# THENATIONAL GEOGRAPHIC MAGAZINE

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An American Girl Cycles Across Romania

With 31 Illustrations and Map

DOROTHY HOSMER

The Panther of the Hearth With 22 Illustrations

FREDERICK B. EDDY

Catdom's Royalty Photographed in Color

25 Natural Color Photographs

WILLARD R. CULVER

Wonder Island of the Amazon Delta

With 30 Illustrations and Map

HUGH B. COTT

Cowboys and Caymans of Marajo

12 Natural Color Photographs DESMOND HOLDRIDGE

Tristan da Cunha, Isles of Contentment

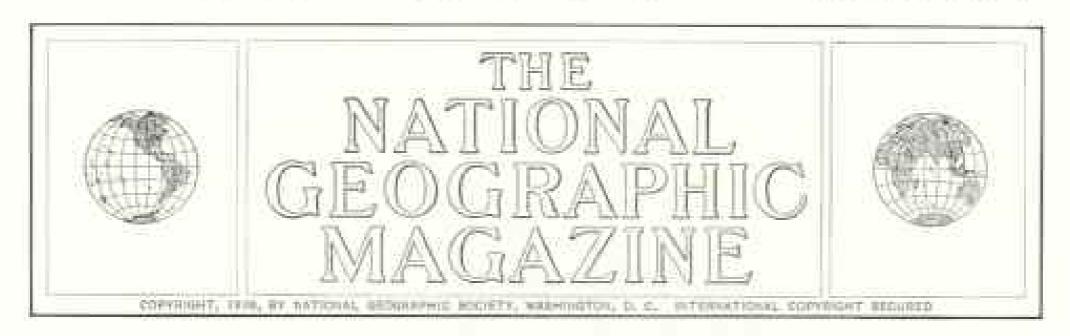
With 23 Illustrations and Map W. ROBERT FORAN

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## AN AMERICAN GIRL CYCLES ACROSS ROMANIA

Two-wheel Pilgrim Pedals the Land of Castles and Gypsies, Where Roman Empire Traces Mingle With Remnants of Oriental Migration

#### By DOROTHY HOSMER

IN KRAKOW I had learned in advance something of the country I was to cycle through in Poland. But in Poland I had been unable to learn anything whatso-ever about Romania. I could not even get a road map of the land where I was to go!

Now a long striped pole blocked the country road over which I had pedaled through southeastern Poland. I got off my bicycle; it was the frontier. Ahead lay Romania.\*

After the customs inspection, my rucksack was strapped back on its carrier. The bar was raised for me. I was entering a country about which I knew absolutely nothing, not a word of its language, nor even exactly where I was going, except that the Black Sea was my goal (map, page 562).

#### A VOLUNTEER FORTUNETELLER

I cycled off down the only road, which led straight across the dusty plain toward Cernauti. Following the advice of a Ukrainian, I took to a narrow footpath that skirted cornfields stretching mile after mile.

It was long past lunch time before I found a few trees, around a shrine. As I sat in the shade, eating, a ragged old woman, carrying over her shoulder a bundle on the end of a stick, came to sit beside me. She started making signs; I finally understood she wanted to eat the cucumber and tomato peels I had thrown on the ground. After looking at me speculatively for a long time, she was apparently seized by the spirit of prophecy. It was my second fortune told in two days! I understood nothing she said, but her somber gaze and mysterious language were portentous.

But I couldn't see that there were risks different from those I had run before. I didn't know then that I was to come to mountains infested with bandits, that I was to sleep in a monastery, then in a hovel, and, again, in a castle!

In the afternoon a signpost led me off the main road. After a few miles following wagon tracks, I came to a thatch-roofed Ukrainian village on the Prut River.

To find myself still in the region inhabited by Ukrainians, among whom I had lived in Poland, made me feel at home. I felt also the ephemeral quality of those official frontiers which are made, and changed again from time to time, even though they sometimes separate people united by bonds that, forged through the ages, last for centuries.

I landed in the village green, having been pushed off my cycle by several small boys. Flocks of silly geese tagged at my heels all the way to the river where I jumped in for a swim.

\* See "Spell of Romania," by Henrietta Allen Holmes, National Geographic Magazine, April, 1934; "Romania and Its Rubicon," by John Oliver La Gorce, September, 1916; and "Races of Europe," by Edwin A. Grosvenor, December, 1918.



Photograph Imm Dorothy Hosmer

#### A STUDY IN SKIRTS-AND CENTURIES LIE BETWEEN

The author, in blouse and divided skirt, dismounts from her bicycle to chat with the best-dressed girl in the village of Raşinari, in Transylvania (page 583). Fine black wool aprone, one worn in front and the other in back, are beautifully embroidered in black and gold, with the same motif appearing on the black velvet jacket. Bits of gold also enliven the black embroidery on the sleeves. The only other touch of color is the grosgrain ribbon around the waist in red, yellow, and blue, the Romanian national colors.

It was Sunday; I was not alone. Groups of girls floated down the current and then, unabashed, ran back along the banks. To have worn my bathing suit would have been out of place amid this bucolic innocence.

#### AN ALFRESCO BOUDGIR

It was a delight to watch the girls dress. From the tiny tots up, not bothering to dry themselves, they pulled over their heads their long, wide-sleeved tunics of linen, wound a bright-colored band several times around their waists, and fastened a scarf on their heads, leaving their feet and legs bare. The few deft motions in performing this simple act had an infinite grace.

CEREMONY OF SPITTING AT BAPTISM

Ringing bells drew me to the little wooden church, with its five bulbous steeples, on the green. An Orthodox priest in a cylindrical hat was baptizing a baby.

The young parents stood before him with three attending couples. In the last part of the ceremony e very thing spoken and everything done was repeated three times, even as Peter three times denied Christ.

After the baby had been dipped in a basin of water, it was returned to its mother's arms, and, to my

amazement, each of the three couples in turn went through the motions of spitting three times over their shoulders. Thus was the baby purged of Satan.

The congregation then divested the church of its banners and icons and carried them through the village lanes, chanting and singing, two men ringing a large bell which they carried suspended from poles.

In the afternoon the green was transformed into a ballroom. The entire village was there in costumes of immaculate white. First the young men, then the girls, joined hands in an ever-enlarging circle, dancing around the Gypsy musicians. White-wooled sheep grazed undisturbed near by.

Next morning
I left this Arcadian village,
where the Devil
is so neatly disposed of, and followed the Prut
the few miles into
Cernauti.

# OF BUCOVINA

In Cernauți, formerly Czernowitz, capital of this one-time Austrian province, where very conveniently I found German to be widely spoken. heard of the Romanian Orthodox cloisters for which Bucovina is famous. They escaped devastation because of the remoteness of their mountain retreats.

No invader ever had a worse time getting over

this country than I on my cycle, along roads, practically impossible for motorists, on which oxcarts creaked over the stones.

Every jolt shook my teeth and made my watch run faster. The day's casualties were a run-down flashlight battery and a broken bottle of layender—how sweet I smelled for a week!

From the 15th-century cloister at Putna (page 568), a long-haired mountaineer had to carry my bicycle and rucksack as he guided me up through a rocky, muddy stream bed across the mountain to Sucevita.



Plantograph by Dorothy Houser

PRAYER DOOK IN HAND, TOWNSPROPLE GO TO CHURCH

Hurrying up the church walk at Cisnadiora are several of its Saxon inhabitants; two married women, then a young man, and two more women whose costume shows that they also are matrons (pages 561 and 568). Large lacy scurves are worn over close-fitting bright caps and fastened with jeweled pins. The older wives dress in black, with a pleated cape falling from their shoulders.

From the ridge I looked down on a walled monastery. With its four watchtowers and heavy iron gate, its aspect was decidedly feudal.

#### TOLLING WOOD AND IRON-BIRD BELL

I arrived just as monks and velvetcapped nuns were called to vespers by a nun who walked around the church carrying the tolling wood, a long flat pole on which she tapped a rhythm with a mallet. From the highest watchtower a repetition of her rhythm, on a larger tolling wood,



Photograph by Withelm Tublen.

#### BABY HAS NOT YET BEEN BAPTIZED, SO MOTHER KNEELS OUTSIDE

Before she can take the infant into the church, this woman of Cernauti in Bucovina must seek the special blessing of the priest. This he is bestowing, with prayer book in hand and his vestment placed over the mother's head to symbolize the protection of the Church.

rang hollowly over the valley. By the church porch an iron bird, around its neck a metal loop which was struck by a sounding piece, added its voice to the clamor, alternating with the deep bells in the towers.

In the compound I paused to study the amazing frescoes which cover the exterior as well as interior walls.

Their hundreds of scenes, which have kept their fresh colors through the centuries, represent religious personages and Biblical subjects (page 570).

The service lasted hours, monks coming and going, nuns lighting thin brown tapers, placing flowers on the tombs, and whispering to peasants who came to kneel before the gilded iconostasis—the icon-adorned partition which, in the Eastern Church, separates the altar from the choir or nave.

I started to go into the sanctuary behind the altar, but was stopped by the priest. "No woman can set foot inside," he said,
"not even the nuns."

To my question, "Why not?" he replied, "It is a precinct sacred to the priests. Men may enter, for every man is a potential priest, whereas a woman is not."

As I was leaving, young Sister Thalia ran up to tell me the Mother Superior had consented to her having me stay overnight.

#### A NIGHT IN A MONASTERY

Before dinner, I saw in the huge, vaulted cellar-kitchen the roast geese and enormous bread loaves we were to eat. Evidently life in an Orthodox monastery isn't all one of penance!

Far into the night, Sister Thalia questioned me about America, where she had long wanted to go.

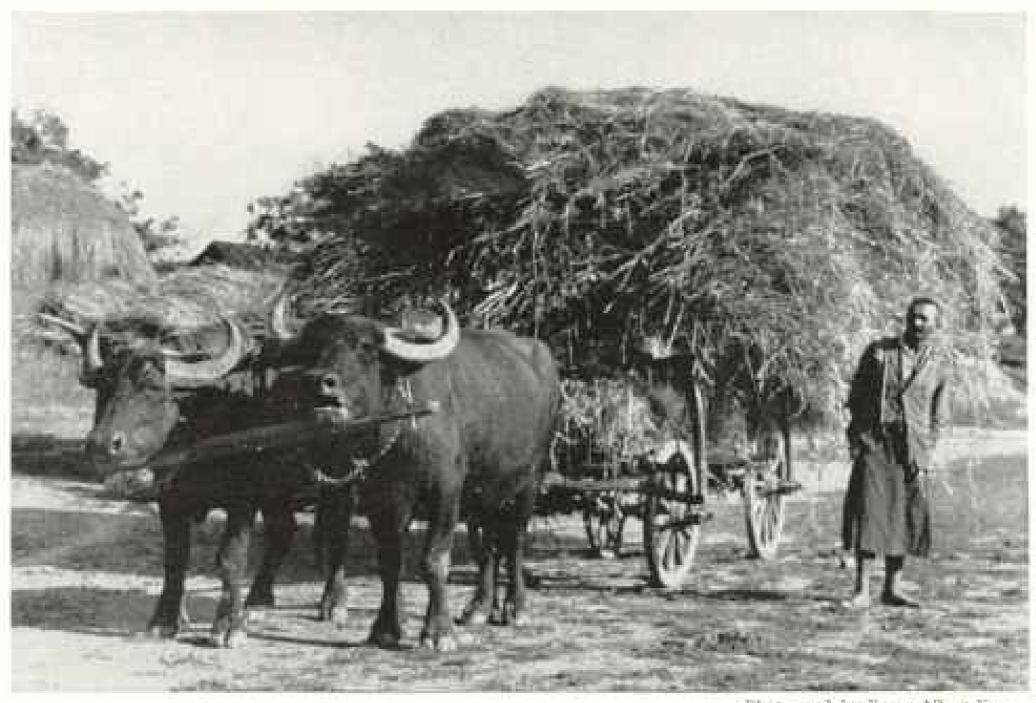
"Have you noticed the crosses on the roofs of some of our churches?" she asked.



Photograph by Docortay Houner

#### UNMARRIED SANON GIRLS WEAR HIGH HATS-AND HIGH HOPES!

Voluminous skirts of intricate needlework, with black-velvet trimmings and large fancy silk or satinkerchlefs fastened at the waist, are seen on Sunday on the cobbled streets of Cisnadiora.

