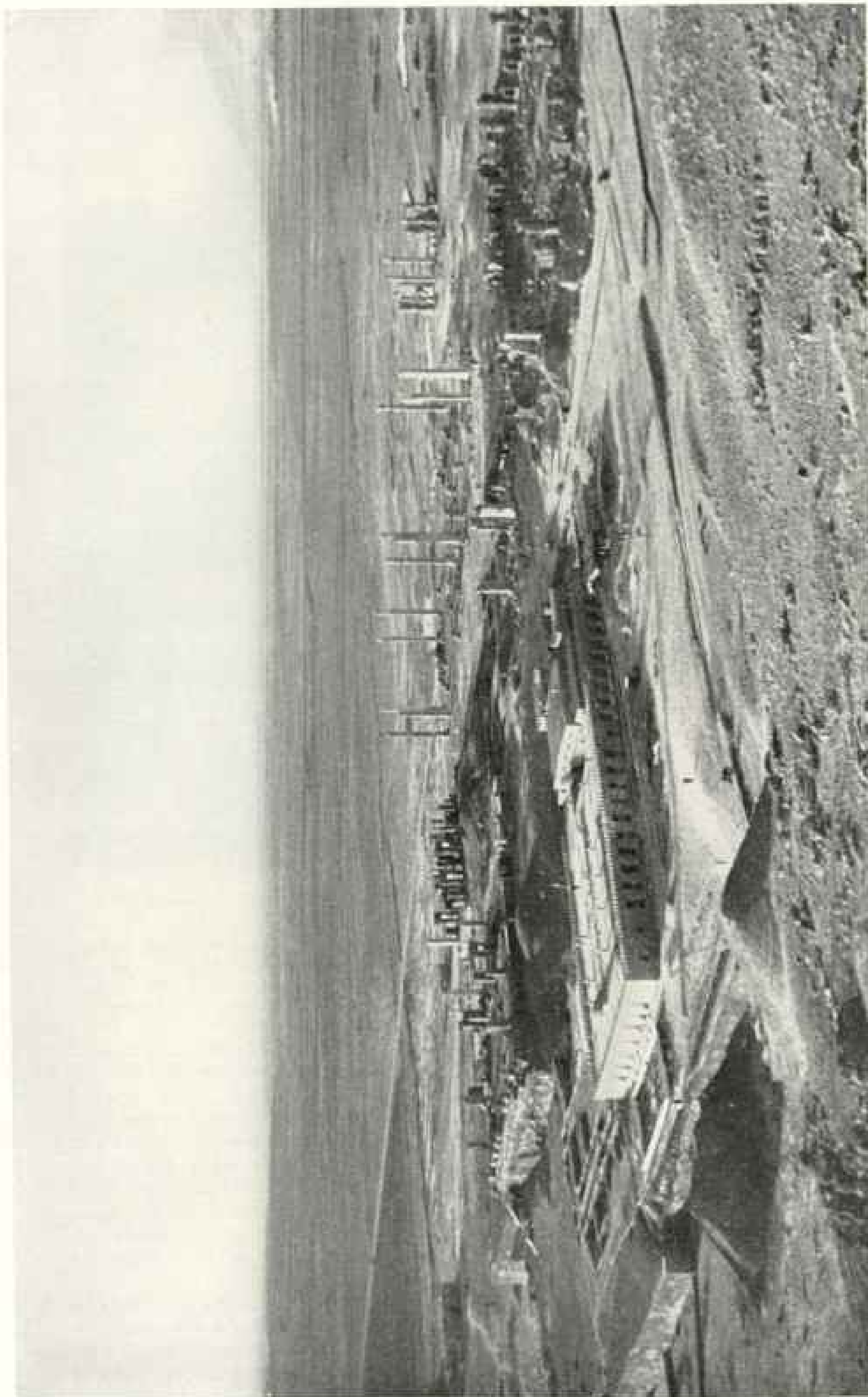


MORE FIGURES FOUND ALONG A STAIRWAY LEADING TO A LARGE RECEPTION ROOM

In the top panel three Heratis bring a camel and a lion's skin and are being introduced by a Persian court usher. Middle: Cilicians, with gold vessels and a pair of rams, introduced by a Median. Below: Five Cappadocians, bringing a horse and garments, being introduced by a Persian.

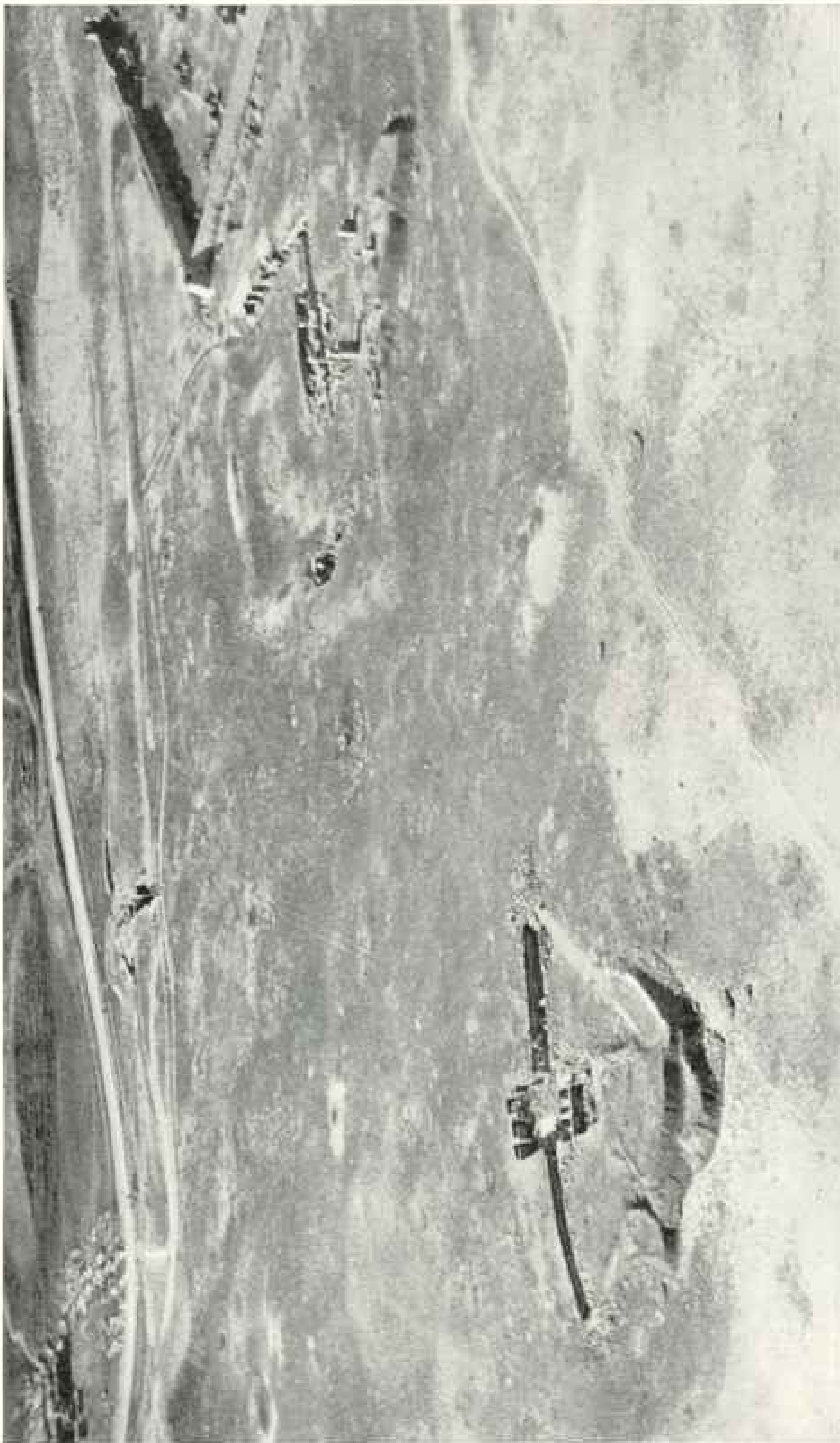
the north, and the dust from the river flood plains of Iraq is carried clear over into upland Persia. When our party reached Bushire, the mountains near the coast were rendered wholly invisible by dust, which looked like a fog bank nearly 12,000 feet deep. In this instance the plane corkscrewed up and up until it rose above the dust, through which the mountain peaks protruded like brown and silver islands in a sea of gray.

Our motion-picture record of Persepolis is the first professional one ever made on full-size film. All the ancient palaces were recorded, as well as the archeologists at



STAFF MEN OF THE EXPEDITION ARE HOUSED IN THE RESTORED HAREM IN THE LEFT FOREGROUND

Built between 600 and 500 B. C., in the days when Greeks and Persians were fighting their great wars, the royal harem contains seven apartments. Six were for harem beauties; the seventh, at the right, was the king's. The entire harem palace will serve as a museum for housing excavated treasures, after the Expedition has finished its clearance and restoration of Persepolis.

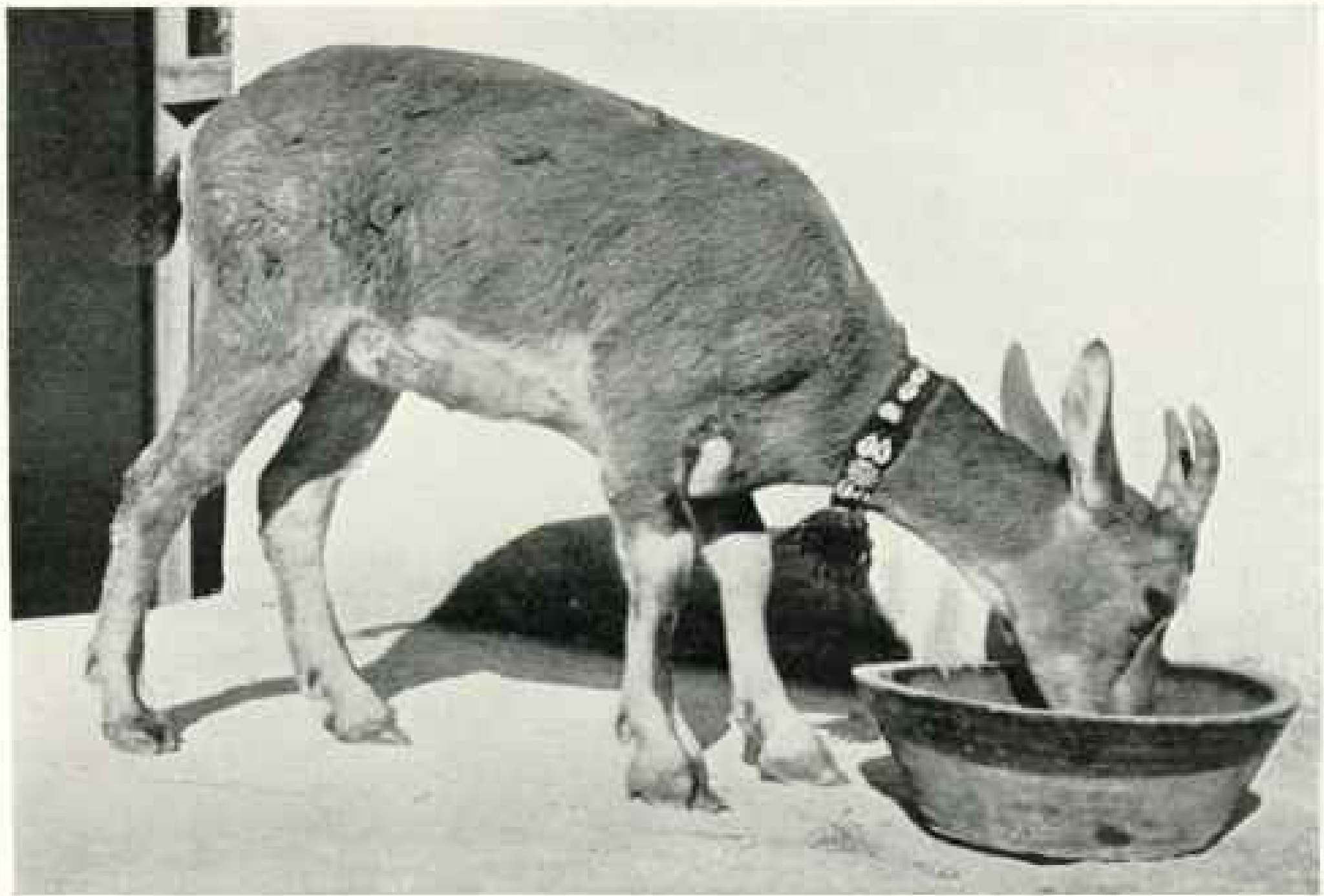


AN AIR VIEW OF THE BEGINNING OF THE EXPEDITION'S EXPLORATIONS AT ISTAKHR

In the upper left corner is a gate. In the lower left corner is a test trench, dug at the beginning of excavations. A similar trench is at the right, beside the modern *Adun*, or halting place for caravans and travelers. Until recent times brigands ravaged this region; hence the halting place was protected by a high wall with watchtowers (see text, pages 406, 409).



TWO PERSIAN MOTHERS BRING THEIR BABIES TO SEE AN AIRPLANE

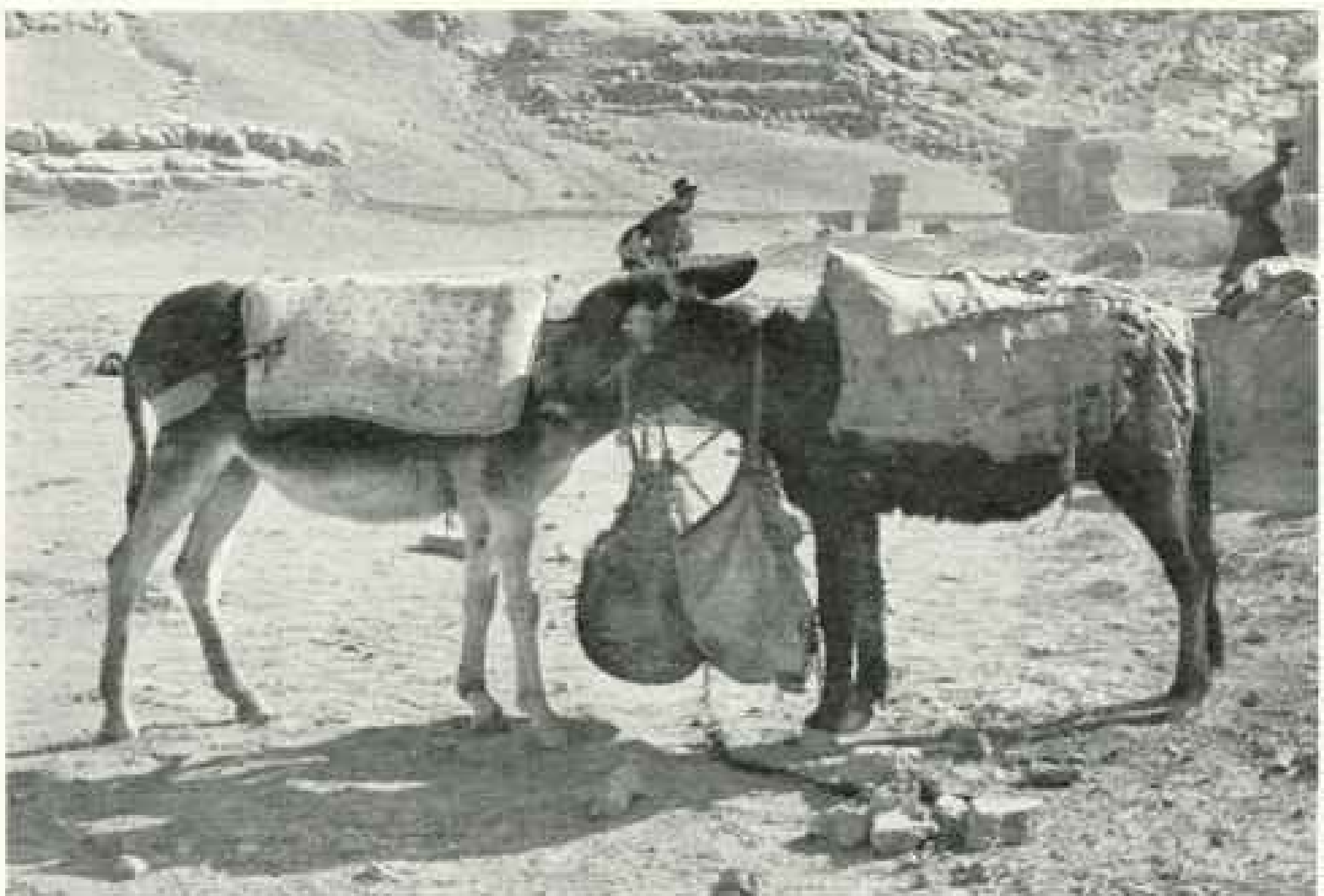


YOUNG GOATS AND YOUNG GAZELLES LOOK MUCH ALIKE

Gazelles run wild in herds and are hunted with falcons. Herds of goats, an important source of food supply, are owned by many village families.

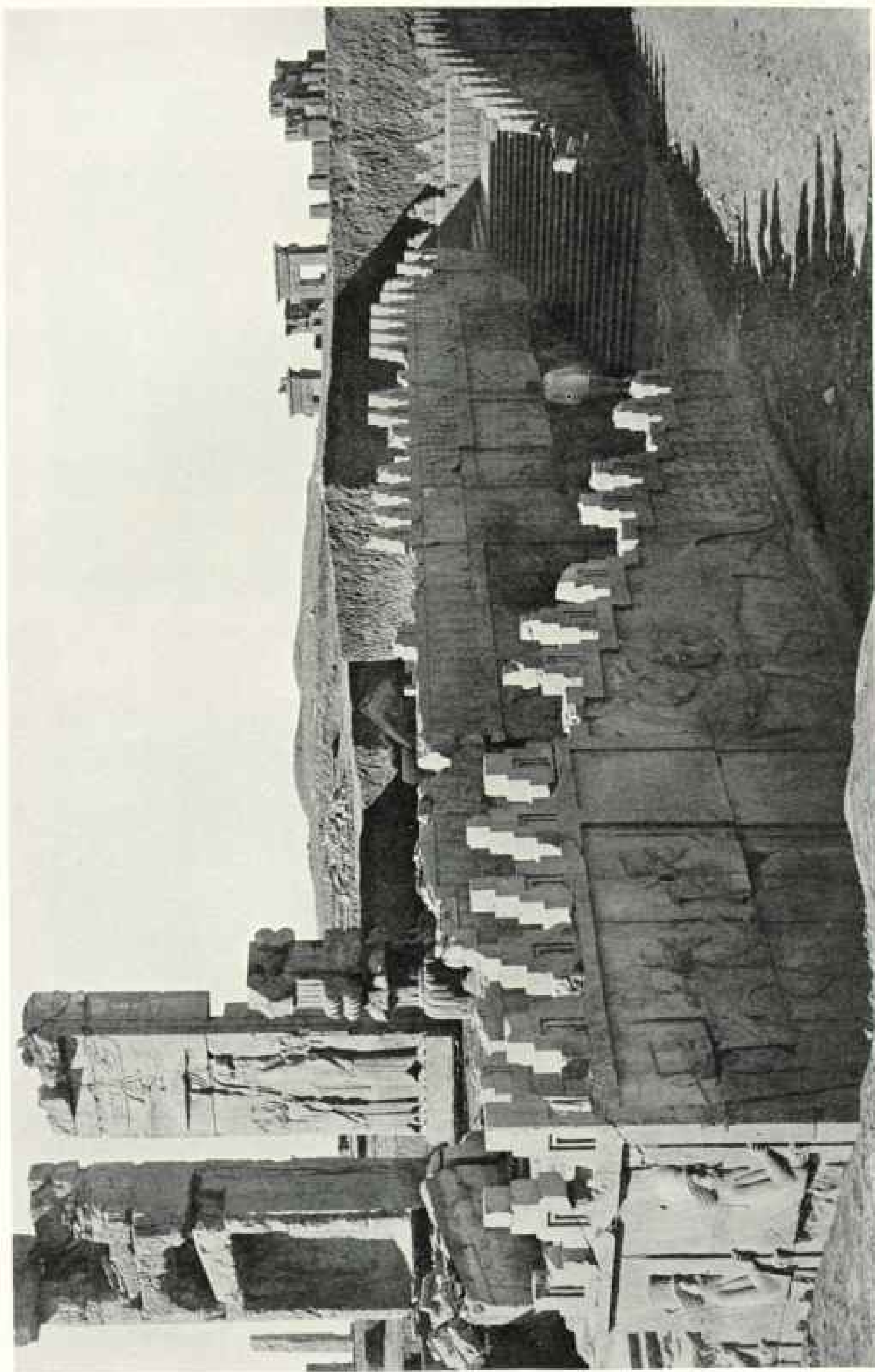


PERSIAN WOMEN, FACES HALF CONCEALED, INSPECT THE EXPEDITION'S AIRPLANE



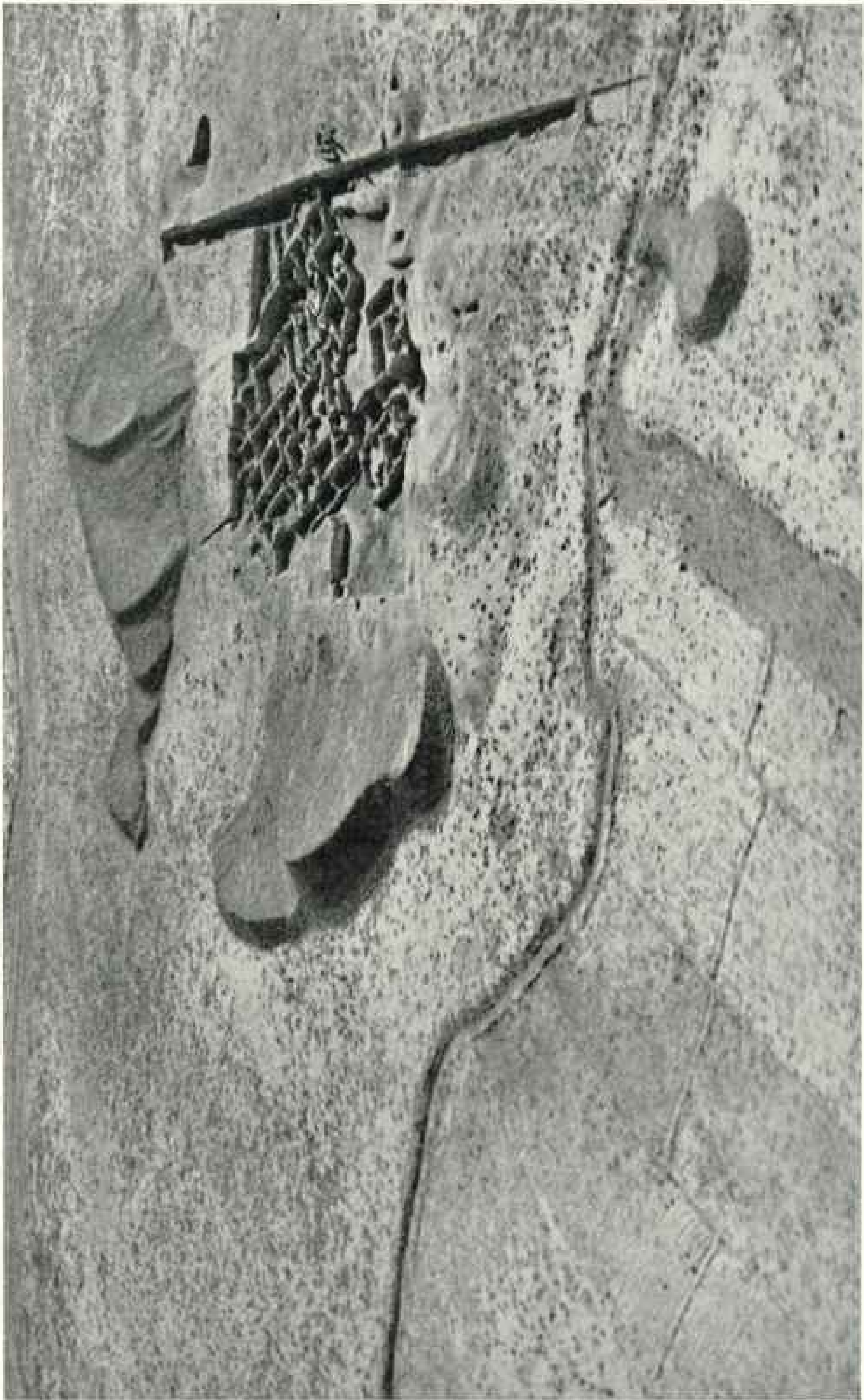
TWO IDLE PACK BURROS RELAX IN A NECK-SCRATCHING SCENE

Heavy pads protect their backs. Breeching straps hold the pads from slipping up on their necks when they walk downhill. Water is carried in skins slipped down under the animals' necks.



THE NEWLY DISCOVERED STAIRWAY TO ONE OF THE TWO AUDIENCE HALLS NEAR THE ROYAL PALACES

This broad double stairway, with its many carvings, is that marked J on the diagram on page 385.



THIS STONE AGE VILLAGE YIELDED FLINT KNIVES, POTTERY, AND BONES OF SOME SIX THOUSAND YEARS AGO

The test trench at upper right was first dug through the mound, and resulted in discovery of a Neolithic village. Its adobe houses have walls six or seven feet high, containing the first-known examples of windows (see illustration, page 418, and text, page 409).



ONE OF THE EARLIEST KNOWN WINDOWS IN THE WORLD

The apertures were in the adobe wall of a Stone Age village near Persepolis, built about 4,000 B. C. Judging from the position of flint knives and pottery which had held food, the settlement had been hastily abandoned (see illustration, page 417).

work. We also filmed the famous royal tombs at Naksh-i-Rustum. Air views add to this fascinating record (see page 386).

From Persepolis and Shiraz we flew back to Bushire, on the way to Egypt.

Desolate Bushire, on the Persian Gulf, is, like Baghdad itself, a meeting place for those who travel the air highways between the Occident and the Orient. Here can be seen planes from England and India on their way either to Croydon or Karachi; planes flying from the Netherlands to Java and return; planes from France to Indo-China and from Germany and Russia and Persia, all carrying passengers and mail.

Quietly, week after week, winter and summer through, in blazing desert heat or through snow-capped mountain cold, through dust storms almost as dark as night, over tropic seas and jungles, the pilots of these air lines carry on over their long air trails. One must have crawled across these dreary stretches by caravan or motorcar fully to appreciate the amount of time and effort saved by air travel.

It was in the autumn of 1932 that Dr. Herzfeld found the astonishing wall reliefs

and sculptures at Persepolis. That our motion-picture record might be up to date, it was decided that another similar flight should be made, this time by Dr. James H. Breasted, Director of the Oriental Institute, accompanied by Mr. Reed N. Haythorne, cinematographer. In general this flight followed the same route and was again under the able direction of Capt. Gordon P. Olley as pilot (see illustration, page 407).

The widespread organization of the Oriental Institute made it possible to plan this flight so that, in flying over five different countries, the party could each night come down at one of the Oriental Institute's own expedition headquarters.

Just as it now consistently employs the airplane and the motion-picture camera, so the Oriental Institute is availing itself of every other useful modern invention of man in connection with the task of recovering the earliest chapters of mankind's own story.

Clay tablets, which were underbaked in antiquity, like those found by the Institute in ancient Babylonia near Baghdad, are sometimes rebaked if we find them too



THE PERSIAN COOK ASSISTS THE CAMP'S GOSLINGS FROM THEIR BATHTUB

Part of the old palace of Xerxes now serves as a back yard for the Expedition. Here geese and chickens are fattened for later use as food. Persians first brought barnyard fowl from India and introduced them to southern Europe (see text, page 406).

friable for safe handling. Most of the expeditions' headquarters have their own electric-light plant, refrigeration, and other conveniences. In its epigraphic or recording work, as at Luxor, where historical documents inscribed on the walls of the temples are being copied for publication, the Institute has even invented its own processes.

By combining the art of the draftsman, the knowledge of the epigrapher (the scholar who can read ancient hieroglyphics), and the latest photographic devices, there has been obtained the greatest accuracy that is humanly possible.

The story of the rise of civilization and of mankind's struggle toward the achievements which mark his life to-day is like a vast jigsaw puzzle. Most of the pieces have been lost, although many of them still lie buried in the ancient Near East. Wherever they are lacking, we must scientifically and accurately guess what they were like. But before we can do this we must find the surviving evidence which still lies buried. This task has hardly been begun.

From the top of an ancient city mound called Tchatal Hüyük, halfway between

Alexandretta and Aleppo, in northern Syria (a place very probably corresponding to the Biblical city of Calno, mentioned by Isaiah), I counted some fifty additional city mounds scattered about the plain. Although the Oriental Institute is excavating sixteen similar sites in western Asia, literally thousands of others lie scattered throughout the Near East awaiting the archeologists who shall come and unlock the secrets they hold.

The epic of the rise and fall of nations that left these silent mounds became at one stage a drama that involved the whole known world of that time. All the other nations of the Near East were combined against their common enemy, mighty Persia.

Though the combined nations included Babylonia and Egypt, and the kingdom of Lydia under King Croesus, in western Asia Minor, and even Sparta and Greece, not all of them fighting together were powerful enough to stop the westward advance of the Persians.

Cyrus of Persia and the emperors who followed him had a wonderful knack of



NATIVE WORKERS CHECKING OUT AT THE END OF A DAY

Each worker carries a card, like a meal ticket, which is punched after each day's work, to record the wages due him. Persian names are so often exactly alike, or so similar, that identification is easier by ticket than by name.

learning the best war strategies employed by their enemies, and then incorporating them into their own organization.

Although the Great Cyrus himself fell in battle, and was buried with majestic simplicity in a place called Pasargadae (near Persepolis), his successors carried on and the Persian Cambyses conquered Egypt 525 B. C.

The whole civilized world of that day, from the Nile Delta around the eastern end of the Mediterranean to the Ægean, had been conquered by Persia in exactly twenty-five years.

During this spectacular conquest there must have grown up a huge library of official documents, state "papers," treaties, secret negotiations, and other documents of national importance similar to the Foreign Office archives of London or Washington.

Yet most history of Persia that we now know has come to us from writers belonging to the races which Persia conquered, chiefly the Greeks, who only grudgingly concede the achievements of Persian civilization.

Today, twenty-five hundred years later, comes a generation of men from the new world who cherish the hope that the 20,000 tablets uncovered at Persepolis may prove to contain some of the foreign office archives of the mighty capital which arose as the fruit of those marvelous years of Persian conquest. Here at Persepolis, guided with a vision and a courage which changed the whole course of history, Persian civilization, the heir to long ages of advancing oriental culture, rose to become the supreme manifestation of the finest things in ancient oriental genius.



CHOSEN—LAND OF MORNING CALM

BY MABEL CRAFT DEERING

AUTHOR OF "HO FOR THE SOONOW HO," IN THE NATIONAL GEOGRAPHIC MAGAZINE

THERE is something elusive about the very name of the Land of Morning Calm. Japan, everybody knows; China, nobody knows. Chosen, or Korea, her light hidden under a bushel for centuries—not yet very tolerant of tourists and standing aloof from the colonizer with all her proud heart—is as shrinking as the mimosa, and yet, to me, the most fascinating country of the three. She asked of the Ages only to be let alone, but the gift was denied her.*

It was our second visit to Korea. On our first journey, in 1915, no one had told us how fascinating and easy of access the country was: unfortunately, our itinerary then was not elastic enough to allow a satisfactory stop-over.

One of the saddest moments of my life was when I was torn away after only three days in lovely Keijo (Seoul), with half its mysteries unsuspected and very few of its obvious beauties explored. I did not even own a Korean chest, and no woman who has ever been to Korea can say a sadder thing than that.

So when we were planning our second oriental journey, a month for Korea, the hermit, was thought none too long; not a day of our stay were we to regret.

Most comfortable of all the oriental countries to travel in, lovely missing link between China and the newer East, the Hermit Kingdom rewards its lovers richly with a civilization, a beauty, and a charm all its own (see map, page 424).

A WRESTLING TOURNAMENT IN KYOTO

It was late summer and there was some cholera in China, Manchuria, and Korea, and quarantine laws in Japan were being strictly enforced. This occasionally disarranged the regular sailings of those excellent steamers which ply between Shimonoseki and Fusan (Pusan). We had been detained in Kyoto by the magic of the lotus in bloom and the booming of bronze temple bells on tranquil summer morns; also, to tell the truth, we lingered because the sporting members of the family wished to see the

climax of the wrestling tournament, which was going on every day beneath a wonderful red and white canopy.

The man whom we had seen as an Osaka high-school boy, when he was the runner-up, was now the champion. The streets were filled with masses of men, fat breasts bared, ample kimonos swathing the rest of their bodies, and long hair done in the old Samurai fashion—a mode never seen now except in old prints or on the classic stage. It seemed as if not one of these wrestlers weighed less than 300 pounds. They swaggered up and down the banner-hung streets, for they were lords of Kyoto for the day.

REVERENCE FOR SHEER BRAWN

Vaguely reminiscent they were of the matadors of Seville, Madrid, and Mexico City. Their long hair recalled the bullfighter's queue, and the adoration of the somewhat puny populace for their strength and skill savored of the admiration shown by the wiry little peon for the velvet-coated swaggerer who, in medieval costume, dares bait the bull.

The Japanese are not cowards, as all the world knows, and if any religion teaches men how to die splendidly, theirs does; yet they pay the same delighted reverence to sheer brawn that the rest of us do.

So we simply had to postpone our departure for a day to witness the crowning feats of this 26-year-old athlete who weighed a sixth of a ton. He was well worth waiting to see, and so was the huge and picturesque crowd, with all the prettiest *geisha* in town and all the men, from gentleman to ricksha coolie, enjoying the event.

TYPHOON STIRS THE STRAITS

I don't believe it is "the thing" for respectable women to go to these wrestling parties, but we went. It was a splendid pageant. If we hadn't waited over, we would have crossed the straits between Japan and Korea during the worst typhoon in fifty years.

We left Kyoto early in the morning, all very fresh-looking in white, and we arrived at Shimonoseki very sticky and bedraggled, thanking Kwannon or any other goddess of

* Since 1910, when it came under the complete control of Japan, the country has borne its ancient name of Chosen.



Photograph by Emma L. Rose

HIGH HATS AND LOW HEELS

The tall lacquered hat, made of horsehair or finely split bamboo, with which one gentleman covers his topknot, can be worn only by one who has married. The huge mushroom-shaped hat and straw-colored garments of the other signify that he is in mourning. At the extreme left is a Japanese traveler, who, with the others, has been delayed here by a breakdown of the railway engine.

mercy for porcelain tubs and plenty of soap and towels.

It was typhoonish even then. The water was still rough and choppy; these straits are not famed for an even disposition. Besides, it was the two hundred and fortieth day of the year, or thereabouts. A Japanese gentleman on the train had told us so.

"This is the hundred and sixtieth day after the planting of the rice, and if we do not get a typhoon to-morrow the crop will be safe," he had said, looking very solemn the while, though the sky was a deep blue and seemed cloudless.

"Do you almost always get a typhoon on this day?" we asked politely.

"Almost always," he replied solemnly.

"If the typhoon holds off for a week, would the rice be all right?" we asked with interest, looking out on the lovely mirrors of the fields with the bright green rice reflected in them.

"It would," he assented gravely.

"Then why don't you plant the rice a week earlier?" we cried in chorus.