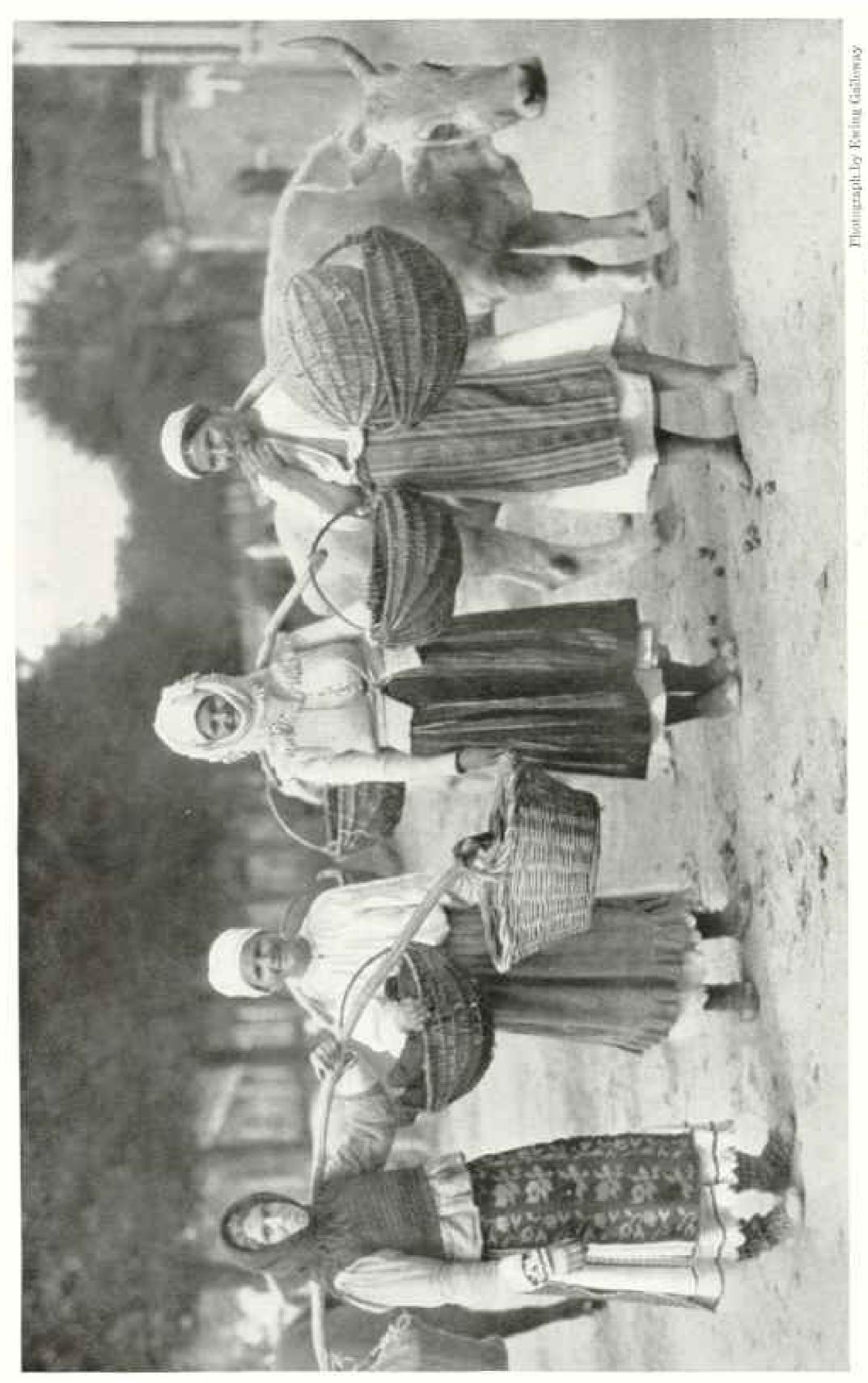


Photograph by Baron Afbert Knas

WATER BUFFALOES, PULLING A LOAD OF STRAW, LEND A TOUCH OF THE ORIENT

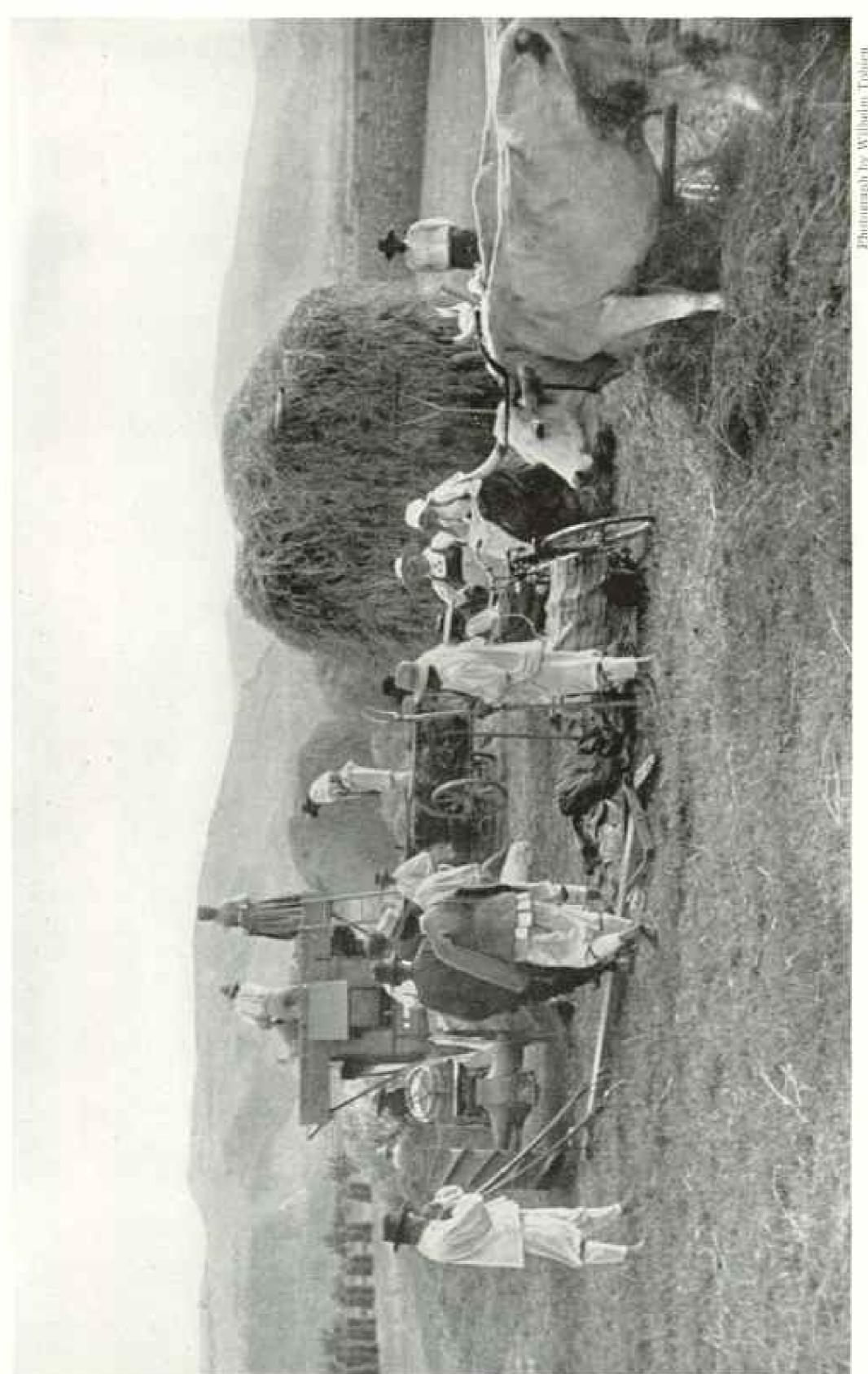
In this southeastern European borderland, many times invaded, the influence of Eastern customs is often seen. Water buffaloes, originally from India, are still used in some rural sections of Romania, both as beasts of burden and as sources of meat and milk (page 579).

OF EUROPE, HAS BEEN THE CROSSROADS OF MANY MIGRATIONS AND INVASIONS ROMANIA, STANDING AT THE THRESHOLD



LICHT THER DASKETS AND LICHT THEIR HEARTS, FOR BUSINESS IN HICHAREST HAS BEEN GOOD

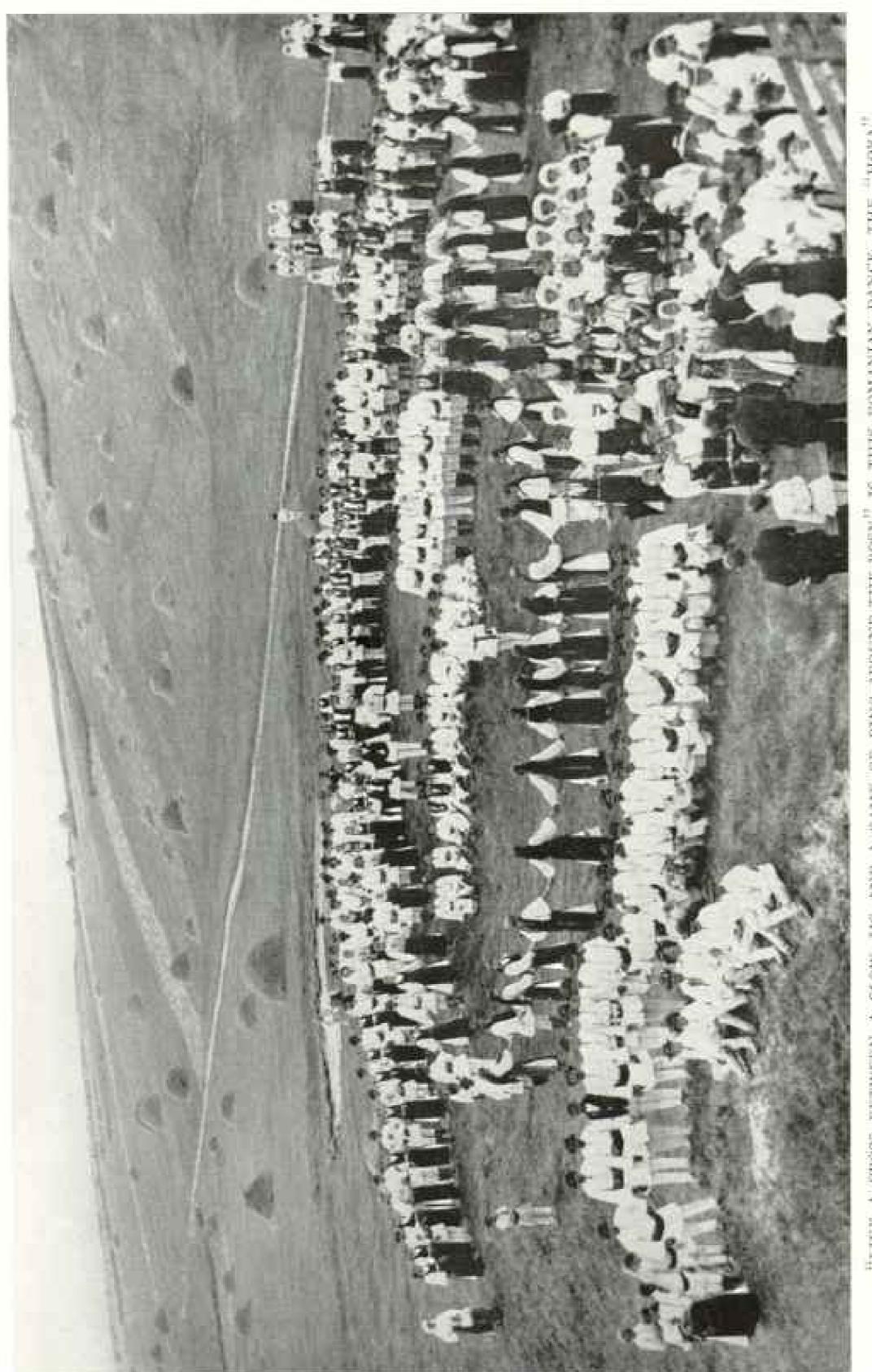
Before daylight they trudged into the capital bent under houvy leads of fruit, vegetables, butter, eggs, and cheese. Now they are homeward bound, traveling light, to the made, reflects the influence of the city. One girl almost hides her face in her store-bought shawl.



Phitturesh by Willadm Tobion.

NEWFANGLED TRACTOR AND THRESHING MACHINE BY MEN IN THE GARD OF THEIR FATHERS

Vividly this Transylvania harvest scene points the contrast between the old and new ways of life which more and more are meeting and merging. Many of the hand-labor methods of other days still survive in the more remate parts of Romania, but here and there farmers are clubbing together and buying up-to-date farm made in America.



A GAME OF RING-ARBUND-THE-ROSY" IS THIS ROMANIAN DANCE, THE "HORA" "LIKE A CROSS HITWEEN A SLOW JIG AND

It takes its name from the Latin word for "hour" and sometimes it goes on and on for several times that long. Variations are numerous, but in general it consists of forming a slowly rotating circle, the participants shuffling and side-stepping in time to the music as they go tound and round. Office the her is performed in the open fields, as been near Sibia. Sunday is the day for dancing, the farmers say, for they the creak out of their bones" for six days work.



Photograph by Dorothy Honner

"BAKSHEESH! BAKSHEESH!" THE RAGGED GYPSIES CRY

Plying their age-old profession of begging, they form a living frieze of poverty along a road in Transylvania. In the Gypsy tongue there are no words for possession; there are none for "honest" and none for "clean." Yet the world is forever in the Gypsy's debt for the haunting melody of his music (pages 578-9, 586).

"Some you will see fastened by chains like rigging; they represent a ship. The crosses themselves, on crescents, form an anchor." \*\*

She mused a while.

"Often I wish that they were ships," she confided, "and that I could sail across the sea."

#### WHERE EAST MEETS WEST

I came to the Carpathian Mountains, in a sense the frontier between Europe and Asia.

"The crescents of the Byzantine churches are not taken from the Turks, but from pre-Turkish Ryzantium. Once bastion against invasion of Hun, Avar, Bulgar, and Turk, these mountains seem to me, because of their vegetation and fauma, and their human and physical geography, the real boundary between East and West.

Twice in Poland I had been high in these mountains, once on a topmost peak. Now they lay between me and Transylvania.

I had followed the chain of monasteries through an enchanting land over hill and valley. Foothills roller-coasted before me. Then the mountains loomed ahead.

Hot and thirsty from climbing. I stopped at a railway pump. A freight train puffed at the station. From the cab of one of the engines, a grimy face leaned out, looked from me

to my cycle as if to say: "Do you expect to scale mountains on that spindly thing?"

I smiled wanly, then broadly, for he said to hop aboard. Cinders and all, what a relief to rest the kinks in my knees!

When I was set down, a long way up into the mountains, I was still far from the next town shown on my map. The climb was tremendous and night began to fall. Coming to a shepherd, I asked if the road led to Vatra-Dornei. He said it did, but motioned me not to go farther.

When I seemed to insist on going on, he became very much excited and kept re-

peating something. Other shepherds who were taking their flocks homeward joined with him and refused to let me pass.

Frightened, I retraced my way and at the first village learned they had been trying to tell that bandits were in the mountains ahead! The marauders had been stopping motorists and others on the highway. They robbed their victims and stripped them of every stitch of clothes, then let them go on their way, naked.

The next morning, on a safer road in broad daylight, with my sense of humor somewhat restored, I thought bow nearly I had come to suffering the fate of Lady Godiva.

The road wound up in serpentines, taking me higher and higher, up into altitudes where

only firs grew, and then to the highest point. I was on the dividing line of the Carpathians. Behind me was Bucovina with Byzantium's icons and incense. Ahead was Transylvania, to me then only a romantic name.

#### AN ISLAND OF SANONS

My next discovery was the most astonishing anachronism I had seen in Europe, the Saxons of Transylvania.

These thrifty and industrious folk were invited here in the twelfth century, as free-



Photograph by Donothy Houser

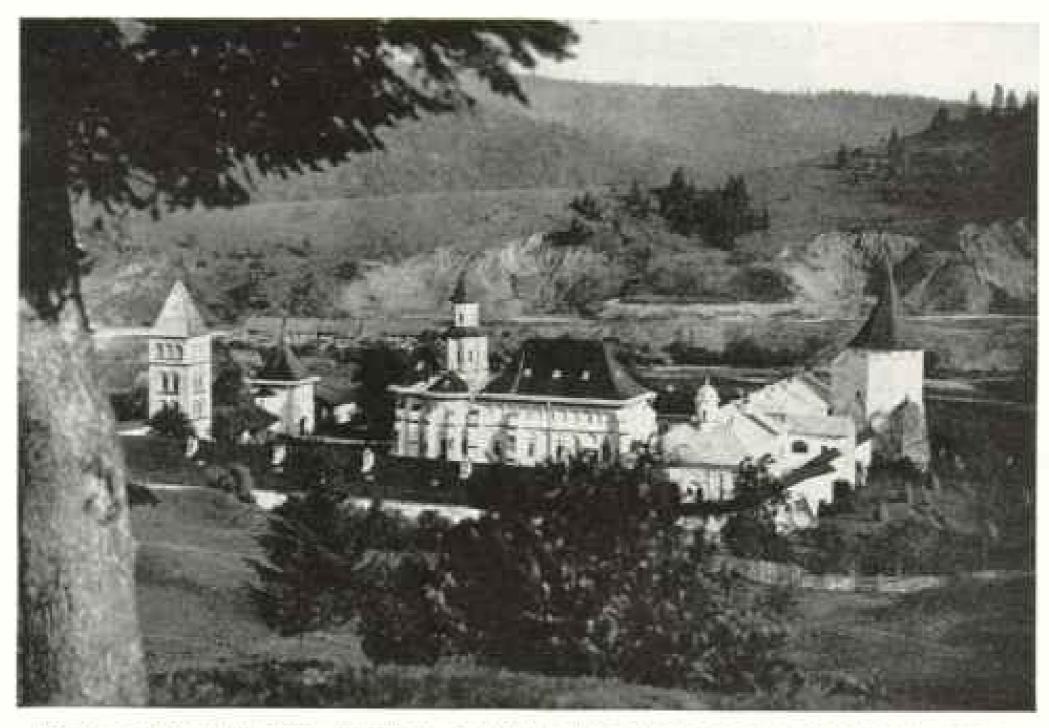
WIDE GIRDLES MEAN THEIR WEARERS HAVE BEEN CONFIRMED

Worked in different colored leathers and ornamented with hits of metal, the broad belts around the waists of the young men aid to the gainty and color of a Saxon church festival in Ghinda. In the afternoon, within a circle of shade trees, the youths and girls danced old Saxon waltzes, until the rain sent them scurrying to cover (page 569).

> men with treaty-protected privileges, to till and defend the soil and to uphold the Hungarian crown. Through siege of Tatar, Mongol, and Turk, they have retained the racial integrity, the language, and the costumes of their early forefathers,

> They called their land Siebenbürgen, from seven burgs or fortified cities, which stand today essentially as they were built.

> Down from the summit, over the steep slopes, I had whirled, the wind tearing at my hair. Only now and then had I seen a cottage, with small crosses over the gate



PUTNA MONASTERY WAS BUILT BY STEPHEN THE CREAT BEFORE COLUMBUS SAILED

The Christian ruler reared these walls as a thank offering for delivery from Turkish invasion. Tradition has it that he climbed a neighboring bill and fired an arrow into the air to determine the site. When this Romanian Province of Bucovina was invaded during the World War, Putna monks hid precious relics in a bole in the walls, allaying suspicion by piling hay on top.



Photograph by Doesthy Hormer

YOUNG BRIDES OF CISNADIORA SIT TOGETHER IN THE SAXON CHURCH

Winter is the usual time for marriages, for seldom does a hard-working farmer consider taking time from work in the fields for the frivolity of a wedding. The arrangement of these large lacy scarves is an art to which the Saxon women give much time.

and on the roof. But not a soul was in sight, no one to glance reprovingly as I let out a few yelps of sheer delight!

The winding road had brought me to the foot of the mountains. Following a torrent through an ever-widening valley, I saw the spires of a town. It was Bistrita, with a population of about equal numbers of Romanians and Saxons.

Thick-walled old German houses and Gothic Evangelical Church, Clean, frankfaced Saxons driving to market. At night waltzes floating to the stars from garden restaurants where burghers sat over their beer.

No less delightful to me than the Saxon architecture were their costumes, the arrangement and the wearing of which are a ritual.

The most exquisite of these, which differ in each community, are near Bistrita, Lechinta, Ghinda, and others (pages 559, 561, 567-8, and 576).

I cycled to Ghinda on St. Jacobus Day, name day of the village church.

The festive spirit was high. Costumes, each according to the age, sex, and rank of the wearer, gave the church service all the color and stateliness of a scene at court. During the sermon, in High German, the women sniffed their fragrant nosegays and passed them over their shoulders to expectant hands behind.

There were old Saxon waltzes in the afternoon within a ring of shade trees, until a storm sent dancers and Gypsy musicians scurrying to the community house.



Photograph by Denurby Husman

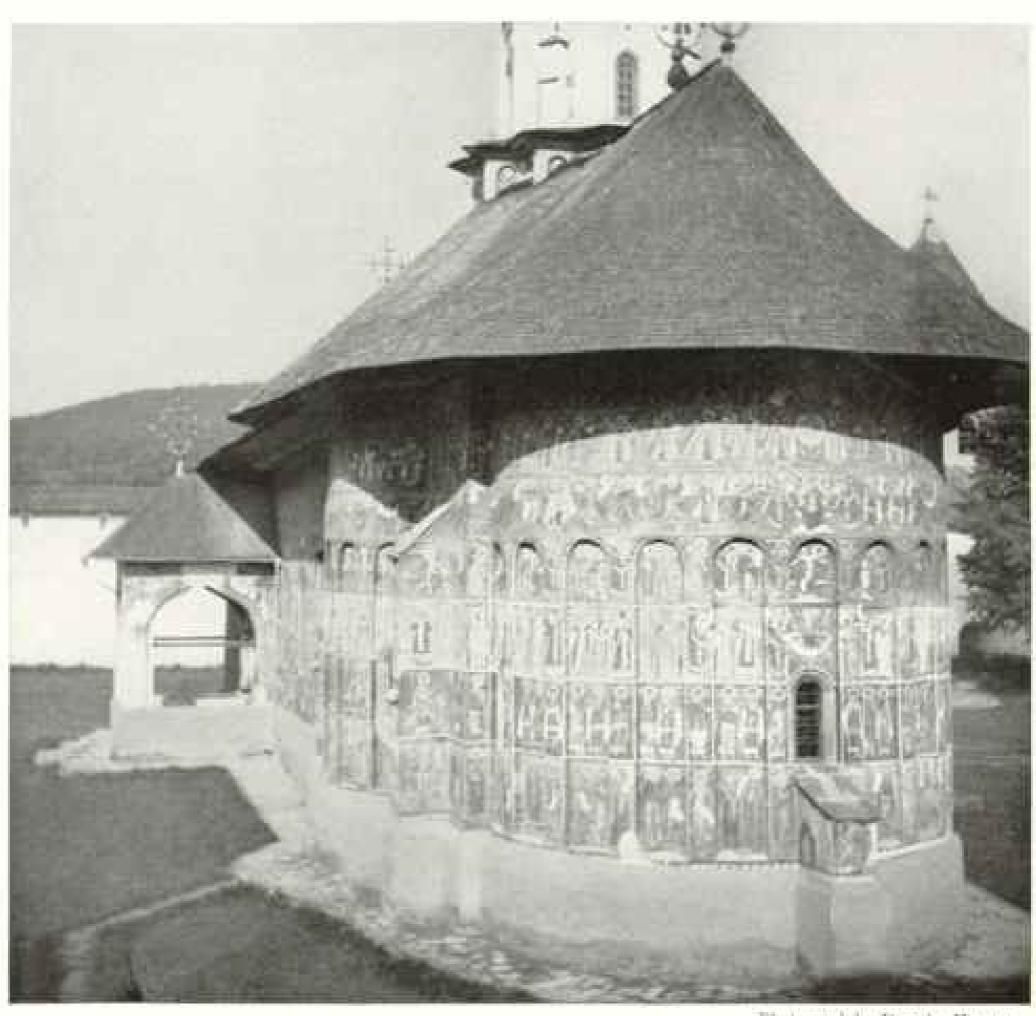
DARK IS THE GARB BUT BRIGHT THE SMILE OF A YOUNG PENITENT.

Laying aside the colors of her usual Sunday dress, this Saxon girl of Turniyor, near Sibiu, dresses in black and white on a Day of Penitence. The shawl, without which no girl goes to church, is known as a "little coat." A budge of maidenhood is the stovepipe but (page 561).

> Toward morning I jolted back to Bistrita in a wagon from a neighboring village, between moonlit fields frothing with Queen Anne's lace. The children sitting opposite me sang a few old German marching songs, then subsided sleepily.

#### A 3-CENT ROOM IN AN ORPHANAGE

At the next town I went, as I had been told, to the Saxon pastor to ask where I might find lodging. This good man eyed my bicycle and me severely, then directed his son to guide me to the orphan asylum!



Photograph by Dorothy Houses

#### PAINTED FIGURES OF ANGELS AND SAINTS ADORN THE VENERABLE WALLS OF SUCEVITA'S FAMOUS CHURCH

In seven tiers of frescoes on a jade-green background appears a profusion of prophets, hermits, martyrs, and archangels, complete with halos or golden crowns—and, somewhat incongruously, a procession of Greek philosophers. Although the church was built in 1586, the blues, reds, greens, and yellows of its frescoed walls, defying time, still form a symphony of color. It stands in the center of a walled monastery, once a refuge for Christian princes fleeing from Asiatic hordes. Here the author "parked" her bicycle and spent the night (page 559).

One of the sisters in the asylum talked to me long that night. I remarked to her that in the Saxon villages I had seen many houses with inscriptions in Gothic letters. One read: "The house is where the peasant sleeps, but the fields are his real home."

She said that was true; that the Saxons were of a farmer race, and, though many sent their sons to universities in Germany, they returned unspoiled by changes in the outside world to follow the traditions of their fathers and to till the soil.

Cycling south from Bistrita, I saw for

the first time Transylvania's strange medley of peoples, living together side by side, and yet apart.

Fortified by the Carpathians, the country is far too rich and lovely a possession, with its forests, streams, and fertile valleys, not to have been coveted.

Of all the races that here saw their day, there remain five distinct peoples: Romanians, Hungarians, Saxons, Jews, and Gypsies. At first it was confusing; but each one had in store for me a different kind of reception, and I became fascinated in unraveling their races, history, and habits.

I soon accustomed myself to returning greetings in Hungarian or German or Romanian, I could even distinguish the villages at a glance: the one wide street of the Saxon lined by well-made houses with well cranes behind the walls; the Romanian with their bright-blue houses and usually narrow streets; and the Szekler and Hungarian with elaborately carved lich gates.

PROM ORPHANAGE TO CASTLE

The character of the villages showed in their churches. The Hungarian Maria Theresa baroque churches had graceful pointed steeples. The loveliness of the fortified Saxon ones, built for defense, lies in their practical simplicity (page 573).

The Romanian Orthodox churches, in contrast, are of an ornate Byzantine basilica style.

Covered from bead to foot with the dust of the road, I was taken in by a Hungarian count and dined in a splendid palace.

That's the fun of traveling this theatrical Transylvania. An invisible hand seems to be constantly shifting players and scenes. No sooner had I had my first glimpse of Saxonland than I cycled into the midst of the Hungarians. The stage was set anew.

After paying my three cents for the bed at the orphanage, I had gone on, following the winding river through the Mures Valley and down a dusty village road lined by gates carved with flower designs and mottoes in Hungarian.

Long-horned oxen yoked to wooden carts



Photograph by Durnthy Homer

IN BUCHAREST YOU BUY ONIONS BY THE YARD

Neatly braided, the vegetables are sold in long strings carried through the streets on a straight wooden shoulder yoke. This weary old man gets a moment's rest by supporting the yoke on a vertical pole.

> lumbered along at a snail's pace, sleepily obeying the voices of the drivers who followed after.

> Intent on keeping from being jabbed by a swing of their spreading horns and maneuvering through flocks of geese and children, I came to a bend in the road.

#### A VISITOR REMAINED TO YEARS

Looking up, I saw suddenly before me a large park in the center of which stood a castle. Feeling I could not go on and leave that lovely castle behind, I steered in through the gate, over the bridge spanning what was once a most, and, as if by enchantment, an hour later found myself at a dinner table with the household of Count



Photograph by J. Fischer UP TO THIS CASTLE RODE THE AUTHOR, ON HER NICKEL-PLATED STEED (PAGE 571)



Photograph by Durothy Hoener

BUSY-FINGERED PEASANT WOMEN TURN OUT A SUIT OF HOME-GROWN CLOTHES

From flax raised on the farm and retted in a near-by river they make sturdy garments like those worn by their forefathers for generations. After the flax has been soaked and dried, it is broken against a piece of wood to remove the woody part of the stalk. Then, to soften the fibers, it is beaten again, across a kind of wooden sawhorse, and is carded on combs of iron. Next, the strands are tied into loose knots and spun by hand from old-fashioned distaffs. The woman at the left is winding the newly made thread onto a crude wooden hobbin, while the other weaves the strong, coarse linear which supplies the household needs.

Domokos Teleki (page 572).

That afternoon, at the Castle of Gernyeszeg, near Dumbravioara, I looked through the Teleki family archives. One thing that caught my eye was a letter in the handwriting of Louis XIV to Mihaly Teleki, personal envoy of Leopold I to the French monarch.

All the letters written to this first Count. Teleki, as well as the personal correspondence of a later Teleki, Chancellor at the Austrian court, were compiled at Gernyeszeg by a young man who came to look through the manuscripts and became so absorbed that he remained at the castle twenty years! In the end be went blind as the price of his devotion.

Count Teleki's hobby is archeology. He has made rich finds, in his own excavations, of Roman capitals, sarcophagi, and other fragments.

These are the more precious because, although Transylvania was in the Roman province of Dacia (whose conquest is commemorated by the

Column of Trajan at Rome\*) the barbarian hordes destroyed nearly all remnants of Roman sway.

Less remote is the Austro-Hungarian Empire. Count Teleki told me of the Empress-Queen Maria Theresa, who in her dissensions with the King of Prussia appealed to the Hungarian Magnates.

Drawing their swords, they cried, "We will die for Maria Theresa!"

\* See "Augustus—Emperor and Architect." by W. Coleman Nevils, National Geographic Magaging, October, 1938.



Photograph by Dorothy Hosmer

SANON CHURCHES WERE PORTIFIED TO WITHSTAND THE SIEGES OF MONGOLS, TATARS, AND TURKS

Many of the Teutonic villages in Transylvania have walled churches like this one at Cisnadie, near Cisnadiora, survivals of a day when settlers fived a life as precarious as that of pioneers in the Indian country of North America. In a few villages the inhabitants still store grains, vegetables, and sides of meat in the cells built into the walls (page 567).

> Most of the castles in Transylvania are of the lovely baroque dating from the time of her reign. Of these, one of the purest is that of Gernyeszeg, with its high, bellshaped roof visible from afar among the magnificent trees of the park, the rows of statuary across the lawns, and the willow tree drooping over the pool in the old moat.

#### BOOKS STRIPPED OF LEATHER BINDINGS TO MEND SADDLES

This mansion, built on the site of the castle of that first Count Teleki, Mihaly,



Photograph by Wilhelm Tobies.

THERE'S MANY A TEDIOUS HOUR BETWEEN THE SHEEP'S BACK AND THEIR OWN

If the family is to have warm woolen clothes next winter, both mother and daughter must spend much of their time spinning yarn, for this primitive method is slow. With a chair or stool as a distain, they draw and twist the wool with one hand and wind it upon a spindle with the other. Their home is high in the Carpathian Mountains, which separate the Old Kingdom of Romania from Transylvania.

who was killed in 1690 by the Turks, has passed through many vicissitudes.

In the peasant revolution of 1848, the pictures were despoiled, the inlaid floors torn up, the silk furniture carried away, and the leather bindings of the valuable books in the library stripped off to mend belts and saddles.

For five weeks I was the guest of Hungarian nobles in the castles of Transylvania.\*

Although their lands and castles are scattered from one end of Transylvania to the other, these Hungarians form a common society, closely bound by family ties. No doubt the Mikes family in the past century had something to do with this. There were 24 daughters; and they all married Transylvanians.

So I was passed from family to family, from castle to castle.

Among the most interesting of these splendid homes is the one at Brancoveneşti, a fortified chateau of the fourteenth century. Another is Count Haller's estate at Sanpaul,

\* See, "Transylvania and Its Seven Castles," by J. Theodore Marriner, NATIONAL GEOGRAPHIC MAGAZINE, March, 1926. where a battle was once fought. However, there are ancestors who escaped the ravages of war. The family portraits from five centuries back still hang on the walls.

> "GRAND OLD LADY" OF MURESENI STILL CARRIES ON

At Mureşeni (Megyesfalva), with a voice that gently commands, rules Countess Bissingen, Transylvania's "grand old lady." An enormous bunch of keys hangs at her girdle. But these keys with their formidable rattle are only a sham. Once one of the richest women in Hungary, Countess Bissingen gives away what is not taken from her.

Of her castles and mansions none remains, All that she now possesses is the 12-room studio which her artist-father spent years in adorning with elaborately carved ceilings, carved furniture, and painted porcelain. Through the combined talents of a talented family it has evolved into one of the most artistic of country houses.

The magnificent park around Mureşeni is overgrown; where once there were lovely vistas of lawn and lakes, now Gypsies camp. Though many of the trees have been cut



Photograph by J. Borman

OFF TO THE FIELDS-BABY, CRADLE, AND ALL

On a farm in Transylvania the entire family goes to work, the youngest member riding on its mother's bend. Father brings up the rear, with pitchfork, rakes, and a jug of wine (page 588).

away, an apple orchard has been spared. However, the apples are stolen before they are even ripe. Once a guard was set to It was found there was a watch them. gendarme among the thieves.