He simply stared at us. Even when we

left the train his jaw was still slightly dropped. We think there must be some answer to this conundrum, though it does sound like something in Alice in Wonderland.

The next morning we were in Fusan, the southernmost and largest port in Korea. The sea had pitched all night, but, as we were good sailors, we had slept peacefully, unaware of the agonies of some of our fellow passengers.

RAILWAYS AND AFFORESTATION ATTEST PROGRESS

The train for Seoul was crowded, compared with the one on our previous journey. The well-built road is owned and run by the Japanese Government, with officials courteous and educated. The cars are most comfortable and the diner excellent. Every morning passengers are handed newspapers printed in English, with the compliments of the company. This effect of kindly interest and official attention was obtained at an expenditure of about two cents. On our first visit the conductor had even furnished



A KOREAN VARIATION OF "SEE-SAW"

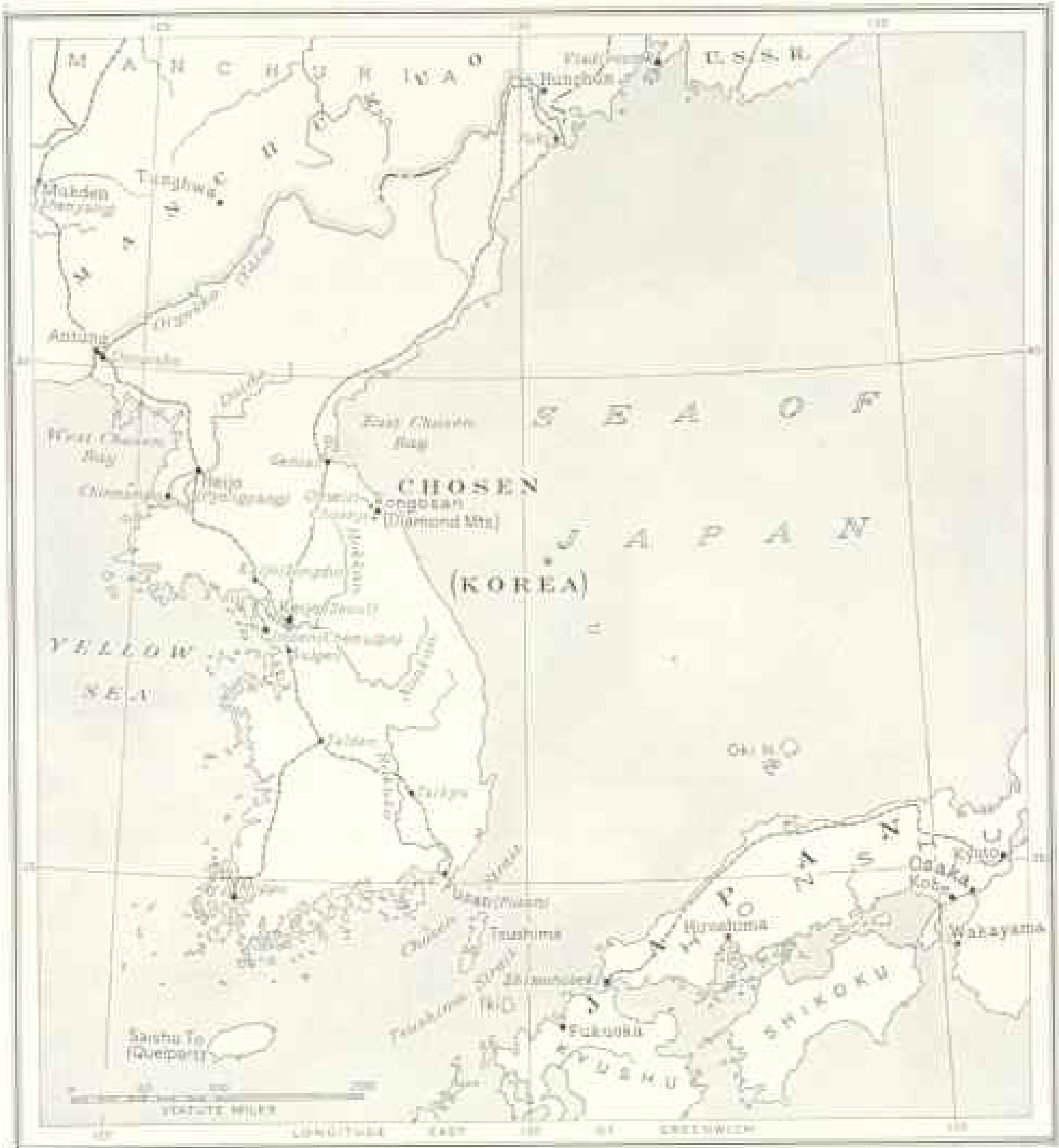
The girl at the left has just jumped down on her end of the board, bouncing her companion high in the air. Tradition says this game originated in the attempt of girls to gain a glimpse of their swains over high walls behind which women are secluded. The girl in the center keeps the board in place.



Photographs by W. Robert Moore

WHEN A KOREAN WIFE SAYS, "FILL THE WOOD-BOX"

These men are bringing heavy loads of pine tops, which provide a quick-burning fuel. The barrenness of many of the hills attests that generations of Koreans have searched both near and far in the quest of wood (see text, page 424).



Drawn by Newman Dunstead

CHŌSEN, WITH ITS ADJACENT ISLANDS, IS SLIGHTLY LARGER THAN MINNESOTA

The population of the Hermit Kingdom, however, is about eight times that of the Gopher State. In most instances the map shows the Japanese name for towns first, with the Korean name in parentheses.

my small child with a volume of Japanese fairy tales translated into English.

Under Japanese influence and control, the old oxcart and river traffic has given way in large part to 4,950 miles of public and privately operated railways, which annually carry some 20,000,000 passengers.

We noticed a change in the appearance of Korea. From a dry, woodless, barren-looking country, with a heaving mass of graves, it was fertile, well-watered, much cultivated, and obviously reforested.

"Give life to the mountains first and you will give life to the nation," a Japanese official had advised. So one of Japan's first acts was to introduce an extensive afforestation program.

The forests are not yet, of course, fully grown, but they are well started and will help conserve Korea's future rainfall (see illustration, page 423).

At several points model farms, started by the Japanese, also gave unquestioned evidence of the increased productivity and



"IT'S YOUR MOVE"

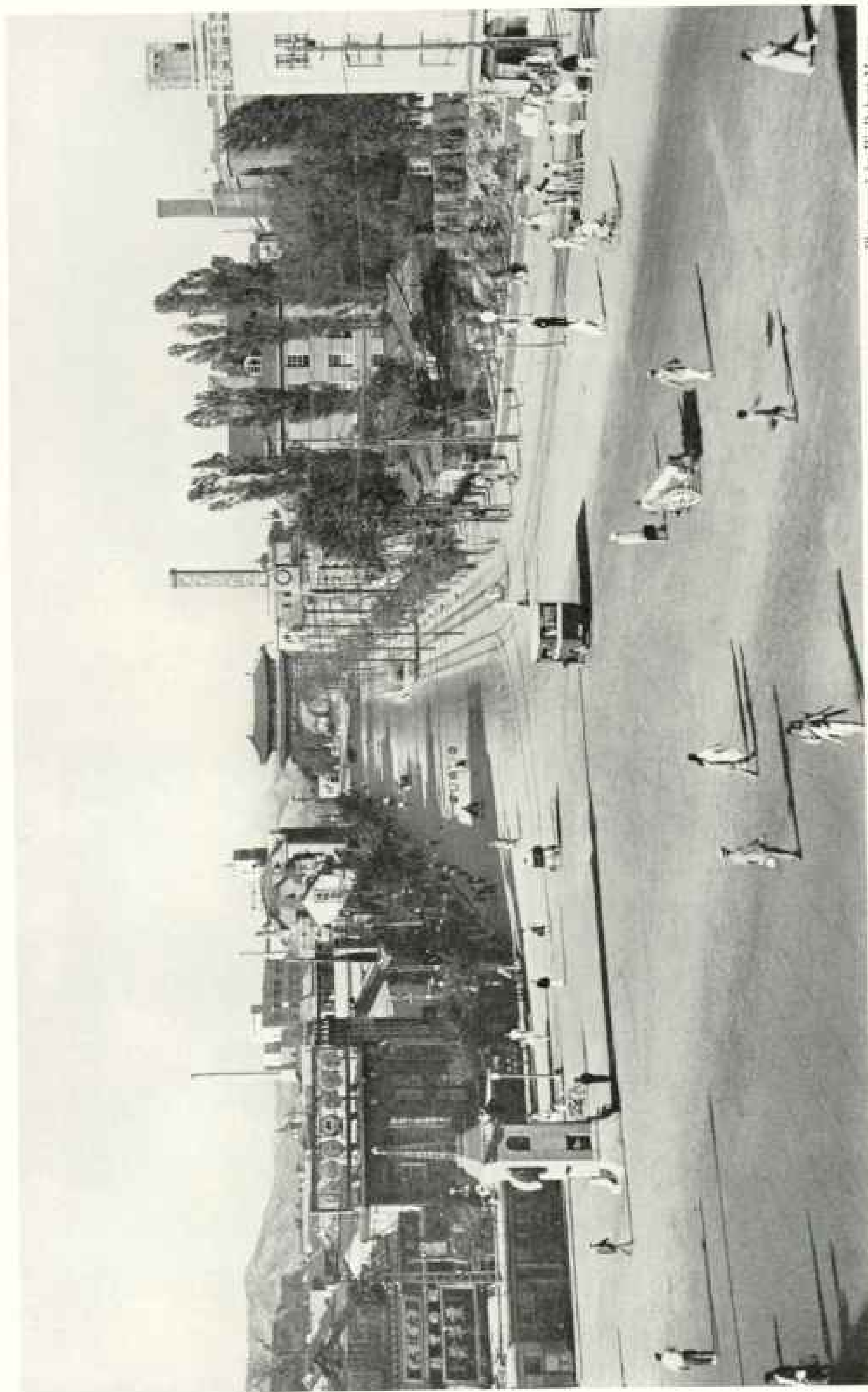
Indoors the Koreans play chess, checkers, and cards. Lacking equipment, they have a number of games which require only the hands and fingers. Kite-flying is a popular outdoor sport, especially for two months in winter, when the north wind blows.



Photograph by Graham Romeyn Taylor

EVERY STREAM IS A LAUNDRY TUB

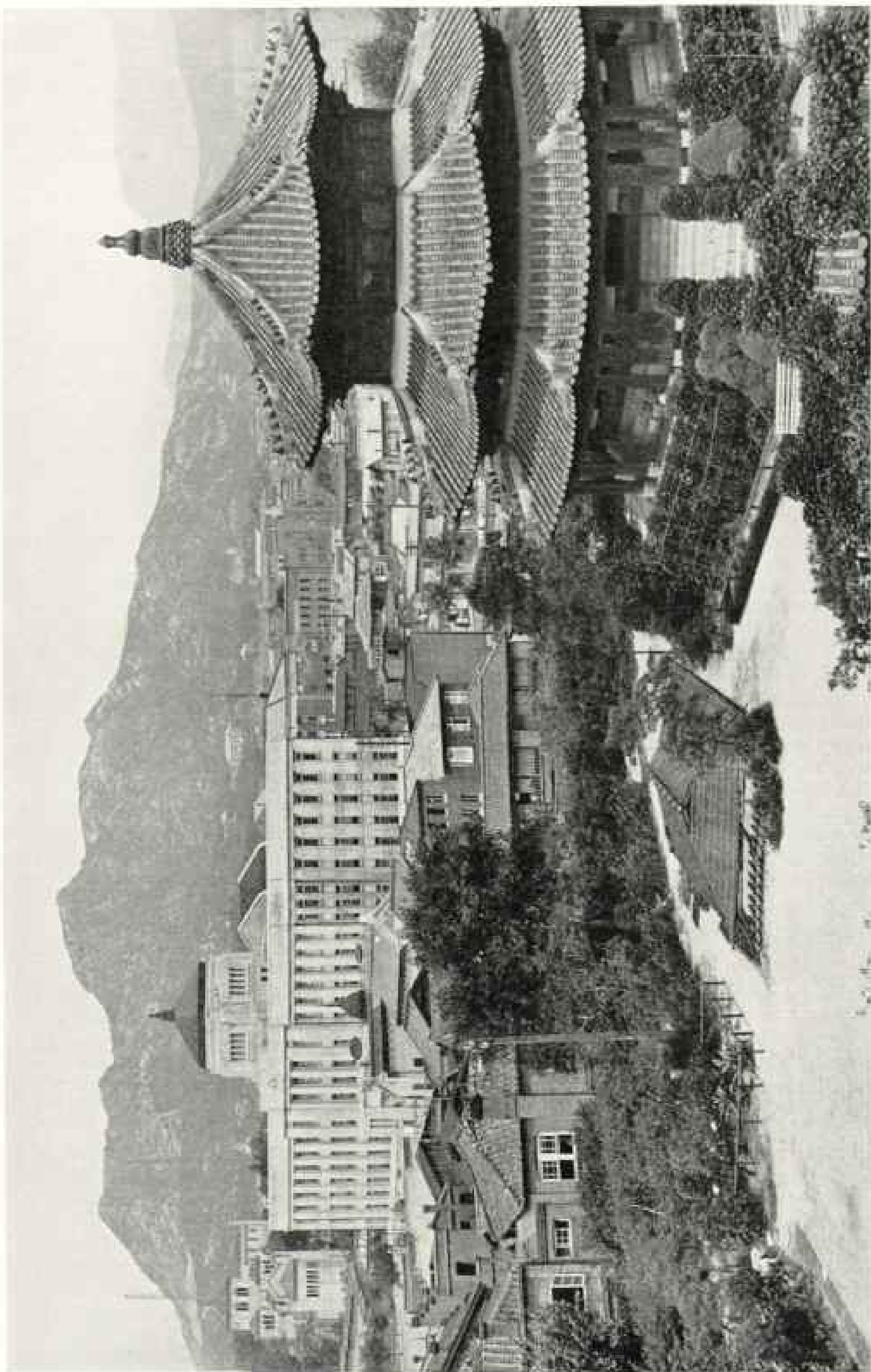
The white costumes of Koreans require frequent laundering; hence the edges of every water-course are usually lined with women, beating the garments on the rocks. The near-by banks are strewn with clothes spread out for drying and bleaching in the sun.



Photograph by W. Robert Maure

BROAD AVENUES HAVE SUPPLANTED MANY NARROW STREETS OF KEIJO (SEOUL)

Before the control by the Japanese, streets in the capital city were narrow and in poor repair. Now the main thoroughfares are well paved. This is the Nandalmon-dori, looking from the railway station toward the ancient South Gate, which has given the street its name. Japanese shop signs are much in evidence.



Photograph by W. Robert Moore

MANY CENTURIES OF PROGRESS—AGAINST A MOUNTAIN BACKDROP

The pagoda-like building of Korean architecture once served as the Temple of Heaven for luxury-loving rulers who lived at Seoul. In the center is the Japanese-built Municipal Building, and at the left is the city's radio tower. At the base of the hills, a little to the left of the temple pavilion, are the Residency buildings and some of the old palaces. From its founding, in 1392, Seoul continued as capital until the Japanese assumed control in 1910.

prosperity of the country. The Japanese now own about half of the cultivated land.

We learned how it was that hundreds of thousands of graves had been made to disappear. In the old days the soothsayer, and he only, could declare the most fortunate position for a grave. Often the spot he chose was the fairest place in the family's most fertile field, and after the grave had been placed there it would not have been respectful to the dead to cultivate the field. In a country as old as Korea and with such a reverence for graves, the result can be imagined. On our first visit grassy mounds rolled everywhere like the waves of the sea.

The Japanese changed all that. In Japan very little land is given over to graveyards. In a country so small, so mountainous, and with such a teeming population, there is of necessity little waste land. Every arable foot is cultivated. Cremation was early favored; consequently, Japanese cemeteries are small and insignificant, except occasionally around a monastery.

In Korea the Japanese established graveyards at what seemed to them appropriate intervals. Koreans who refused to remove their ancestors to these cemeteries were compelled to pay a grave tax. There was naturally much opposition, for the graves of a Korean are his most cherished possession. But taxes are taxes and this tax accounts for the increased fertile acreage. The regulation also is responsible for the fact that so many fine pieces of celadon, a sea-green porcelain, all of them belonging to the Korai period and all treasure-trove from graves, found their way to the market.

LAND OF MANY CAPITALS

Korea is a country of many capitals. As one came to be considered unlucky, soothsayers would choose another. Again, when, from extravagance, bad government, or reckless taxation, signs of misfortune began to appear, the capital would be moved to a new site, just as loveless married couples move from house to house, hoping to leave their discontent behind them.

Suigen, or Suwan, sometimes called the Flowery Castle, about 25 miles south of Seoul, had glory for a day, as time is reckoned in the old, old countries of the East. For long years, too, it was one of the important defensive outposts of Seoul, and at one time is said to have sheltered 50,000 people. Very likely it did, perhaps more,

for the ruins are extensive. The city now has about 15,000 people.

In the latter part of the 18th century the place so captivated one of the kings of Seoul that he flirted with the idea of transferring his capital here. The summer pavilion, lovely in its decay, is all that is left of the palace where he frequently used to resort. Two of these Yi (also called Li) kings, father and son, the latter having built the city walls, found their last resting places within Suigen's friendly confines.

UNATTRACTIVE COSTUMES FOR WOMEN

On the village street which runs through the imposing North Gate I obtained one of my best photographs, that of a woman not at all coy, with a water jar on her head. As so many travelers have noted, the costume of the Korean peasant women is particularly suitable for motherhood. The countrywomen wear full, shapeless skirts from waist to ankle and a short Eton jacket which stops but little below the armpits, often leaving the breasts exposed.

Although the Korean costume for men is, I think, the most impressive in the Orient, the women's dress is decidedly unattractive. Its shapelessness would make a sylph look like a sack of potatoes.

The hair is worn in the most ugly way possible: parted in the middle, then brushed back at either side of the head, and wound into a tight knot at the nape of the neck in a way that would make the Venus of Milo look like Sis Hopkins. Especially is the polished forehead ruthlessly exposed and brought into prominence.

One would say that the hideousness of the women's costume might cause the attraction of Korean men to the *keisaing*, or professional dancing girls, if they had evolved anything prettier; but the improvement is slight. The *keisaing* do pull out the hair on their temples and make a somewhat softer hair line than that of the other women, but they draw it in the same tight knots.

The *keisaing* have adopted a prettier sleeve, which is very long and trimmed with gay ribbons. They wear brighter colors and many ornaments. Their dancing feet are tiny, when you can get a glimpse of them beneath the voluminous skirts, which trail all around; but, for professional dancers, they are the most rigorously covered women in the world (see Color Plates I and VII).

We had an amusing experience when we

CHROMATIC HIGHLIGHTS OF KOREA



© National Geographic Society

Finlay Photograph by W. Robert Moore

SHE PLAYS A LEADING RÔLE IN KOREAN ENTERTAINMENT

Selected for their beauty and taught at an early age to sing, dance, and to play various musical instruments, the *Jeonjang* become expert entertainers. Formerly they were supported by the National Treasury and were commanded to appear at official dinners and palace entertainments (see Color Plate VII).



© National Geographic Society

THE PALISADES OF ONE OF THE EARLIEST KOREAN CAPITALS

Fullay Direct Color Photograph by W. Robert Moore

Ask any world traveler for a list of his twelve favorite views, and he is most likely to include that from Peony Point (Botan-Daŭ), which looks out over the mountains, vast plains, and meandering river that surround historic Heijo (Pyongyang). Beyond the Eimeŭ Temple, in the foreground, is a portion of the long, flat island of Ryora, which splits the lazy Daido (Daiddong) River.



© National Geographic Society

The rock carving to the left is the Miroku Buddha, in the Diamond Mountains. To the right are two devil posts, set beside a road to prevent evil spirits from passing. Buddha and Confucius have numerous followers; Shintoism has been introduced from Japan, and Christianity has spread among all classes. But strange, primitive worship of spirits and natural objects persists in rural areas.



Family Direct Color Photograph by W. Robert Moore

THE RELIGIOUS BELIEFS OF CHOSŬN (KOREA) FIND EXPRESSION IN MANY FORMS



(E) National Geographic Society

WHITE IS IN VOGUE, EXCEPT FOR BRIDES

The everyday garments of the people in the Land of Morning Calm are pure white, but for weddings and for celebrating the 60-year cycle of life Koreans wear gorgeously colored robes such as these.



Photo Direct Color Photographs by W. Robert Moore

TRappings of a CONFUCIAN TEMPLE AT KEIJO (SEOUL)

Bells, banners, lanterns, and other paraphernalia are used in the annual festivals that are held in connection with the temple's activities. The young man is one of the chief priest's attendants.



© National Geographic Society

NOW TELL IT AGAIN, GRANDPA!

The tiny Korean maid is dressed in festive clothes. The man wears the spotless white garments and traditional "fly-cage" hat, made up of a horsehair skullcap with a raised center, upon which is perched a topper of the same material.



Finley Direct Color Photographs by W. Robert Moore

RING AROUND THE PICKLE JAR

The boy and his sister, clad in their chromatic New Year's attire, are somewhat quizzical about the cureraman's activities. The jar, in which pickles are preserved, is one of many usually found in the rear courtyards of Korean homes.



THESE GARMENTS SOON WILL BE READY FOR PASTING—NOT STITCHING.

Sewing clothes for the family is usually done by hand in Korea, although sewing machines are becoming more popular. Often the seams in Korean clothes are glued instead of stitched, and are taken apart when the garments are washed.



© National Geographic Society

Finlay Photographs by W. Robert Moore

MORNING MARKET IN KEIJO

In the vegetable stalls two pumpkin and pepper sellers display their wares. Peppers are always in demand, as the Koreans like highly seasoned food. In the background are several of the peculiarly shaped racks on which, strapped to their shoulders, they carry the produce to market.

CHROMATIC HIGHLIGHTS OF KOREA



THE DANCE OF THE DRUMS

Beating the drums as they circle, posture, and whirl about the stand, all to the tune of a native orchestra, the *Jejuing* dancers bring a Korean entertainment to a noisy climax. A school is maintained in Keijo for the training of these dancers (see Color Plate I).



© National Geographic Society

Finlay Photographs by W. Robert Moore

A PAVILIONED GATEWAY AT CHOANJI MONASTERY

This shrine is one of the four largest Buddhist religious centers in the famous Kongosan, or Diamond Mountains, in eastern Korea. Some of the monasteries were founded in the fourth century. Vivid colors and a wealth of intricate carving under the eaves are characteristic of the early Korean monastic builders.



© National Geographic Society

Finlay Photograph by W. Robert Moore.

DWELLERS OF THE CLOISTERED WALLS

For centuries hundreds of monks have found retreat in these beautiful monasteries that were located in secluded places, amid the grandeur of forested ravines and bold granite crags. Mountain pools, waterfalls, and peaks also have been surrounded by religious legends, and consequently are popular places of pilgrimage. This is Choanji Monastery (see Color Plate VII).

were trying to get to Suigen. We had been deprived of our trip to the famous old Buddhist monasteries and splendid scenery in the Diamond Mountains by the Father of Typhoons, so we planned motor trips to nearer places. Then, when we proposed Suigen, we were gravely assured by the Japanese hotel clerks that the road to Suigen was washed out and that we could not make the trip.

Not liking to have my plans changed for me, I said: "Well, we'll take the motor and go as far as the washout. We want to see the country, anyway." The American woman, because of her independence, is the despair of the Japanese man.

We took the motor, with a Japanese chauffeur and a Korean guide, and went merrily on our way. It was a sparkling day, and there were few evidences of the recent terrible storm, except some uprooted giants by the side of the excellent Japanese-built road, and here and there a ruined rice field where the wind had swept with terrific velocity.

We passed through many interesting villages and saw countrymen with *gæki*, the wishbone-shaped stick with which they carry on their backs enormous loads of grass, baskets, and hats. When turned the other way, it also makes a *chaise longue* for a sleepy hour (see illustrations, pages 441-2).

Then, some 20 miles from Seoul, we encountered a motor bus which was operating a regular route from Seoul to Suigen and beyond, and found out from the driver that they had been making the trips uninterrupted every day. There was not even a washed-out bridge! Upon discreet inquiry we found that political events had not been going well in a few near-by villages.

A VISIT TO THE HIGH TREE CAPITAL

It was perhaps a week after our trip to Suigen that we went to Kaijo (Songdo). Songdo was the High Tree Capital of Korea from the 10th century until 1392, during the Korai dynasty, the Elizabethan Age of Korea. Almost everything that is loveliest in Korean art and literature is of the Korai period, and most of the arts of this golden age are now lost, the making of celadon, for instance (see text, page 428).

Songdo was also a walled city and is still wonderful and extensive. The palace of the old Korean Cæsars is entirely gone—more the pity—though there is always something disappointing, to my Western

mind, in Chinese, Korean, and Japanese palaces. There is too much wooden simplicity, too much dependence on paint and lacquer, not enough comfort, and no precious stones. They are neither barbarous nor civilized, just bare and uncomfortable looking.

Apparently there has not been a fire in Songdo for a thousand years. Looking down from the heights, one sees the remarkable thatched roofs of this old, old city, their ancient designs miraculously preserved. They are brown and soft-looking and curious in shape.

Each house seems to follow any line its owner may have fancied. They are almost never square (see illustration, page 439). Some are shaped like horseshoes, some like crescent moons, and others are fashioned like gridirons. All have a thick mushroom thatch.

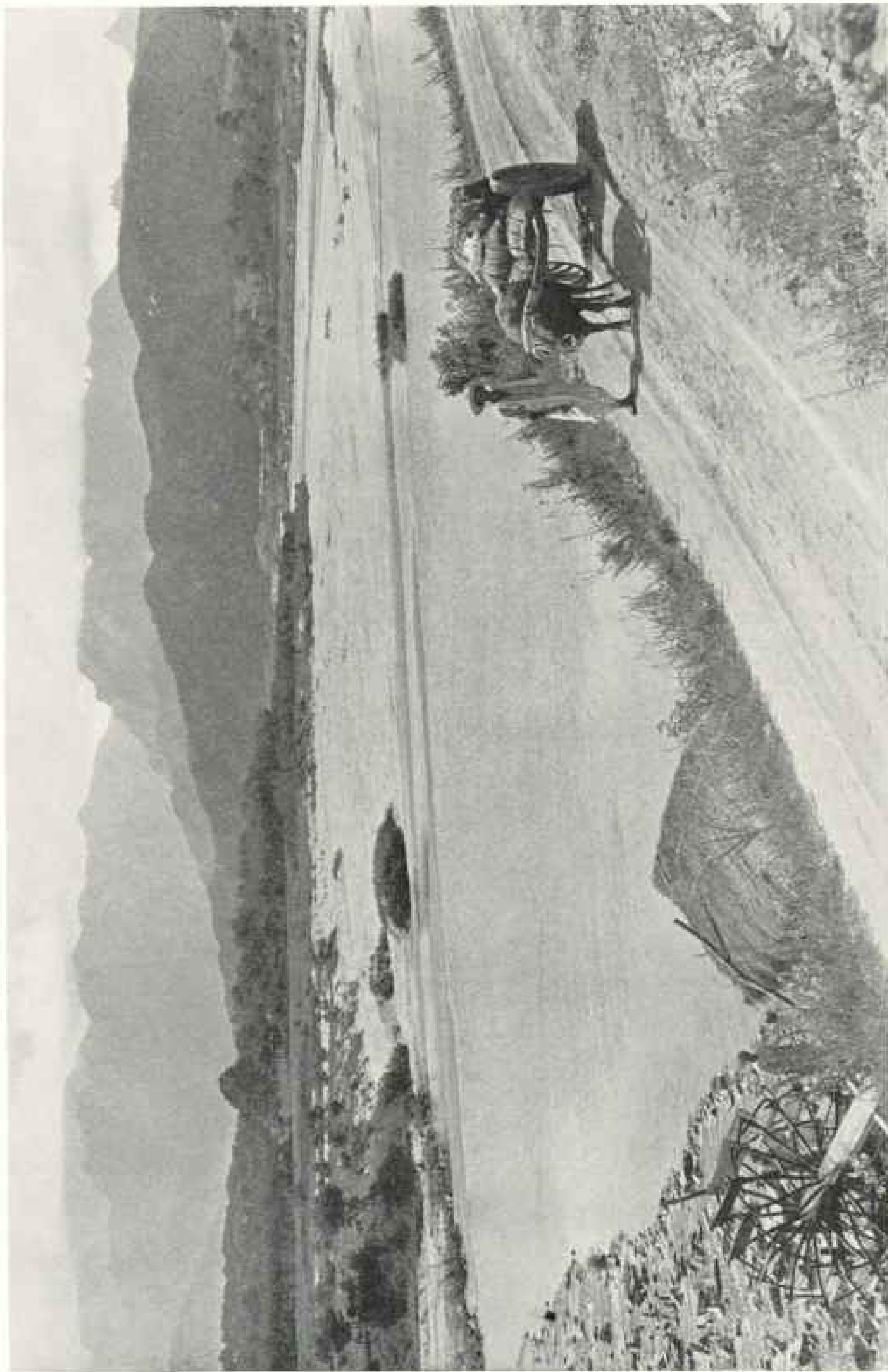
THE BRIDGE OF HEAVEN—WITH NATIVE "ANGELS"

There are practically no Europeans in Songdo except the missionaries, who live outside the city in houses of more substantial construction. Apparently few Europeans go there, for we were almost trampled by the populace, who wished to get a near view of us.

When I was photographing the Bridge of Heaven (see page 446), with a few Songdoites serving as the angels, the press of the crowd was so great that our Korean guide became alarmed and exhorted his countrymen to disperse, instead of showing such childlike curiosity. To this they paid no attention, but good-naturedly pressed closer. Our guide was the more disturbed because it was much against his will that we had come to Songdo.

There were a few cases of cholera in the city and our guide was not anxious for any direct contact with his countrymen. He was exceedingly afraid of the disease, as most orientals are, and had exaggerated the danger to us in every possible way. We were determined, however, and had finally told him that he need not go; we would go alone. That settled it. We went and so did he.

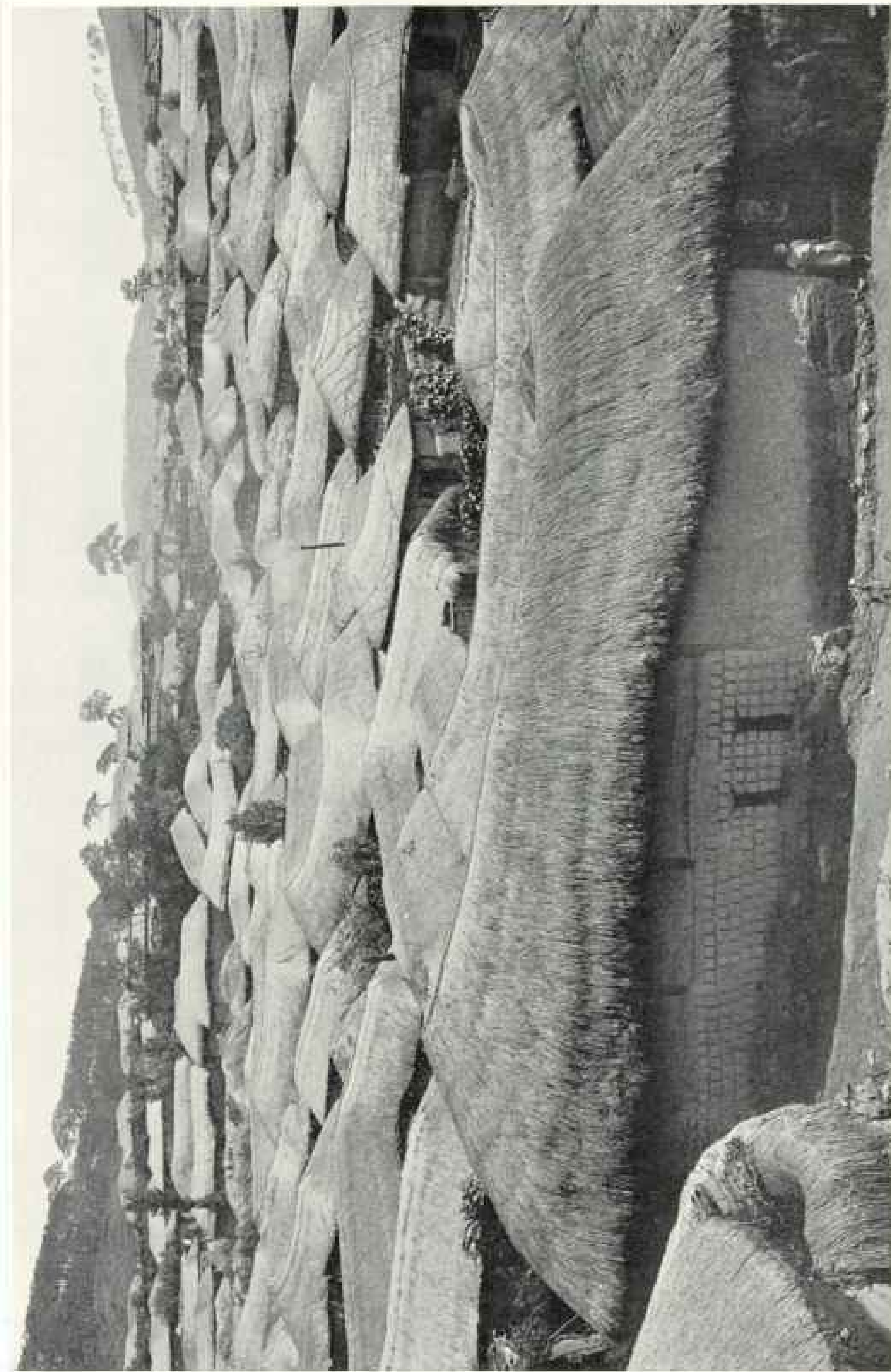
We ate our luncheon, put up at the Seoul hotel in the daintiest baskets, at a remote and airy pavilion once attached to the royal palace. We had to climb a ladder to reach the salubrious spaces; there we opened our baskets cautiously and kept our sandwiches carefully covered until we ate them, though



Photograph by W. Robert Moore

EASTERN KOREA OFTEN RESEMBLES ENGLAND'S LAKE COUNTRY

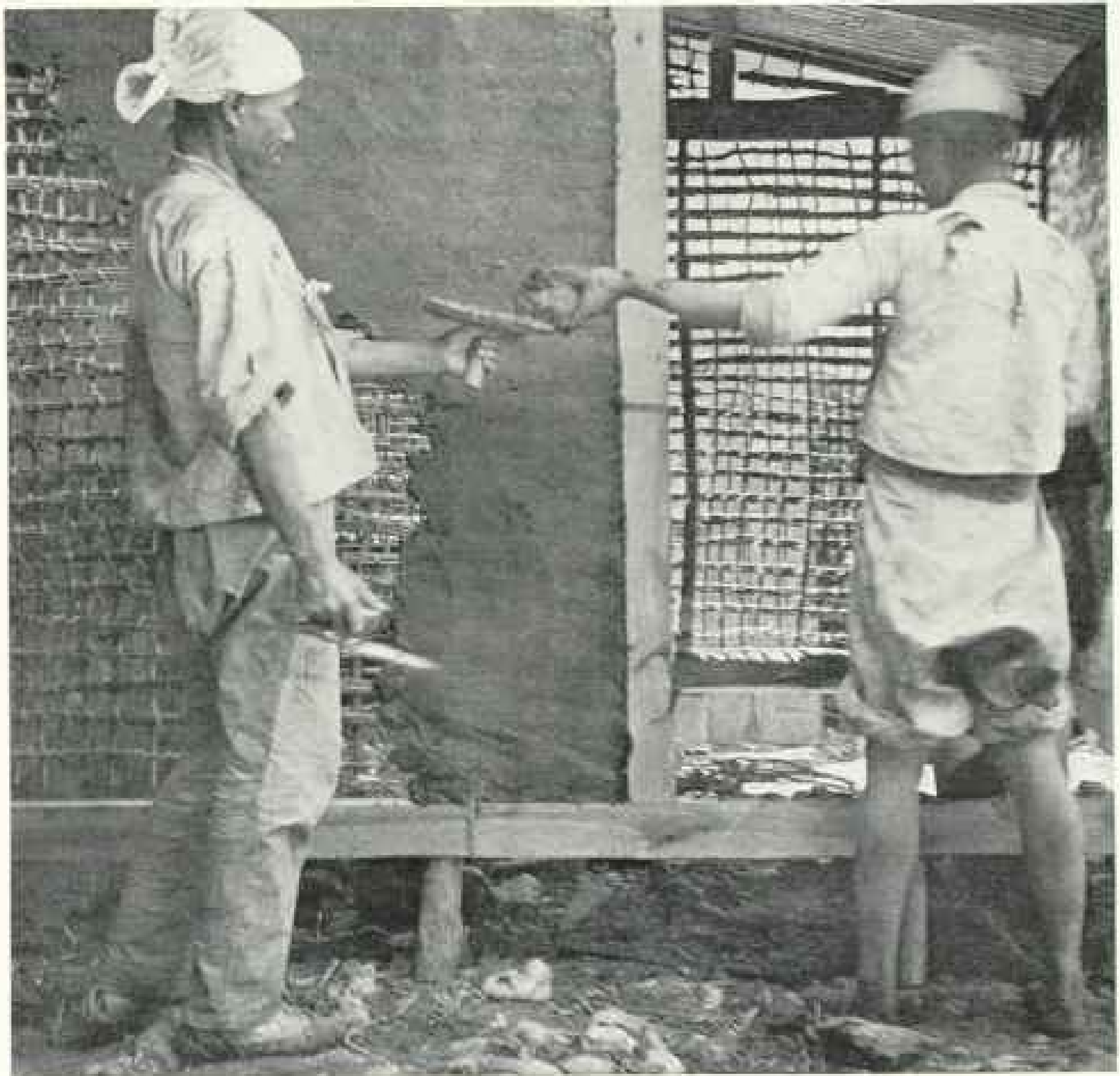
The granite peaks known as the Diamond Mountains, or Kongesan, which rise in the distance, are famous for their rugged beauty and for the hoary Buddhist monasteries that for centuries have nestled in their deep ravines. Primitive water-wheel mills still grind grains and slow-moving oxcarts convey the simple cargoes of the rural residents. Under Japanese control many miles of roads have been built or improved (see illustrations, pages 443-4).