"But," he explained the day he was caught with a basket of apples under his arm, "I am the policeman!"

#### WHERE PRINCELY TRADITIONS SURVIVE

Although Countess Bissingen's estate has been reduced by expropriation to a hundredth of its former size, the household in summer takes on proportions reminiscent of other days.

Then her three daughters are there. The grandchildren are also all there from Budapest, the tots with their German governesses, as they learn their foreign languages first so they will speak them without accent.

Countess Bissingen never knows whether to have the table set for 15 or 25, for there are no telephones and guests drop in unexpectedly for dinner, tea, or for tennis, and may stay for an hour, a day, or a week.

Following these princely traditions, the household extends hospitality, besides, to noted guests from all over Europe. One of the best-known Hungarian artists had just arrived to make sketches of the costumes at Rimetea (Torockó), which, with those in Mezőkövesd, near Budapest, are traditionally held in Hungary to be the finest of the national costumes.\*

#### DANCING THE "MAGYAR SWING"

At a ball at Gernyeszeg Castle I saw that the Hungarians have retained their spirits and mirth. And I danced the csdrdds fortyfive minutes at a stretch!

In Transylvania social position is still marked, not by automobiles, but by fine horses and equipage. We went everywhere from Mureșeni by carriage.

The fourteen miles to Gernyeszeg we drove in a marvelous old "break" of three rows of seats set on springs high up in the air. Everyone in the villages and along the road raised his hat as we went by.

A short distance on the way we passed a Gypsy leading a horse.

"Whom did you steal it from?" called Countess Bissingen.

"From you!" he grinned back promptly.

\* See "Magyar Mirth and Melancholy," by John Patric, NATIONAL GEOGRAPHIC MAGAZINE, January. 1938; "Rudapest, Twin City of the Danube," by J. R. Hildebrand, June. 1932; and "Sunday in Mezőkövesd." by Margery Rac, April. 1935.



Photograph by Datothy Hanner

TRIM AND NEAT ARE THESE SAXON VOLUTIES IN EMBROIDERED GO-TO-MEETING GARB

As they char on a street in Turnisor, near Sibiu, one looks like a mirror reflection of the other—same white leather coat decorated in rust and red, same fur collar, prayer book, and ruddy-cheeked grin.

The ball was for the benefit of the Hungarian school and held in the village schoolhouse. At the beginning a few tangos and waltzes were played, but the notes came half-heartedly from Gypsy strings. Then a csardas was called for, and nothing else was heard until five in the morning.

The csardas is the most gregarious of dances. One not only looks at one's partner but keeps an eye on everyone about. Comments are freely exchanged, and the couples crowd as close as they can around the musicians, whom they prompt with word and gesture.

Just before daybreak we started back, passing a caravan of Gypsy wagons lighted by flaming torches that danced in the dark. Two roebucks bounded across the road ahead of us. As we neared a town in the misty dawn, peasant women burried by with huge baskets of asters and chrysanthemums on their heads.

"PLANKED" MEAT AND CHIMNEY CAKE

One day we went to a Flecken party at Szent Ivany, Countess Zichy's estate. Driving back to back in the "hick-ory," we forded the Mures and passed through villages where peasants were breaking, carding, and spinning silvery bemp.

At Szent Ivány we baited craynish and spread a picnic lunch at the side of the stream.

The Flecken, grilled meat, was served on thick squares or plaques of wood. The proper way to eat it is to cut off a thin sliver and dip it into a sauce of sour white wine and paprika.

As a sweet there was "chimney cake," made by wrapping dough around a rolling pin, sprinkling it with sugar, raisins, and spices, and turning it slowly over live coals. This hollow cake is also known as the "wine slide" because it calls for wine, more cake, and still more wine.

In Transylvania are some of the finest hunting reserves in Europe. I was invited in the fall for the hunt at the mansion at Dumbravioara (Sáromberke). Transylvanians, ardent followers of the chase, came from far and near. There were other guests from Budapest, Germany, and Scotland.

#### OFF FOR THE HUNT-IN CARRIAGES:

In the early morning six carriages drove us to the forest through which lanes had been cut and the posts for the hunters marked on the trees. Forty or fifty beaters, village men and boys, formed a long line and. shouting and beating the bushes, drove the game up toward the hunters' guns.

Besides several deer that raced by (the season was closed), three wild boar charged the line. No one dared shoot: double-barreled shot-

guns were all the hunters carried for the small game, and a wounded boar would have made bad company.

After five drives we were served lunch from huge pots and platters kept steaming on a pinewood fire, around which we sat or lay on fur blankets spread over the ground.

That night there were 35 guests at the long table in the dining hall. Behind the dinner jackets and bare shoulders stood rows of silent figures; cuirassed Saracen and Tatar armors and helmets, with spear and scimitar in gauntleted bands. The walls from the floor to the 20-foot ceiling were



Photograph by Wilhelm Tublen

A GYPSY BABY, ON MOTHER'S BACK, STARTS DOWN THE LONG, LONG ROAD OF VAGABONDAGE

Gypsies learn to wander even before they can walk, bumping along in crude cradles slung on the backs of their dark-skinned, sinewy mothers, as in this scene near Ogradina, on the Danube River,

> hung with a terrifying host of horns and heads, many of them of exotic animals, for several of this branch of the Teleki family were famous hunters and explorers.

> The hunt lasted three days at Dumbravioara, was continued at Szent Ivány, and so went the rounds. Some of the more fervent then went higher into the mountains for the bear which for centuries have made hunting in Transylvania famous.

> I had frequent opportunity, such as on these hunts, to see how close the Hungarian peasants are to their nobility, upon whom they have always depended.



Photograph by Denethy Husmer

NEAR THIS OLD TOWN CAPTAIN JOHN SMITH, OF VIRGINIA FAME, LOPPED OFF THE HEADS OF THREE TURKS

For his bravery in battle, the fire-eating Englishman was knighted by the Duke of Transylvania in 1603, about four years before the soldier of fortune sailed for America with the Jamestown colonists. Much of Sighişonra, called Schässburg by its Saxon inhabitants, is little changed since that versatile hero's time. Beyond the square, crowded on market day, rise gabled, steep-roofed houses, narrow winding steps, and in the distance the "Tower of the Hour" (page \$86).

The Romanian peasants, despite their centuries under Hungarian rule, have maintained their own rather easy-going character. Less warlike than Turk or Tatar, they have contrived, nevertheless, not only to survive but to multiply in the land.

#### "I LIVE FROM YOUR GARDEN!"

The Gypsy mentality is even more interesting. One day, walking for a swim in the Mures, we found a Gypsy stealing in the vegetable garden. The vegetables were taken from him and he was scolded for being a trespasser and a thief.

"Thief!" he cried indignantly. "Why, I

live from your garden!"

Another day the forest guard caught two Gypsies stealing wood. Taking their axes

from them, he made them carry the wood into the village. This incident had consequences no one had foreseen. We were at tea when a servant excitedly announced "an Excellency" to see the Countess.

"An Excellency!" exclaimed the Count-"What Excellency?"

"A Romanian Excellency,"

Instead of having him shown in, the Countess went out into the hall, finding there the strange visitor, a swarthily handsome and elegantly dressed individual.

It was a Gypsy king! He had come to protest against the maltreatment his subjects had suffered at the hands of the forester.

It is impossible to count the Gypsies in Romania. The sedentary ones are not distinguished officially from the other Romanian citizens and it is difficult to lay a finger on the nomads. However, the estimate is generally around a quarter of a million (pages 566 and 577).

Though the Gypsies submit to the Romanian administration, their true allegiance is to their own leaders. The highest often live in cities, are rich, and surround them-

selves with luxury.

Each tribe has its own chief, who is chosen not only for his fighting and thieving ability and his other Gypsy virtues but for being most elegantly dressed! Once he is chosen, his word is law.

#### GYPSIES SPECIALIZE IN TRADES

Everywhere I cycled past Gypsy camps, and on lonely roads when I saw them I pedaled faster till they were safely behind. On the outskirts of many villages their wagons have given way to hovels where sometimes dozens of families live as a part of the permanent population. These sedentary Gypsies have their special trades. Everywhere it is the Gypsies who make the clay bricks in their primitive open-air ovens.

The Caldarari make the huge copper kettles which they peddle from village to village, and repair the pots and pans (page 583). The Ferarii put the hoops on cart wheels and shoe the horses. Many of the Gypsies who settle down to a sedentary life become tubercular.

I learned that some of these sedentary Gypsies are honest, that they sometimes keep their word, and are very humble in their attitude. However, about some of the nomads, especially the wandering tribes of Netoti, I heard the most horrible tales: of women practicing "sorcery," and of children kidnaped and mutilated to make them pitiful to the passers-by from whom they beg.

Once, when my weeks with the Hungarians had come to an end and I was on the road again, toward Rimetea, I walked my bicycle through a crowded village fair. The cycle was given a push, and when I looked around, my pump, as if by magic, was gone. There were several ragged Gypsies within arm's length, but who could tell within which bundle of rags my pump was hidden!

On I went, via Cluj, ancient university city and from time immemorial a center of Hungarian culture in Transylvania. For four days I stayed at a university student house for Romanian girls. We had rum in our morning and evening tea and were served by pretty barefoot peasant girls with bright-colored scarves over their hair, which fell in a single braid down their backs.

#### RIMETEA, FAMOUS FOR COSTUMES

To reach the village of Rimetea, noted for its Hungarian costumes, I climbed the valley of the Aries River, whose sands flash brightly. Perhaps this was one of the sources in Transylvania which (after Trajan conquered the Dacians) provided the declining Roman Empire with gold.

In Rimetea I stayed with the family of the doctor. About the room where we sat after dinner were shelves with books in six

languages.

The doctor explained that the costumes I would see in the morning had a decided oriental stamp, derived from the Magyars' Asiatic origin.

Similarly, he accounted for the tulip motif which I had seen everywhere on the carved gates and in the embroidery of the

Szeklers and Hungarians,

"This, in Transylvania and Hungary, a land where the tulip never grew, speaks eloquently of the passage of the Magyars from central Asia, where the tulip is indigenous."

We were interrupted by a wagon clattering into the courtyard. The doctor was called away to a difficult birth in the next village. They drove off into the night with lanterns swinging, the doctor having provided himself with a supply of extra candles.

In the morning the women came across the square to the church. Their costumes were of a truly barbaric splendor, with the heavy headdress, pleated red boots with the upturned pointed toes, and the patterned kerchief at the girdle showing whether the wearer was unattached, engaged, or married.

#### WATER BUFFALOES BEASTS OF BURDEN AND MILK

The only Sunday traffic was the geese, the pigs, and the water buffaloes driven through the streets. These strange-looking creatures I had seen everywhere in Transylvania, grazing in large herds and wallowing in the rivers. With the oxen they replace horses in working the fields and drawing wagons, and their milk and butter are valued for their rich flavor and high fat content.



Photograph by Dorothy House

GOOD SOUP, GOOD BREAD, AND GOOD APPETITES AT A CHURCH FEAST IN PETERS

Thrifty, hard-working Saxon farmers regard their bread as the most important part of their diet; in some villages meat is exten no oftener than once a week. The white scarf is worn over the black-and-white bonnet only when attending church (page 559).

To the wayfarer these Asiatic water buffaloes, with their black, misshapen bodies, flat borns, flat heads, and lowering looks, are the most astonishing of the exotic notes in the Transylvanian scene (page 561).

The days were winy with apple scent and huge flocks of ravens swept over the browning fields of rustling corn as I sailed south to Alba-Iulia over the London-Istanbul highway. For once I had a good road!

In Alba-Iulia, young Baron Banffy took me to the Catholic boys' school he attended, introducing me to the Regent, who invited me to have supper with the priests.

We had time to see the burg atop the fortressed hill, a cradle of Transylvania history, on which the school stands. Here, alongside the venerable Cathedral of St. Michael, the Romanians built their immense neo-Byzantine coronation church for the crowning of King Ferdinand and Queen Marie in 1922.

The Director of the theological students showed me the Batthyany Library, one of

the richest in Romania. What exquisite illuminated manuscripts, some as early as 800! The Codex Aureus is one part (Matthew and Mark) of an Evangelicum, of which the other part, Luke and John, is in the Vatican.

I arrived a little late to sup with the priests. They all stood when I entered the refectory. Those nearest came to kiss my hand and I was led to the head of the table. I pretended not to be embarrassed—but it was the first time I had been the center of attention of so many priests!

After supper the Regent said I should stay at the school overnight. In the morning I went with the 250 boys to the service held in the low-vaulted chapel.

#### VILLAGES WITHIN SIGNAL-FIRE DISTANCE

It was the last I saw of the Hungarians in Transylvania. It made an unforgettable impression on me—those boys kneeling in silent prayer, with a beam of light cutting across the vault above their bowed heads.



Photograph by Dorothy Hormer

YOUNG ROMANIANS DANCE THE "WHIRL" IN A TRANSPEVANIAN VILLAGE NEAR TURDA

Rightly named is the Invaritta, a swift and breathless national dance, in which strong-muscled farmers swing their partners to the strains of violin, bass viol, and guitar. The dancers abandon themselves to the music, stirring up a mist of sun-shot dust as they whirl, the boys getting in a few unbelievably complicated steps as they go faster, faster.

were the spires of the Saxon churches. More than 200 of these fortified churches still exist, scattered through the 260 Saxon villages. In olden times they were, when possible, so placed that almost every one was in sight of at least one other so that, in times of trouble with the Turks, warning signals by fire could be flashed from the tower of one to that of the next (page 573).

One of these churches which I stormed sometimes it seemed there were still watchers in the towers-was in Cristian. At the Sunday service I was struck by a queer sight. The Saxons in their gay colors sat in every other row; alternating with them were rows of people dressed in somber black.