© E. M. Newman

INFINITE VARIETY OF FORM MARKS VILLAGE HOMES

Some of the mud-walled, thatch-roofed houses in this maze are shaped like horseshoes, the letter L, or the figure 5; some follow other fantastic styles. The Koreans seem averse to having rectangular floor plans (see text, page 437).



THIS LITTLE GRAY HOME OF THE EAST IS BAMBOO AND MUD

The walls of many humble Korean homes are made of a grille of bamboo strips or long millet stalks, over which mud is plastered. The roofs are of thatch or crude tile.

no flies were visible. We peeled our fruit and felt that in our remote eyrie we were entirely free from contagion. It is possible for cholera germs to be carried on the feet of flies.

After luncheon, as we sat looking down at the beautiful view, we saw an arrow fly past us. Presently came another and then another. We came down to find that a company of Korean gentlemen were occupying another of the former royal pleasure pavilions and were practicing archery!

WHERE MAN-SHAPED GINSENG GROWS

We looked at these beautifully dressed, creamy skinned men with unlined faces, apparently entirely remote from all vulgar

strife; it made us pinch ourselves to see if this were really the 20th century.

This strangely medieval city is commercially important, as the ginseng grown here, a medicine greatly prized by Chinese, Japanese, and Koreans, is the finest in the Orient and frequently sells for more than its weight in gold.

The plants, with curious man-shaped roots, are cultivated in specially prepared beds, where they are protected from the sun and beating rain by reed blinds for a period of about seven years. Then the roots are steamed, dried, and carefully trimmed before they are marketed to work their alleged curative powers. The steaming process is a Government monopoly.



Photograph by J. B. Millet

A "CASH AND CARRY" STALL IN TAIDEN

The man who is sampling the saleswoman's fruit wears the wooden framework, shaped like a wishbone, on which all manner of loads are borne (see text, page 437). The grass sandals (right), fruit, and grain are only a few of the many things that are sold in the outdoor markets and at the open-front shops.



Photograph by W. Robert Mours

INSTEAD OF IRONING, KOREAN WOMEN CLUB THEIR CLOTHES TO SMOOTHNESS

Beating garments on a flat rock or wooden roller removes the wrinkles from the grass cloth and imparts to it such a fine sheen that it appears to have been mercerized.



Photograph by Branson De Coo from Galloway

THREE EPOCHS IN KOREAN TRANSPORT

The trolley has arrived, the two-wheeled cart persists, but the human back, in a land where labor is cheap, still conveys most of Korea's goods. Drums, baskets, tables—every type of furniture, food, and goods—is piled on the native "backrack" (see illustration, page 441).



Photograph by W. Robert Moon

MATting HAS MANY USES IN KOREA

With the coarse fabric made from rice straw or dried grass produce is wrapped or bagged and floors are covered. Much of it is hauled into Jinsen (Chemulpo), as jute is to Calcutta, India.



Photograph by W. Robert Moore

THESE GREAT STONE FACES AND FIGURES ARE BUDDHIST IMAGES

On another side of the same rock are carved 53 other figures of the Buddhas who came from India to found one of the remote mountain monasteries. These rocks are not far from the Chouanji Monastery (see Color Plates VII and VIII).

Much of the coarse white cloth that forms the national costume is also made in this old metropolis. The Songdo merchants, we are told, early developed a method of book-keeping similar to the double-entry system used in the Occident.

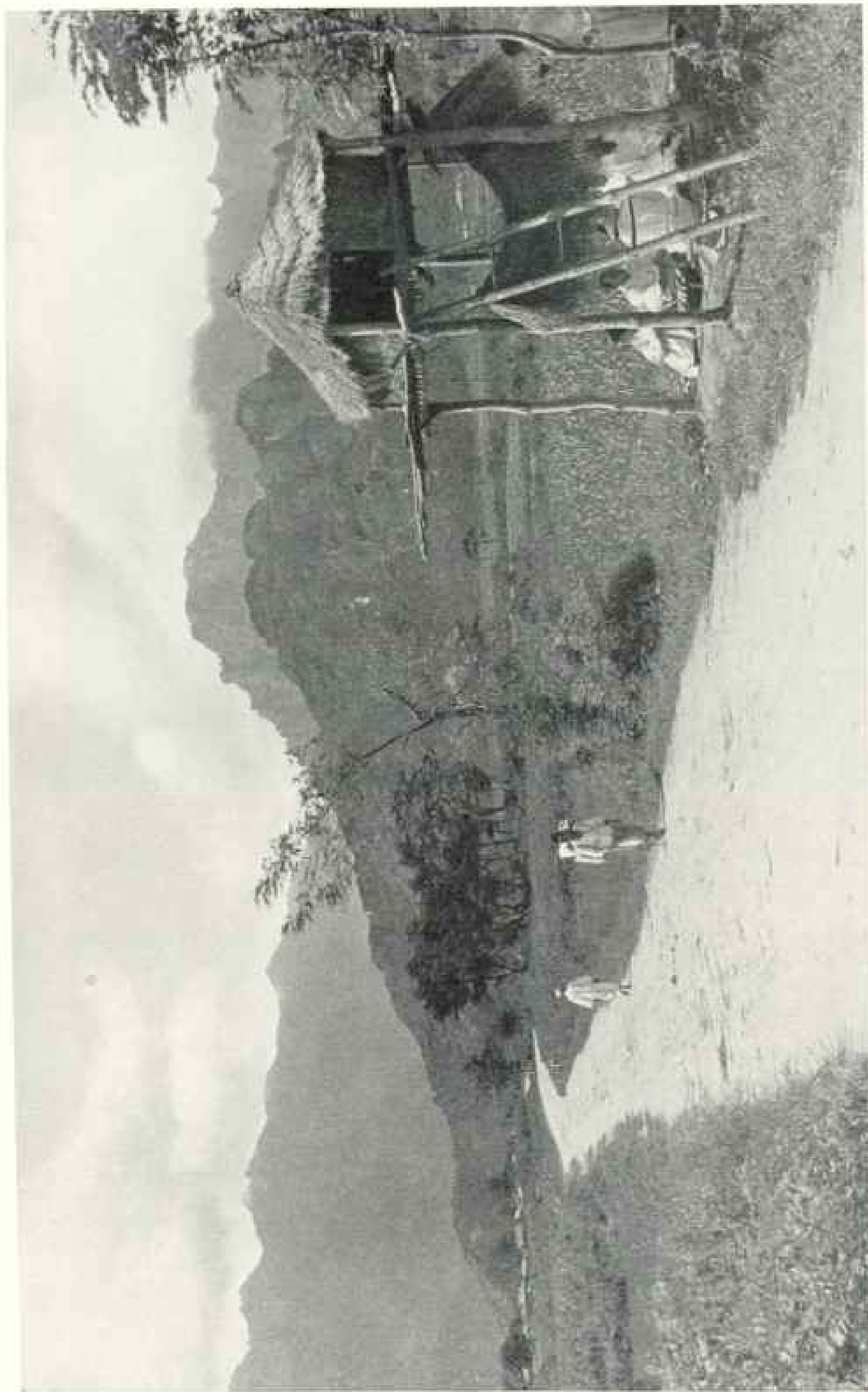
Some 20 miles from Songdo the road crosses a certain river. It is of this crossing that the story is told by Mrs. Lillias Stirling Underwood, in "Fifteen Years Among the Top-Knots," of a Korean nobleman who at the time of the Hideyoshi invasion (see text, page 447) lived in a magnificent summer house on the bluff overlooking the river. His king, fleeing from the Japanese, arrived here at midnight, and to light him and his escort to the ferry the nobleman set fire to his beautiful home. As a result of this act the king crossed in safety and escaped his enemies.

In token of his gratitude the king ordered that a summer house be kept perpetually, in memory of his loyal friend, on the site of the one which had been sacrificed.

LEGENDS CROWD THE SONGDO STAGE

The traditions of Songdo are delightful. It seems that the real reason why the High Tree Capital became unlucky and finally fell from its high estate was because it had been customary to feed a 20-year-old girl to a resident serpent every year. The girl who was to be the choice tidbit at the serpent's annual feast was apprised of the honor early in life, was specially trained, and, I suppose, was fattened for the event.

At any rate, the particular child to whom the distinction was destined to fall some 17 years later became very friendly with a turtle. She fed the turtle and in other ways



Photograph by W. Robert Moore

THE DIAMOND MOUNTAINS ARE A VERITABLE NATIONAL PARK AREA

The thatched watchtower houses sentinels who guard melon and vegetable patches from thieves. It also furnishes friendly shade for a group who have been hiking on the sun-parched road. Annually thousands of Koreans visit the shrine and view the scenic beauty of the mountains, where every peak, waterfall, and other features have names and a cluster of classic lore. Beyond the village of Onseiri, discernible at the base of the hills, is a Government-operated hotel, which is a popular starting place for trips into the mountains (see "In the Diamond Mountains," by the Marquis Curzon of Kedleston, in the NATIONAL GEOGRAPHIC MAGAZINE for October, 1924).



Photograph by W. Robert Montro

ON THE BUSY BANKS OF THE DAIDO RIVER AT HEIJO

Native craft from upriver bring their wares downstream and unload them near the East Gate of the city. At the left is a cross-river ferryboat waiting for a load of passengers. The modern highway and street-car bridge which connects old Pyngyang, or Heijo, with the large factories and the projected suburb on the opposite bank appears through the morning haze (see Color Plate II and text, page 446).



Photograph by Mabel Craft Deering

THE BRIDGE OF HEAVEN IS CROWDED, IN SONGDO

This structure is one of the few remnants of the period when Songdo was the capital, during the Elizabethan Age of Korea (see text, page 437). The carvings on the side represent clouds.

attached it to her, so that the turtle became her friend—as ardent a friend as so cold-blooded a creature could be. The turtle, to save his friend, killed the serpent; but the serpent, unfortunately, was the magic protector of Songdo; so the city became unlucky and the dynasty fell.

The story of the fall is interesting, too. As usual, it was treachery. The last emperor of the Korai dynasty was driven out by his minister of war, Yi Taijo, the founder of the Yi dynasty, which lasted, after a fashion, until the death of the late emperor. The scholarly prime minister of the deposed Korai monarch, Chung Mong Ju, who had been the only block in the path of the coup, was killed on a bridge visible just below the pleasure pavilion where we ate our luncheon on that lovely September day.

He was on his way home from a dinner when he was struck down (some say he committed suicide). The whole thing happened nearly five and a half centuries ago, yet bright red stain of his blood remains vivid on the white stone bridge!

The bridge is called Zenchikukyo, which means Blood-Turned-to-Bamboo Bridge, and there are always plenty of Songdo children ready to conduct you to the place. The most interesting thing about the bridge is the tablet in honor of the loyal victim,

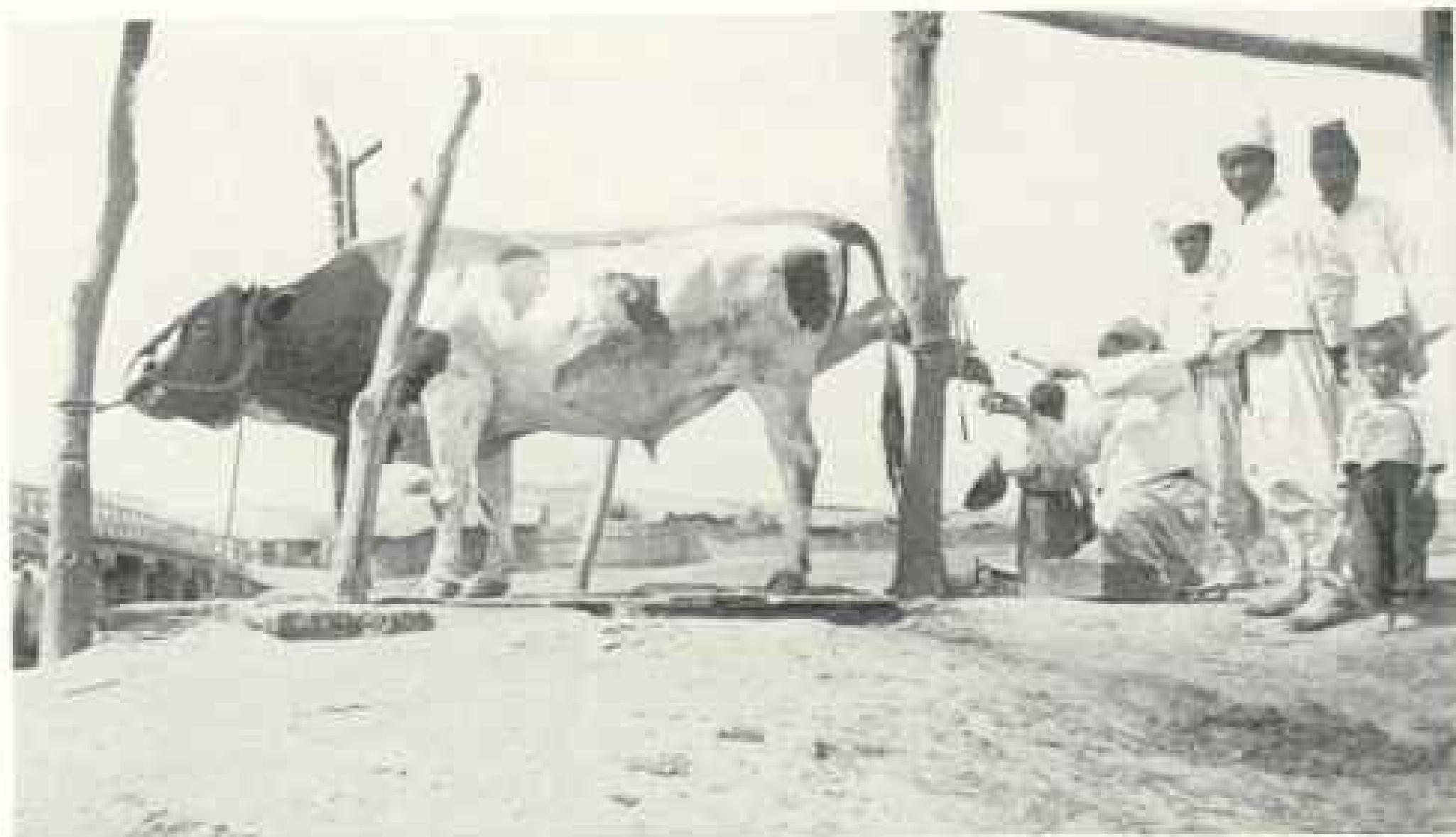
erected by the usurper Yi, showing that one may be able to appreciate a virtue without possessing it.

Mrs. Underwood relates that the gates of Songdo were removed because the people of that city so persistently continued to despise and treat with contempt the authority of Seoul. Whereas it is the custom to speak of going *up* to Seoul, they would refer to going *down* to that city. They would not measure their grain from right to left, as in Seoul, but from left to right. Worst of all, from having constantly referred to the King as a pig, they came to speak of a pig by the King's name!

PYENGYANG, EARLIEST OF CAPITALS

In this quest of ancient capitals in Korea, there is also Heijo (Pyongyang). What a name to conjure with! About 162 miles north of Seoul the charming old city sprawls on blufflike hills which rise above the sweeping Daido (Daidong) River.

One has missed much in this Hermit Kingdom until one has stood in the pavilion that is perched atop Botan-Dai, or Peony Point, and seen the superb panorama of mountains, plain, city, and the sparkling river (see Color Plate II). Well might Korea's traditional founder who coined the title, Land of Morning Calm, have stood



"SAFETY FIRST" WHEN SHOEING AN OX

Because they are used as draft animals throughout the country, the bulls are shod or are provided with twisted-grass sandals to protect their hoofs.

on this very eminence and watched the play of light and clouds over the marvelous landscape.

Up and down and across the swift-moving waters of the Daido ply numerous cargo craft and ferryboats, their white and golden sails glinting in the sunlight. Farther downstream, spans of a modern steel bridge vault the river, and still farther off rise smoking factory chimneys, a 20th-century touch impinging on the scene (see p. 445).

Pyongyang is one of the oldest cities in Korea; for centuries previous to the rise of Songdo it was the capital. According to tradition, it was here that the Nation's founder, Kishi (Ki-tze), a Chinese scholar, established his palaces when he became emperor. His supposed burial place is marked by a shrine. The tablets, stone images, and lanterns that surround the mausoleum, however, were erected nearly 2,000 years after he had lived and ruled and died in his adopted land.

Even after the center of power shifted to Songdo, and later to Seoul, Pyongyang continued in strategic importance. Besides many an ancient conflict that shifted back and forth across its hills, Pyongyang was also the scene of three major invasions—the Hideyoshi campaign in 1592-98, the Sino-Japanese War of 1894-5, and the Russo-Japanese War of 1904-5.

Some of the old walls, monumental gateways, and buildings still stand, defying the ravages of time with remarkable vigor.

In the Daido-mon, largest of the gates which pierced the city wall, built by King Seiso, of the Korai dynasty, hang pieces of the anchor chain from the *General Sherman*, an American schooner which, with its crew, was destroyed in 1866.

New jostles the old in this time-mellowed town. Days are well spent in glimpsing and sensing its many contrasts; but contrasts cannot be considered new in a place that has a 3,000-year-old life story.

THE TRAGEDY OF QUEEN MIN

Each dynasty in Korea has gone out in darkness. The cruel murder of the patriotic and resourceful Queen Min in 1895—a descendant of the Mings of China, it is said—was the real end of the usurping Yi family.

One pretty tale, perhaps apocryphal, is told of the deep damnation of her taking off. It seems that one of her court ladies, realizing as soon as the palace was invaded that it was the queen's life which was sought, attempted to impersonate her royal mistress. When she was about to be murdered by the assassins, the Judas Iscariot of the plot, a Korean who had been bribed and who, as a trusted inmate of the palace,



PUMPING STATIONS STILL ARE CRADLE SCOOPS

By this back-breaking irrigation device the Korean farmer lifts the water from streams and ditches into channels that carry it to the thirsty fields. Conserving the water supply has become a serious problem because for centuries hills have been denuded of trees (see text, page 424.)

knew the queen well, called out, "That is not the queen!"

So the search for the royal lady went on. She was finally identified by a gold and jade serpent she wore in her hair. Again the serpent!

The Emperor was a weakling and he remained, surrounded by women and sycophants, sunk in pensioned luxury, until his life simply faded out. This last Yi, in a funeral of indescribable magnificence, was carried to his place among the imperial tombs. The last prince of the house is now married to a Japanese princess and the dynasty is lost by absorption, as has happened so many times in Europe.

NEW SEOUL OVERSHADOWS THE OLD

It is said that the falling of a miraculous snowstorm showed the Yi dynasty where to build the walls of Keijo (Seoul), known as the Snow Capital. Now the Temple of Heaven is the dancing room of a tourist hotel; some of the crenelated walls have been torn down and traffic now skirts around as well as through the old gates. The exquisite tea house, like that pictured on the Willow Pattern plate, only far love-

lier, where Queen Min used to entertain the Chinese envoys, has been razed and no longer rises in loveliness from its lotus bed.

Modern banks and offices, monumental stone Government buildings, and wide tramway-and-bus-served streets have given the metropolis a thoroughly up-to-date, businesslike appearance rather than that of an oriental capital.

Instead of bonfire signals that once burned on the surrounding hills to tell the emperors that all was well in the land, electric waves crackle in the ether from the radio towers of a broadcasting station, and nearly 115,000 miles of telegraph and telephone lines spread their spiderweb network to the uttermost corners of the former Hermit Kingdom. From the Residency of the Japanese Governor General are directed the affairs of the Nation (see pages 426-7).

True enough, several of the old palaces and pavilions are still standing, but their closed doors and lack of paint leave them as somewhat sad reminders of their departed glory.

The turtle has again slain the serpent, and Seoul, the last capital, has become, for Korea, the most unlucky of them all.

LIFE ON THE ARGENTINE PAMPA

BY FREDERICK SIMPICH

AUTHOR OF "SEYFATHS IN LATIN AMERICA," "GIANTIC BRAZIL AND ITS GLITTERING CAPITAL," "MEX AND GOLD," ETC., ETC., IN THE NATIONAL GEOGRAPHIC MAGAZINE.

"WE DON'T eat armadillos in Dallas or race our horses after ostriches; otherwise this flat Argentine pampa, with all its wire fence, windmills, and cow music around the water troughs, looks, smells, and sounds just like Texas. Even the *pampero* windstorms here blow like our Texas northers."

Lured to this tail of the hemisphere by the same "cow music" that echoes over our own cattle plains, my new-found friend from Texas was showing me about one of the pampa's enormous ranches, or *estancias*, feudalistic in their magnificence.

All about us the boundless, eye-tiring pampa stretched flat as a billiard table, its dead level broken here and there only by clumps of exotic trees set about a ranch-house, or by the tall, spraddling towers of windmills marching like steel skeletons to far horizons.

Pampa the Indians called this region, which was their name for plains. So Spaniards took the word, and thus we, too, know the vast, flat Argentine grasslands that sweep from the Atlantic to the Andes.

History picked this pampa as a vast stage for one of its most eventful and swift-moving dramas. Probably no other region, in so brief a time, has seen more astounding changes. More Europeans are settled here, more magic cities are leaping up, more railways being built, and more wealth amassed than in any equal area below the Equator. Ask Paris waiters if any other visitor spends like an Argentine cow king, who "leaves all change on the plate."

ALFALFA WROUGHT HISTORIC CHANGES

Alfalfa alone, as we shall see, migrated to this new land to bring it amazing economic strength. In a few short decades, with such forces as prize bulls, barbed wire, cold storage, and fast ships, man turned a wilderness into a farm so big and rich that now it helps fix the world price of bread and meat.

This swift rise of a new Canaan, whose theme song, as the Texan hinted, is the ceaseless moan and bellow of myriad kine, affords a fantastic example of mass migration. Its marvel is not in the fact that millions of white settlers swarmed across the South Atlantic to this fecund pampa. That

was extraordinary, of course; you can imagine the infinite host slipping down under the equatorial horizon like figures turning in a phenakistoscope.

But the whole truth is harder to imagine. Not only did the millions move from southern Europe, but, as if lifted and carried overseas on some magic carpet, they took with them to the pampa a whole cross-section of European life. Speech, culture, religion, manners, and customs they carried; likewise tools and trades—even their animals, fowls, grains, fruits, flowers—and weeds.

THE LONG SPANISH TRAIL TO THE RIVER PLATE

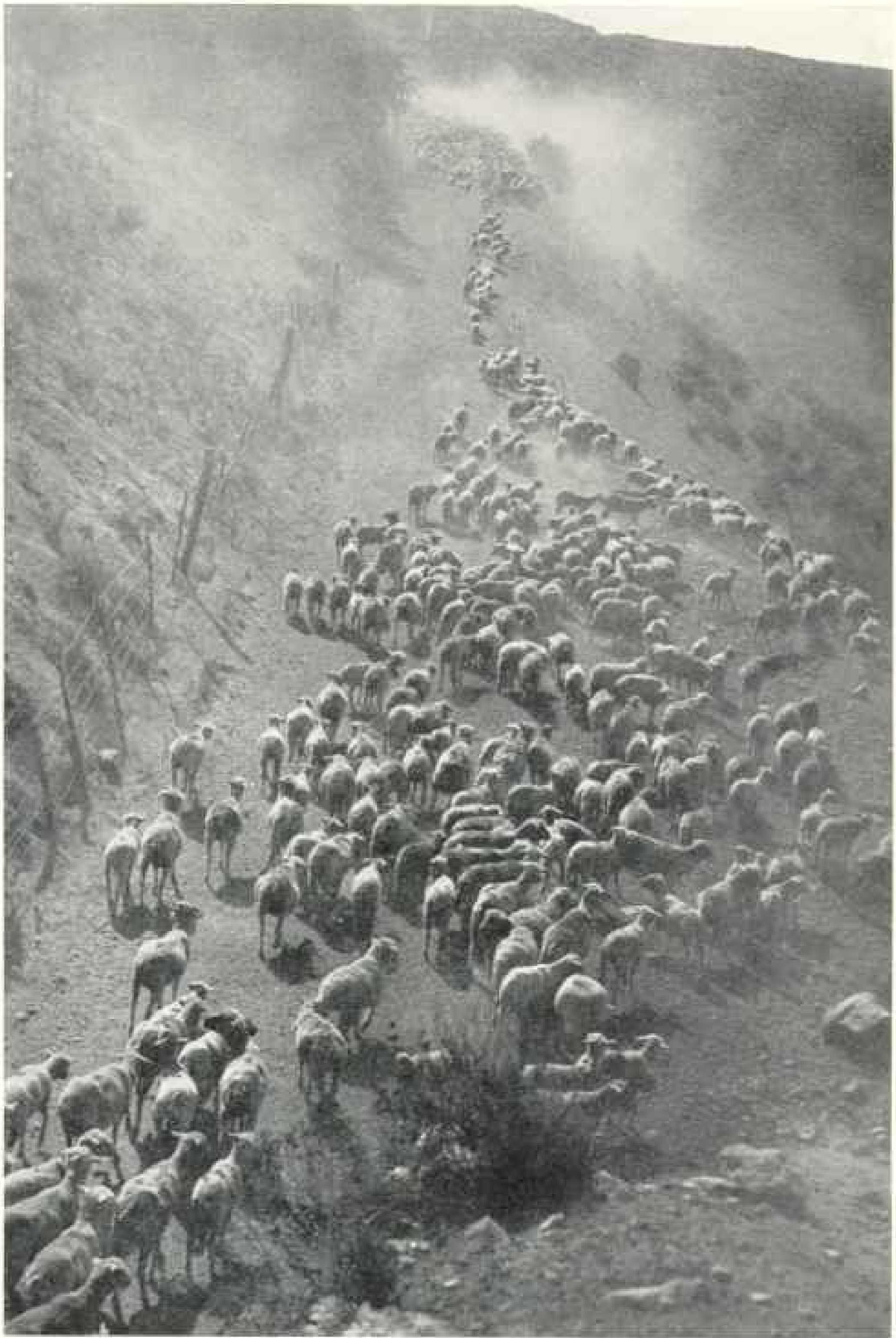
To-day their thistle almost covers Argentina. Tradition says the first thistle seed came over accidentally, in the long hair of army mules! Along immigrant trails into the pampa a scattered fringe of European grass, weeds, vegetables, and berries first grew up, where fodder, camp refuse, and seeds from food were dropped, just as along the Santa Fe* and Oregon trails our covered-wagon trains introduced many berries, plants, and fruit trees from farther east. History holds no parallel in time or space to certain aspects of this amazing movement of people and plant life.

But, you ask, since whites first landed, some 400 years ago, why was the conquest of the pampa so long delayed? The reasons are plain, yet curiously interesting.

Except for Indians, who at first dwelt near the River Plate country, the pampa was empty. No glittering pagan cities, no rich gold mines or Inca treasure were here to lure the Conquistadores. Also, Europe still lived then from its own farms. It had not yet grown so thickly peopled or so highly industrialized that, as later, it had to look overseas for more bread and meat.

Here, as in our own land, white settlements were long confined to limited regions. The Atlantic seaboard had been settled for many generations before we knew much about our Far West. So it was on the pampa, with this difference: Spain, who

* See "The Santa Fe Trail, Path to Empire," by Frederick Simpich, in the NATIONAL GEOGRAPHIC MAGAZINE for August, 1929.



Photograph by R. Venturo

HUGE FLOCKS FLOURISH IN THE ARGENTINE LAKE COUNTRY

Periodically, range sheep are rounded up and corralled, to be branded or washed and sheared. In the round-up, mounted shepherds are aided by well-trained dogs which understand signals whistled by the sheep herders.



Photograph by H. G. Olds

GAUCHOS CUT COWHIDE INTO STRIPS TO MAKE LASSOS AND "BOLEADORAS"

Both devices are used for roping animals. The lasso, as used in our West, is simply a running noose; the *boleadora*, plaited into "Y" form, has a weight, usually of lead, on each of its three ends, so that when thrown hard it wraps about the legs or neck of an animal.

early ruled most of South America, long allowed sea trade only through Porto Bello (Puerto Bello), in Panama. It took about two years, by land and sea, to exchange goods between Cádiz, in Spain, and the settlements along the River Plate (Plata).

This decree, while it made life hard for traders in Buenos Aires and encouraged smuggling by Dutch and English ships, really hastened the development of certain Argentine back country by many centuries. Tucumán, Córdoba, Mendoza, and Jujuy, for example, though far inland, were founded centuries ago because they lay along the Andean mule paths over which Spanish goods came down from Panama and Peru to the Plate settlements.

Some of the first sugar mills in the Western World, crude and primitive yet making good sugar, were built about Tucumán.

Pack trains and creaking caravans of high-wheeled freight wagons plied for many years between the Argentine northwest and Buenos Aires. While the pampa was still as empty as Oklahoma in 1870, they

crossed it on a well-worn trail, just as our own ox wagons traded from Missouri to Santa Fe in the ante-railway days. And there was the same Indian menace.

Old maps show a string of forts strung across the pampa west of Buenos Aires. Here the Indian frontier was hundreds of miles long, and the forts stood guard between Indian raiders and the white settlers.

From the lookout towers on these forts soldiers watched the waving seas of pampa grass for signs of skulking Indians. Sometimes a warning that Indians were sneaking through the tall grass was given by fleeing animals or by sudden alarm and movement among the birds. Again, charging past the forts on horseback, Indians, carrying long spears, raided the ranches behind the lines, and in the course of years many Spanish women and children were seized and carried into captivity. These Indians stole cattle, also, by the thousands and drove them over the Andes for sale in Chile.

Through all these turbulent times the pioneer colonists stubbornly pushed their

settlements farther and farther out on the plains. Finally, about the same time that Custer, Miles, and Crook were conquering the last of our warring tribes, Argentina sent the famous General Roca on his now historic drive against the pampa Indians. This campaign ended forever all danger from these predatory savages.

The heat and hammering of Indian raids, outlaw fights, and desperado forays, the trials of revolution and civil war, produced a fighting breed, hardy and audacious, fit to handle the thundering herds and guide the rising tide of immigrant farmers from southern Europe.

RAILWAYS, WIRE FENCES, AND WINDMILLS

Although the swift growth of pampa farms and cities is of more recent date, foundations for this power and wealth began in the days when San Martin marched his cavalry over the Andes and helped Chile and Peru win freedom from the Spanish yoke.

History always emphasizes war and politics. To such prosaic yet significant events as the coming of high-bred livestock, the introduction of foreign grains and forage plants, or the advent of railways, wire fence, and windmills, or the rising tide of immigrant home-seekers, history often makes but casual reference. Yet on the pampa, all through the Indian raids, during the lawless days of Facundo Quiroga, the Pancho Villa of Argentina, and especially during the wars with Paraguay and Brazil, these economic forces were gaining momentum and paving the way for what is to-day the rich and virile Argentine Republic.

The pampa, with its 250,000 square miles, is to Argentina what the Nile Valley is to Egypt. It works with the rhythm of a great factory: so many square leagues of corn and alfalfa fed to so many million head of cattle and hogs mean so many shiploads of meat for Europe.

And there is wheat! So much wheat that a big crop here affects the world price at Liverpool, and so hits the pocketbooks of wheat farmers in the United States, Canada, Australia, Russia, and elsewhere.

Before we explore the drama of its daily life, let us look at what you might call the "stage props," or mechanics and scenery, which the Argentineans have set up to make their humming pampa one of the world's amazing industrial spectacles.

In the old days when a gaucho's wife wanted to visit her neighbors she sometimes rode sitting on a dried horsehide. Her husband, mounted on his horse, dragged this horsehide sled with a long rope tied from it to his horse's girth. On this primitive conveyance, rough as a North American Indian travois, the pioneer pampa woman rode, slipping over mudholes or bouncing through clouds of dust.

Over this same pampa now palatial passenger trains, with sumptuous diners, sleepers, and glistening observation cars, race from town to town, over level tracks, often with no curves for scores of miles. "So fast," said a Texan, "that it takes two gauchos to see a train: one to say, 'Here it comes,' and the other to say, 'There it goes!'"

It is amusing, in this Spanish-speaking country, to hear the conductor calling stations, for so many bear familiar English and Irish names, given by British settlers on the pampa.

Look back to the day when a steam engine, pulling two "omnibus" coaches, puffed out of Buenos Aires for the pampa, scaring ostriches and armadillos and bringing snorts from the jeering gaucho's trembling horses. That was Argentina's first railway, long ago. You can imagine how long ago when you hear that the locomotive, built in England, had been ordered for use at the siege of Sevastopol in the Crimean War!

Soon after, "a coach to seat sixty persons was ordered from the United States." That first line was but a few miles long. To-day the country has nearly half of all the railway in South America, or more than 25,000 miles, and most of it spreads over the pampa.

A MASSACHUSETTS PIONEER IN RAILROAD CONSTRUCTION

Hailing from Newburyport, Massachusetts, and shipwrecked on the shores of Argentina, William Wheelwright built the first really important railway over the pampa. To-day his pioneer line forms part of the Central Argentine System. He planned the Transandine Line, but did not live to see it built.*

Unsung in his homeland, but famed as a founder of railways and steamship lines in South America, monuments rise

* See "The First Transandine Railroad from Buenos Aires to Valparaiso," by Harriet Chalmers Adams, in the NATIONAL GEOGRAPHIC MAGAZINE for May, 1910.



THE MASTER

In these notable paintings Señor Cesáreo Bernaldo de Quirós, the Argentine artist, records the romantic gaucho life as lived from 1850 to 1870. Garbed in the costume of that time, a well-known proprietor of a vast ranch in the Province of Entre Ríos posed for this portrait.



THE COUPLE AND THE WATERMELON VENDER

Romanticism was the artist's medium in conjuring this pictorial epic of the life of that now fast-disappearing, already semi-legendary caballero—the dashing gaucho of the pampa. Señor de Quiros, who calls this series "Scenes of Gaucho Life in the Province of Entre Ríos," was born in that then still half-wild province in 1881. On his father's cattle ranch he, as a youth, came to know the daring gaucho, with all the shifting pageantry of native scene and character. From this came a thorough conception of old-time gaucho character, culture, and customs.



THE JUSTICE OF THE PEACE

As an authentic, vivid portrayal of life during Argentina's formative period, Señor de Quiros' paintings of gaucho days on the pampa form a distinctive pictorial interpretation of history. The Province of Entre Rios, where these pictures were painted, was the scene of many armed conflicts in the bitter struggle to form the Argentine Confederation. Working here on his canvases, De Quiros was the guest of an old ranch owner who possessed many souvenirs of gaucho equipment, such as arms, costumes, old saddles, and guitars.



LET US GO ON

This Study Hints at the Gaucho's Nomad Nature



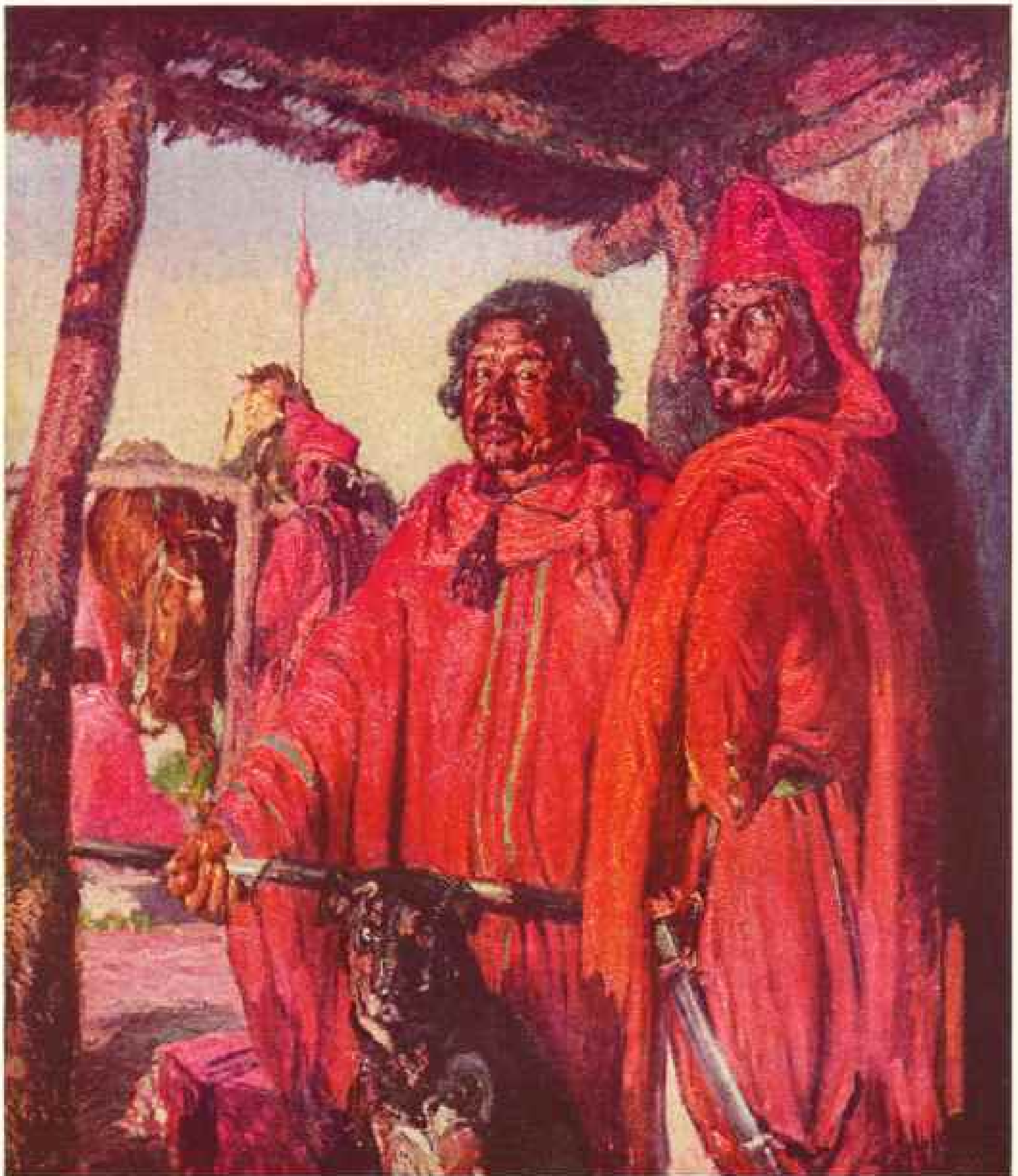
CAKES AT THE RACES

Suggests that the Gaucho Womenfolk also Loved Horses



THE SPARROW HAWK

A gay cavalier was the gaucho, adept in love as in war, with his lavishly caparisoned horse, his own elegant costume, his raven locks, swarthy skin and gleaming teeth. Daring, hot-headed, virile, violent and reckless, yet gallant, with the blood of Moors, Spaniards, and native Indians coursing in his veins—what a man of another day!



THE CHIEFTAINS

In color, dominant red, and in characterization, one finds the two elements of appeal in these gaucho paintings. Red was the color worn by gaucho soldiery in the Argentine Civil War; red was the blood they shed—and red the meat they lived on. And where but on the Argentine pampa 75 years ago, when might made right, could you have met such dramatic characters as these virile chieftains!



THE HEALER

In old days the *curandero*, or self-taught family doctor, wandering from ranch to ranch, treated the sick among gaucho families. Similar types exist to-day, but their costumes, and happily their knowledge of medicines, have changed with advancing years. With brush and pigment, Señor de Quirós has made many aspects of gaucho life live again in these paintings.

to Wheelwright both in Argentina and Chile. But to English capital and English engineers, in the main, Argentina owes its intricate, efficient railway net.

Touching now almost every nook and cranny of the pampa, this net flows west and fans out over the grain and cattle country much like our own, whose western border is formed by the ends of the fan's ribs, in central Nebraska and South Dakota. A glance at a pampa map shows line after line, many of them almost parallel and only a few miles apart; they converge into Rosario and Buenos Aires, as our systems serve grain and cattle lands and lead into St. Louis and Chicago.

To plow and plant far inland, before the rails came, was futile. Crops could not be hauled at a profit to the ports. Now, so thick is the net, farmers seldom must haul grain or drive cattle more than a few miles to reach a main-line railway or one of its spurs.

The pampa paid for rails with land, as we did in the West. Santa Fé Province gave a strip three miles wide on each side of the new railroad, or a total of 925 square miles.

But this railway handled its settlers well. Some years ago one Guillermo Wilcken, on behalf of the Argentine Government, made an official investigation of colonization on the pampa. His report is a fascinating human document. He says when these settlers arrived the company was ready to receive them with wooden houses, wire for fences, tools, and provisions. All the settler had to do was to go to work. Towns were located by a cut-and-dried plan, so many miles apart.

THE PAMPA LACKS MATERIALS FOR ROAD-BUILDING

To-day the railways gradually stretch to the very limits of arable land; increasing immigration forces this. Farm colonies multiply as the rails push ever inland. Growth of each depends on the other. Here, as in Texas, the cattle barons are loath to yield land to tillers of the soil. Yet slowly, steadily, more acres come under the plow, either because the big cattlemen themselves are raising more crops or because here and there colonies of small farmers succeed somehow in breaking up the big ranches.

In either case the railway follows, to move livestock, wool, grain, and flaxseed to market.

Because the pampa is utterly without rock, pebbles, or any other road-making materials, improved highways are few and far between. Good motor roads as we know them do not exist. This accounts, of course, for the amazingly heavy passenger traffic enjoyed by the many railways. Fenced with wire, wide avenues of dirt road, what a Mexican calls "tracks on the ground," run for miles across the pampa, deep in dust or sloppy with mud, according to the season. Along these lanes bellowing herds are driven to the nearest railway siding, and motor trucks or huge high-wheeled wagons with grain, wool, or other produce flounder through ruts and puddles (p. 490).

MANY HIGH-WHEELED WAGONS ARE STILL IN USE

These high-wheeled wagons are conspicuous in pictures of pampa life. Many are still in use, especially in the Patagonia sheep country and in the Chaco timber belt (see page 474).

The giants, with wheels ten feet high, amused Darwin. When he was here, writing on his cruise of the *Beagle*, he observed how their high wheels made it easier to get through deep mud and water. Their tops were leather hoods on hoops. Carrying a load of two tons or more, it usually took three yoke of oxen to pull one of these big carts. The leaders were guided by a long pole, bright with ostrich feathers, running forward from the top of the hood.

For defense against Indians and other robbers, on the long drive of many weeks from Buenos Aires up to Córdoba, Mendoza, Tucumán, Salta, and Jujuy, these wagons went in caravans often including as many as fifty.

Like our Forty-niners, each wagon train had a boss, here called a *tropero*. Carpenters and blacksmiths went along, too, to keep the train in repair. The drivers were a swaggering lot, such as our early stage-drivers, looking down on men of more humble calling. These drivers were nomadic people, totally unlike the gauchos or stock breeders, with customs and dress peculiar to themselves. At one time there were 20,000 oxen and about 600 wagons engaged in the salt trade alone.

Long railroad freight trains puff over the pampa now where these plodding wagon trains used to raise the dust. At sidings and lonely tank towns grain bags are piled high, covered with tarpaulins or being



Photograph by H. G. Olds

DIPPING CATTLE TO RID THEM OF PARASITES

One by one the animals are driven from the corral through a narrow chute, where they slip down an incline and dive splashing into the deep tank of creosote or some other solution. Mexican cattle, when imported into the United States, are dipped this way along our Southwest frontier, as a precaution against fever ticks.

loaded into waiting cars. There are loading pens, too, where grunting, bawling cattle are clubbed up the gangways into waiting stock cars, with much lowing and bellowing, kicking, hooking, and snorting.

THE PAMPA ECHOES TO THE THUNDER OF GALLOPING HERDS

Freight trains rumble down from Mendoza with the millions of gallons of wine Argentina drinks every year; they roll down from Tucumán with sugar, and from the new oil fields of Chubut run long strings of tank cars headed for La Plata refineries; and up from Chubut and Patagonia come wool and mutton. Everywhere, night and day, the local and fast-flying passenger trains are busy hauling people up and down the pampa, people of many races, forever

moving about this restless new land of Canaan.

Pampa Indians had tamed those three kindred animals—the llama, alpaca, and guanaco; but they never saw cattle until the Goes brothers, two Portuguese, landed in 1552 with the "seven cows and one bull," now so famous in Argentine history. By 1600 many more cattle, sheep, horses, and goats had been brought in by the Spaniards. Think what a feat *that* was, to crowd enough fresh water and fodder on a small sailing ship, already loaded with animals, to keep them alive on so long a voyage!

Grazing on the succulent grass of the boundless pampa, in a perfect climate, these animals multiplied prodigiously. In time many strayed away or were stolen by Indians. In the course of years, unbranded,



AFTER HE HAS CORRALLED HIS HERD, THE GAUCHO ROPES THE HORSE HE NEEDS

Mancha and Gato, the two now famous horses used by Mr. A. F. Tschiffely on his 10,000-mile ride from Buenos Aires to Washington, came from El Cardal Estancia, in Buenos Aires Province, where this photograph was made (see "Buenos Aires to Washington by Horse," by A. F. Tschiffely, in the NATIONAL GEOGRAPHIC MAGAZINE for February, 1929).



Photographs by A. F. Tschiffely

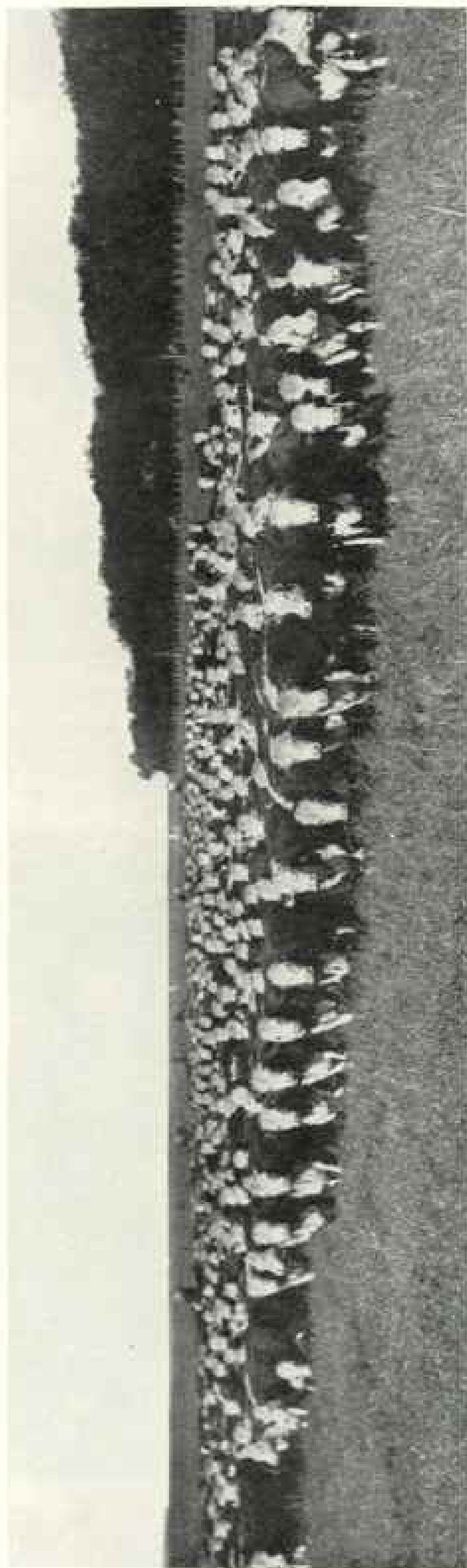
THOUGH HE IS BLINDFOLDED AND HELD WHILE BEING MOUNTED, THIS PONY'S SHORT TAIL SHOWS HE HAS BEEN RIDDEN BEFORE

A "kicking strap" ties the broncho's hind legs to the cinch. When the rider is seated, he will slip off the blindfold and "let him buck." His stirrups are all leather, and the rough saddle is covered with a sheepskin (see illustration, page 477).



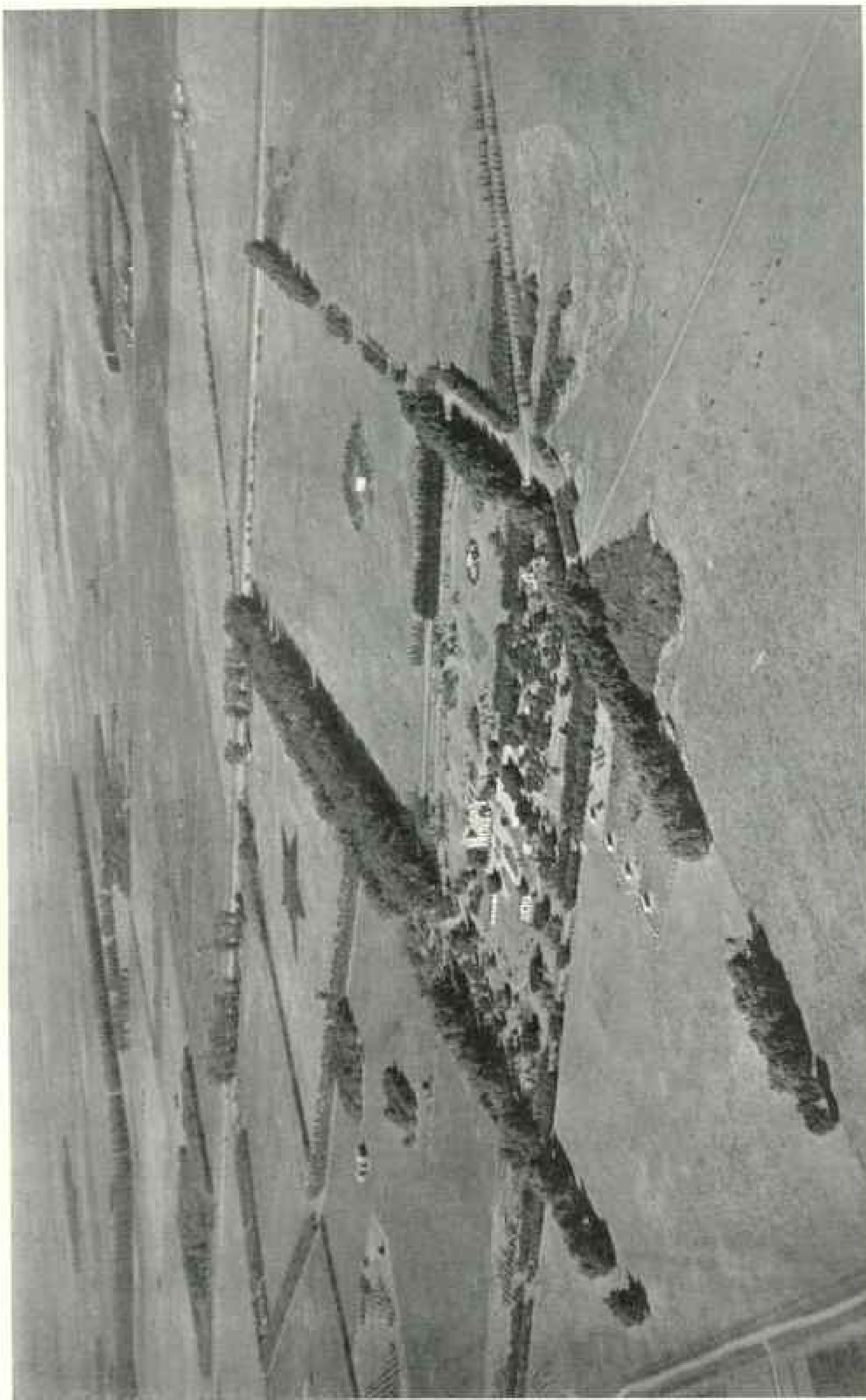
Photograph by H. G. Olds

WINDMILLS ARE COMMON, YET PRIMITIVE COWHIDE BUCKETS, DRAWN UP FROM THE WELL BY A HORSE ON A LONG ROPE, ARE STILL USED



Photograph by A. F. Tschiffely

REGIMENTS OF WHITE-FACED BEEF CATTLE, HEAVY WITH FAT, MOVE IN STEADY RHYTHM FROM PAMPA TO PACKING PLANT



Photograph by Accorcello

TREES FORM WINDBREAKS ABOUT THE PALATIAL HOMES OF PAMPA CATTLE KINGS

Estancias, these ranches are called, and in lavish equipment some are among the show places of the world. Visitors, amazed to find billiard rooms, paintings, swimming pools—even private golf courses and polo teams—away out on the pampa, may overlook the vast herds and crops which pay for this baronial magnificence (see text, page 491).



Photograph by Gomez

A GAUCHO REPORTING TO RANCH HEADQUARTERS

His headdress is known as the *vincha*. On his right arm hang his poncho and ornamental quirt. Both his belt and the horse's bit ornaments are of silver. His legs are encased in a Turkishlike pair of baggy trousers. This costume is not so frequently seen as formerly.

belonging to no one in particular, they ran wild in thundering herds, as did the American buffalo. Tobal, in his "Argentine Geography," says: "Anyone had the right to take up to 12,000 wild cattle." But to take a larger number one had to "get a permit from the Governor"! A cattle thief, caught at it, was branded with a red-hot iron; if he repeated the offense he was hanged.

For two centuries man's chief occupation here was the pursuit of wild cattle. Stupendous numbers were slain merely for hides and tallow, as was true in California when Dana saw it and wrote "Two Years Before the Mast." Besides the many hides

sent to Spain and smuggled out to other lands, countless thousands were used on the pampa for making huts, tents, sleds, and even fences.

Cattle were so cheap that a rider would kill one merely to get meat enough for his lunch! One Argentine historian says soldiers used to shoot a beef so that they might tether horses to its horns, there being no trees!

SLAVES PAID FOR WITH HIDES

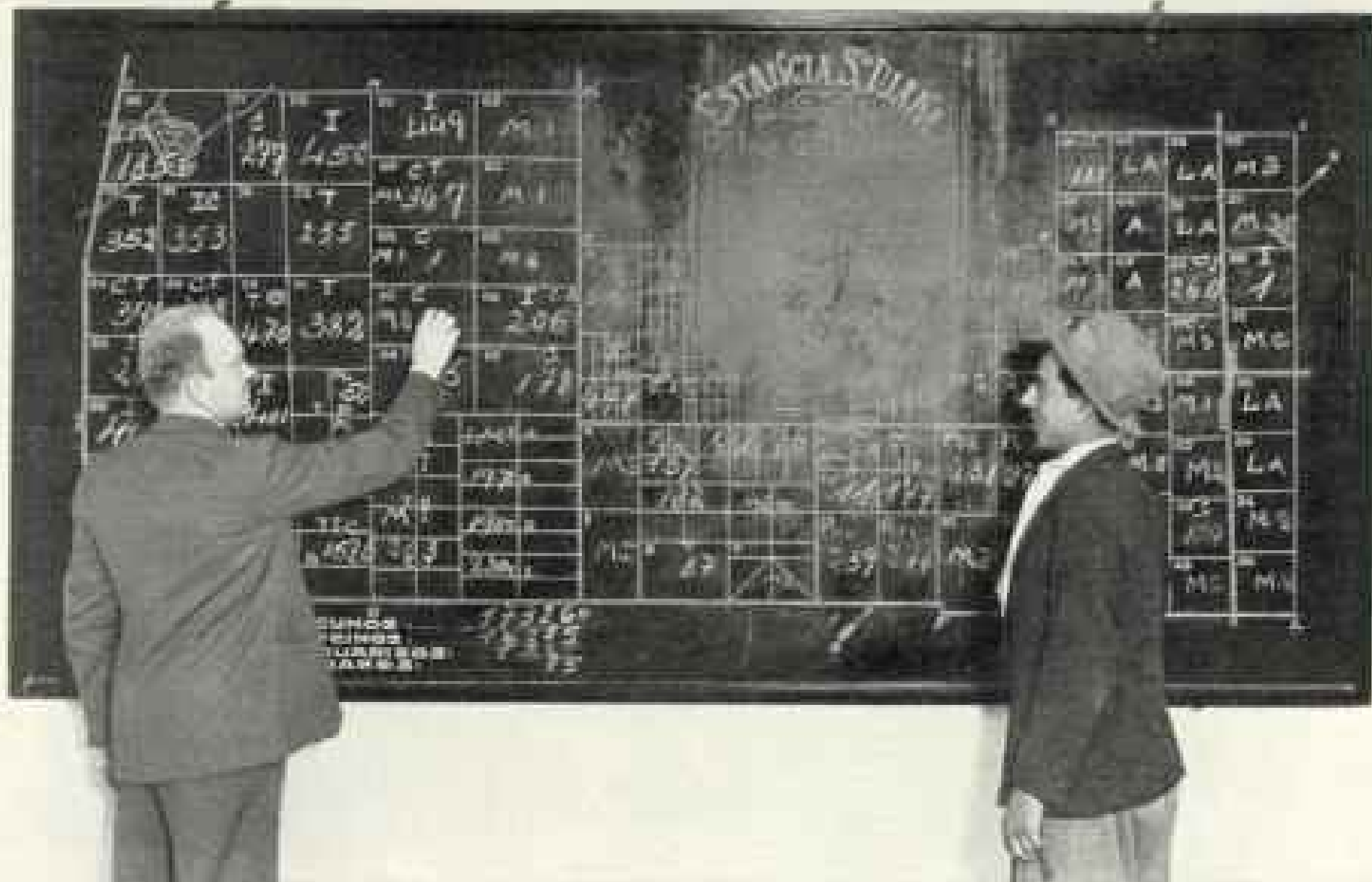
And it was easy to capture them. A band of gauchos simply surrounded a herd. Then each man, armed with a long-handled *pica*, or lance with a sharp blade like a half-moon, hamstringed as many animals as possible before the herd broke away. This done, the gauchos dismounted, skinned the fallen animals, and abandoned the meat to birds and wild dogs.

Hides took the place of money. When, by the Treaty of Utrecht, England got the sole right to import slaves

into the River Plate country, she stipulated that the blacks should be paid for with hides and tallow.

From hunting cattle mostly for their hides, the pampa by 1830 created a huge traffic in the export of dried beef. This went to feed slaves in the West Indies, where their labor was then building up the tobacco and sugar industries. "Jerky" (salt beef) is still made by the ton in the meat-drying shed on the big estancias, and sometimes huge racks of it, like haystacks, are piled in the open air.

With the rise of the world's woolen trade, pampa flocks multiplied till seventy or



Photograph by Jacob Gayer

A BLACKBOARD MAP IS USED TO KEEP TRACK OF CROPS AND ANIMALS

Each square represents a certain field area; figures show the purposes for which the field is being used, and, if it is pasture land, how many and what kind of animals are grazing there, etc. M-1, for example, means that first-year maize (corn) is planted there. At the right is an overseer, reporting to the bookkeeper.



Photograph by A. F. Tichiffely

ONE GAUCHO PLAYS THE GUITAR WHILE ANOTHER ROASTS THE SUPPER OF MEAT

Two sit on seats made of cow- or horse-hip bones tied together and covered with rawhide, while the third drinks mate, or Paraguay tea, made from the leaves of an evergreen of the holly family and sucked through a metal tube. Tea leaves and hot water are in the hollow gourd in the man's hand. This is the national drink of the Argentine.



Photograph by Federico Kahlmann

THROUGH THE MIGHTY HUMAHUACA RAVINE A RAILWAY LINKS THE PAMPA WITH BOLIVIA

The Rio Grande de Jujuy, flowing down from high plateaus, scours this picturesque canyon through long, wild leagues, and forms a natural route to Bolivia. Humahuaca, meaning "Weeping Head," is so named from an Indian legend.



© Martin Munkacsy

RIDING LIKE THE WIND, OSTICH HUNTERS LET FLY THEIR WHIRLING "BOLAS"

The "three Marias," gauchos call this tricky device of weights on a rope. The hunters first cut the bird they wish from the flock, then ride hard after it. When about ten yards away, whirling the bolas overhead, they let fly. The rope, to which is attached the lead or stone weights, wraps itself about the bird's neck and legs, and throws it (see page 476). "Bolas" and "boladoras" are terms used interchangeably.



© Ewing Galloway

PEON WOMEN POUNDING CORN MEAL BEFORE A HUT ON THE PAMPA

Peon workers on the vast *estancias* lead a hard life. (see text, page 485).

eighty million sheep were here—a dozen times as many sheep as people!

Slowly, as meat became valuable, men brought in high-bred bulls to build up the herds. Englishmen were pioneers in this. With Europe's growing meat hunger came science with ways to freeze meat, and fast ships. At once the pampa reacted. It not only bred better herds, but it began to raise swine, to improve its wool clip, its grain crop, its flax.

It bought shiploads of windmills to pump subterranean water up into troughs, so that cattle would not have to walk their fat off hunting a drink.

Windmills prove what a man-made, artificial garden the pampa has become. Few rivers water it from the Andes. Most of them are lost in shallow lagoons that often go dry. During long droughts literally millions of cattle perished before windmills

came. Early writers tell of seeing the half-dried lagoons choked with their bodies and bones piled many feet deep in mudholes.

Now windmill towers dot the prairie like castle turrets. They pump water for the enormous herds to drink, and they supply the ranchhouses, the flower gardens, lawns, and shrubbery.

BARBED WIRE ENDED NOMAD LIFE

Out on the pampa a small town is a veritable forest of windmills, with one in almost everybody's backyard. Even railways use them. All along the right of way, which may stretch for a hundred miles straight as an arrow, you look ahead and see windmill towers steadily rising from under the horizon like ships hull down at sea. They pump full the tanks that stand at "tank towns" where engines take water. Cheap to operate, out on open plains where



Photograph by H. G. Oida

A GAUCHO'S WIFE BRINGS HIS STIRRUP CUP OF PARAGUAY TEA

Practically everybody here starts the day with a pull at the *mate* tube and gourd (see page 467).

naught obstructs the breeze, they are Chicago's gift to the pampa.

Travelers used to say that when, after weary leagues of pampa riding, they came finally to a wire fence, even if there was yet no house in sight, they felt cheered up. Here was a sign at last that Christians were about. In that land of savages, spears, pumas, jaguars, wild ostriches, and distance, a wire fence was a solid symbol of civilization.

Richard Newton, an Englishman, brought the first wire in 1845. He had a hard time finding material for posts. Few trees had then been introduced on the pampa. But wire's use soon spread. Posts were shipped in from the Chaco. As soon as men found a way to inclose their fields, they got a feeling of actual ownership. Before, their ranches, not marked off by any separating barrier, had seemed merely part of the public domain.

Although Indians and thieves were checked by the fence, its chief use was of course to keep the scrub cattle from mixing with the high-bred stock. This phase of its use, keeping various herds separated, has been worth untold millions to the pampa's cattle trade. Since Newton's time the amount of wire imported by Argentina for pampa fences is almost beyond imagination. Not merely shiploads, but whole navies loaded with it.

BEASTS AND BIRDS FOLLOWED MEN

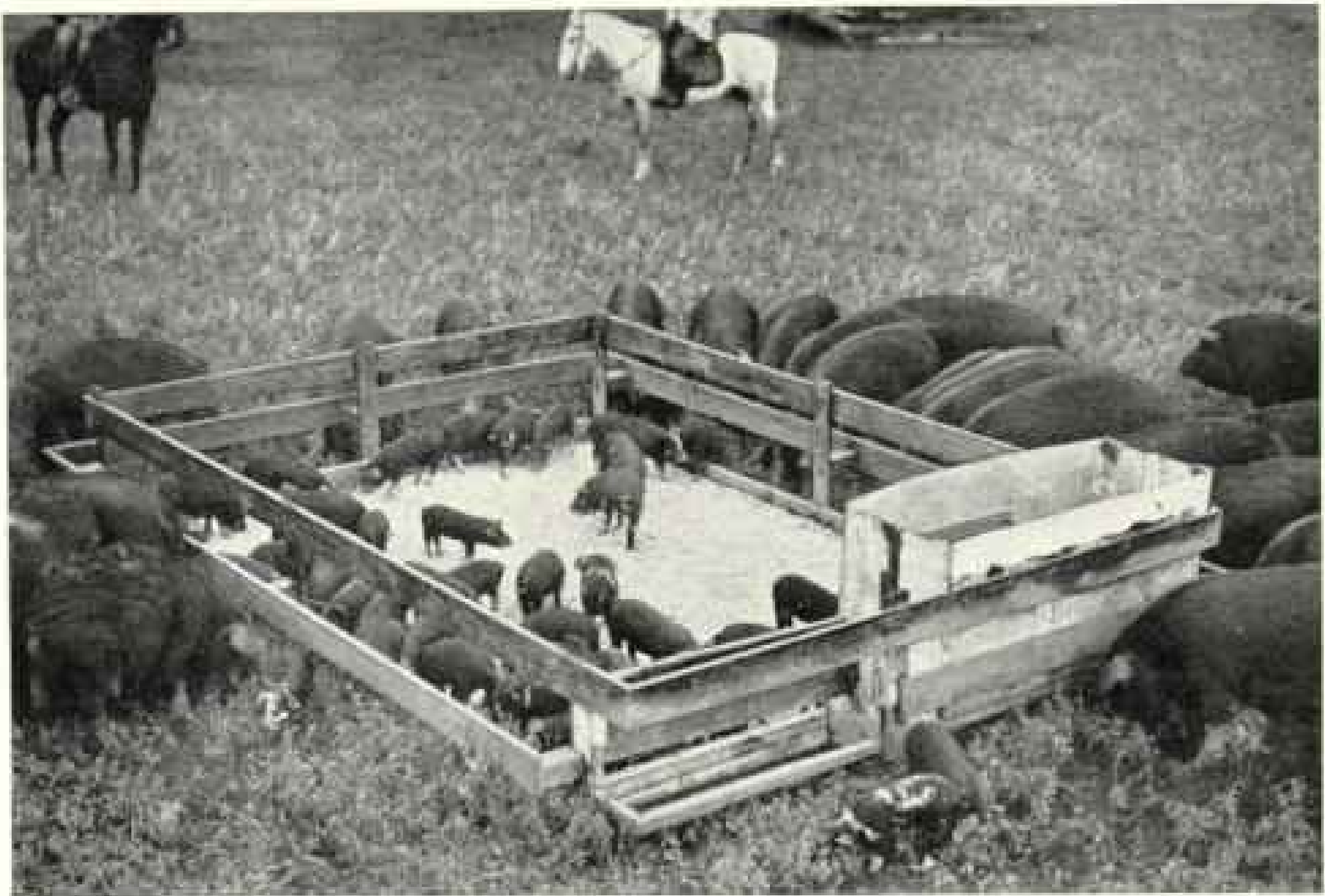
Animal and bird life increased with the settlement of the pampa. Scarcely any small animal life was here before the advent of the Spaniards' horses and cattle. As for the puma and jaguar, they came after the herds. They moved to the pampa from Andean foothills simply to prey on these new meat-bearing animals. With the



Photograph by Federico Kohlmann

A DERRICK IN THE GOVERNMENT OIL FIELDS IS ACCIDENTALLY BURNED

Being without coal, Argentina some years ago directed her efforts to oil discovery. Locating the petroleum zone of Comodoro Rivadavia, the Government reserved production from an extensive field for its own use.



Photograph by Arthur Bauer

"ACTING THE PIG" AT FEEDING TIME IS PREVENTED BY THIS DEVICE

Planks in the fence are so set that small porkers may enter the pen and get food within, while big hogs battle for place from without. This insures ample feeding of the smaller animals.

colonists, too, came new kinds of rats and mice, as well as cats and dogs, from Europe.

Some of these imported dogs turned back to nature—ran wild and formed packs. They killed so many calves that the settlers were forced to organize wild-dog hunts to stop these depredations.

Once the prairie-dog-like viscacha was numerous. It lived in colonies, digging tunnels and chambers for its home, which it shared with owls. Looked on as a pest by the farmers, this prairie dog has now been largely destroyed. Many an Irish and other immigrant got his first job here poisoning viscachas.

The owls still abound. Walking or riding about the estancias, you see them everywhere. One sits on almost every fence post. As you walk past, they screw their heads around to watch you. You may go around and around one of these owls and his face seems always to follow, as if he were twisting his own head off!

Hares from Europe, first brought by German settlers and bred for use in the sport of coursing, multiplied so fast that they became a nuisance.