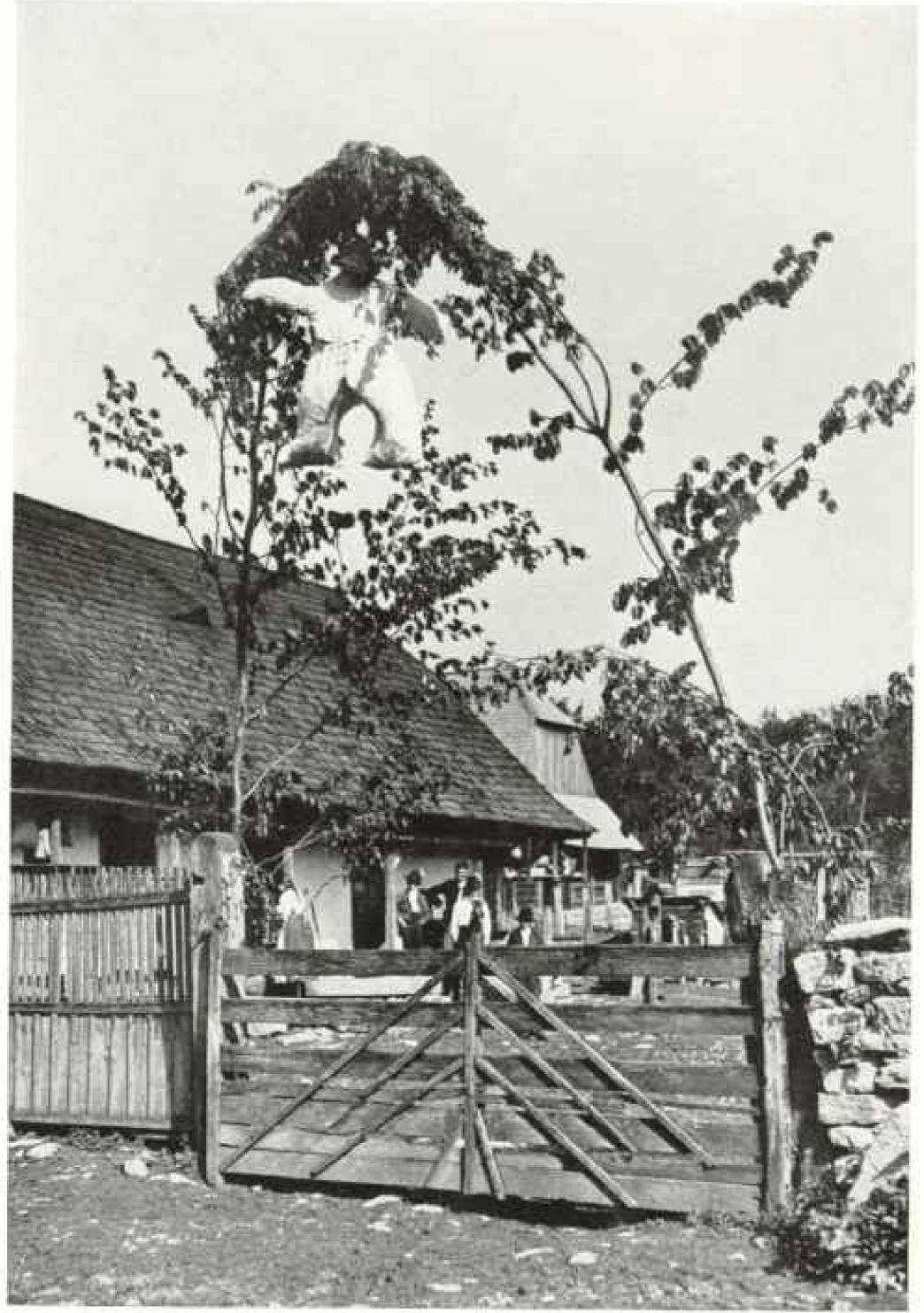
The director of the Evangelical school, as we sat in his walled-in garden, told me about these people.

"They are the Landlers," he said, "descendants of people from five Austrian prov-

As I cycled southward my milestones inces who in 1734, under Charles VI, were given the choice of adopting the Catholic faith or losing their homes. They chose the latter and wandered into Transylvania, settling in this and two neighboring Saxon villages. They retained their own dialect, as we have ours; so to understand each other we must speak High German."

Before us two plates were set, heaped with perfumed muscat grapes which had been brought down the night before to the singing and merriment of the traditional Saxon wine harvest. He went on to tell me of the church itself, whose present form dates from 1490.

"It fell into neglect in the early eighteenth century, there being no funds to repair it because the town was reduced to 28 families as a result of the cholera, plague, and Turkish invasions. The church book in 1737 records: 'The church resembles a robbers' den; and the birds of the heaven can fly in and out." "



Photograph by Denis Galloway

HIGH HANGS A STRAW-FILLED EFFIGY, NOT TO SCARE CHOWS BUT TO MAKE SPORT OF A BUCOLIC BRIDEGROOM

Many a broad, good-humored joke was aimed at the happy, blushing pair during a Humarian wedding near Huedin. Romania, where two saplings bent together at the farmyard gate formed a rural triumphal arch. "Wheat, wine, peace, and a good-looking wife!" In these words the Hungarian farmer sums up all that he asks of life.



Photograph by Dorothy Hounes

### THIS GYPSY WOMAN PARKS HER SHOES WHILE SHE WORKS

Footgear is left off at the slightest excuse, for Gypsy feet are far more comfortable free. From house to house in Bucharest she goes, brightening up old pots, pans, and tubs. Building a wood fire and melting metal, she applies a new coat to the inside of the atensits (page 579).

My interest aroused, I began delving into Saxon chronicles for myself. They made marvelous reading.

#### ETIQUETTE NOTES IN THE SAXON CHRONICLES

"Any neighbor who in Walach-wise shall loll with his elbows on the table, instead of sitting upright, is to be fined six denars."

And then again, in winter there was the spinning meeting at which the young men met and chatted with the lassies while the spinning wheel hummed. There was allowed no word or action that was not comely, and, "If a youth presumes to touch or take out the brooch from the bodice of a girl, he shall be fined 30 denars."

From Sibiu, seat of the Evangelical bishopric, I made excursions to the villages lying in the broad valley, or toward the high peaks of the Carpathians that give Sibiu its marvelous setting.

In Turnişor, near Sibiu, the pastor was a distinguished figure, in his black-velvet beret, with his white mustache and Vandyke, and the Saxon vestment of black with a row of silver buckles down the front.

And in Carta, in the valley of the Olt,

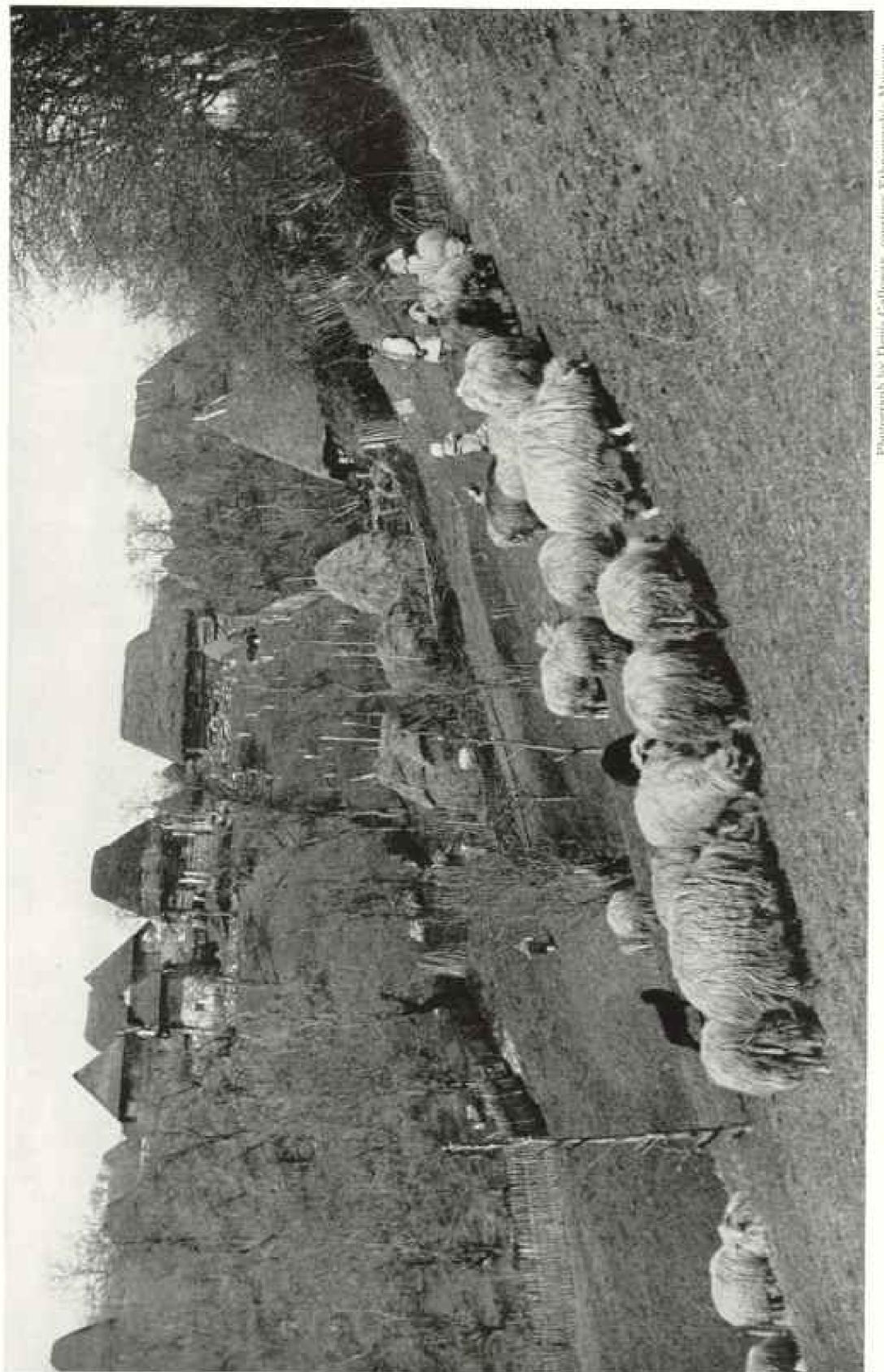
there are the ruins of a Cistercian monastery with its vivid chronicle of being razed thrice by Turk and once by Mongol, leaving only small portions of the original walls. At present a little Saxon church stands within the roofless walls.

From the window of my room in the pastor's home at Carta I had a gorgeous view of the Fagaras Mountains, whose summits, rising over 8,000 feet, were blanketed by mists and whose flanks were purple beyond the green pasture lands.

Fagaras is the seat of an ancient Romanian fief. In the folds of the Fagaras and Sibiu Mountains lie many Romanian villages, secure in their high retreats.

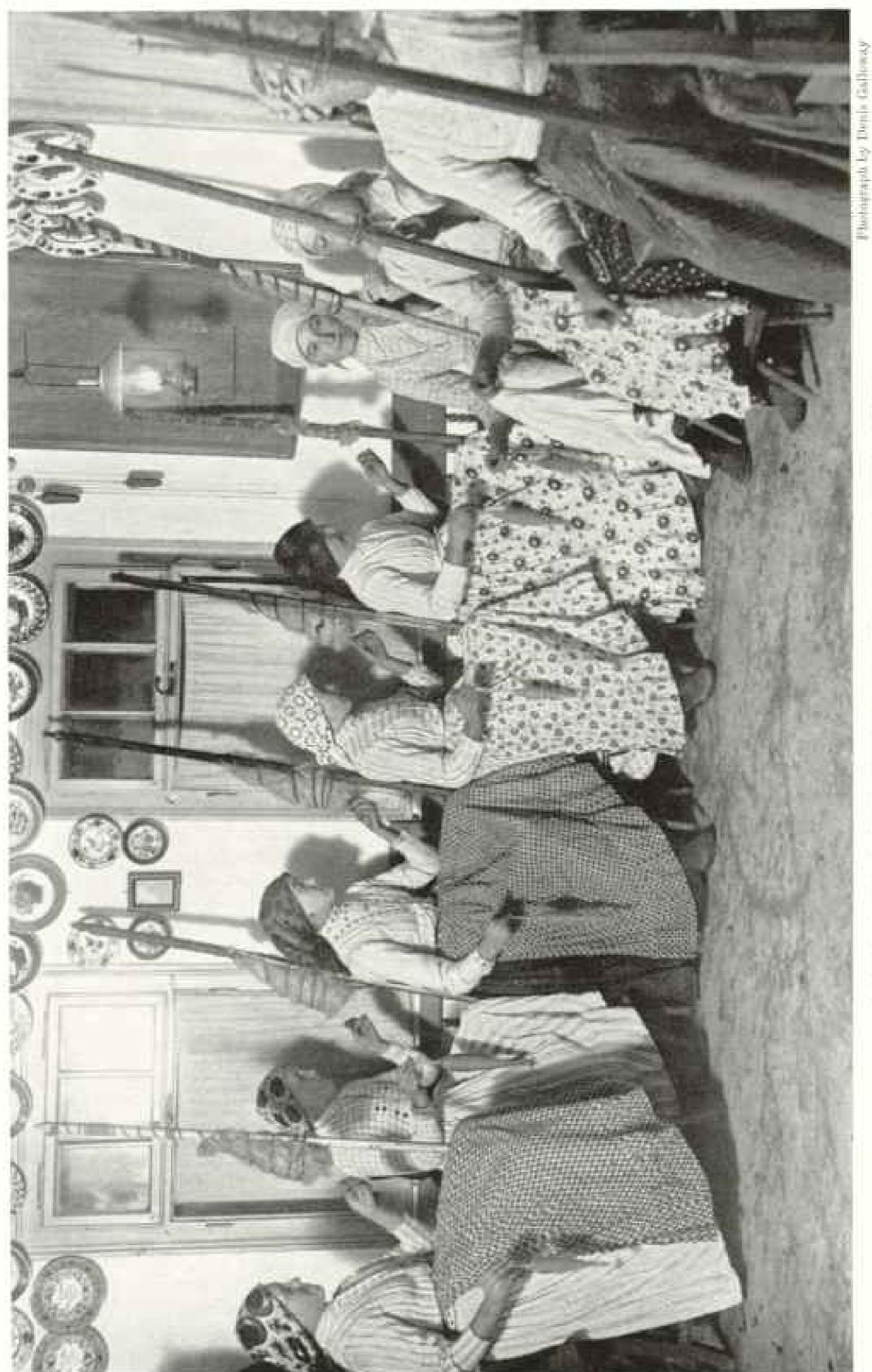
One of these, Răşinari, I reached on my cycle. A pretty face at a window watched me curiously: I must have looked hot and weary. The girl, Rica, asked me to come in for a dulccata, the traditional one spoonful of preserves on a tiny dish, served with a glass of water.

Refreshed, I went with Rica to the Sunday afternoon promenade, she drawing envious glances for her costume, the richest in the village, and I, astonished looks for my divided skirt (page 558).



Photograph by Denta Calloway, courtesy Ethnographic Museum THE MOUNTAINEER'S LIVING LARGELY DEPENDS PLEECE UPON THIS "GOLDEN

Not even the occasional black sheep is scorned, for its worl is used in making the jet-black embroidered aprons worn fore and aft by the women (page 558). Here a present surveys his flock, asfe in the fold at a Carpithian village not far from Huncdoorn. Guarded by lean, long-jawed mongrels and by shepherds with staffs and tuneful pipes, the herd is pastured high in the mountains. Several shepherds stopped the author list she fall a victim to a band of thieves (pages 565-7),



HE THE SPINNERY WHEN THE YOUNG MEN ARRIVE MERRICH WILL

To belighten long winter evenings of spinning wool, swains drop in and join the unmarried girls. Then spirits rise, and jokes and songs. The girl who drops her spindle must pay a canson for its return—most likely a kiss. The Hungarian traditions of the spinnery are dying out now as more and more villagers buy machine-made cloth.

There had been a wedding. The procession marched among the promenaders, who followed to the community house and joined in a dance that afternoon.

The musicians came from a Gypsy village higher up in the mountains, bringing with them a violin, cello, flute of Pan, the large six-stringed cobza, similar to a mandolin, and the timbal, a type of rudimentary piano played with two mallets.

The dancers were striking in their black and white costumes. Rica left my side to

go hand in hand with them.

When she returned, I asked why they had Gypsy musicians instead of Romanians. She was surprised at such a question, as if musicians could be only Gypsies.

Most curious is the use the Romanian peasant, who spends much time telling tales and singing, makes of his improvised songs.

"The worst thing that can happen to a girl in the village," said Rica, "is to be sung about. A girl who has been 'sung'

Those who are sung about have their deeds and misdeeds immediately known by everyone. A married couple thus brought before the public show their faces with shame. For others the song carries a punishment or menace. Thus the song becomes a kind of social pillory.

Of the maneuvers going on around Sibiu I had received warning. Getting into town was one thing, but leaving it another. I found myself shut up in a city whose streets swarmed with Romanian officers in their

elegant uniforms.

Only persons with unobtainable special permits could leave town afoot, by cycle, or auto. Finally I arranged to get out on a bus which took me well along the road to Medias.

In Mediaş a rich deposit of natural gas had become ignited, shooting a large column of flame and smoke high in the air, illuminating the sky for miles around. In the winter birds and animals left the woods to gather around the fire.

I saw also the hot salt-water lake, Lacul Ursului (Bear Lake), at Sovata. This deep lake, in which the water is of high salt content, lies in the mountains, and is surrounded by rock-salt cliffs.

Mountain streams flowing into the lake spread a surface of fresh water over the top, and the sun's rays, passing through this layer of fresh water and striking the salt water, are absorbed, generating a high temperature a few feet down. Floating buoyantly on this lake and putting a foot down into hot water is a sensation I shall not forget!

From Medias I cycled on to Sighisoara (Schässburg), fascinating Saxon town, with its hill-top stronghold. There vaulted passages and houses packed close around the Clock Tower Gate make of the latter a veritable fortress. Citizens of centuries past believed the bright colors of its houses—buff, green, rose, blue—brought happiness and luck. A minute train seems to come out of nowhere and puffs down the main street, past the square, tooting saucily, then disappears around the corner between the gabled, steep-roofed houses (page 578).

The walls circling the burg are guarded by watchtowers, each built and defended by one or another of the medieval guilds.

Late one afternoon I opened a gate in the wall at the foot of the Pewter Tower, the most beautiful of them all, onto a narrow parapet overlooking the town. A tiny house clung to the wall in the shadow of the tower. It was the studio of a young artist who, when he recovered from the surprise of my intrusion, offered me a glass of must (juice of freshly pressed grapes).

#### NEEDLEWORK FOR THE "HEAVEN BED"

For two days out from Sighişoara I was chased by storm clouds which rolled low over the mountains. I arrived in Braşov in downpouring rain. At the home for Saxon girls studying in Braşov, I practically disrupted the supper hour, girls of all ages inventing excuses to come out into the hall to see me clean my muddy cycle.

During my stay the girls vied with each other in teaching me various stitches used in the beautiful Saxon handwork in their costumes, table linens, and the cases for the down pillows which are piled ceiling high on the ceremonial "heaven bed" in Saxon

peasants' homes.

The Saxons' renowned Black Church is in Braşov. Started in the fourteenth century, it was burned in 1689, leaving only the foundation of the tower and the walls blackened with smoke, from which the church takes its name.

The interior walls are hung with 119 Turkish carpets brought by traders from the Orient. Certain ones with a medal-lion design of stylized flowers are called "Siebenbürgen carpets," being known in Europe as coming from Transylvania, after having been brought from the Orient across the Carpathians through the Predeal Pass.

My route had brought me to the foot of the Carpathian wall. This I must cross, reversing the way of history, going toward the lands from which had come all the centuries' invasions, and also toward the end of my journey.

From the mountain village of Predeal at the summit, I started the long coast down through the stupendous pass, following the torrent of the Prahova. About an hour of this and I was so nearly frozen I stopped at an inn to thaw out. On down I rode through Busteni, where just a bit above the road the fir trees were already white with snow.

Sinaia, where King Carol has his summer residence, was in gala array. It was Crown Prince Michael's sixteenth birthday. Royalty and high military authorities from all over Europe had gath-

ered to see his promotion to second Heutenant.

The setting was dramatic. The brilliant uniforms of the attaches, and the fluttering pennants of the troops as they swept across the parade ground, rivaled the blaze of gold, bronze, and scarlet of the forest which covered the mountain slopes up to the gray rock peaks that jutted through white clouds into a sky intensely blue.

I had crossed and recrossed the Carpathians. The day after leaving Sinaia I



Photograph by Dorothy Hosmer

A BIRTHDAY FOR CROWN PRINCE MICHAEL—AND A KISS FROM HIS FATHER THE KING

An autumn breeze sweeps the parade ground at Sinaia and the blue-yellowand-red tricolor of Romania snaps and flutters on its eagle staff as the tall young heir to the throne is bonored on reaching the age of 16. On this occasion, October 25, 1937, Prince Michael ("Mihai" in Romanian) was promoted to the rank of second lieutenant and given paternal counsel on his duty to King and Country. Carol II, the reigning monarch, is a grandnephew of Carol I, German Hohenzolleen founder of the dynasty.

> came down onto the plains of the Old Kingdom of Romania, known as the "Regat."

> A straight road brought me to Ploesti, chief center of refineries for those oil fields which are major factors in Romanian politics. That night I stayed at the Standard Oil Company "boarding house," speaking my first English in many a week.

> Then I rode on into Bucharest, the end of my trek, for winter was upon me.

With all the miles I had cycled, I hadn't had to change a tire.



Photograph by J. Berman

EVEN THE GIRL AND THE LITTLE BOY HAVE HELPED IN THE HARVEST FIELDS

Romanian peasant women shoulder a scythe or a rake and work side by side with their husbands, brothers, and sons. The youngster with the wooden pitcher not only plies a rake but also serves as water boy. Laced sandals recall the footgear worn by Roman soldiers who once occupied this land,

In Bucharest I learned that "all roads lead to Constantinople"; and I bought flowers from Gypsies whose grandfathers were slaves.

My first impression of the city changed as I learned more of the background of this Balkan capital. In appearance it is entirely Western, but underneath the surface there is the eternal East, with a strong undercurrent from the days of Turkish domination.

Most delightful is the singing in certain of the Orthodox churches.

A gay note is given the capital by the Gypsy newspaper, fruit, and flower venders who, clothed in rags and sometimes barefoot even on winter's coldest days, are carefree and irrepressible. When begging, certain of their poses personifying "Cold,"
"Distress," "Hunger," etc., might well provide rich inspiration for a Russian ballet.

It is inconceivable that many of this race, to whom freedom is as necessary as the air they breathe, were for more than 400 years slaves of boyars, clergy, and individuals, who held over them the rights of life and death.

Not until about 100 years ago did this oppressed people obtain their freedom, and could roam again in true Gypsy fashion, as "a leaf blown by the wind."

And so I, too, in my wanderings, wait only for the spring to set me on the road again—from Bucharest across the flats, over the mighty Danube, to the Black Sea!

## THE PANTHER OF THE HEARTH

# Lithe Grace and Independence of Spirit Contribute to the Appeal of Cats, "The Only Domestic Animal Man Has Never Conquered"

#### By Frederick B. Eddy

Formerly President, Siamere Cat Society of America and Empire Cat Club of New York

BESIDE me in his favorite chair sits
Toby, my Siamese cat.
He and I have been friends for
more than nine years, but always on a basis
of complete equality. Like the rest of his
kind, he would tolerate no less honorable a
relationship.

I have taught him to roll over, as one teaches a dog, but he obeys my command only when it pleases him to do so. He understands me perfectly, yet often when I am most desirous of showing him off he flatly refuses to humor me, merely gazing at me in slightly superior fashion as if to say: "Aren't you making yourself a little ridiculous by being so insistent?"

It is this distant attitude, this air of selfsufficient independence and even superiority, that constitutes for numerous cat lovers the unique appeal of their pet.

Indeed, many celebrities who have numbered puss among their familiars have felt that the cat was the dispenser of favors rather than the man.

"When I play with my cat," observed Montaigne, "who knows whether I do not make her more sport than she makes me?"

#### THE UNCONQUERABLE CAT

A writer who is widely known as a lover of dogs once put it another way. "The cat," he said, "is the only domestic animal man has never conquered.

"Take a human baby, a puppy, and a kitten, put them on the floor and bring danger near. The baby will cry for help. The puppy will roll over on its back, wave its paws in the air, and beg you not to hurt it. But the kitten will arch its back, spit, and prepare to fight. You can't conquer a cat."

This gentleman went on to bemoan the trait, remarking that because of its unconquerable nature the cat, unlike the dog, cannot be trained to do any useful work, apart from its purely voluntary pursuit of rats and mice. As to useful work, it is well to reflect that if all the cats in the world should die tomorrow the rodents would come close to inheriting the earth.

As long ago as 956 A. D. laws for the protection of cats were passed in Britain, since in safeguarding food from rats and mice they have no equal. During the terrible Black Death epidemic in Europe the relative abundance or scarcity of cats in various localities was found to bear a distinct relation to the prevalence of the scourge, the rat-borne bubonic plague.

#### PUSS ON THE PAYROLL

The United States War Department once engaged "ten necessary cats" to keep rodents from nesting in some 8,000,000 yards of airplane and balloon fabrics—and incidentally received an object lesson in the wholehearted habit of the feline tribe to "increase and multiply."

Within a few months the number had risen to "9 cats and 12 kittens," causing the disbursing officer to raise his official eyebrows and write a letter expostulating as follows:

"While it is to be admitted that the maintenance of such a force of cats is of advantage and tends to preserve Government property, such a radical increase in the number of cats being maintained at Government expense makes it fitting to inquire where this increase is going to stop, and as to whether or not the attention of these cats has been given entirely to the elimination of rodents; also as to whether this increase, if continued, will not place an undue burden on the Government in view of the probable exhaustion of the supply of rats, and the necessity of purchasing unlimited quantities of cat meat."

"The natural increase," came the answer, "had not been foreseen and could not in any way be regulated."

Two weeks later the disbursing officer was writing again, this time to protest that



Photograph from Pictimes, Inc.

A "OUTEN" SEEMS TO BE CONDUCTING HER OWN ORCHESTRA

The little Persian "Cleopatra of Undonna" reveals a temperamental spirit at a show in Melbourne, Australia. The ancient Greeks apparently were familiar with feline fury, for they called the cut "tail waver" or "the waving one."

the records now showed "9 cats and 17 kittens,"

Just where the "natural increase" finally stopped the official communications do not indicate, though they make it abundantly clear that the storage depot's rat and mouse population was soon entirely wiped out.

One of the best-known professional mouse-catchers is Minnie, on the payroll of the Standard Oil Company of New Jersey. Every month she draws \$3.20 for milk and salmon, and she looks like a lady who loves her job (page 632).

#### FOUR-POOTED WORLD CITIZEN

Despite its yeoman work as a rodent exterminator, however, the cat, unlike most domesticated animals, justifies its companionship with man not primarily by its usefulness but rather by its society. As a pet it makes itself at home in drawing room or humble kitchen, on a tenement fire escape in the light of the moon, or on silken cushions at a cat show in a sumptuous hotel.

In the home of an aristocrat in London's Berkeley Square two Siamese cats serve as watchdogs; in Siam the cat is worshiped in the temples; in Egypt it was once adored as a goddess; in old Mexico it served as mouser, philosopher, and friend; in Australia the cat is a household familiar; in fact, geographically it is well-nigh universal.

Whence came this "tiger in the house," this strange, aloof, condescending animal whose charm has captivated such diverse characters as Cardinal Richelieu and Theodore Roosevelt, Pope Pins IX, Colonel Lindbergh, Ronald Colman and Saint Gertrude? In general, our modern breeds of cats are doubtless the descendants of wild kittens brought home by prehistoric hunters as

pets for their troglodyte children.

In Egypt the cat was domesticated from the earliest times of which we have record. It was venerated as sacred to the cat goddess Bast or Pasht (Pakht), and countless mummies of sacred cats have been found. In their tombs have been discovered mummified mice, doubtless provided as food for the cats in their other life.

Phoenician sailors and Roman soldiers, adopting pass as a mascot in Egypt, probably helped in its distribution to the European mainland, to Britain, and to other parts of the ancient world, where it mingled with the descendants of local varieties of cats that once were wild.

As seagoing rat eradicators, Old World cats undoubtedly were carried to America in the early exploring and trading ships. Incidentally, many a nautical term owes its origin to that four-footed sailor, the ship's cat. They range all the way from "cathead," to which the anchor is hoisted, and "catted" while at sea, to the dread "cat-o'-nine-tails" with which the sailors of other days were flogged before the mast. Even the huge modern dirigible is equipped with a "catwalk" within.

#### "CARESSING THE TIGER"

"God made the cat," wrote Méry, "so that man could have the pleasure of caressing the tiger."

There seems little of the tiger in the silken-haired aristocrats that grace our cat shows, which are portrayed in the accom-

panying color plates.

Yet even in a cat whose ancestors have been domesticated for many generations there remains something of the clusive mystery of the wild. And, if occasion demands, the cat can revert to its natural state and find a living far more successfully than most other domestic creatures.

In the meantime it suffers itself to be fed and cared for by man, apparently considering that any debt on its part is more than repaid by the boon of its society!

Madame Jules Michelet once boasted that she had owned a hundred cats.

"Say rather," her husband retorted, "that a hundred cats have owned you!"

In making the remarkable series of fullcolor photographs which accompanies this article, the National Geographic Maga-



Photograph by New York Dudy News

A "POLE-CAT" IS "PIPED" DOWN
Having climbed for reluge to the top of a pole
B. New York City, this sitter could not be per-

in New York City, this sitter could not be perstuded to descend. At last a police patrolman clambered part way up and snared the trembling fugitive with a metal pipe rigged with a loop.



C Donald McLrish

THE MEAT LINE FORMS IN THE ROMAN FORUM.

A guard is busy at his daily task of doling out supper to a colony of cats that has taken up residence among the ruins of the ancient Forum Romanum. In modern Rome, pass is seldom absent from barracks, museums, factories, and even public offices. Italians are particularly fond of cats, and the patrols of strays are sure of a backdoor "handout" if rat-hunting is poor. The Rome society for the protection of animals conducts a veterinary clinic where pets of persons unable to afford the fee are treated free. Behind the statue of a vestal virgin appear the columns and portico of the Temple of Faustina.

ZINE's photographer, Willard R. Culver, discovered that cats are as temperamental as any movie star.

## CARDBOARD CATS USED AS "STAND-INS"

To avoid making puss wait in a nerveracking glare during arrangement of lights and shadows, "stand-ins," or substitutes, were used, after the manner of Hollywood except that these were of cardboard.

"When finally we were ready to shoot," says Mr. Culver, "it was always a question whether our subject would be in the mood

to oblige.

"Invariably I had to introduce myself; we had to become formally acquainted. Any attempt by a total stranger to place the animals before the camera and the fear-some array of lighting equipment would frighten them and defeat any possibility of obtaining a picture portraying their beauty and normal serenity.

"With a bit of salmon or catnip, sometimes liver, approximate friendship could be developed, though many times shortlived. A false move on my part would change the most polite and complacent pussycat instantly into a defiant and combative creature that revealed the savagery

of the jungle.

"Often, scared and suspicious, our subject fled. Then, on hands and knees, I found myself trying to coax a prize-winning Persian from her dark retreat with dulcet calls of 'Kitty, kitty, kitty—nice kitty' my only answer a hissing growl from back under the divan.

"Sometimes, after several attempts, we had to 'strike the set' and rebuild it anew the next day."

## JINXED BY A BLACK CAT'S TAIL

A cat's tail speaks a definite sign language. Raised high, bannerwise, it means pride, contentment. When it extends straight out behind, its owner is generally on a still hunt. When it thrashes from side to side he is angry. And when it curls against his body he is worried and scared.

"I can never forget our difficulty in trying to photograph a black cat named Midnight," Mr. Culver recalls (Plate XVIII).

"She persisted in curling her tail tightly against her body. We would place it in a graceful, curling line and attempt to divert her attention from it, but she would snap it back against her, sometimes rising slowly and then sitting on it.

"With my patience sorely tried after repeated efforts, I could think of only one solution. Turning to the cat's owner, I said in jest that a strip of adhesive tape or a thumbtack would hold that tail in place.

"No you don't-not with my cat's

tail!" said she.

"So Midnight and I struggled to outdo each other, with Midnight never granting me complete triumph."

There was no such problem with the Manx, which is tailless. But here, in view of that very fact, it seemed desirable to show both sides of the subject, as it were.