In a field I saw vast flocks of seagulls hopping after a plow, close on the heels of the plowman, pecking at bugs and grubs turned up in the fresh furrow, for all the world like chickens following a farmer's wife through the poultry yard (see p. 480).

Many birds seem to enjoy the company of animals. About the water tanks, feeding troughs, and corrals on the estancias, where the horses, cattle, sheep, and swine are



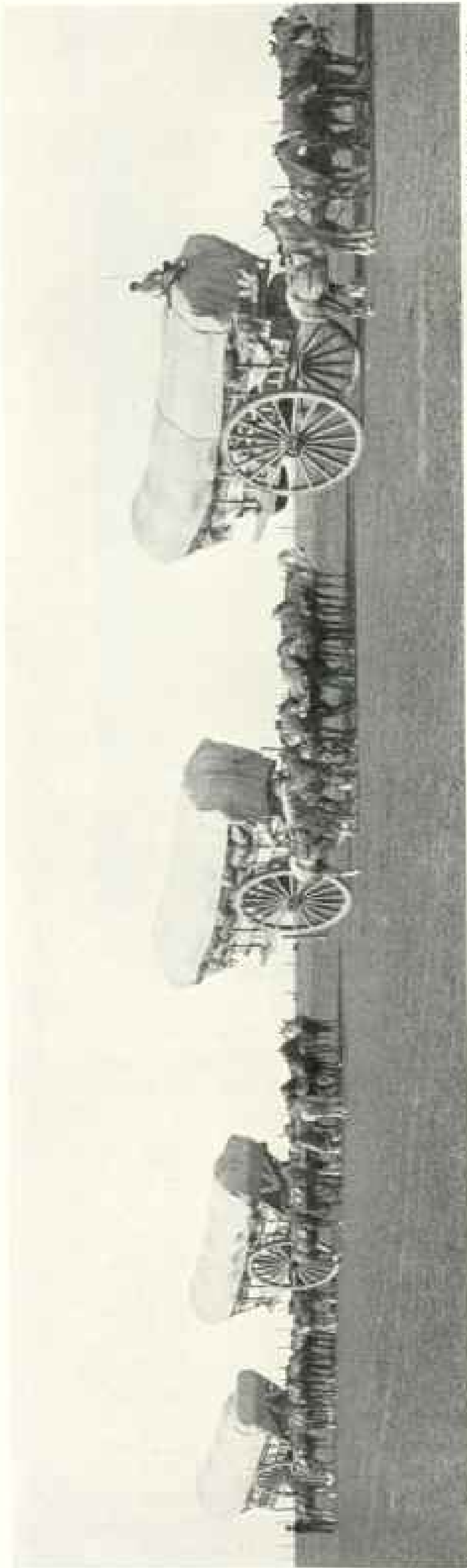
Photograph by Federico Kohlmann

OIL OVERFLOW FROM A WELL AT COMODORO RIVADAVIA

Drillers unexpectedly struck this abundant flow. All available tanks being filled, the stream was diverted into this hastily dug ditch, and carried to a dry river bed, where it was impounded.

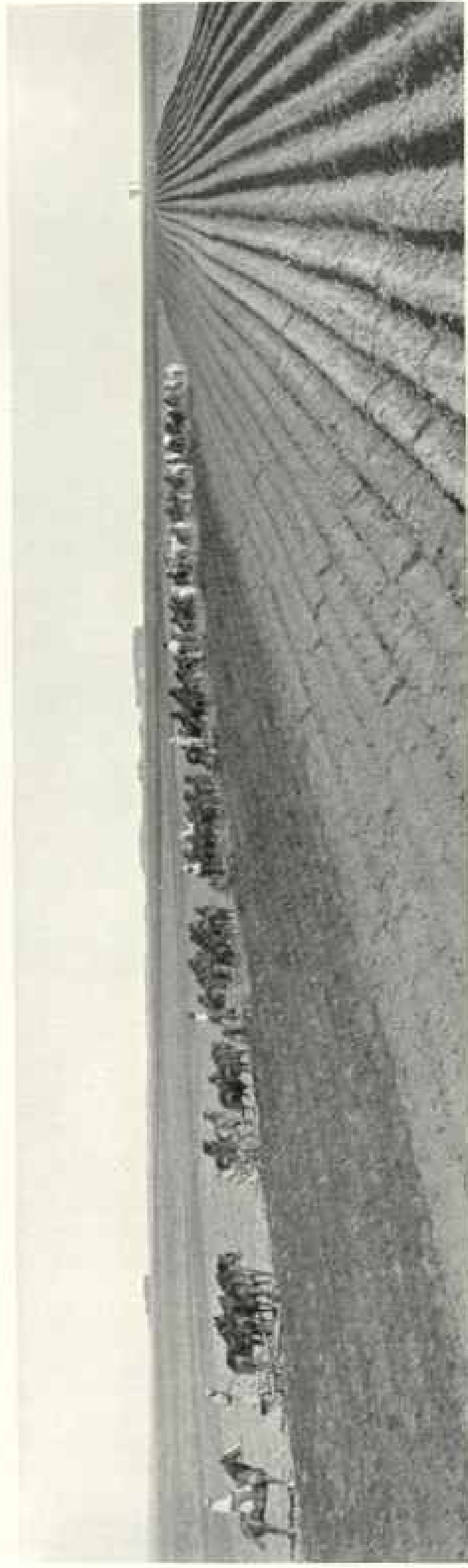
crowded, you observe also thousands of doves, vultures, various hawks, and small birds with local names. Even the pampa *perdis*, a plump, reddish partridge, ventures near the feed troughs to grab corn. Gauchos, mounted, ride down these swift-running birds and snare them with a noose on the end of a pole.

"Look how they waddle!" said the Texan, as a flock of ostriches lifted their stubby, useless wings at our approach and fled with long, skating strides. "They run like a man with both arms in a sling." Spurring his pony, he loped a few yards after the long-legged birds, swinging his rope at arm's length. I recalled a woodcut in an old third



Photograph by H. G. Olich

HIGH-WHEELED COVERED CARTS, DRAWN BY SIX OR MORE HORSES ABBREAST, HAUL GRAIN, WOOL, HIDES, AND BALLED HAY



Photograph by Arthur Baurer

LONG LINES OF HORSES PLOWING ACROSS THE PAMPA LOOK LIKE CAVALRY ON THE MARCH

On an Argentine pig farm these teams are plowing the land, preliminary to corn planting. Sometimes, to save harvest labor, when corn is ripe, pigs are turned into the field and allowed to feed themselves.



Photograph by Arthur Bauer

PAMPA SWINE FEED BELLY-DEEP IN ALFALFA

Though developed later than the cattle and sheep industry, hog raising has amassed fortunes for ranchers. In the background is a *troje*, a cylindrical container woven of wire and cornstalks, for storing corn.

reader that showed gauchos chasing ostriches over the pampas, whirling the Indian lasso with weights on its ends (page 469).

"They're rheas, not real ostriches," he explained. "Their feathers are only good for brushes. But they are a link with the past. The pampa Indian, with his long lance, is gone. Most of the prairie dogs have been poisoned. Even the gauchos like to ride in Fords and would as soon crank a gramophone as tune a guitar. But many big estancias keep ostriches. They set off the scenery. Except the owls and ombú trees, they are about the last survivors of pioneer days, when horses were so cheap that Buenos Aires burnt horse grease in its street lamps."

BIRDS COMMUTE FOR 18,000 MILES

On one estancia in Santa Fé Province I walked around a lagoon where there were cranes, herons, ibises, ducks, and many kinds of waders. Plover, I was told, and bobolinks come here from North America, making round-trip flights of about 18,000 miles every year.

You can fancy that, in virgin state, this open pampa was fairly clean of animals. Man, his shiploads of animals serving as Noah's ark, started a new life.

Trees, as well as useful and useless plants from abroad, have been brought to the pampa by immigrants. The aborigines were apparently familiar with potatoes, cotton, corn, and certain berries and fruits. But whites brought wheat, oats, barley, flax, alfalfa, various grasses and new vegetables, as well as apple, peach, pear, apricot, fig, orange, and lemon trees, and grapevines.

To-day, it is estimated, only about one-fourth of all plant life on the pampa is native to it. Writing of the imported thistle, W. H. Hudson, in "Far Away and Long Ago," says: "In places the land as far as the eye could see was covered with a dense growth of cardoon thistles of a bluish-green color." The large spreading ombú, with fat trunk and waxy leaves, useful only for ornament and shade, was the only tree found by pioneer Spaniards. Now the poplar, paradise, and blue gum, or Australian eucalyptus, are common; and, from plantings of acacias, parts of the pampa begin to supply themselves with fence posts.

Cow symphony, the rhythm of busy reapers, even the happy grunt of swine at feeding time, are broken now and then. Here, as everywhere, life meets its bumps.

There is drought, ever dreaded; and low prices when big crops in rival lands go to glut the world markets. Vexatious plagues, with vaccination and quarantine, and the pernicious thistle that makes cows' milk taste bitter, all these at times worry the farmer. But the locust, the same old locust that harassed the Egyptians, is the chief bane of pampa life.

Coming in clouds, from the direction of Brazil, they cover ground, trees, fence posts, barns, corncribs, sides of houses, people's hands and faces. They devour not only every green thing; they eat wood, bark, clothing, stripping the country clean. A man who has not seen a locust army in action cannot even imagine its appalling magnitude and powers of destruction (see p. 485).

With bad storms comes devastating hail. Mail pilots on the trip from Buenos Aires across the pampa, and thence over the Andes to Santiago, often get a good look at these terrific windstorms. "Usually we get ample warning by the huge clouds of dust that roll ahead of the rain and hail," said one pilot, "and so we can dodge the worst of it." Flocks of gulls and plover and even swarms of dragon flies have been observed flying madly ahead of these storms.

But it is hail—not wind, lightning, or torrential rain—which wreaks havoc. Big hailstones, pounding the farms like artillery fire, not only beat crops, fruits, and vegetables to pieces, but have been known to kill sheep, young cattle, and even horses.

Yet these are but variations, triling and evanescent, in the steady, vigorous expansion of pampa life.

WHEAT ENOUGH TO AFFECT THE WORLD PRICE

Momentous that day when man planted the first grains of wheat here! Solemn and potent as that occasion, 2,800 years before Christ, when the Emperor of China sowed rice during one of the great farm festivals.

We know men have grown wheat since prehistoric times. As recently as 1870 Argentina had to buy wheat abroad. But now, on the pampa, a vast, new, world granary has arisen.

The instant the water front of Buenos Aires, Bahía Blanca, or Rosario is sighted from the deck of a ship, the rising towers of grain elevators strung along the shore hint at the huge stream of export grain. Argentina is one of the leading nations in the world's wheat trade. On our wheat



Photograph by Federico Kohlmann

A PATAGONIA PONY GETS HIS FIRST LESSON UNDER THE SADDLE

First the wild colt is singled out from the herd, roped, thrown, blindfolded, and saddled. Then, just as one Indian releases him and he leaps up to run away, another rider jumps on his back. Kicking, biting, and bucking, the horse gives battle till man conquers (see page 463).



Photograph by A. F. Tschiffely

HORSES ARE ROPED AND THROWN FOR BRANDING OR FOR TREATMENT

The smell of burning hair is common about the corrals at branding time. Wooden doors of pampa blacksmiths' shops are often burnt with patterns of branding irons used on neighboring estancias, and horses that have often changed hands may bear several brands, as in our own West.



Photograph by Federico Kohlmann.

LOOKING DOWN CALLE BELGRANO, IN THE OLD ARGENTINE TOWN OF JUJUY

When the Spaniards first traded from Panama overland down the Inca trails through Peru and Bolivia, Jujuy, with Salta, Tucumán, and Córdoba, were among their first settlements. Some early colonial houses remain, and the population still includes Indians and people of mixed blood.

plains, as through Minnesota or the Dakotas, many elevators rise beside railway switches. Not so on the inland pampa; here all grain is handled in bags, whose annual cost to farmers is tremendous.

As this is written, Argentine delegates at the London Economic Conference are seeking, by agreement with other wheat-growing lands, to reduce the acreage and thus cut world surplus. With the United States, a special tariff agreement is being negotiated.

Important as is Argentine wheat, alfalfa means more to the pampa than any other imported plant. Yet, in an odd way, the beef and wheat trades go hand in hand. Many big ranchers will rent grasslands to a tenant for sowing wheat, with the understanding that after three or four wheat crops he will plant alfalfa and return a good "stand" of alfalfa to the cowman.

The so-called Wheat Crescent of Argentina is a scimitar-shaped area on the pampa reaching from Mar Chiquita down to the Colorado River, a distance of about 600 miles. Here settle many immigrants. Some farm on shares, some pay cash rent; a few own land. Here, as in parts of our West,

is the one-crop man. He raises neither pigs, chickens, fruit, nor vegetables for his own use—only wheat. In country-town stores, where men also gather to drink liquor, are imported canned goods, eggs, potatoes, and even apples from Oregon for sale.

This one-crop man's home is often a mere dirt-floored, iron-roofed hut of one room, with a windmill near by. Sometimes there is not a tree, hedge, or even an outbuilding to break the vast open level of the monotonous pampa. Life is unbelievably primitive, like the sod-house days in western Kansas.

The settler, usually an Italian, may obtain from the landowner enough seed, implements, and work animals to put in a crop. If he has children, they work, too. How to reach a far-away school is a problem of pampa child life for the workers. It is no problem at all for the wealthy ranchman, whose lands are measured by the square league. His children are educated in Buenos Aires or Europe.

As a group, these Argentine cow, corn, and wheat kings are the world's richest farmers. Some live in Paris, or drive their



A COWHERD OF THE SANTA CRUZ CORDILLERAS LIVES IN THIS COTTAGE

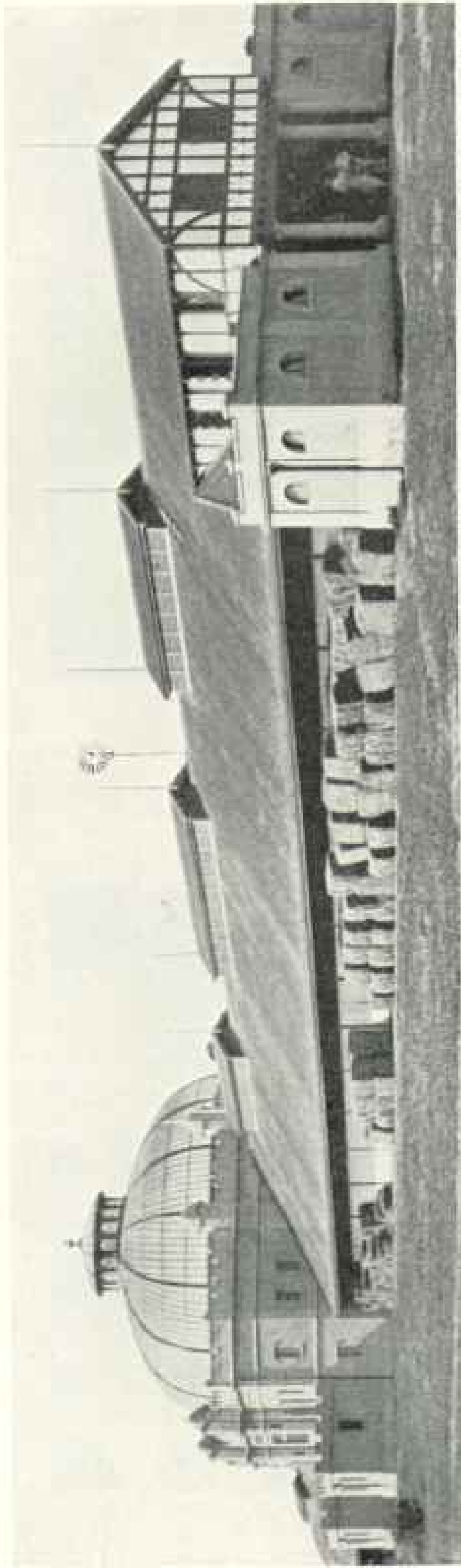
On the headland south of the Cordilleras are narrow stretches of land which receive sufficient rain to provide excellent pastures, but because of distance from markets, only a few cattle are raised. His domestic animals are seen before this herdsman's log cottage. The wife of the herdsman is half Indian. At the left, about a mile and a quarter away, may be seen the ice of Viedma Glacier.



Photographs by Federico Kohlmann

SHEEP OWNERS MUST EARMARK THEIR ANIMALS

High-breed lambs are tattooed in the ear. More common sheep, in big herds, are marked with a tool like a ticket punch, which cuts a number, a star, or some other distinctive symbol. Often both ears are marked, so that passing sheep may be quickly identified from either side.



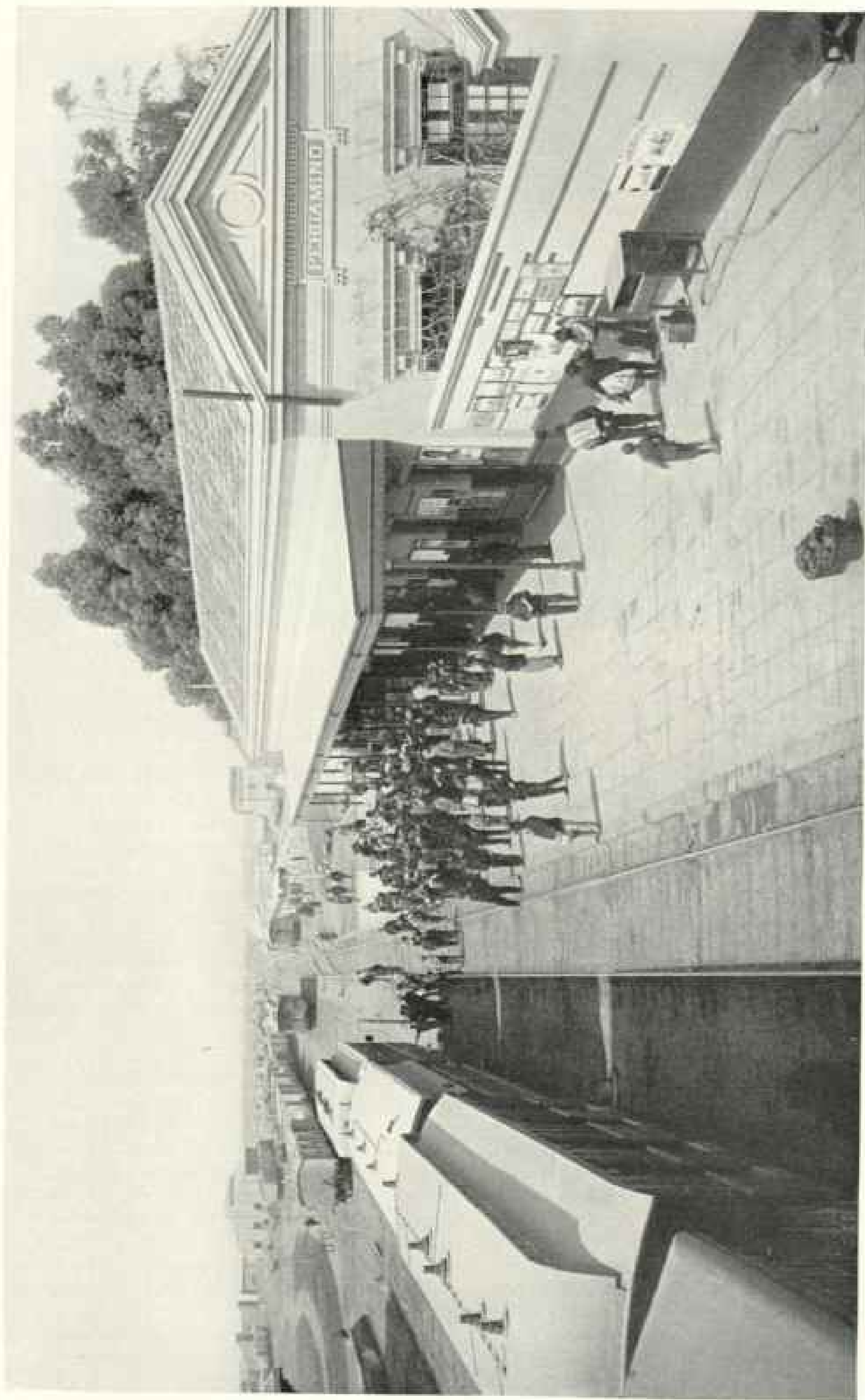
Photograph by A. F. Tackliffe

PRIZE LIVESTOCK ARE SHELTERED IN A GLASS-DOMED BULL SHED ON EL MARION ESTANCIA



Photograph by Jacob Goyer

FLOCKS OF GULLS FOLLOW THE PLOW AND EAT THE WORMS AND INSECTS UNCOVERED



Photograph by H. G. Ochs

MODERN RAILWAY STATIONS ABOUND IN AN AREA OF FEW HIGHWAYS

Billboard space for hire, on the right, is characteristic of up-to-date Argentina. Many of these smaller towns along pampa railways are named for Irish and English settlers. This is Pergamino, between Rosario and Buenos Aires.



Photograph by A. F. Tschiffely

LEATHER WINGS PROTECT THE RIDER'S LEGS FROM BRUSH AND THORNS

Galloping horses resemble huge butterflies as they approach, bearing riders clad in these flapping leg guards, locally called *guardamonte*. In some bushy regions of the Andean foothills, a shield of leather is also lashed across the horse's breast to protect it.

coaches and four at the English horse shows, and seldom even see their *estancias* on the "camp," as the Englishmen call the pampa.

LIVE IN BARONIAL SPLENDOR

Others, with palatial homes in Buenos Aires, spend only the pleasant summer months on their estates. These absentees leave their managers, often English or Irish, to run the *estancias*. With all the planting, cultivation, harvest, stock raising, sheep shearing, fence repairing and animal doctoring, the conduct of an estate where the distance may be "twenty miles from the front porch to the front gate" is a highly organized industry.

Besides the manager, a host of assistants, foremen, overseers, artisans, and other helpers may mean a working army of many hundreds on a single farm.

With every facility from harness shop to hospital, these huge estates are self-contained units, baronial in scope. Many are owned by English and Irish families whose bilingual sons are famous in the annals of Argentine sport, especially polo. One big estate vies with another in exhibiting prize

animals at the annual Live Stock Show in Buenos Aires, and love of horse racing is above every other emotion. Even in the small, drab pampa towns, on any Sunday, ranch hands from far and near race their horses down the dusty main street. Betting is exciting, noisy, and universal.

To-day not so much money is "thrown at birds," even on the pampa, for it, too, has felt the world slump. Yet for sheer extravagance of living and lavish spending, the gilded prince of the pampa ranks with the princes of India.

More than ever the Midwest American feels at home here when he looks at the familiar farm implements. So many are "made in Chicago." You see whole rows of tractors, disk plows, cultivators, seeders, and many harvesting outfits, as well as wagons, trucks, scrapers, and an endless list of small tools and implements, all made in the U. S. A. Moreover, thousands of these machines are now made by local manufacturers.

By a curious boomerang of complex modern world trade, you see another phase of this export of our inventive genius. With-



Photograph by Federico Kohlmann

THE PUMA MOVED FROM FOOTHILLS TO THE PAMPA WHEN LIVESTOCK APPEARED

Sheep suffer much from marauding pumas in Patagonia. Pumas, caught young, become quite tame, but as they grow older their savage nature reveals itself, and they often make treacherous attacks on owners or on livestock. This captive was photographed on a Santa Cruz sheep ranch.

out such tools and implements, mostly invented in our country, the pampa could not have become so quickly a competitor in the world wheat trade, fighting with our own farmers to sell grain and wool to Europe.

CORNFIELDS WAVE ALONG THE PLATE

Besides its thick net of rails, the gigantic River Plate system, seen long ago by Sebastian Cabot, Mendoza, and Magellan, touches the pampa and ties it by water to world markets. Ocean steamers ply upstream to Rosario, which reminds you of Kansas City. Smaller boats go up 1,800 miles, far into the very hills of Brazil, on the upper Paraguay.

Toward Rosario, as you ride the train from Buenos Aires into Santa Fé Province on a summer day, you go through seas of corn. For miles unbroken fields of undulating green run in waves to far horizons—fields of incomparable size, measured not in acres but in leagues. Later, at harvest time, men snap ears from stalks, haul and store the corn in huge cylindrical bins. Scattered about the pampa, the bins look like houses or barns. Their sides are woven of corn-

stalks and wire and cornstalks form its thatched roof (see page 475).

Though the crop may vary from year to year, the pampa is the world's chief exporter of corn. When, in the World War, coal grew scarce, some Argentine steam engines burned corn instead.

In Santa Fé, too, is flax, far-reaching plains of pink when it blooms, the plant that yields linseed oil for paint.

To the north lies the Chaco, land of woods, wild animals, and Indians, echoing to the ax of the quebracho choppers. Quebracho, rich in tannic acid, is a hardwood; hence the name, "quebracho," or ax-breaker. Here and across the Paraguay line* Argentine, British, and American companies own millions of acres and use an armylike organization of men, mules, tractors, boats, railways, and reduction works, where quebracho chips are treated. After being steamed out, the resulting dilute is evaporated and then molded into big cakes, wrapped in jute, and shipped. As our own

* See "River-encircled Paraguay," by Harriet Chalmers Adams, in the NATIONAL GEOGRAPHIC MAGAZINE for April, 1933.



Photograph by H. G. Olds

THE HEAD OVERSEER OF AN ARGENTINE CATTLE RANCH LEADS A BUSY LIFE

He must see that all orders from the owner, or his manager, are promptly and intelligently obeyed. Round-ups, branding, feeding, fences, maintenance of windmills and water supply; also the hiring and firing of gauchos—in fact, all the details of estancia management are in his hands.

oak, hemlock, and chestnut trees, from which we get tanning fluids, tend to disappear, we look more and more to South America.

At the south end of the pampa, rail again meets sail at Bahía Blanca, which astonished old sea traders by suddenly emerging, as did San Pedro, California, and claiming its share of ocean commerce. Farther down is Patagonia, with all its Welsh settlers and sheep, and the Comodoro Rivadavia oil fields in Chubut Territory, hugely important in a nation without coal or iron (see pp. 472-3). To the west are the drier, brush-grown steppes that lead to Andean foothills. Such is the frame around the pampa; and the pampa is the power that moves Argentina. It molds the people's character.

There was not much room for women on the earlier boats that came here from Spain.

Men, horses, food, fodder, fresh water, and guns took up all the space. So pioneer men often mated with Indian women. Later, as more white men migrated here, some brought wives with them; others married into the ever-increasing group of half-castes, or mestizos. From these mixed marriages came the gaucho, that rollicking, hard-riding, bola-throwing plainsman in poncho, Turkishlike pants, and boots, who played the guitar, fought with his knife, and was helpless without a horse.

IMMIGRANT TIDES OBLITERATE THE OLD-TIME GAUCHO

Until migration from Europe, rising to millions after 1850, came to crowd him out, the gaucho was the leading man in this wild bovine drama of the pampa. Unfenced, free, and scantily populated, the open



Photograph by H. G. Olds

THE PAMPA OFTEN FIGHTS FOR LIFE AGAINST INVADING HORDES OF LOCUSTS

One means of checking their advance is digging a long, deep trench whose sides are overlapped by metal plates. Into this ditch the invading insects fall; the overhang of the plates prevents their escape. The trapped insects are burned and the ditch filled with dirt (see text, page 476).

pampa was his happy hunting-ground. He could own horses, also cattle if he liked, and build his humble hut where he chose, or rove gypsy-fashion wherever grass and water were best. Plow and plant he would not.

Illiterate, half-savage, colonial born, he has often been called the true "native" of the pampa. In courage, self-reliance, and independence of spirit, he was much like the American "mountain man" or beaver trapper of Kit Carson's time.

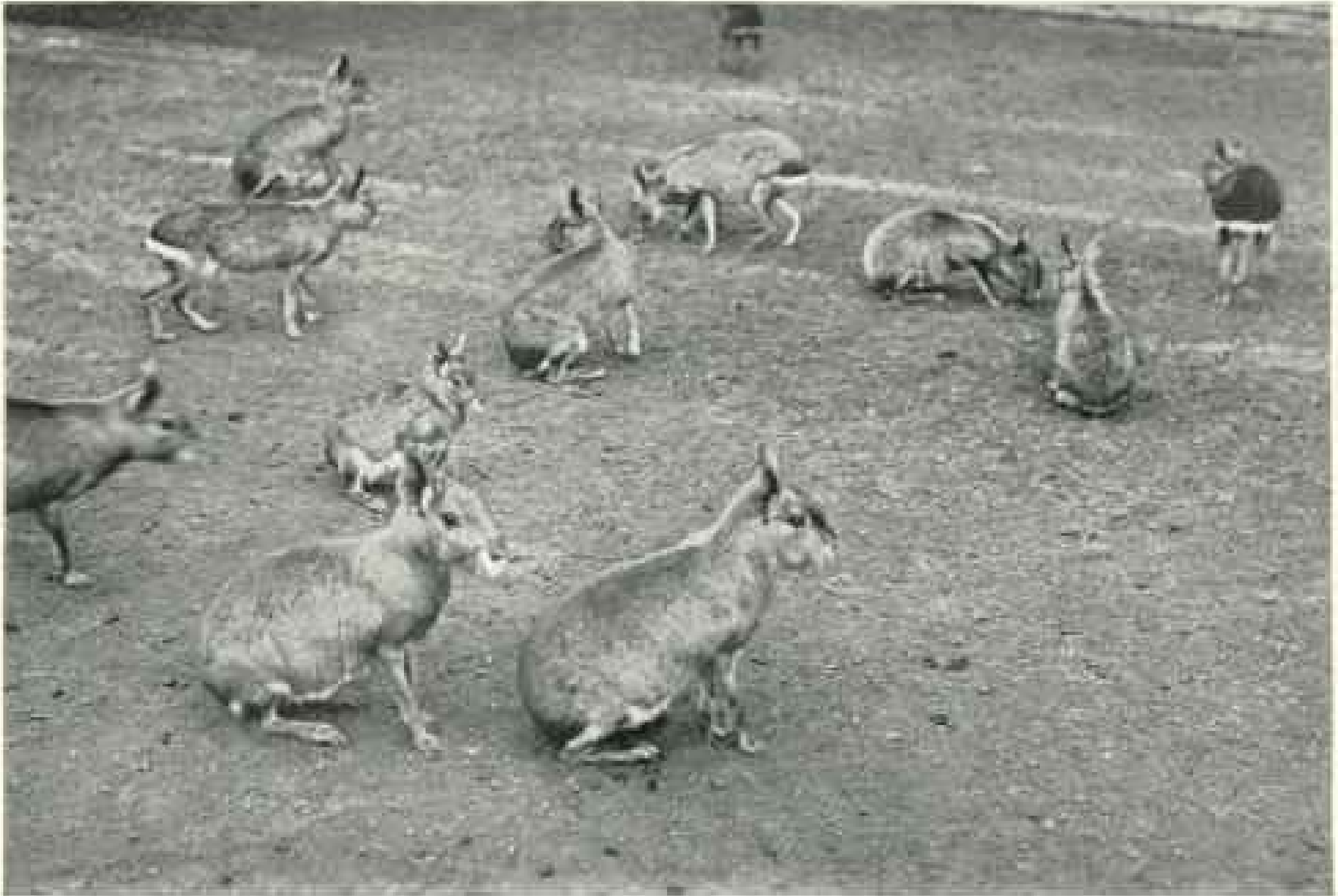
But as wire fence, steel rails, and settlers came, the gaucho tended to disappear. When he hired out to work cattle for others or to break horses, it was the beginning of the end. Now he is a disappearing type, though peon workers on estancias are still called gauchos.

In fact, so strong is the original gaucho's

mark on pampa life that you may hear the term "very gaucho" applied even to Europeans or Americans if they are exceptionally skillful riders, can rope and throw a steer in record time, and talk the Spanish slang of the corrals.

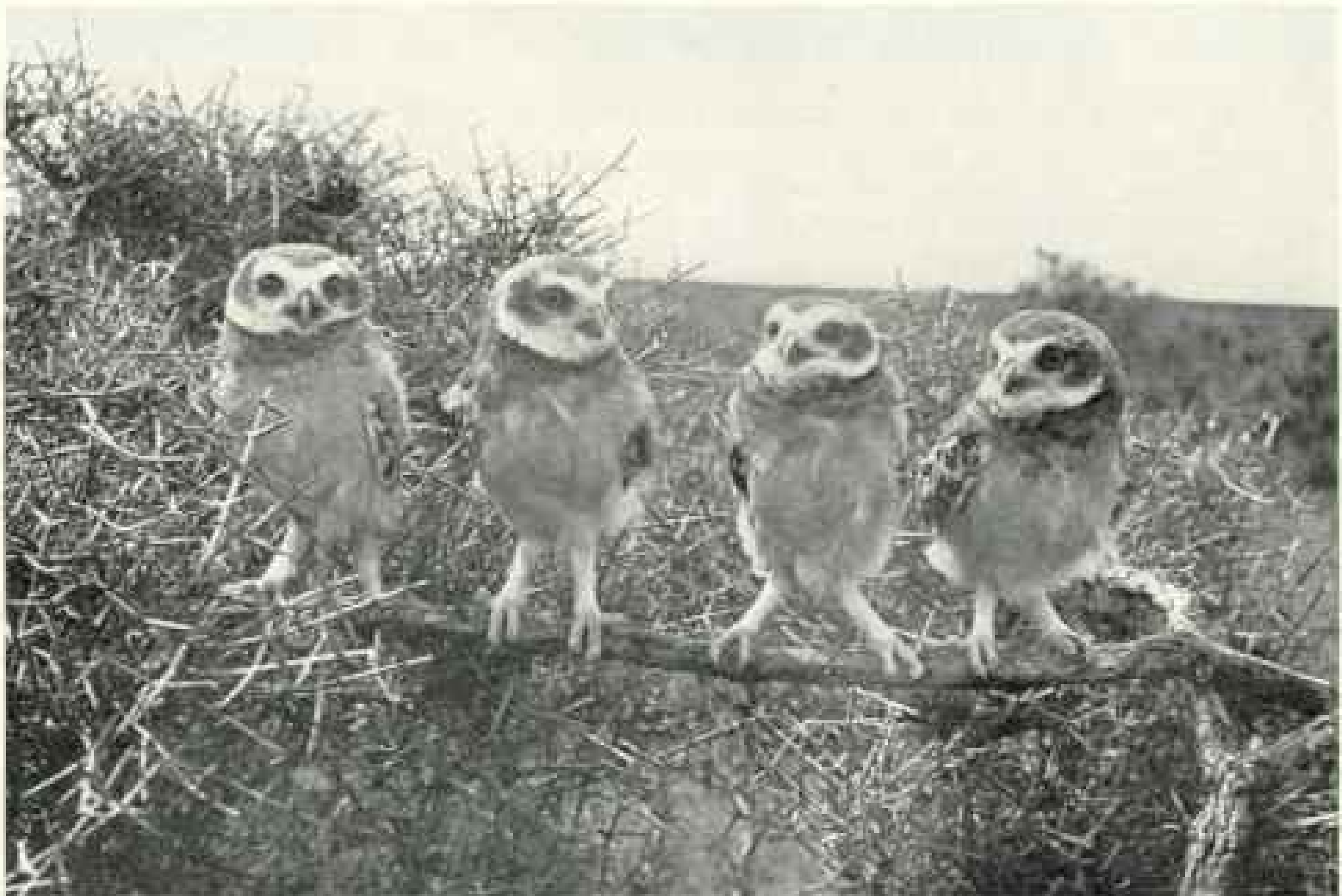
Of course the same man, with a greater mixture now of Italian or Spanish blood, still lives on the pampa; but his old wild, free character and customs have passed. He's the peon now, who works for the land and cattle kings, caring for the flocks and herds, repairing wire fences, greasing wind-mills, hauling corn and wheat, doing the chores of any other farm hand on a big estancia. Quarters are built for him and he works for wages; but he's still a good horseman.