So Mr. Culver hit upon the device of having one of the Manx cats gaze into a mirror. Captain Kidd, being not at all vain, declined. But when a bit of liver was placed in the corner of the mirror he changed his mind (Plate XX).

#### "SLEEPING LIKE A KITTEN"

Nothing is so expressive of utter contentment as a sleeping kitten—unless it be three sleeping kittens. At the home of a Siamese owner in Washington, the photographer was given a busy afternoon by a family of engaging, provocative kittens. They were all over the room, pulling balls of yarn, upsetting the knitting basket, romping in and out of the scene (Plate XXI).

By the time Mr. Culver had made two plates the afternoon was nearly spent, and so was he. But so, it turned out, were the kittens. As he started to pack his equipment to go, he noticed the now-exhausted kits curied up in a cushioned chair sound asleep. Gently he laid their weary little heads along the arm of the chair and fired away, while they continued to dream (Plate XXII).

In its physical make-up a cat is one of Nature's most remarkable mechanisms.

My Toby could, when he was younger, leap seven feet straight into the air.

A comparable feat for a man, in proportion to his size and weight, would be to leap over a house.

#### A CAT'S FIGHTING ARMAMENT

"Quick as a cat," of course, is a byword, and any human boxer would envy the lightninglike left or right jab with which a cat stands off a dog.

Its armament, like its muscular development, is not conspicuous but distinctly effective. Its claws, 18 curved needles in velvet pads, are always kept sharpened



Photograph by Armir

### LEFT BEHIND, BUT WITH A DAILY MEAL TICKET

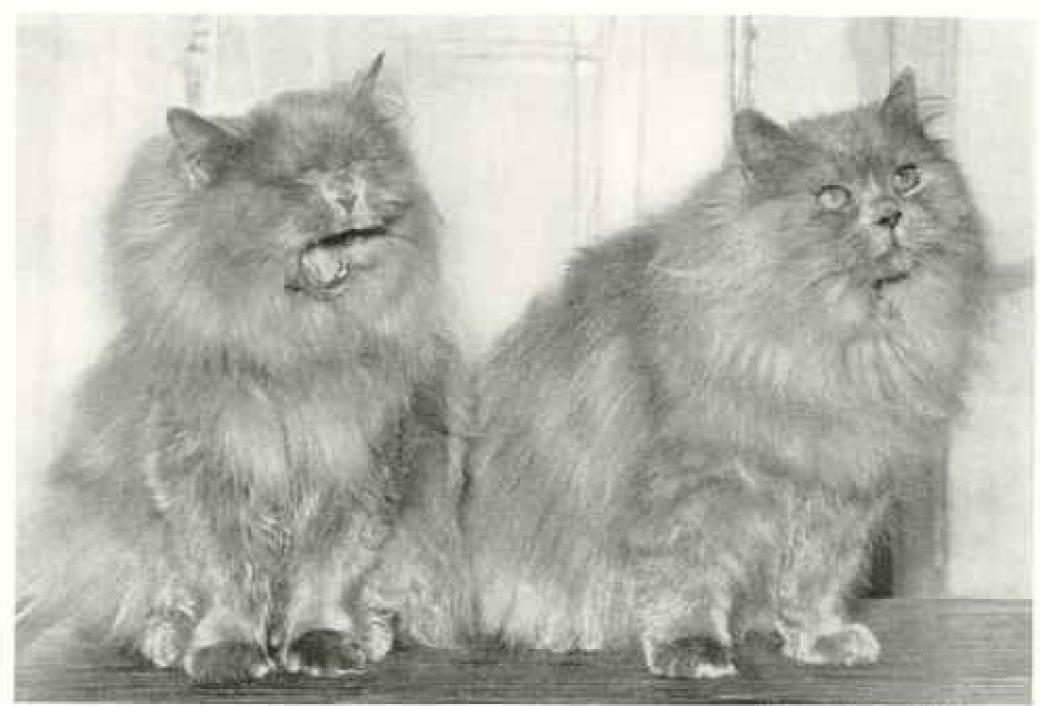
When a teacher set out on a world tour, he left a credit account of up to 15 cents a day for his pet at a New York City drugstore sada fountain. Apparently used to the feline company, a girl at the counter nonchalantly sips coffee while the cat laps up cream poured for him by an attendant.



Photograph from the Tokyo Aushi

## A JAPANESE PUSS KEEPS WARM IN ITS OWN KIMONO

On cold winter days, comfort-loving house cats of Nippon gather around charcoal braziers, snuggle under figured-silk quilts wrapped around their mistresses' knees, or step into stylish made-to-order garments. Once upon a time the Japanese ship's cat was commonly classed as a member of the crew and might earn a rank higher than the cook.



Photograph by Paul W. Kearney

#### BORED SOPHISTICATE AND WISTFUL INGENUE

Although they lack speech, most cats are eloquent with gesture and expression to make known their wants, preferences, and even opinions. "Lavender Westamoe" (left) does not try to hide her canul, while Champion "Decamband's Melissa of Allington" is a feline embodiment of pensive devotion. Both are Hine Persians owned by Miss E. G. Hydon (Plate V and page 610).

to fighting keenness, on your furniture if a convenient piece of wood is not provided. Hair-trigger muscles bare these weapons for action in a split second, or withdraw them again when the need has passed. One way a cat expresses affection, as it stands or sits on your lap, is by working its claws in and out.

Life itself often depends upon these claws, not only because of their use as weapons but also because they make possible that swift, almost aerial flight up a tree where canine jaws cannot follow.

# CAT'S EYE A "CANDID CAMERA"

A cat's eyes are as remarkable as its claws. It is not true, of course, that "a cat can see in the dark." No eye can see in actual darkness, which means the complete absence of light. But the eye of the cat is so constructed that it will make the most of what little light there is.

Not only is the amount of eye surface exceptionally large in proportion to the weight of its owner; more important, the eyes of the cat are equipped with highly sensitive pupils which shrink to the merest slits in strong light and expand in relative darkness like the aperture of a camera lens until they cover almost the entire lens of the eye. "In China," says Carl Van Vechten, "it has sometimes been the fashion to tell the time of day by them."

I am reasonably sure cats' eyes distinguish color. In the pattern of one of our carpets were some red roses, and our Peter Whiffle, a Brown Tabby Persian, used to chew at them, ignoring the other colors. My theory is that the red roses looked to him like his meat.

A woman acquaintance of mine told me of putting medicine in her cat's milk. When she used a colorless kind the cat took it readily. Later she tried some which gave the milk a faint pinkish tinge—and pussy would not touch it.

The sense of smell may not be so keenly developed as it is in dogs, but it is highly discriminating. Cats often show pleasure in fragrant flowers, and downright discomfort in the presence of distasteful odors.

The cat's sense of hearing is far more

acute than ours. Often we see one of our cats spring up, suddenly alert, when to our less sensitive eardrums no sound is audible.

In nocturnal prowling the whiskers are useful, serving as delicate feelers.

But perhaps the outstanding physical characteristic of the cat is that delicacy of movement, that perfect muscular control, which may perhaps be described only by the adjective "feline" and which enables a cat to leap lightly to a buffet crowded with glassware generally without disturbing a fragile object.

# THE "L Q." OF A CAT

And then there is the question of intelligence.

Ask the man in the street what he thinks of a cat's brains and he will probably tell you that the cat hasn't any.

Yet Georgina Stickland Gates, formerly Associate Professor of Psychology at Columbia University, found by actual tests that cats surpassed dogs, raccoons, and rats in learning that a light on one of three boxes meant that that particular box contained food.

A confirmed dog lover not long ago went on record as conceding that "cats do some marvelously intelligent things," such as "learning by themselves to unlatch a door or to hit a faucet handle until they turn the water on."

A case has even been reported in which a cat apparently set a trap for a rat. He carried a piece of meat to the vicinity of the rat's hole, then lay in wait, according to his master, until the rodent came out to eat it.

Concrete instances of the exercise of intelligence could be multiplied by cat owners almost indefinitely.

Our own Peter Whiffle serves as an example of the cat's ability to get its own way. Whenever we had guests in the evening Peter would come in and visit with them briefly. He would then retire and not be seen again until shortly after eleven. Then, if the guests were still with us, he would re-enter and pointedly pace back and forth, mewing occasionally and sometimes hissing a little.

### GETTING ALONG "LIKE CATS AND DOGS"

It was more than most of our company could stand. The good-nights would be said and Peter would retire, content.

Some of the most intelligent cats I have

met were ragged-eared waifs of the common alley or back-fence variety. Living "on their own" sharpened their wits.

Many popular misconceptions have grown up about cats. One is that cat plus dog inevitably equals trouble.

As a matter of fact, when allowed to get used to each other, cats and dogs are often the best of friends (page 632). My Siamese cats and my wife's Samoyed dogs are a typical example, and their play never becomes too rough for the cats.

I have introduced two-month-old kittens to two-month-old puppies, and though the kits were sometimes tossed into the air they obviously enjoyed the rough play and "took it" better than the pups.

Upon seeing a dog for the first time the tiny kits would arch their backs and spit, but they soon got over this hostile reaction and entered into the spirit of the thing.

### "NINE LIVES" - MINUS EIGHT

Another common misconception is that a cat "has nine lives" and can fall many stories without being killed.

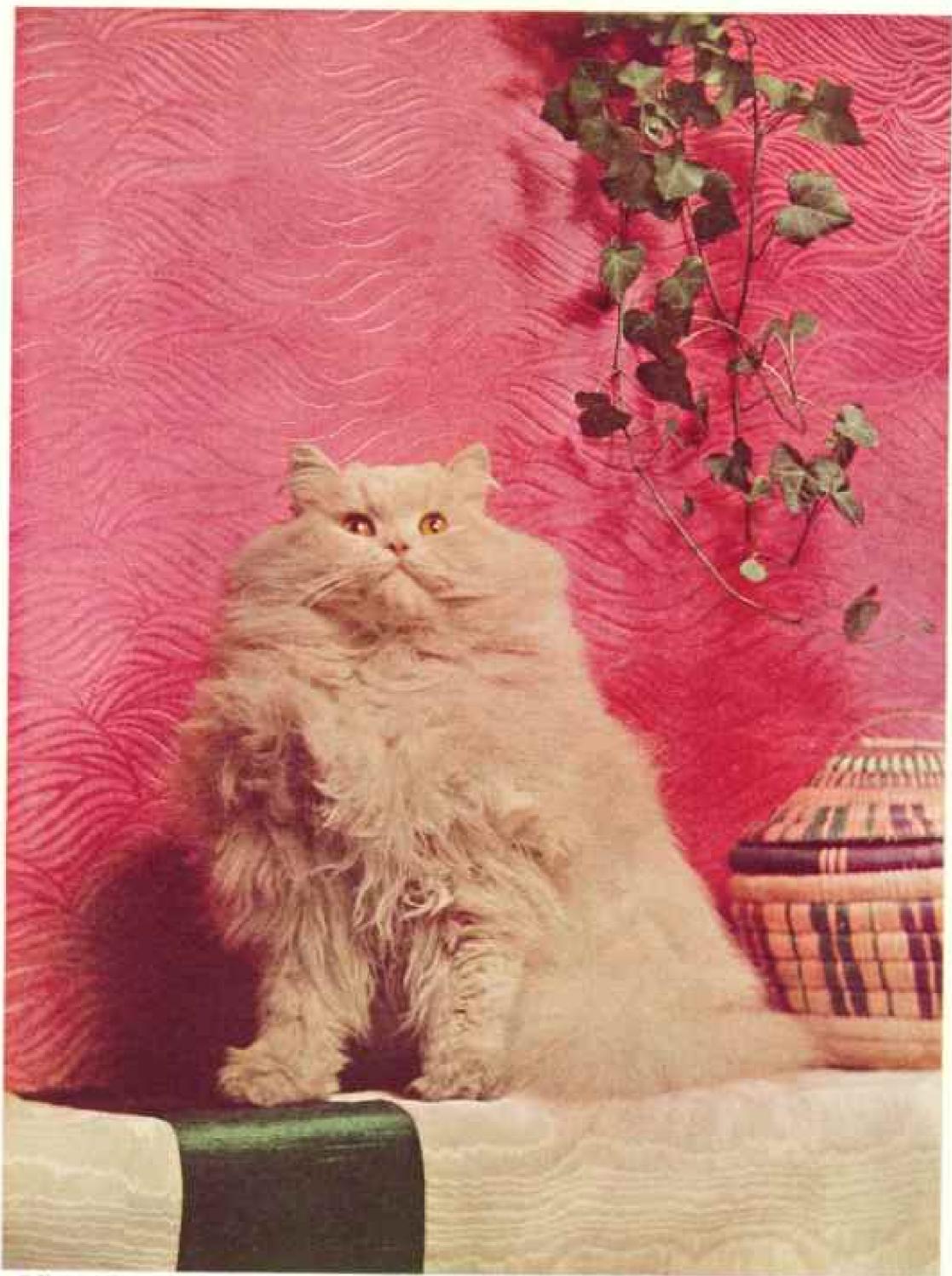
It is true that a cat has an uncanny ability to alight on its feet—drop one upside down from only a foot or so off the ground and its feet will be under it by the time it strikes—and it can fall unhurt from heights that would probably kill a man or almost any other animal.

But this ability has distinct limitations, and many cats are killed every year by falls from heights so great that even their wonderful feline grace and spring-steel muscles cannot save them.

The cat himself has no illusions about having nine lives. Occasionally, in head-long flight from a dog, he ascends to a lofty vantage point from which, in a soberer moment, he trembles to come down, where-upon the fire department has to be called out to rescue him (page 591).

The cat's air of mystery, of knowing more than it reveals, has probably had much to do with connecting it, in the popular mind, with the supernatural. Perhaps also the tendency of its fur to harbor electricity and to give off sparks when stroked has had some bearing on the matter.