Sunday afternoons or holidays gaucho groups race horses around the crossroad



THE PATAGONIAN AGOUTI RESEMBLES THE AMERICAN JACK RABBIT

These lively rodents are found in Central and South America and the West Indies. In Argentina some recent experiments have been undertaken with agouti farms, which raise these animals for their meat and fur.



Photographs by Federico Kohlmann

OWLS BLINK FROM PAMPA BUSHES AND FENCE POSTS

Feeding on destructive mice and insects, these owls are useful to farmers. They feed in daylight and sleep in holes in the ground. When a saddle horse gets a foot down such a hole the owl is blamed, though rabbits really dug the hole.

villages or gallop up to a pampa station to watch a train pull in. Some still wear soft black hats, baggy pants tucked into boots, and all still ride the old-style sheepskin saddle, with a blanket, or poncho, flapping about their shoulders. But don't be too disillusioned if, between villages on the pampa, you also meet a countryman wearing a derby hat and riding a bicycle!

To-day the mestizo class, from which the gaucho sprang, is dwindling fast. Nearly all the pampa people are white. Although the immigrant tide rises or falls with good or bad times, over the years European influx has been persistent. Now practically all of Argentina's 11,000,000 people are of European birth or descent. Of all Latin American lands, this is true of only one other country, Uruguay.

WORKERS CROSS THE ATLANTIC FOR SEASONAL JOBS

In 1895 Argentina had fewer than 4,000,000 people. In ten years this number more than doubled. The World War checked immigration. Afterwards it resumed. By now nearly a third of all inhabitants are foreign born.

Besides the hordes of Italians and Spanish, and the many English, Irish, Germans, Syrians, Poles, and other elements who have gone to make their homes here, there is a curious stream known as "swallow" immigrants. These are seasonal workers, crossing the Atlantic in steerage. They help with the harvest and then return to their own country. It is estimated that to date more than 9,000,000 have made this round trip. At 500 to each vessel, that would be 18,000 shiploads of "swallows."

A fantastic figure; yet it shows what a busy place this pampa is in world trade. These swallows earn high wages and carry most of their money back with them.

A NEW RACE RISES ON THE PAMPA

In the ethnic mixture on the pampa now, Italians are most numerous. The English and Irish, however, are more prominent as large landowners and many pampa towns bear Irish and English names. As in our country, so in the Argentine, more than half of the people live in towns and cities, and immigrants seem to prefer town life. Of Germans, Spaniards, and Syrians this is especially true. To turn more swallows and *bona fide* immigrants into small farmers,



Photograph by A. F. Tschiffely

THE MUD NEST OF THE OVENEIRD RESEMBLES A MINIATURE IGLOO

Gauchos have a saying that this bird never works on Sunday. To avoid cold winds from the south, the bird usually builds its nest facing north, toward the sunny Tropics.

Argentina has tried almost every known form of colonization.

Down here on the tip of this hemisphere, with new thinking in a new environment, is growing a new United States.

Bunker Hill, "Don't give up the ship," Pike, Frémont, and Kit Carson going west, Scott scaling Chapultepec, covered wagons, Lincoln's Gettysburg Address, a gold spike dedicating the Union Pacific, Dewey's guns rocking Manila Bay, public schools, normal schools, good times, hard times—they fused our national character.

Here similar events and forces saw the



Photograph by Dr. Arthur H. Fisher

THE FOUR-DAY-OLD BABY ARMADILLO IS A MINIATURE OF ITS MOTHER

To pull a live armadillo from his hole takes all the strength of a strong man. To trap him, gauchos sink a tin cylinder in the ground and drop in a piece of meat; once down in the tin the animal can't climb out, as the tin is too smooth. A baked armadillo, lifted from his shell like a hard-boiled egg, is relished by gauchos.

birth of Argentina. After Spain's conquest, military men, bishops, and adventurous colonial officials of wide powers ruled from Panama to Patagonia; but by 1810 the pampa saw the end of colonial rule. It saw strife split South America into many republics, with Indian and mestizo masses being converted to Christianity, yet clinging to the old idea of tribal chiefs.

This accounts in part for the tumult and struggle in setting up the Republic. They made their constitution like ours, but it took decades to wean men away from thoughts of kings, viceroys, and chiefs and make popular government popular.

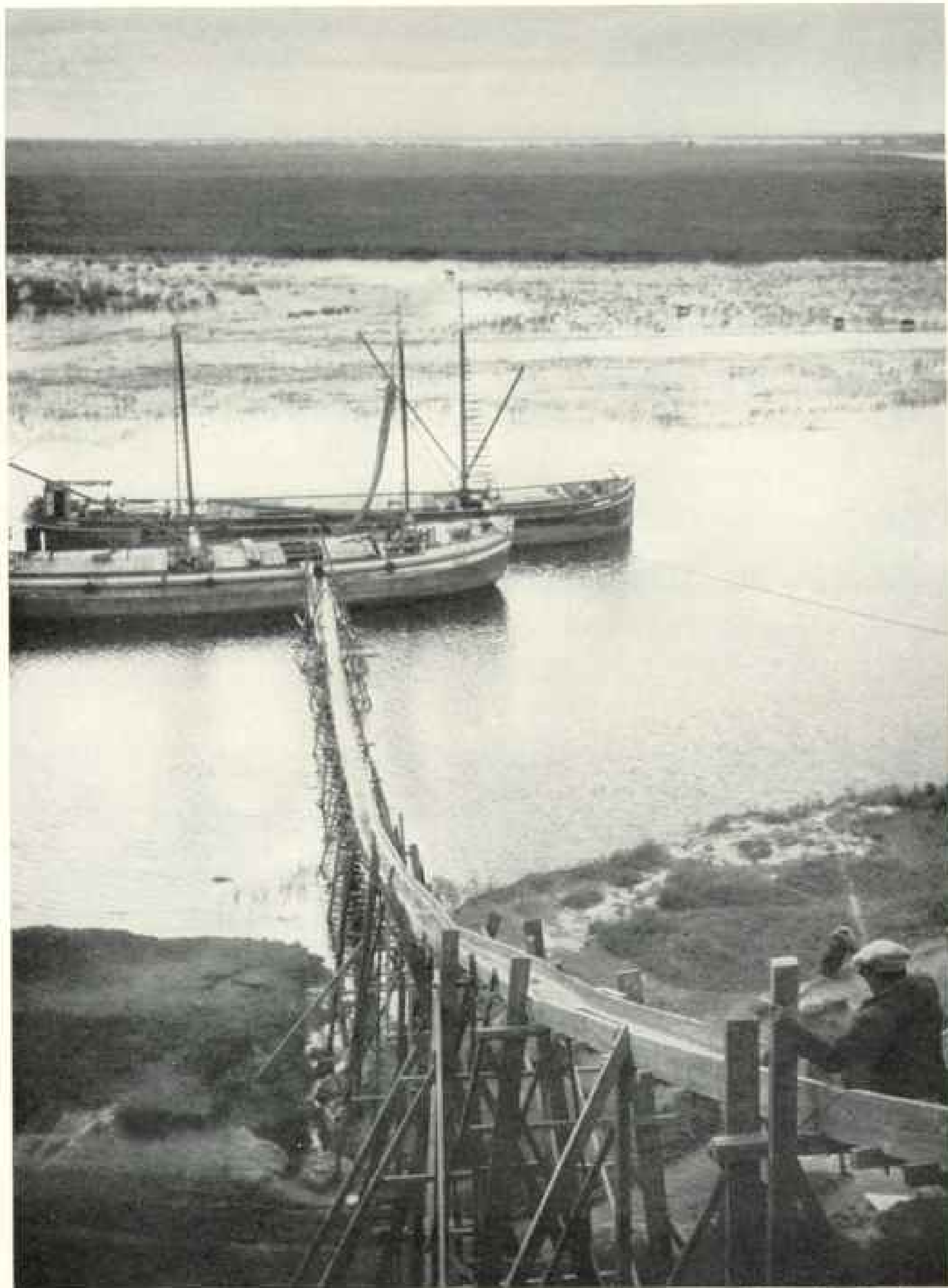
But, as with us, immigrants of many races came early. They found a new land without a past, hindered by no traditions or old habits of thinking. So Argentineans grew up, a bold, restless race, audacious, like pioneer Americans, daring anything. When at last consolidated, the Nation enjoyed a growth which is one of the economic marvels of the century. Older nations were amazed. They had not expected this sudden rise of a rich, powerful country; for to Europe, as

to the United States, South America was long a land of rather nebulous geography. Outside people did not know much about it.

In this kaleidoscopic whirl of swarming immigrants, new railways, and rapidly rising cities, the modern Argentine youth develops. Of Spanish speech, but mixed European strain, he is of a new human stock—a strong, sane, vigorous, Temperate Zone people, who guide the destiny of this young Republic. You think of all this as you ride back to Buenos Aires over the pampa, where rise the new Kansas Cities, Fort Worths, Sacramentos, all tied together by rails, with crowded trains shuttling back and forth as between Baltimore and New York.

At stations you look across into car windows of other trains going inland. There's one for Mendoza, the busy wine center. It is crowded with Italians, scores of families with their babies and bundles, recruits for the vast vineyards.

On sidings you see still more trains and many stock cars jammed with jostling, goring, bawling cattle, bound for the busy packing plants of Buenos Aires.



Photograph by P. Taylor.

LOADING WHEAT INTO BARGES NEAR THE SMALL PORT OF SAN PEDRO

Some of the grain-loading chutes, where bags are slid down to waiting river boats on an estuary of the Paraná, are more than 1,800 feet long. The lighters are loading to carry the cargo to steamers waiting in the main stream.



Photograph by Federico Kohimani

FEW MOTOR CARS MAKE LONG TRIPS ON THE PAMPA BECAUSE OF BAD ROADS

This highway, deep in dust, leads through the irrigated vineyard regions of San Juan Province. Houses are of adobe, and poplars in the background are planted along an irrigation ditch. Water comes from streams in the Cordilleras, which lose themselves in the dry plains.



Photograph by Jacob Gayer

"DOCHAS," A CROSS BETWEEN BOWLING AND MARBLES, IS A POPULAR GAME

Gauchos, ranch hands, and clerks from far and near crowd the inns and corner stores of the drab, tin-roofed country towns on Sundays, to watch the trains go through, to race their horses, see the movies, gamble, drink—and play at *bochas*.



Photograph by H. G. Olds

THROWING THE BULL AND PUTTING A RING IN HIS NOSE

Gauchos handle cattle and horses with amazing ease and skill. This rough tumbling of fat bulls is not always practiced. Often the animal is driven into a chute and then ringed while standing, his head held between slats.

The day coach of your own train, fogged with cigarette smoke, is full of boisterous pampa men, many in flat hats, baggy trousers, ponchos, and short boots. There is much shouting and laughing; one gaucho has a guitar and about him a group is singing. Many talk at once, and much talk is about horses, cattle, grass, water, and prices. You recall a certain ride, long ago, in the smoking car of a "Katy" train, crossing the cow belt of Texas and Oklahoma, bound for a cattleman's convention in Kansas City.

Again your train halts at another pampa station with a chaletlike estancia house near by (see page 465). You visited there once, and remember the oil painting of a \$20,000 bull that hangs in a bedroom. The bedroom looks out on a formal garden, with a swimming pool, and rows of poplars where doves roost. There are tennis courts, too, and a golf course; 2,500 horses, square miles of cattle and swine; so many separate fields and pastures that, to keep a record of the crops or animals in the various areas, a map

is used whereon all the different fields are marked off like counties of our States (see page 467).

And there's a big dairy where the hired hands are Danes and all the machines are Danish, and from whence tons of butter are shipped each week to London.

And up an incline chute, into stock cars waiting on a switch, more cattle are being driven by yelling cowmen. The animals butt, kick, and crowd each other, and stir up a thick dust, pungent, ammonia-laden.

It is like Texas. Your train rolls on toward Buenos Aires, and you overtake still more trains of bawling animals bound for the ultra-modern city of Spanish courtesy, French fashions, English sports, American energy, and Chicago packing plants. Fancifully, you think of all these plants as big radio sets; all the grunts, bleats, and bawls that rise from their crowded stockyards are like static squeals and heterodyne howls—what the Texan called the cow music of the pampas—the voice of Argentina.



Photograph by Lawrence A. Fensworth

A MOUNTAIN "HAY WAGON" LEAVES FOR THE FIELDS

On the return trip the huge load of hay, carried on the rack on the donkey's back, will so envelop the animal that only his patient face and small black feet will be visible underneath (see illustration, page 510).

ANDORRA—MOUNTAIN MUSEUM OF FEUDAL EUROPE

BY LAWRENCE A. FERNSWORTH

ANDORRA, or the Valleys of Andorra, as it is more officially called, is a strange little country set down in a labyrinth of mountains, furrowed by deep valleys and narrow defiles. A modest triangle on the map shows where it lies in the chain of the Pyrenees (see map, p. 495).

To enter Andorra is like turning back the pages of time by centuries—its national birthday dates from only twelve years after William the Conqueror set foot on English soil—and the land has aptly been called a living museum of feudal Europe. Here one may study feudal institutions and customs almost exactly as they existed more than 600 years ago.

This land, with only 191 square miles of area and some 5,000 people, has three rulers, two of them designated as Princes, and the third is President. Yet it is neither principality nor republic; it does not fit any modern political pigeonhole. It is a land of unwritten law, where custom and usage, handed down for centuries from father to son, are more binding than written word (see illustration, page 501).

A MODEST, PEACEFUL REVOLUTION

Last April six centuries of somnolence and isolation were disturbed by a revolution, a very small revolution which lasted only one hour, a peaceful revolution which promises to change certain customs that have persisted for centuries.

On that day Andorran youth, weary of having no voice in the country's affairs, stormed the House of the Valleys while the Council was in session and forced the Council to accept a decree which thereafter would give the vote and the right to hold office to all Andorran citizens of 25 years or more. The decree further provided that the sessions of the Council should be public.

The young Andorrans then hurried to the principal villages of the valleys and read the decree. Since then the patriarchs have sought to repudiate the concessions, on the ground that they were wrested from them by force; and the quiet valleys still are in turmoil with plans and compromise plans.

It was on a day of late September that I found myself at Hospitalet, the last French

outpost in that part of the Pyrenees, with a pack on my back and my face set toward Andorra.

Looking dimly ahead through the mist, as I left the French village behind me, I beheld a gigantic jumble of mountains tilted at crazy angles, their peaks lost in heavy gray clouds.

ON A CONTINENTAL DIVIDE

Soon a drizzle turned to heavier rain, and the rain changed to huge damp flakes of snow. Then lightning shot flames among the peaks and thunder began to explode against them. I became so enveloped in clouds that I could make out only the dim outlines of the mountains up whose steep sides I was climbing. They broke upon my view now and then as the hull of a ship breaks through a fog.

The storm varied its cadence as I trudged forward for nearly two hours until finally I reached the summit of the Port (pass) d'Embalire (also known as the Col d'En-Valira), whence the descent would begin. By that time the storm was subsiding.

There was a spot at one end of the summit from which I could look straight down into the two valleys which here met head-on, for I was standing on a continental divide.

The Ariège, which took its course here and found its way into France, would eventually empty its waters, via the Garonne, into the Atlantic. The Valira del Oriente, which forged its way through Andorra's principal valley, through which my route also lay, would eventually reach Spain and join other rivers to empty its waters into the Mediterranean.

Across the valley the pointed and pinnacled crests of two famous *cirques* (steep-walled, amphitheater recesses high on the mountain sides) soared blackly above that sea of clouds. One was the Fontnegre, somber, jagged, and tousled with patches of clouds lying in its hollows and hugging its sides like snow. Almost shoulder to shoulder with it was the Cirque des Pessons, a majestic, symmetrical circle of peaks guarded at each end by sentinel peaks, and with walls concaved like the inner sides of



Photograph by V. Claveral

"NOTABLES" OF ANDORRA POSE WITH AN OVERLORD

The Spanish Bishop of Urgel, who, with the President of France, is one of the coprinces of Andorra, stands surrounded by the members of the Council General, or Parliament. The Councilors bear the official title of "Notables," and must wear cocked hats, black ties, and black gowns when the Council is in session (see text, page 512). They elect a "President," who becomes a third ruler of this curious feudal State.

a bowl. Very soon now, on both sides of these cirques where cloud draperies hung, there would be patches of snow instead.

"MAIN STREET" IS A MULE TRAIL

I plunged down among the clouds that had been surging below me. I got under them and was again traveling through mist. In another hour I had reached Soldeu, the first Andorran outpost and the village that boasts the highest altitude, about 6,000 feet, of any in Andorra.

It was dusk, but I was able to see that Soldeu sat on the high shoulder of a mountain that sloped easily down to the newly born Valira del Oriente. The flanks of the mountains across the valley were green with pine to their very tops.

The village itself was a mere cluster of gray houses and barns built of slate and cobbles. Its single cobbled street was a mule trail. Tucked away among its edifices was a small church. On an occasional Sunday the priest would trudge up here to say mass.

Although Soldeu did not possess anything so attuned to modern life as a café or a

store, it did have its hotel. The building, of gray slate, with a low-lying gable roof, stood on the slope by the side of the road. It looked down on a garden, which turned into meadow as it raced down to the edge of the river that brushed by the foot of the opposite mountain.

Within were floors of rough plank, rafters of roughly hewn timbers, a room with a long plank table worn smooth, another room just off it with a short table, some faded pictures and maps on its walls.

The larger room was a "second-class" dining room, reserved for sheep and mule herders and mountaineers. The other was for "first-class" guests—adventurous travelers, if and when they came by.

A PRIMITIVE MOUNTAIN KITCHEN

But what attracted me most was the kitchen. Later I was to discover many like it, some even more primitive. This one had a hard floor of earth and, at one end, a fireplace, from which flames were licking the black sides of a pot in which most of the evening's meal was cooking. From wooden pegs thrust into smoke-darkened rafters

hung hams, sausages, and slabs of codfish, while shiny pots and pans swung from other pegs on the wall.

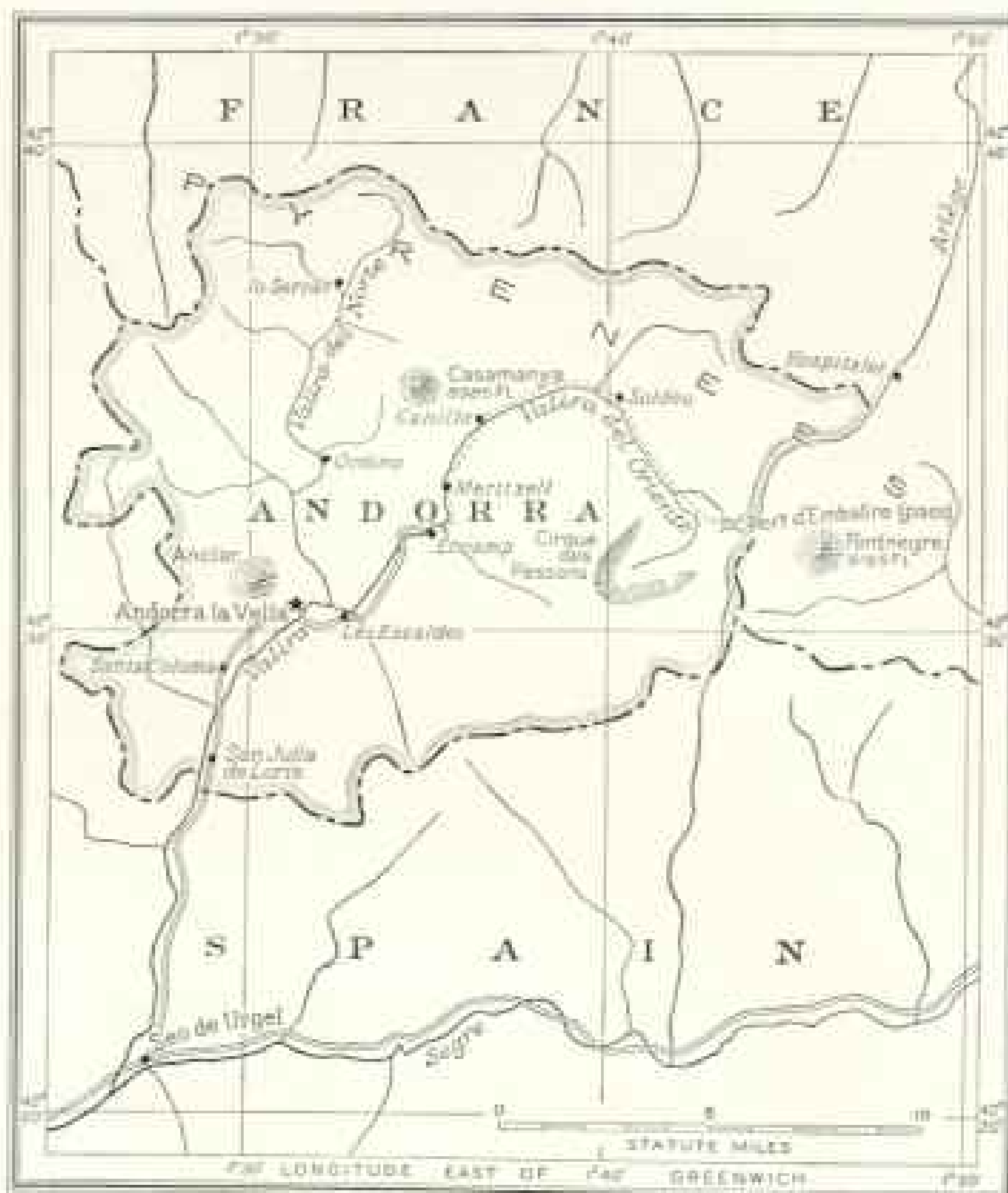
Here I had my first contact with man since I had turned my back on Hospitalet, and also my first glimpse of some of Andorra's strange customs.

As I sat on a little bench by the kitchen fire drying my dampened clothes and warming myself, Mother Bonell prepared the supper. And by the table on which the family meal would be served, apart from the "first-" and "second-class" guests, the host, Jaume Bonell, was reading a paper.

A tall, angular, eagle-beaked mountaineer was Jaume, whose eyes, under shaggy brows, seemed to see a great deal without peering too sharply. When he stood erect he planted himself with a gaunt and loose awkwardness, with outward-hung arms, in a pose reminiscent of America's western pioneers. He had gray eyes and a fighting jaw, for he came of Andorra's fighting stock.

In fact, I learned that Jaume had just come out victorious in a little one-man revolution of his own. The parish council (Andorra is divided into six parishes, which are like six little nations in a world of their own) had levied an annual tax on Jaume's hotel, apparently believing he was becoming too prosperous.

Now, so far as anyone can remember, no money tax had ever been levied on a living Andorran. In more ancient days the people had paid tithings of lambs, chickens, cheeses, and crops to their Lord Bishops. But a revolution had abolished even those,



ANDORRA, MIDGET STATE ATOP THE PYRENEES

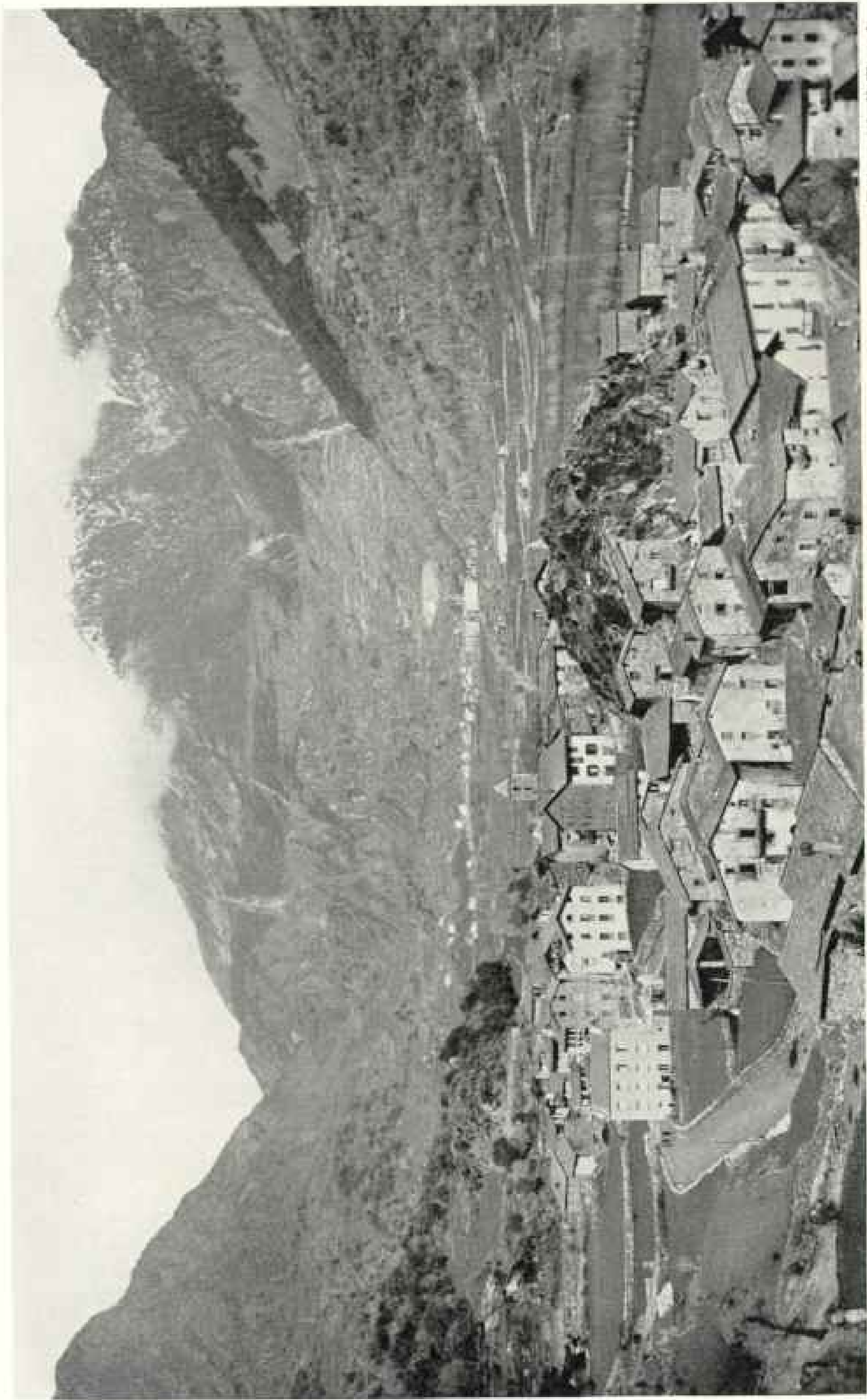
Wedged between France and Spain, this tiny State, once a smugglers' paradise, has an area less than a fifth that of Rhode Island. Most of its roads are mountain trails. For more than six centuries its 5,000 mountain people have maintained their independence, in the form of a feudal land which is a political curiosity among modern European governments.

and it was contrary to all custom and to all notions of justice that a tax should be levied on anyone now.

Jaume promptly closed his hotel. When Andorrans passed by that way, they might dine in the open or sleep under the skies if they liked. If the Councilors must impose taxes, let them impose the same on the hotel provided by Nature, Jaume suggested. But Nature pays no taxes. And neither does Jaume.

ONE OF THE OFFICIAL "NOTABLES"

Jaume was one of the "first men" in Andorra, one of the country's official "notables," which is an Andorran word just as written. He was doubly so, in fact, because his lands and herds made him one of the richest. And in Andorra wealth



Photograph by V. Claveral

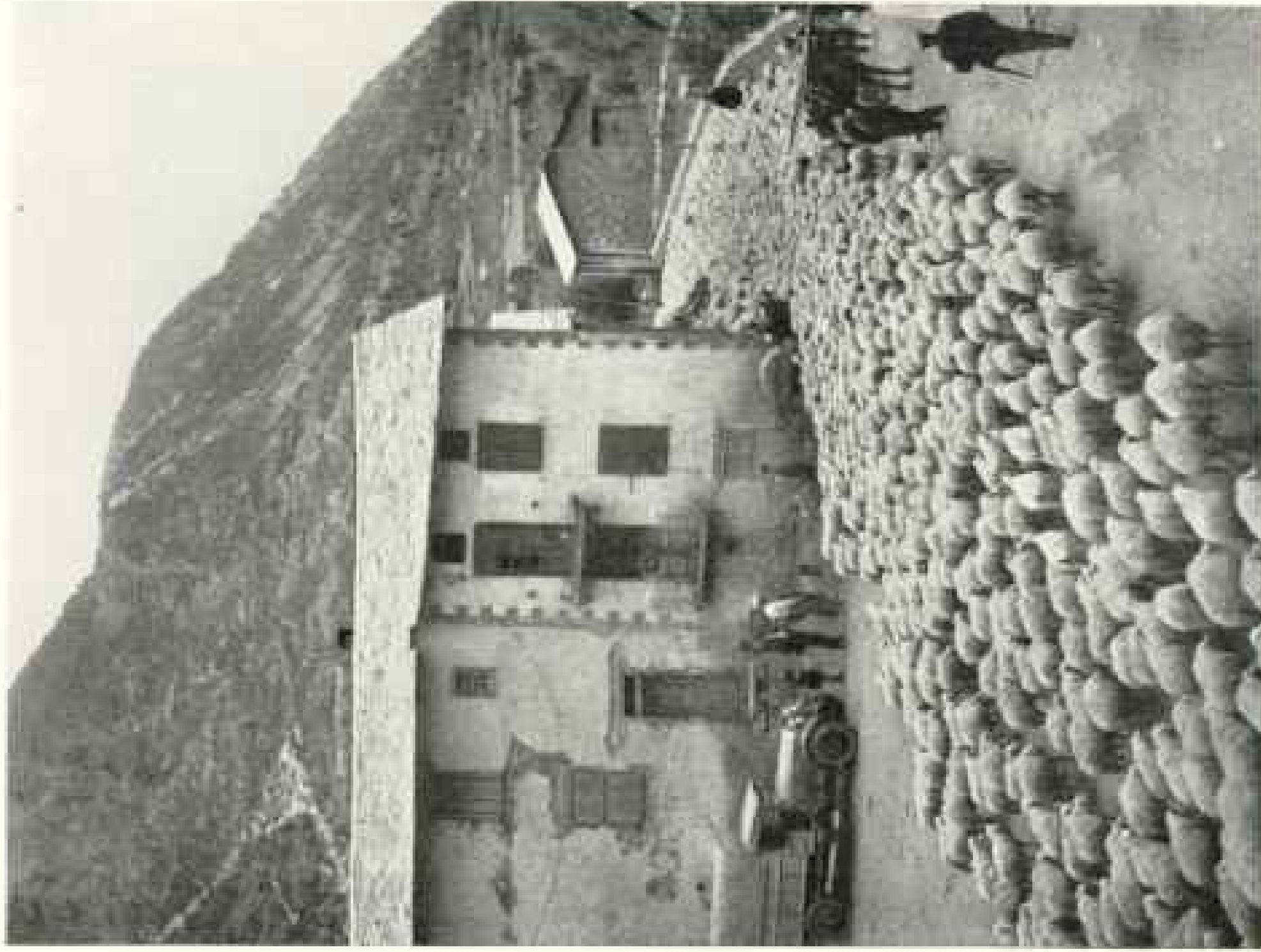
ONE OF THE WORLD'S SMALLEST CAPITALS

From this diminutive seat of national government, resting soberly against its mountains, feudal Andorra is ruled in a medieval manner (see text, page 510). Its streets are narrow and tortuous, its stone houses plain and somber. This view looks over Andorra la Vella, up the Valira Valley toward Les Escaldes.



AN OUTDOOR "TOBACCO BARN" OF ANDORRA

Bunches of tobacco are hanging on a shady corner of the house to dry. Tobacco and smuggling were once synonymous terms in Andorra. To-day, smuggling of tobacco and mules across the frontiers is not so profitable because of exchange fluctuations since the World War. But tobacco is still a "money crop" and the best lands are given over to it. Cigars and cigarettes are manufactured in the homes and in a few local tobacco factories.



Photograph by Lawrence A. Freyworth

RIVERS OF SHEEP FLOW ACROSS THE BORDERS

Andorra has so much pasture land that she rents some of it to French and Spanish sheep owners between June 24 and September 29, the dates for the feasts of St. John the Baptist and St. Michael. Then the sheep must leave the mountains and trek north or south for home. Most of the Spanish sheep are guarded by Andorra shepherds, who live high in the mountains with the flocks during the summer months.



Photograph by Burton Holmes from Gallway

THE CAMEL OF THE PYRENEES

From the Andes in South America to the mountains of northern China the lowly mule becomes an important carrier in high altitudes. Many of Andorra's so-called roads are mere bridle paths, and articles from sewing machines and wheelbarrows to lumber and bells are tied to the awkward wooden saddles of these freight animals (see illustrations, pages 500 and 511).

counts, since a man without property has long had no say in the country's affairs—a suffrage limitation the young Andorrans now seek to abolish.

But primarily he derived his dignity from the fact that he was the head of a tribe, a patriarch who carried on the traditions and kept intact the possessions of his house, handing them down to those who should come after him.

I had been sitting there a short time when Jaume laid down his paper and we began to talk. He took from the wall a faded old photograph to show me. It was the likeness of his father, a man with a grim fighting face, a grizzled old patriarch. He was clad in his robes of office as a member of the country's Council General, or parliament. He wore a flowing black gown and a black, cocked hat (see illustration, page 501).

Looking at the old man's picture, gazing then at his gray-haired son who now carried on after him as the guardian of the family's traditions and prestige, and as the custodian and accumulator of its wealth, I caught a glimpse of the bond of unity that in Andorra links the chief of a family with all the chiefs who have gone before.

WOMEN SILENT UNTIL SPOKEN TO

Mother Bonell continued at her task of preparing the supper, paying no heed to our conversation. In Andorra, while men are conversing, women are silent unless asked to speak. She had cheeks as red as the red of a sun-kissed apple. About her head was a gray scarf such as is worn by all Andorran women, except that the color is most frequently black.

We had trout for supper and grilled codfish, which in Andorra is a delicacy more



Photograph by Burton Holmes from Galloway

IT TAKES SIX KEYS TO UNLOCK THE "IRON CABINET"

Down the center of this age-blackened chest, which holds Government archives, are six key-holes, each bearing the name of one of Andorra's six parishes. The keys are held by each of the six senior Councilors, so that the chest cannot be opened until each of them, with his key, is present. Despite its name, the cabinet is of oak, but is strongly bound with iron (see text, page 512).

relished than trout. We also had the gamy black meat of the *izard*, the Pyrenees chamois, which is caught high among crags, and delicious smoked Andorra ham, famous even beyond the country's confines.

After supper we gathered around the kitchen fire once more—Jaume, his wife, his three sons, two or three "second-class" guests, and myself.

They had thin, dark faces, black eyes and black hair, these mountaineers, and one had a drooping mustache. They talked to each other in Catalan, not animatedly but slowly, lapsing now and then into silence. Their voices were low and pleasant. The woman sat silent, unobserved, in a corner.

The eldest son sat with his legs stretched out by the fire. He was six feet tall, lanky, self-contained, self-confident. When the old man spoke to him, his voice was soft. It was this son who would inherit all the

land, inherit the rôle of preserving the family, inherit the title of chief. When the old man had gone, this son would rule, be the lawgiver to his brothers, to his wife, to his children, and to all who should live in the house.

A TRAIL THAT KNEW NO WHEELS

From Soldeu next morning my trail picked out a crazy, winding way farther into the heart of the country. Nothing so comparatively modern as a wheeled vehicle had penetrated where this trail led. It was for donkeys, mules, horses, sheep, and men. I faced a wilderness of mountains looming in the deep distance. Now and then I passed donkeys or mules laden with enormous burdens, their drivers urging them on.

Marvelous the loads these donkeys carried on their awkward wooden saddles underlaid with heavy felt. Sometimes the



TACKLING THE HARD JOB OF ROAD BUILDING IN MOUNTAIN COUNTRY

Andorra has no railway, though a trans-Pyrenean line was opened several years ago near its eastern border. A road between Urgel, in Spain, and Hospitalet, in France, traverses the center of the country. Its best section, which is low-level and much-traveled, lies between Urgel and Encamp.



Photographs by Lawrence A. Fensworth

SNOWBALLING BREAKS THE WINTER MONOTONY OF THE THREE R'S

In summer, when valley families drive their cattle to upland grazing lands high on the mountains (see illustration, page 504), many Andorran school children go along and spend their vacations helping to care for the animals.

loads were twice as large as the donkey. The animal you could not see, but only little black feet moving under the load.

And there was little that could not be loaded on their backs— chests of merchandise, cases of wine, of olive oil, of beer, furniture, sewing machines, wheelbarrows— even the logs and stones of which houses are made. All the church bells that ring through the valleys from tall, campanilelike towers were brought here in this manner, some of them centuries ago.

CONCESSIONS FORMERLY WERE GRANTED TO SMUGGLERS

Dark-faced, kindly men were the occasional drivers of donkeys who passed me. In other days they would have been smugglers of silks, of phosphorus and matches, of perfumery, of tobaccos. Then the most respectable families were the chief traffickers in contraband. It is even of record that the Council General granted a monopoly for the contrabanding of sulphur and matches.

Contrabanding did not run counter to any law that had been handed down to the Andorrans, and they did not see why they should concern themselves about the laws of other countries. The smuggling across borders of sheep, horses, and mules is still practiced, but the more picturesque phases of Andorran smuggling are done.*

The occasional driver, as he passed me, greeted me with a grave "Bon dia," or a "Passi-ho bé," or a "Bon viatge," or a

* See "A Unique Republic, Where Smuggling Is an Industry," by Herbert Corey, in the NATIONAL GEOGRAPHIC MAGAZINE for March, 1918.



Photograph by V. Ciampi

HE IS A CONSERVATOR—BY INHERITANCE

The father of Jaume Bonell, the author's host at Soldeu, in his robe, black tie, and cocked hat of a Councilor. Such grizzled veterans, with their grim, fighting faces, guard their family's prestige and possessions, and hand down property and traditions of a proud and independent people (see text, page 498).

"Buenos." The Andorran has a great repertory of greetings and seems to make it a point never to repeat the one you have just given him.

The men who greeted me were lithe and sinewy, built to pick their way over mountains with sure, unhesitating pace, like their donkeys. Their faces were weather-tanned and seamed by contact with winds and sun. But the features were regular, the eyes eager and glistening; the hair was often the gray of a patriarch. They were the gravest and most dignified of mortals, dignified and grave like their mountains.

There was a time when Andorrans wore



Photograph by Lawrence A. Ferrisworth

IT'S THE WORKER WHO WINS HER MAN

Her diligence, not her beauty or charm, is the quality most sought after by Andorran suitors (see text, page 507). After marriage, the women toil side by side with their menfolk, for the soil exacts every ounce of effort from those it sustains.

eye-filling costumes made up of white hose or leggings, short tight pants, large black sash, and black velvet coat, topped off by a long, pointed, and tasseled cap of flaming scarlet. The sash is still frequently seen and an occasional ancient yet clings to his native cap. But the rest of the costume has given way to corduroy suits fashioned by native tailors or wives. Even these suits have a distinctiveness expressive of the wearer's personality (see page 505).

I overtook a mountaineer plodding behind his donkey. He, too, had followed the honored profession of smuggling. He became alert upon learning I was an American, and he asked many questions. Did

they have mountains there as here? And forests? And donkeys and sheep? How about the cities? They were very large, some people tell, and had buildings as high as mountains.

And those big steamships? He had never seen a steamship or even a tiny boat. Andorran waters are too turbulent for boats and the like. America had a President, he had heard. Well, Andorra had a President, too. And two princes, besides.

Traveling between mountain walls, following the stream, we finally reached Canillo, one of the six capitals of Andorra's six parishes.

Canillo was a black little town overhung by black mountains. It was a jumble of black roofs, of black stone buildings at crazy angles to each other, at crazy angles to its cobbled, narrow streets. Here is a cluster of houses perched on an uprising rock; there a house is set in a shelf against a black precipice. They reminded

me of goats spurning the level spaces, getting themselves settled on rocky protuberances, on ledges, or wherever they can find a foothold (see illustration, page 508).

At the far end of the town, snug against the cliff, is the ocher, campanilelike tower of the church, its height measured off by three poplars. The tower and poplars, the upward line of the cliff, the rocky pinnacles towering beyond, lend an aspiring Gothic note to the village.

The clifflike black mountain back of the village serves as a mere pedestal to one of Andorra's mightiest mountains, the Casamanya. The lower mountain is fringed with crags and looks down upon the town

sullenly, menacingly. Its sides are seamed with bare, hard ridges of rock. Here and there it holds shallow patches of earth in which brush and some grass have taken root. Up and beyond you see a field, an orchard, a stone barn with its cabin. Above this black footstool the Casamanya itself begins sloping upward toward an eventual altitude of nearly 9,000 feet.

Arrived at the fringe of the village, I noticed that the monotony of the black houses with their quaint wooden balconies was relieved here and there by façades plastered and whitewashed, and that terraced gardens surrounded some of the houses. A donkey plodded up the street carrying an incredible load of short logs. Two black-garbed women came from the direction of the church, talking. Some hogs were basking in front of a doorway. And from a side street one heard the voices of children at play.

In Canillo the children wear long dresses that tempt a smile. The boys who have graduated from dresses wear oversized blouses and pants made of the cast-off clothing of their elders. Women wash their clothes by the river at the edge of the town. Other black-garbed women come out of their doors to gossip, or carry loads on their heads through the streets.

Here the most outstanding events of the day are the pealing of the Angelus at morning, at noon, and at night. Each week is marked off by the Mass at the church, the gathering in the café, the afternoon promenade. The outstanding events of the year are the church festival and the stock fair



Photograph by Lawrence A. Fergusworth

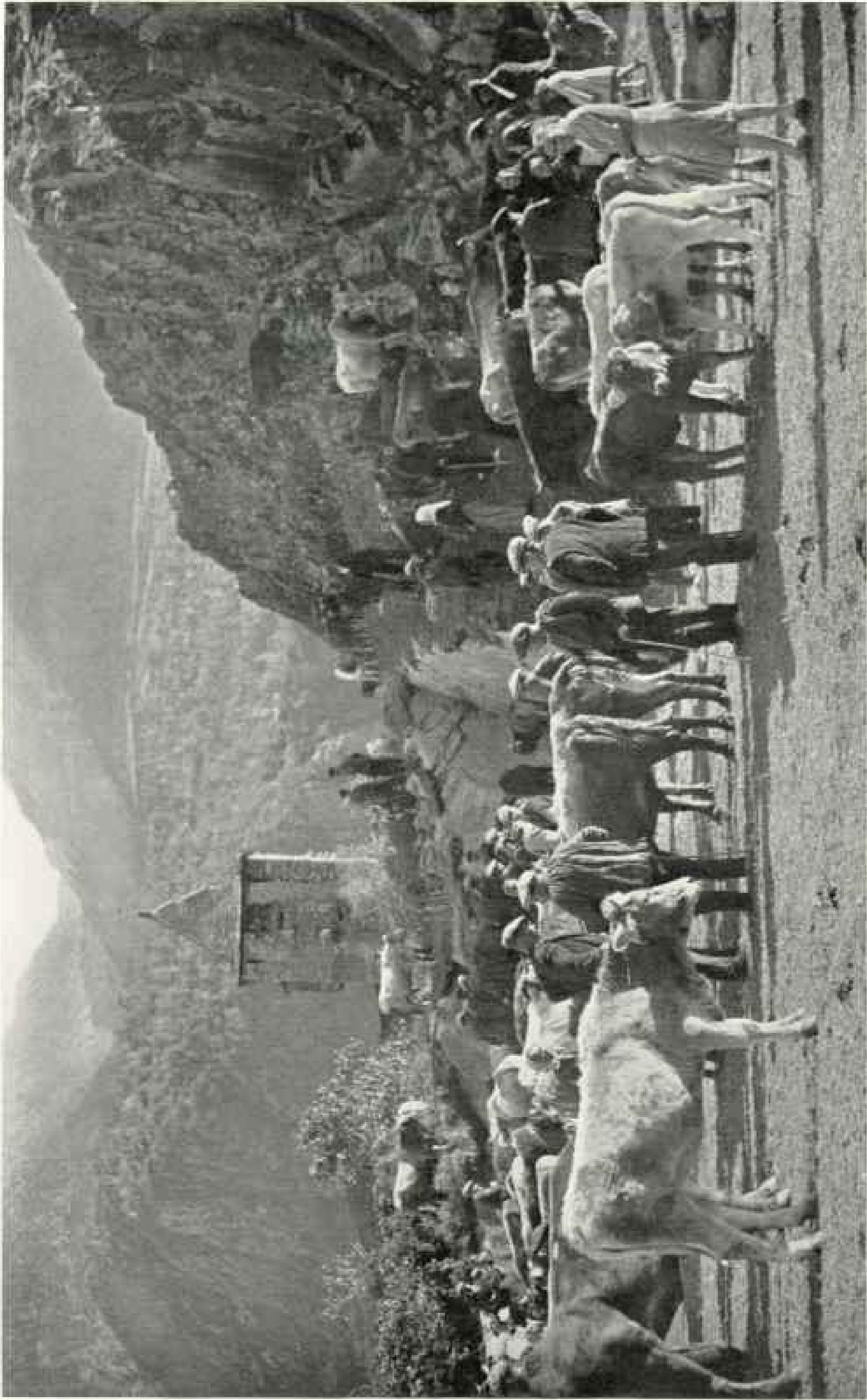
A TOWN CRIER OF URGEL

The six parishes of Andorra have belonged to the diocese of the little town of Seo de Urgel, in northern Spain, for a thousand years. Since 1278 the Bishop of Urgel has also been one of the coprinces of Andorra (see text, page 512, and illustration, page 494).

(see illustrations, pages 504 and 509). In an Andorran village life moves like that.

LAND MORE PRECIOUS THAN GOLD

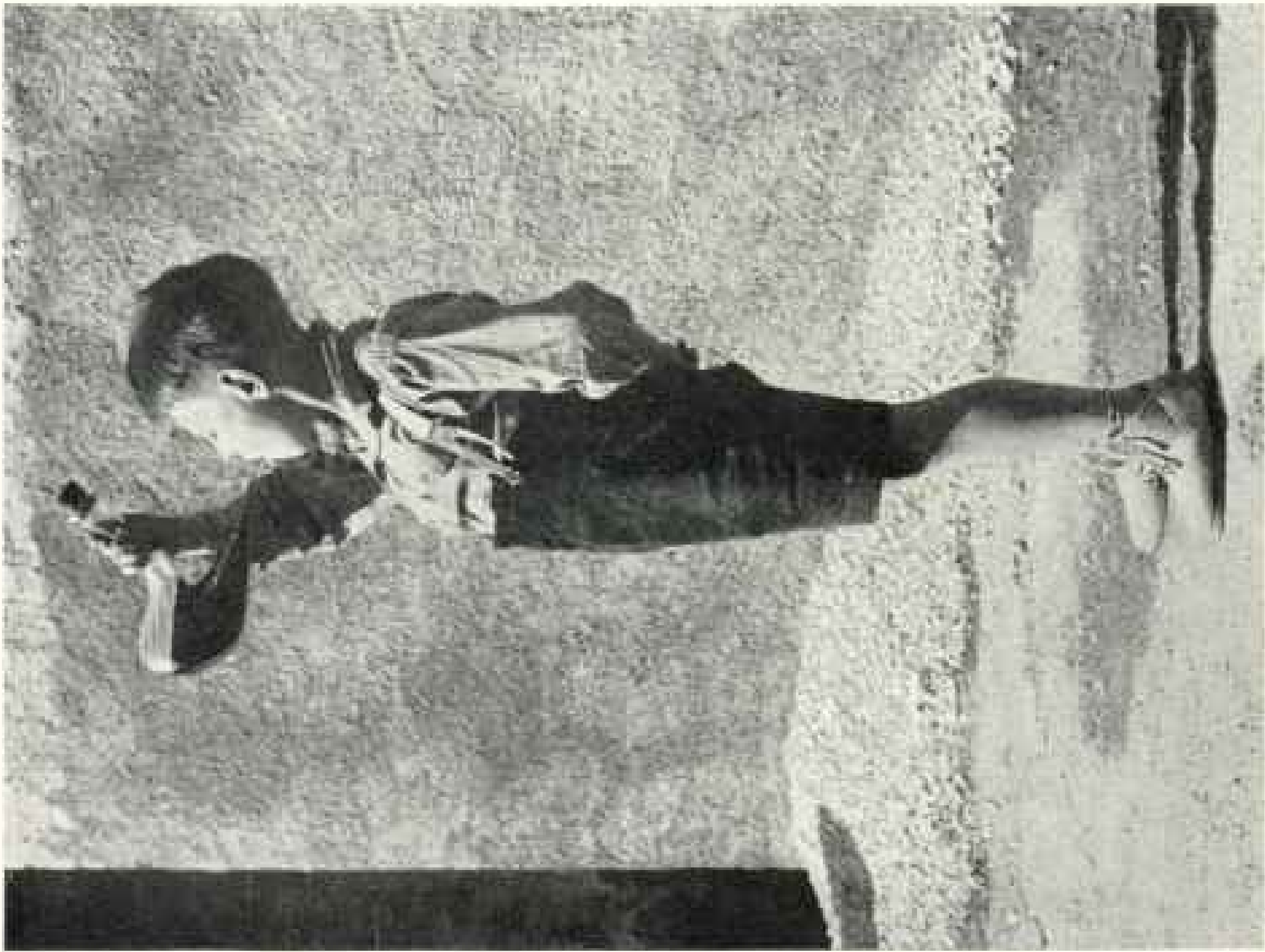
From Canillo I pressed onward alone through still narrowing mountain walls hemming in a valley that was seldom wider than a thousand feet. More often there was room for only a narrow strip of field to squeeze itself between the white foaming river and the mountain. High up on the sheer mountain sides other small fields were clamped. I wondered how the fields, or the farmer and his oxen whom I saw plowing them, could manage to stay put without sliding into the river.



Photograph by Plancholsit

"COW MUSIC" ECHOES UP AND DOWN ANDORRAN VALLEYS AND MOUNTAIN SIDES

All summer many Andorrans stay in temporary villages on mountain tops, herding their animals, gathering manure, and making a crop of hay. Late in September they descend with the animals to the valleys again. Then the cattle fairs are held in various villages. That of September 27, at Andorra la Vella, is the most important, for then the Spanish animals, especially sheep, start from the mountains on their homeward trek (see illustration, page 497).



Photograph by Barton Holmes from Galloway

THE SANITARY DRINKING CUP OF ANDORRA

The boy holds high the queerly shaped bottle and lets a long, thin stream pour into his mouth. To close the lips means drenching. The trick seems simple, but the amateur must learn the art of swallowing rapidly while the mouth is open.



Photograph by Lawrence A. Fernsward

A PATRIARCH HEADS HOMEWARD

In spite of his age, this mountain man is lithe and sinewy. In years past his costume would have been white hose, short trousers, sash, velvet coat, and a cap of scarlet, instead of the somber corduroy suit of to-day (see text, page 502).



Photograph by Lawrence A. Fernsworth.

THE WOMAN'S LIFE IS FREQUENTLY IN THE FIELD OR ON A MOUNTAIN TRAIL

She has achieved, or had thrust upon her, equal rights with men for hard work. Only a few valley towns along the main highway know such conveniences as automobiles, farm machinery, or electric light.

To an Andorran his little patches of earth are more valuable than gold. Only the direst need will induce him to part with one of them, and even then he or his heirs can always buy it back, although centuries may have elapsed since the sale. A man's wealth consists first in his land, and then in his mules. His philosophy is that land never runs away, while gold does, and sometimes even the mules!

No people ever came nearer to the Biblical injunction of earning their bread by the sweat of their brow than do the Andorrans tilling their soil. The people know every foot of their mountains, and wherever they have found a bit of earth through which a plow might be drawn, they have laboriously cleared it of rock and stone and made it ready for planting, be it ever so high and access ever so forbidding. Other land lies far beyond the peaks or on small plateaus that seem like the bottoms of craters around which sharp mountain summits stand guard.

At the highest levels, away from the valleys, are summer villages, or *cortals*, and sometimes isolated barns and huts called

bordes. These are covered with snow in winter, and deserted, but thither the men move in the summer to remain until their hay and their buckwheat have been harvested, either to be stowed away in barns or to be transported down to the winter villages of the valleys.

It is a curious sight to see a large load of green, dry hay moving over a trail far up a mountain as if it were traveling by itself. One has to be near and look sharply to observe the small black legs and the tiny dark face of the donkey. The load almost completely covers the animal, coming down its sides and reaching far above it. It is a familiar sight to see husband and wife following behind it, each likewise bearing a burden of hay or grain on his or her back.

After the grain reaches the barn it will be threshed by being beaten with a club or switch, and thereafter winnowed by the wind.

The women of Andorra work side by side with their men. That seems to be born of the necessity of wringing a livelihood from a soil that exacts every ounce of effort

from those it sustains. But these women of Andorra who give of their brawn in equal measure with their menfolk are neither large, muscular, nor masculine. They are small and lithe, with fine, sharp features. Their bodies are of the compact, sinewy flesh of mountaineers and they are trained to their work from childhood.

Wherever one sees the women of Andorra they are clothed in black. In the fields they wear long, black dresses that set off their slender forms, and black shawls and scarfs over their heads. On Sunday for church their costume is the same, but the black of their cloth seems newer. When it begins to appear worn and faded it will be relegated to workaday wear.

But if the older women of Andorra wear black, that is not true of their younger daughters. Girlhood is the time of bright colors, of the dance, of the promenade on the days of the fiesta. And likewise of work. In Andorra it is not bright colors, prettiness, or coquetry that win the man. It is a reputation for being a worker. And so the Andorra girl who would marry well sets out most industriously to acquire it.

Although Andorran women work hard, they seem happy and contented. And they accept with extreme complacency the extremely minor rôle they play in the life of the family. Andorrans are still as far removed as they were in feudal days from any notion of equality between woman and man. Yet the men treat their women with consideration and they seem to make excellent companions.

The valley by which I left Canillo has narrowed into a gorge. The trail has climbed high and is now skirting precipices. The Valira has sunk so far that I can only hear its sound, not see it except when I crawl to the edge of the precipice and lie down to look over. Then it appears like a thin stream of frothing milk.

Past wayside shrines I trudged, shrines where in other days smugglers threw coins invoking the protection of the Andorran patron saint, the Virgin of Meritxell. Past more black villages with smudgy faces like urchins; past solitary stone churches with high-reaching square towers—edifices reared so long ago that no one can say just when, and now all but abandoned.

And then I came to the sanctuary of the Virgin of Meritxell herself, a white church with an arched portico, an adjoining white building, and a near-by cluster of black

houses, all on the steep slant of a lofty mountain.

The Church of the Virgin is not like other Andorran churches, for the Andorrans, wishing to do something pretentious, took a note from the architecture of Spain.

Legend says that centuries ago the statue of the Virgin was miraculously found buried in the ground under a rose bush which, although it was January and the ground was covered with snow, was in full bloom. The statue is still in the church. She is a serious-faced Virgin, wearing wooden shoes and peasant garb, and holding a child in her lap. The statue had probably been buried in the spot where it was found by the Christian Visigoths fleeing the Moors, about the tenth century.

The Andorrans believe this Virgin preserved their independence through the centuries and have a deep devotion to her.

THE LAST OF THE HERMITS

A lone hermit, last of numerous hermits who formerly guarded the small churches and chapels to be found all over Andorra, watches over this sanctuary.

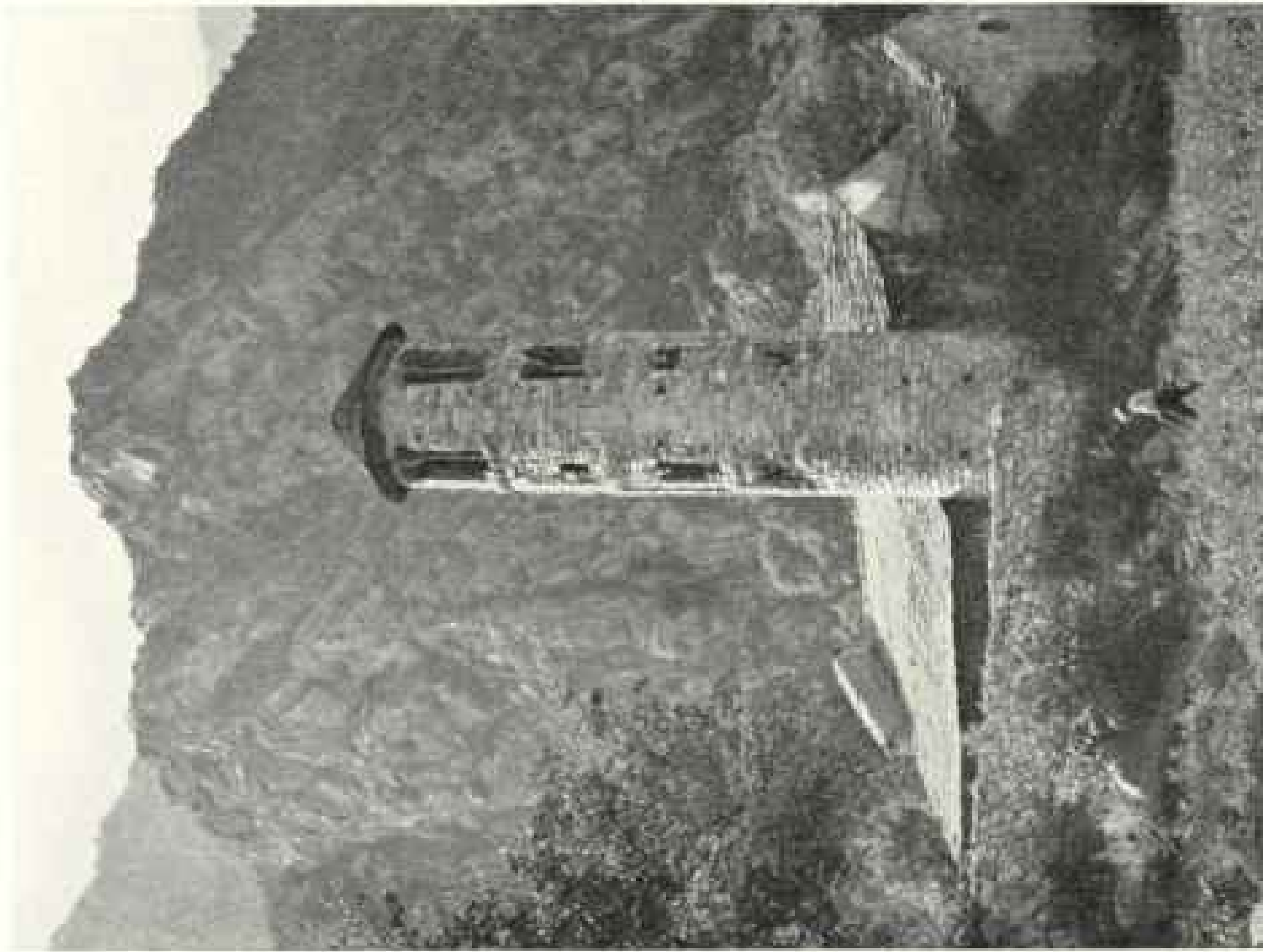
And so the trail meanders until finally it reaches Encamp, my goal for the day.

Encamp is the metropolis of the valley down which I have been traveling; wherefore it has inns and stores and shops, such as those of the shoemaker, the blacksmith, and the carpenter, and more narrow, cobbled streets and dark houses. From this place there are wild valleys to be explored and a wilderness of high mountains which invite climbing. Also there is one of the coziest inns in all Andorra (see p. 509).

From Encamp my route took me to the capital city of Andorra-la-Vella, or Andorra-the-Ancient, where stands the statehouse, known as the House of the Valleys; then down into Spain and finally to the historic Spanish city of Seo de Urgel, which is the Spanish gateway to this part of the Pyrenees, and where resides the Bishop who is also one of Andorra's coprinces (p. 494).

And now I was able to swing along a highway which had been built to Encamp from Urgel some years before. It was the first highway Andorra had ever known.

Taking the road at Encamp, I found that it followed a brawling stream which cut a narrow way through overhanging rocks, beat itself into a fury at the foot of some cliff where it made a sharp turning, and, near the capital, reached a broadening



Photograph by Lawrence A. Frittsworth

SANTA COLOMA REARS A TOWER LIKE THE CAMPANILE

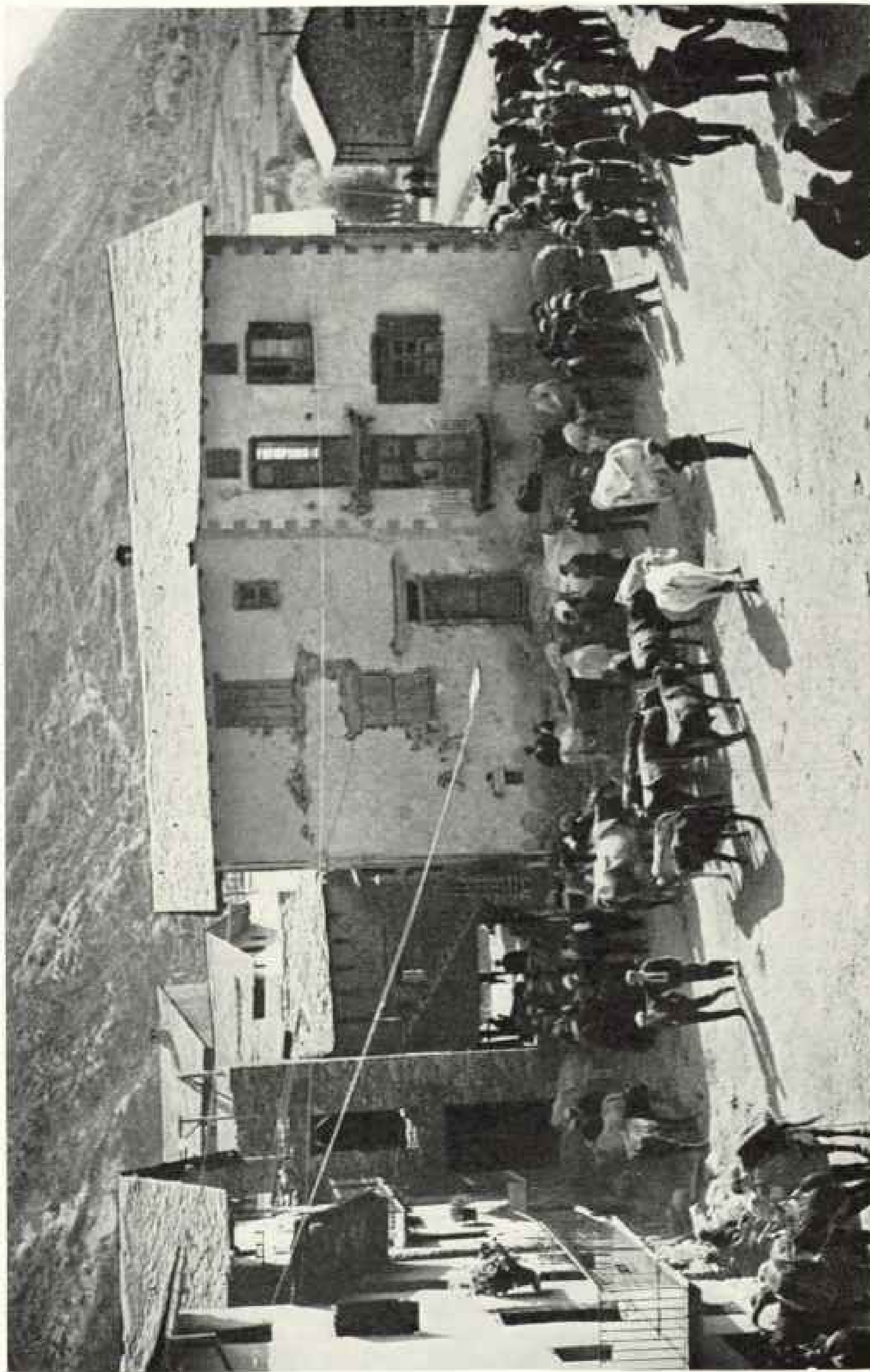
The curious round tower of this little chapel in the Valira Valley, south of the capital, measures its height against the dark mountain beside it. Pious Andorrans make frequent pilgrimages to such chapels and to wayside shrines scattered along the trails. Every village has its patron saint.



Photograph by V. Claverol

"A BLACK LITTLE TOWN OVERHUNG BY BLACK MOUNTAINS"

One of the six capitals of Andorra's six parishes; Canillo is a jumble of black roofs upon dark stone buildings set at crazy angles to each other along its narrow, cobbled streets. The wooden balconies of its somber houses face the sun (see text, page 502).



Photograph by Lawrence A. Fernsworth

CATTLE FAIR TIME AT ENCAMP

It has five or six shops, like those of shoemaker, carpenter, and blacksmith; also the coziest inn in the country. Otherwise it is a typical Andorran village, with stone houses huddled around narrow, cobbled streets. The annual cattle fair, held September 10, is a principal event of the year (see text, page 507).



Photograph by Lawrence A. Fernsworth

MAKING HAY WHEN AND WHERE THE SUN SHINES

The more hay, the more sheep and goats, cattle and mules the farmers can stable through the winter. In a land so furrowed by deep-cut valleys and narrow defiles, where mountains cast shadows far and wide, every available acre of sunny slope is utilized for hay and other crops. Much hay is grown on the irrigated sections of the lower valleys (see page 492).

valley which was really a juncture of this valley and another one which came down from the north (see map, page 495).

The two constitute Andorra's principal valleys and give to it its official name of Andorra of the Valleys.

ENTERING ANDORRA-THE-ANCIENT

The highway along which I traveled was still a mountain road winding through the canyon in curve after curve, hugging forested mountain sides, passing under precipices strewn with menacing boulders. I rounded a last shoulder of mountain, crossed a rustic arched bridge spanning a cascading stream, entered a narrow street, and was at Les Escaldes. Several hotels line the principal street. One wonders why. The answer is that Les Escaldes has a warm spring which in summer attracts visitors from neighboring Spain.

Leaving Les Escaldes, I walked along meadows, then over a large stone bridge spanning the now widened river. Ascending the thigh of a somber and scowling mountain, I reached Andorra-the-Ancient.

The capital city rests soberly, sedately

against the lowermost slopes of its mountain. A diminutive seat of national government it is, with its meek-looking Capitol building from which a feudal State is ruled in an entirely feudal manner (page 496).

The town's public square is the Plaça del Príncipe Benloch, named for an episcopal coprince of other days and the only public square in Andorra having a name. There are various shops, a church with a squat, square tower of stone, a constant movement of laden donkeys and mules. It is like other Andorran towns in that respect. But now there are more wheeled vehicles, ox-drawn carts, camions loaded down with trailing logs dragged laboriously from nearby forests, and those curious little canvas-topped, two-wheeled carts called *tartanas*.

A narrow, shadowed alley leads away from the plaza to the Capitol building, standing in an inclosed space on the outskirts of the town. No country ever had a more self-effacing capitol than Andorra's "House of the Valleys," as it is called. But most likely none ever had a capitol more useful.

To shelter the archives and to provide a



Photograph by Lawrence A. Fernsworth

THE "FAST FREIGHT" PUFFS UPHILL AMID ANDORRAN SNOWS

Winter comes fairly early to the midget country on the crest of the Pyrennes; sometimes snow blocks the passes into France for eight months; but the muleteers are stalwart mountain men, and their pack animals are a sturdy breed. These animals afford the only supply line to the outside world for the more isolated mountain villages.

gathering place for the Council General are but the beginnings of the purpose it serves. Everything of consequence to the State happens there and eventually everyone goes there. A portal composed of massive, feudal-looking doors affords entrance to the inclosure.

It is two and one-half stories high, with a plain front, low gable roof running lengthwise to its façade, and with slight pattern in the placing of its windows. In the center is an arched, double-doored portal, neatly tailored, lending the building a touch of distinction.

A tiny beehive turret projects from a forward corner near the top. A small square tower, with a pointed, four-sided bonnet, rises from the diagonally opposite corner at the rear. Its tip is not quite so high as the tips of some sharp rocks which rise just behind the building. The House, in fact, hacks away into these rocks, which seem to have gone into a huddle and to be trying to keep it from falling over the cliff.

When the Parliament meets, an official called the *munci* hangs the Andorran flag over the portal. The 24 members of the

Council have come over mountain trails afoot or on donkeys. They always bring an animal when they can because the unwritten law of the land, besides allowing them a salary which is equivalent to nearly a dollar a year, provides them with free entertainment for themselves and their beasts.

THE ORIGINAL "DOLLAR-A-YEAR" MEN

The animals usually are laden with buckwheat or tobacco or similar products, and on the return will be weighted down with some other articles.

The Councilors and the "President of the Republic," having tethered their beasts in the plaza or elsewhere, having stood chatting there with each other or gathered in the café, repair at the stroke of a bell to the House of the Valleys. Doors close behind them and they enter into secret conclave, which they may not leave until all their business is concluded.*

Before the members of the Council begin their session, they vest themselves in their

* The secrecy of the Council meetings was ostensibly abolished at the recent popular movement, although the point is not settled.

long black gowns and picturesque black hats. They must always wear black ties. A Councilor appearing at a session without a black tie is first fined and then sent out to get one (see page 494).

The Councilors being properly garbed, an extremely important formality has to be attended to before they get down to business. The members of the "President's" cabinet, of whom there is one from each of the country's six parishes, must bring with them their keys to the huge, iron-bound oaken chest that contains the archives and other state papers. Until all the six keys have been brought the chest cannot be opened (see page 499).

For the first time in its more than six centuries Andorra officially received in May, 1933, a representative of the United States, who visited the country to present a letter from President Roosevelt acknowledging a letter addressed to him on the occasion of his inauguration. The letter from President Roosevelt was deposited with the tiny State's archives in this historic chest.

ANDORRA'S "MAGNA CHARTA"

No one knows just how or when Andorra had its origin, but most likely it is the last survivor of the independent States set up by Charlemagne when he established the Spanish March, that series of buffer States intended to ward off the Moors, who were overrunning Spain and knocking at the gates of the rest of Europe. However that may be, Andorra tradition claims Charlemagne as the father of the country, while there still exists a copy of the charter of liberty said to have been granted to Andorra by Louis the Pious, the Debonair, Charlemagne's son.

This charter, whose authenticity is improbable, is the only bit of documentary evidence offered to account for the existence of Andorra between those early days and 1278. In that year two lords who had been warring over Andorra signed an agreement, still in existence, by which they were to rule over the country as coprinces, each having exactly as much power in the land as the other. One of these coprinces was the Count of Foix, a Frenchman, while the other was the Bishop of Urgel, a Catalan owing allegiance to Pedro of Aragón.

The Bishop of Urgel continues as coprince of Andorra to this day. The titles of the Counts of Foix underwent many vicissitudes, however, and were eventually acquired by the Kings of France. Later,

when the French revolutionists abolished all titles, they renounced claim to Andorra.

It was in 1806, under Napoleon I, that the Andorrans themselves petitioned the French sovereign to resume his ancient title to Andorra, fearing aggressions on the part of Spain and desiring the protection of the French chief of state. Napoleon consented, and that is how the French ruler is also today a coprince of Andorra.

The relationship of the French President to their country, the Andorrans hold, is a purely personal one and not in the name of the French Government.

Andorra is commonly referred to as a republic and sometimes as a principality. Strictly speaking, it is neither one nor the other, nor is either of the sovereigns a prince, although they are called princes and they acknowledge the title. The charter of 1278, called the *Pariatjes* (*Paréages*), calls them "lords," which approximates their real status.

Although Andorra has a kind of parliament, its members are not elected by the people, but by the heads of families, who must live in their own houses and be owners of land. Failing one or the other condition, they may neither vote nor hold office. The landed head of a family who lives in the house of his father also is ineligible.

The Parliament, moreover, represents the land, not the people, a condition which is also in accordance with feudal custom. It originally bore the title of Council of the Land.

Thus Andorra can hardly be called a republic. With respect to its internal government it has been an aristocracy, perhaps the most exclusive in Europe. In relationships to sovereign lands it is a monarchy. It is precisely this twofold character which is ascribed to it by the *Polítar*, an ancient digest of laws and customs, which is accepted by the people as an authentic statement of Andorra's political status.

Andorra has changed somewhat since that September day when I first found my way over its mountains through a storm. Soon thereafter the construction of its first highway was begun.

The country, having closer contacts with the outer world, is bound to change. These contacts will undoubtedly affect its customs, its laws, and its institutions, as well as the character and activity of some of its towns. But I think no single highway will ever separate Andorra from its unique beauty and charm.

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ARTICLES and photographs are desired. For material which the Magazine can use, generous remuneration is made. Contributions should be accompanied by addressed return envelope and postage.

IMMEDIATELY after the terrific eruption of the world's largest crater, Mt. Katmai, in Alaska, a National Geographic Society expedition was sent to make observations of this remarkable phenomenon. Four expeditions have followed and the extraordinary scientific data resulting given to the world. In this vicinity an earth wonder of the world was discovered and explored—"The Valley of Ten Thousand Smokes," a vast area of steaming, spouting fissures. As a result of The Society's discoveries this area has been created a National Monument by proclamation of the President of the United States.

AT an expense of over \$50,000 The Society sent a notable series of expeditions into Peru to investigate the traces of the Inca race. Their discoveries form a large share of our knowledge of a civilization waning when Pizarro first set foot in Peru.

THE Society also had the honor of subscribing a substantial sum to the expedition of Admiral Peary, who discovered the North Pole, and contributed \$55,000 to Admiral Byrd's Antarctic Expedition.

NOT long ago 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 of California were thereby saved for the American people.

THE Society's notable expeditions to New Mexico have pushed back the historic horizons of the Southwestern United States to a period nearly eight centuries before Columbus crossed the Atlantic. By dating the ruins of the vast communal dwellings in that region The Society's researches have solved secrets that have puzzled historians for three hundred years. The Society is sponsoring an ornithological survey of Venezuela.

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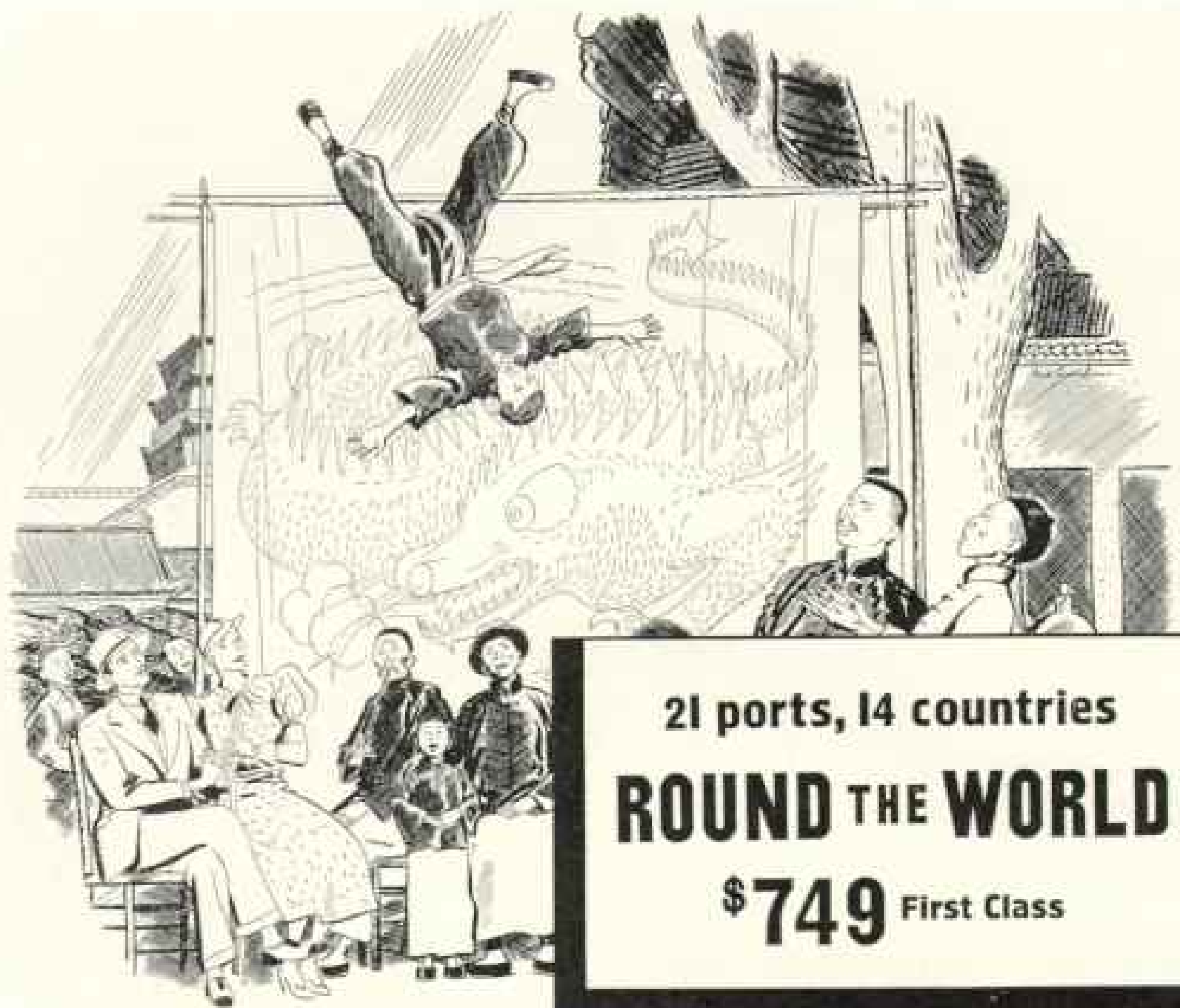
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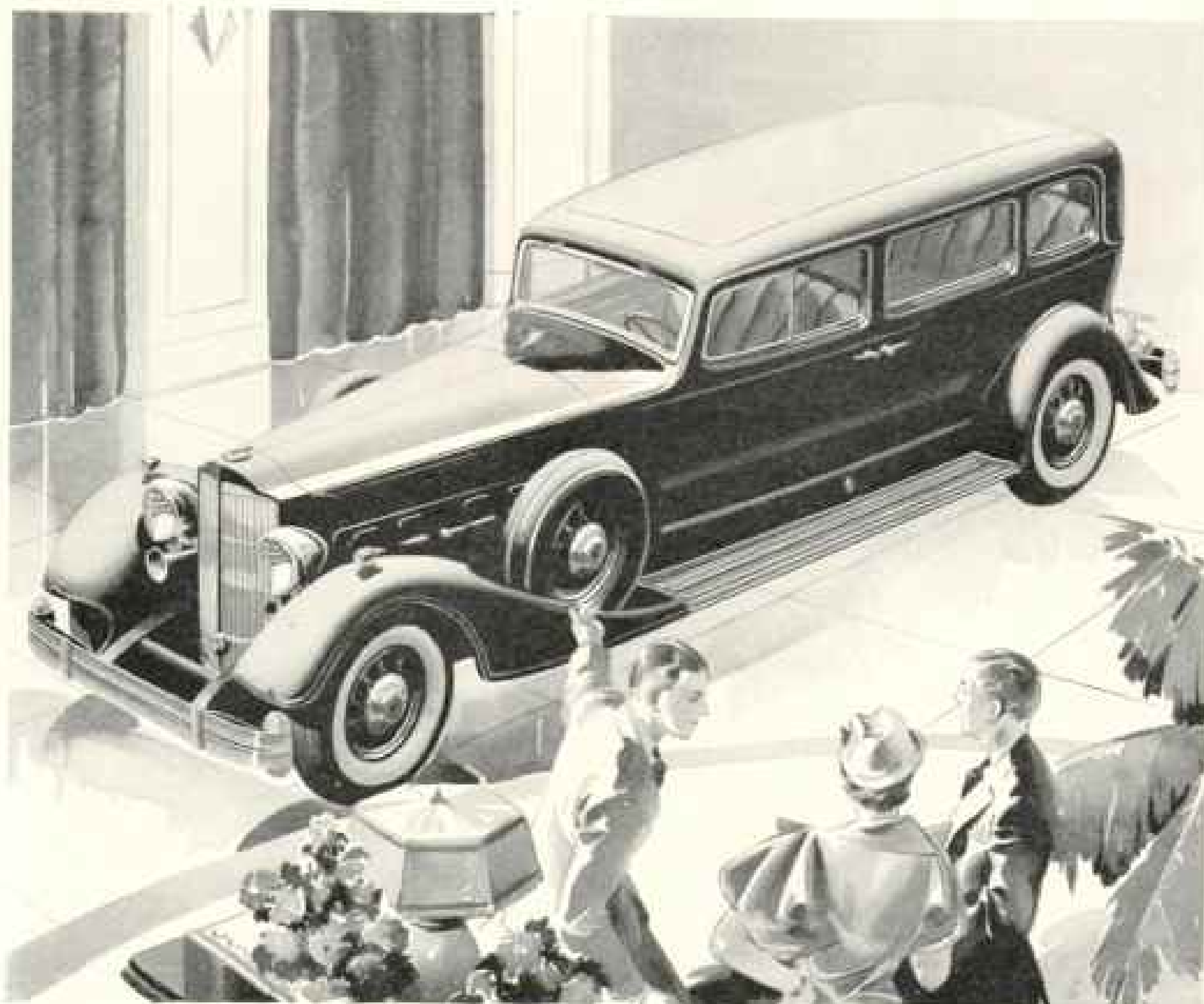
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THE message reproduced here, "No More Diphtheria," published in November 1923, contained facts unknown to a large majority of the people. Many newspapers verified the statements and then, in the interest of local public welfare, reprinted the article in full in their news or editorial columns, or both. At the same time they urged local Boards of Health to see that every school child was protected from diphtheria. In 1923, the diphtheria death toll was about 13,500 in this country.

The facts about prevention of diphtheria were retold in 1926 when the death list was about 8,750; again in 1929 when it had dropped to about 8,000; and still again in 1931 when the mortality was about 6,000.

It is encouraging to report that last year about 8,000 fewer children died of the disease than in 1923. But the sad fact remains that in 1932, according to estimates, more than 5,000 children, most of them under five years of age, died from the disease.

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Get your child vaccinated against diphtheria.

Diphtheria can be stopped!

It is a simple matter to get your child vaccinated against diphtheria. The vaccine is made from the bacteria that cause the disease, and it is so weak that it cannot cause the disease. It is given in the form of a small injection, and it gives your child a permanent immunity against the disease.

If you see them—Make them safe!

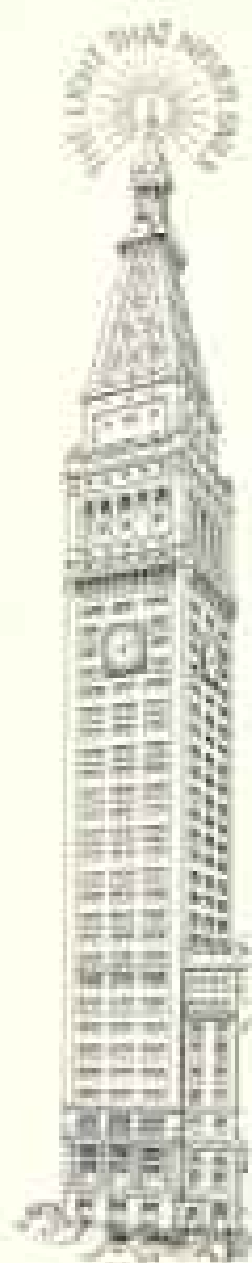
See to it that every child in your neighborhood is vaccinated against diphtheria. This is the only way to stop the disease from spreading.

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against which, not many years ago, the science of medicine had found no defense.

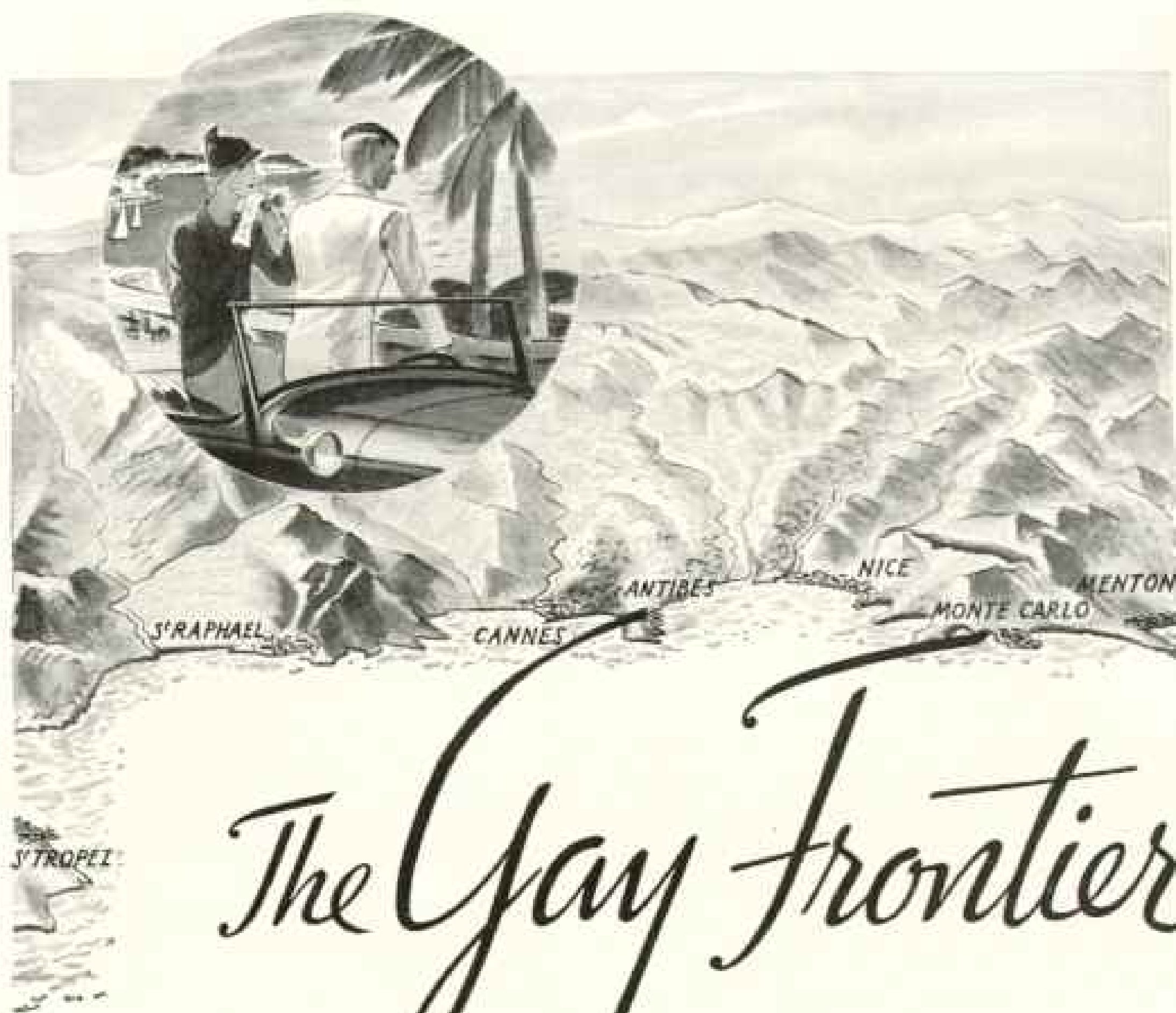
If all the boys and girls in the country, more than six months of age, are inoculated now—and if in the future all babies are inoculated as soon as they are six months old—the death-rate from diphtheria will fall close to zero, and the promise made ten years ago "No More Diphtheria" will be fulfilled.

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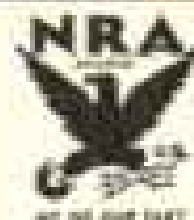
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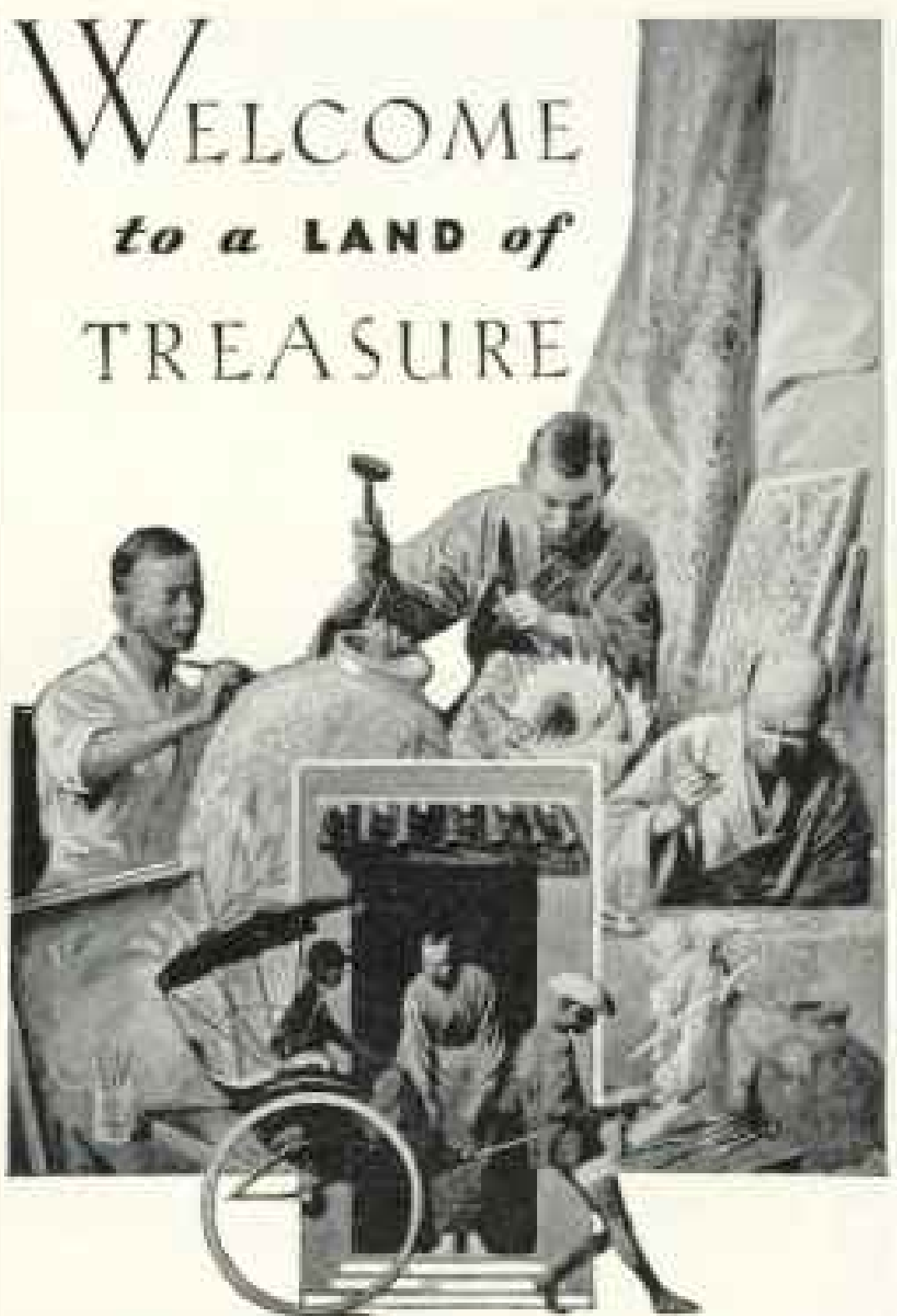
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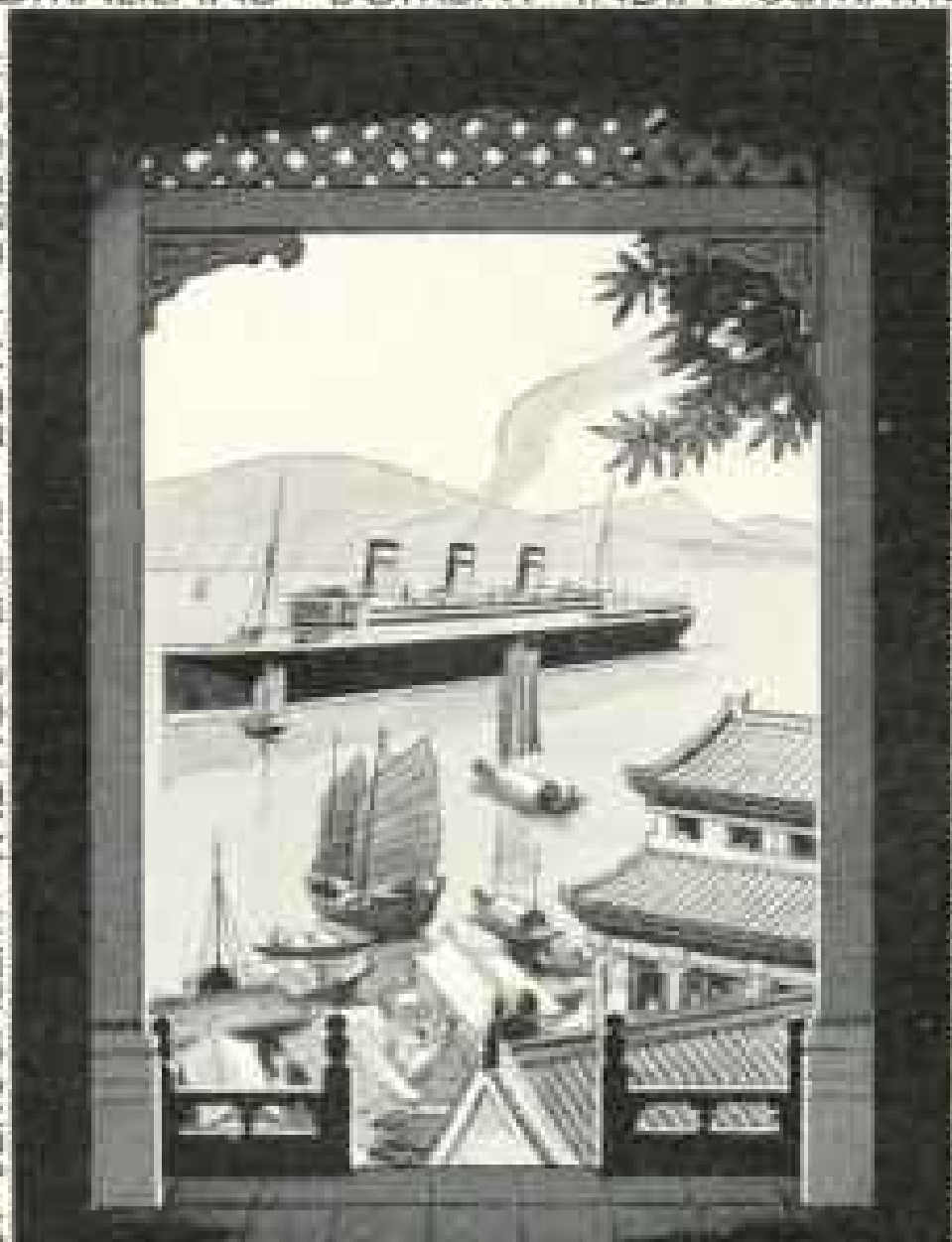
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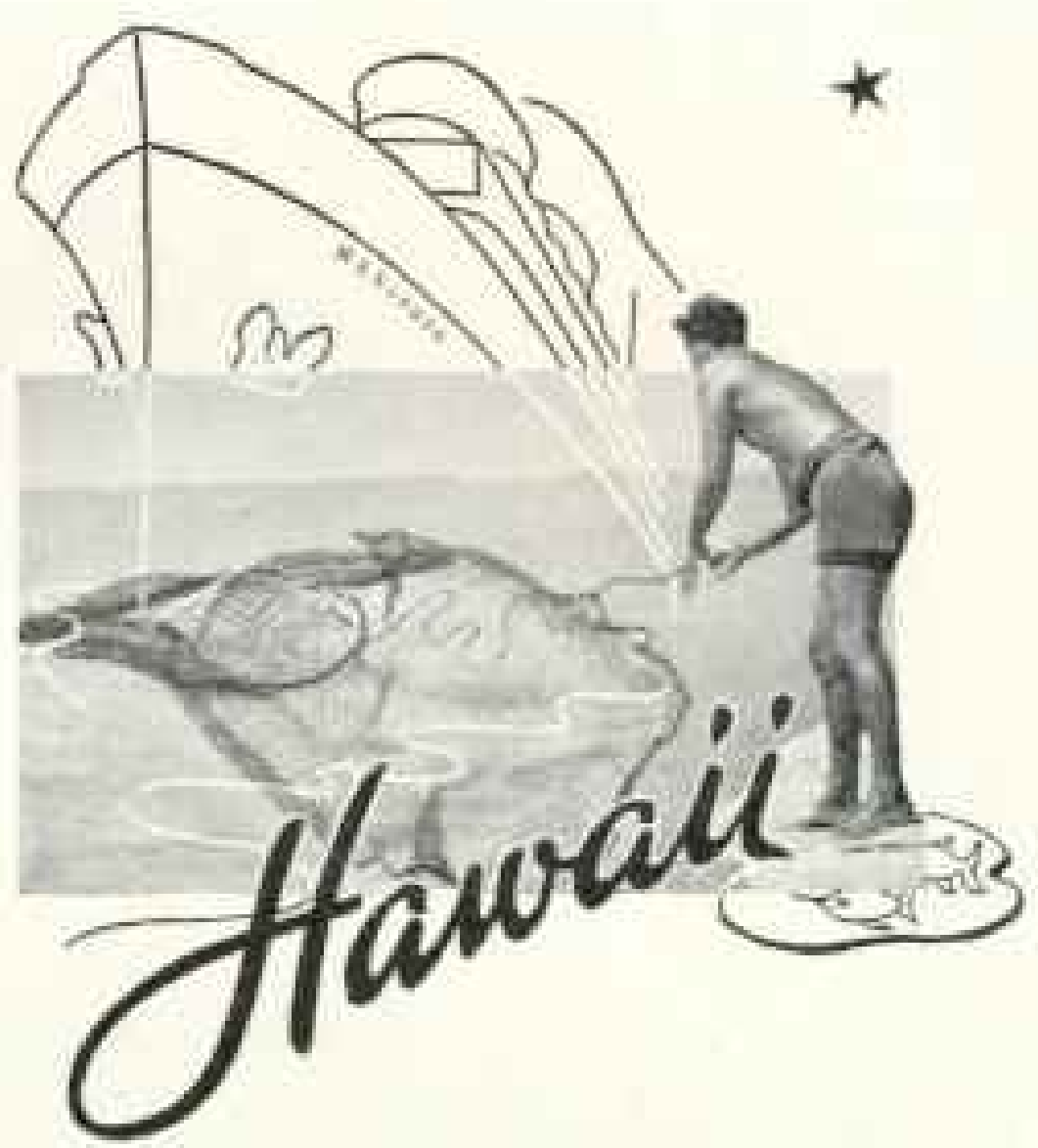
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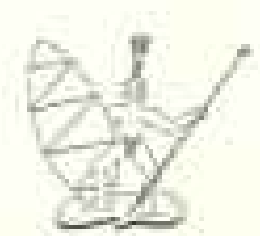


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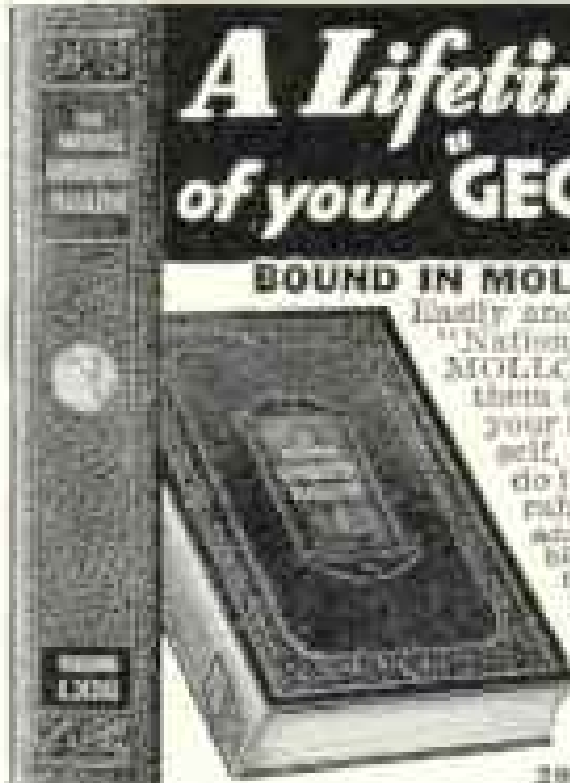
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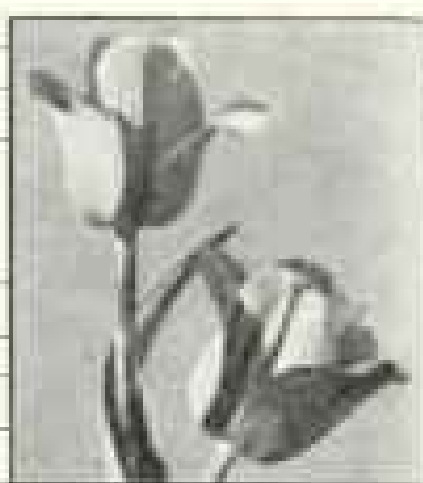
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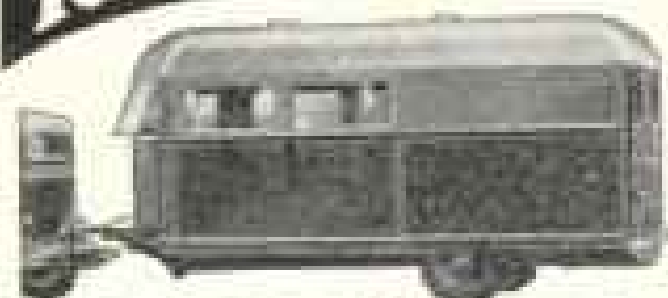
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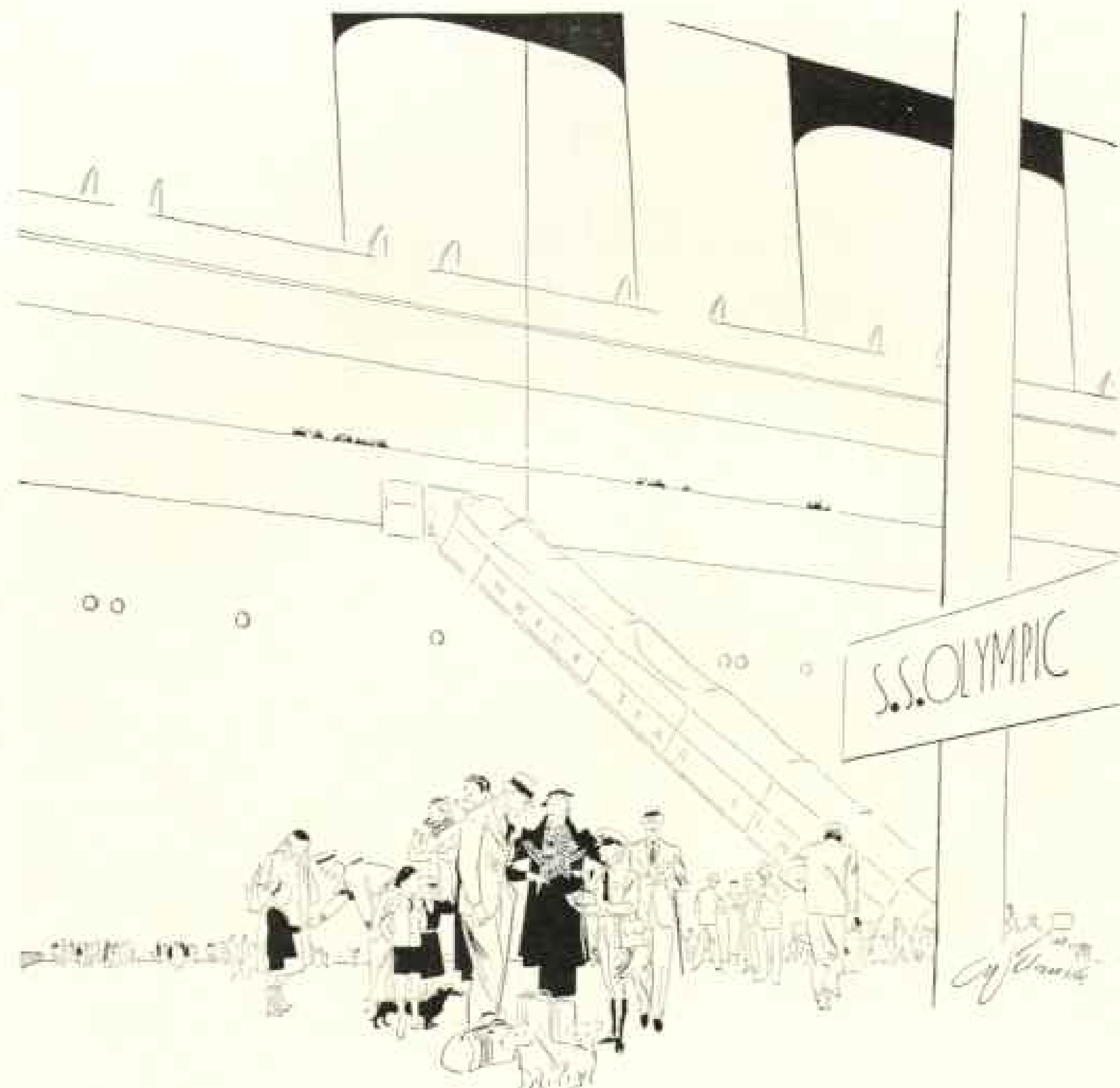
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