During the dark years when our ancestors were burning witches, in both Europe and America, the cat was commonly regarded as Satan's familiar and the companion of the witch. In fact, at the height of the witch-burning hysteria, it was as

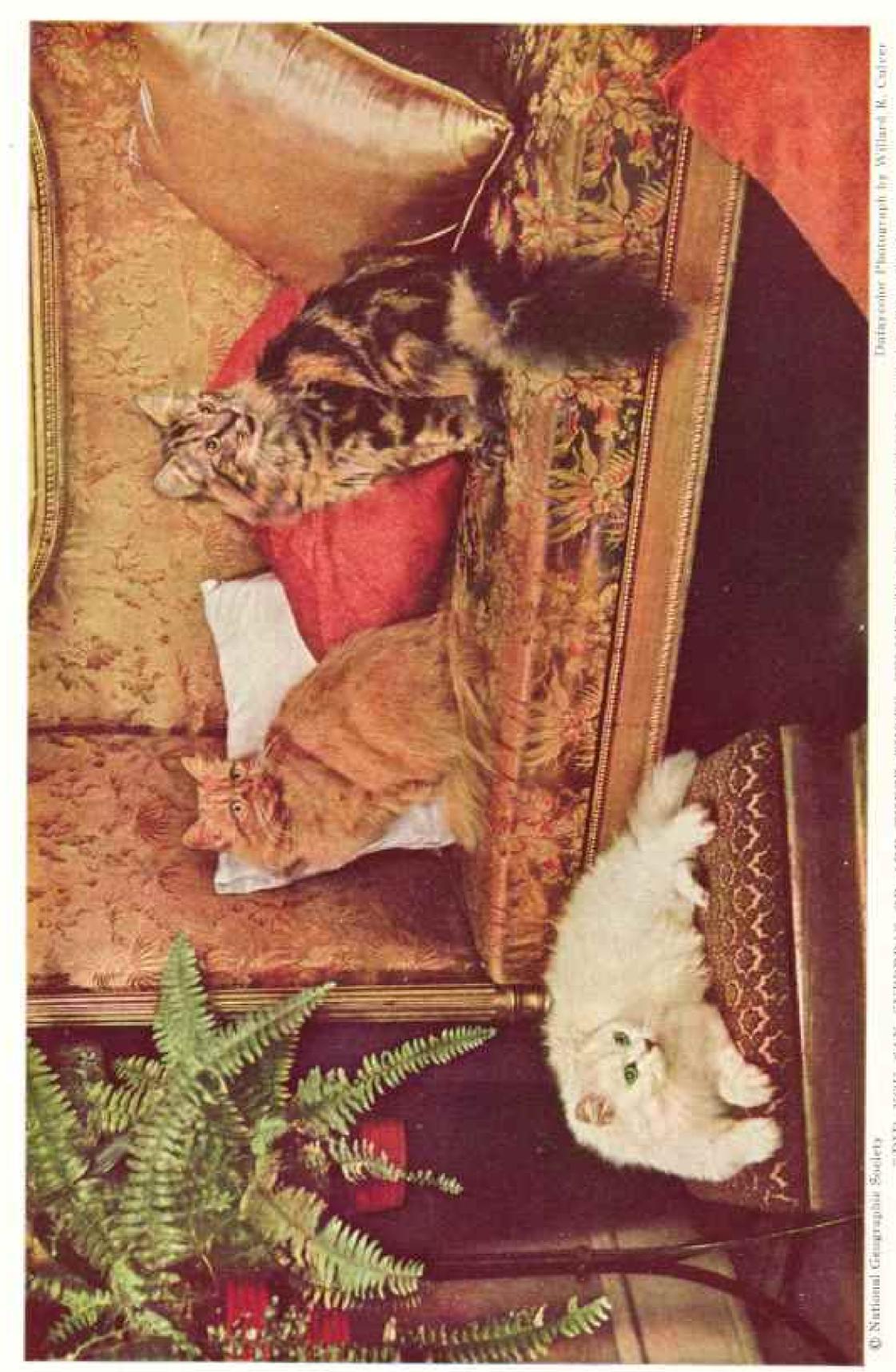


· National Geographic Society

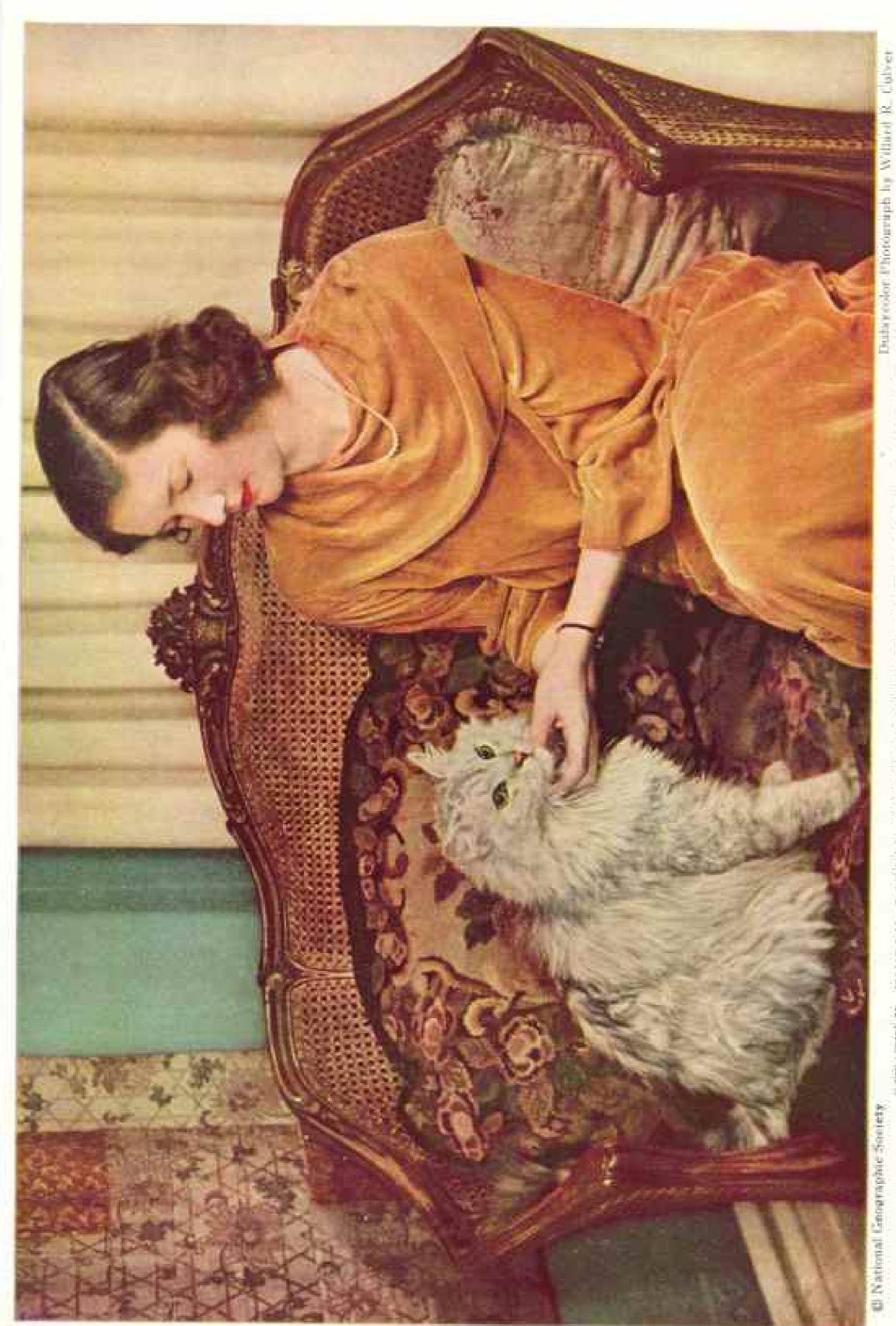
Dufuycolor Photograph by Willard R. Culver

BEAUTY IN A REAST: A CAT WHOSE ONE EXTRAVAGANCE WAS "CLOTHES"

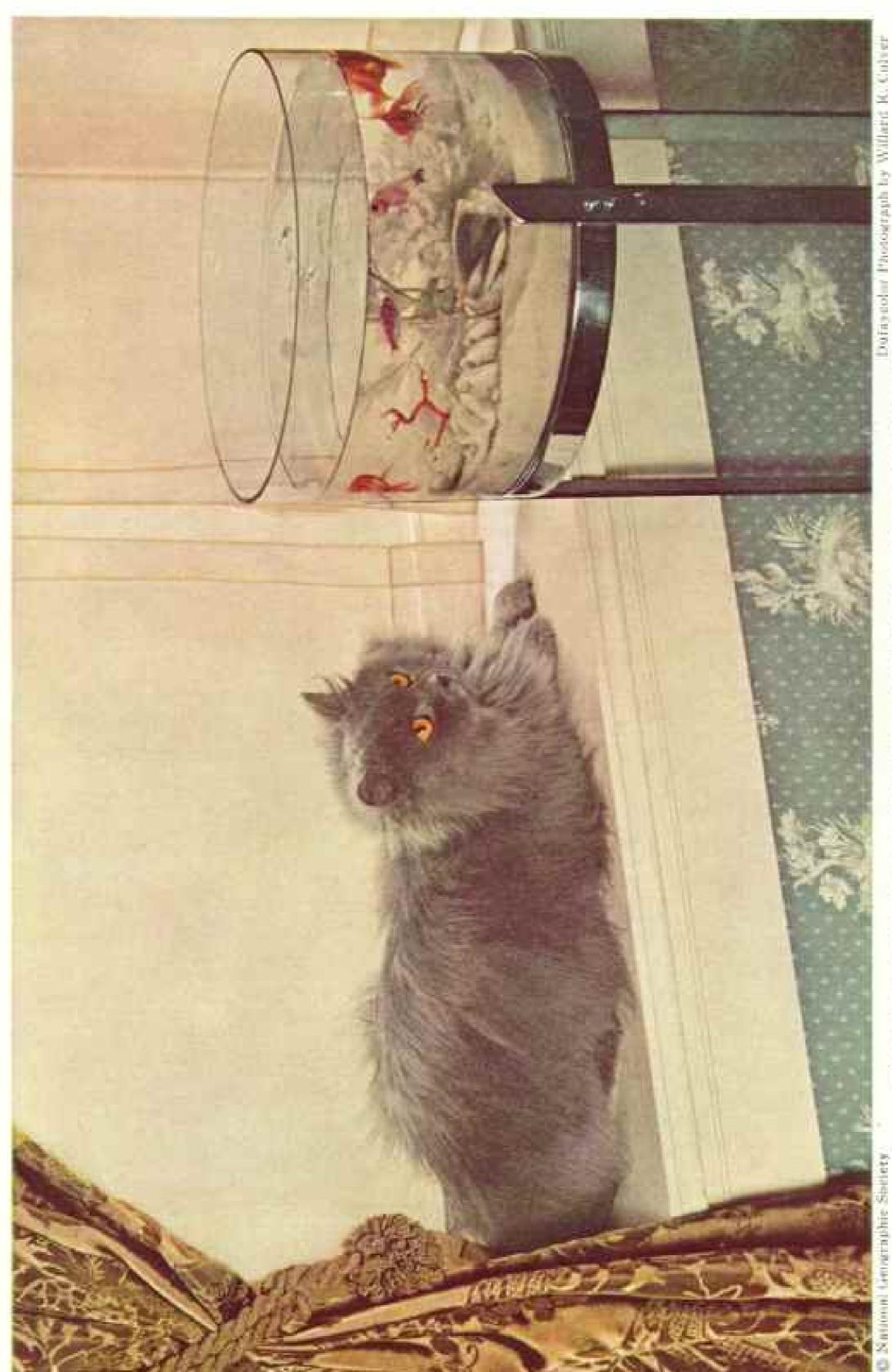
To "keep up appearances" is his sole responsibility! Long-haired Persian cats, pampered and fussed over in modern shows, probably trace ancestry in part to wild desert leftnes of central Asia. Breeders are specializing more and more in the CREAN PRESIAN, with its heavy, luxuriant coat and liquid-copper eyes. Champion "Lavender Chamois," shown here, is owned by Miss E. G. Hydon, of Bogota, New Jersey. In these pages The Geographic presents 25 natural-color photographs of cats taken by synchronized photo-flash, the first such series ever published.



Taking her case upon the ottoman (left) hes a glistening Chinchilla, Teneral Dale of Tempal, "A white pillow sets of the warm, hustrous coat of Champion "Birz-Birz of Tempal," a fine Prick-vach Rich Tahuy Prinslan, Broke Shing, and Silver Spring, Maryland, owns the beauties, "necklaces," distinguish the Brown Tahuy Prinslan, "Tempal Gretchen," (right). Mrs. A. M. Olmsted, of Silver Spring, Maryland, owns the beauties. TOTO YOU SAY SUPPERPL OR ARE THESE THREE FELINE CRACKS ANSWERING A CALL TO ARMS!



is among the most difficult to breed to perfection in type and color, "Ti-Ful," enjoying a is owned by Mrs. F. R. Coudert, of New York City. PRIEND, CONDESCEND HERR TO SIT BY ME" CSWINDERNEY One of the loveliest of cats, the Sn.vin Tanny Priksray, gentle chin-chucking, "STATELY, KINDLY, LORDL)

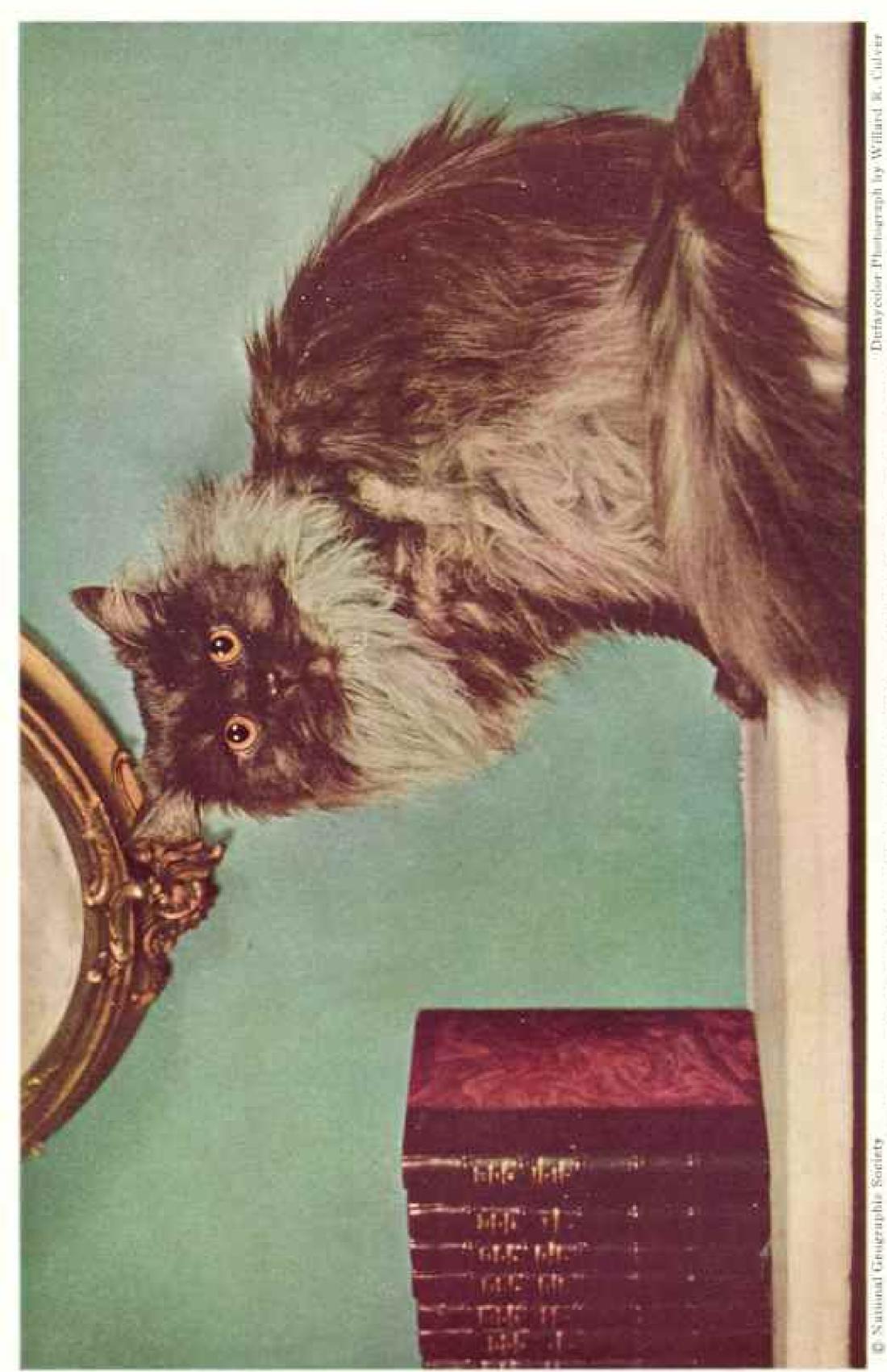


TO FISH? AND STOLEN TITHITS ARE SO MUCH TASTIFR! WHAT CAT'S AVERSE

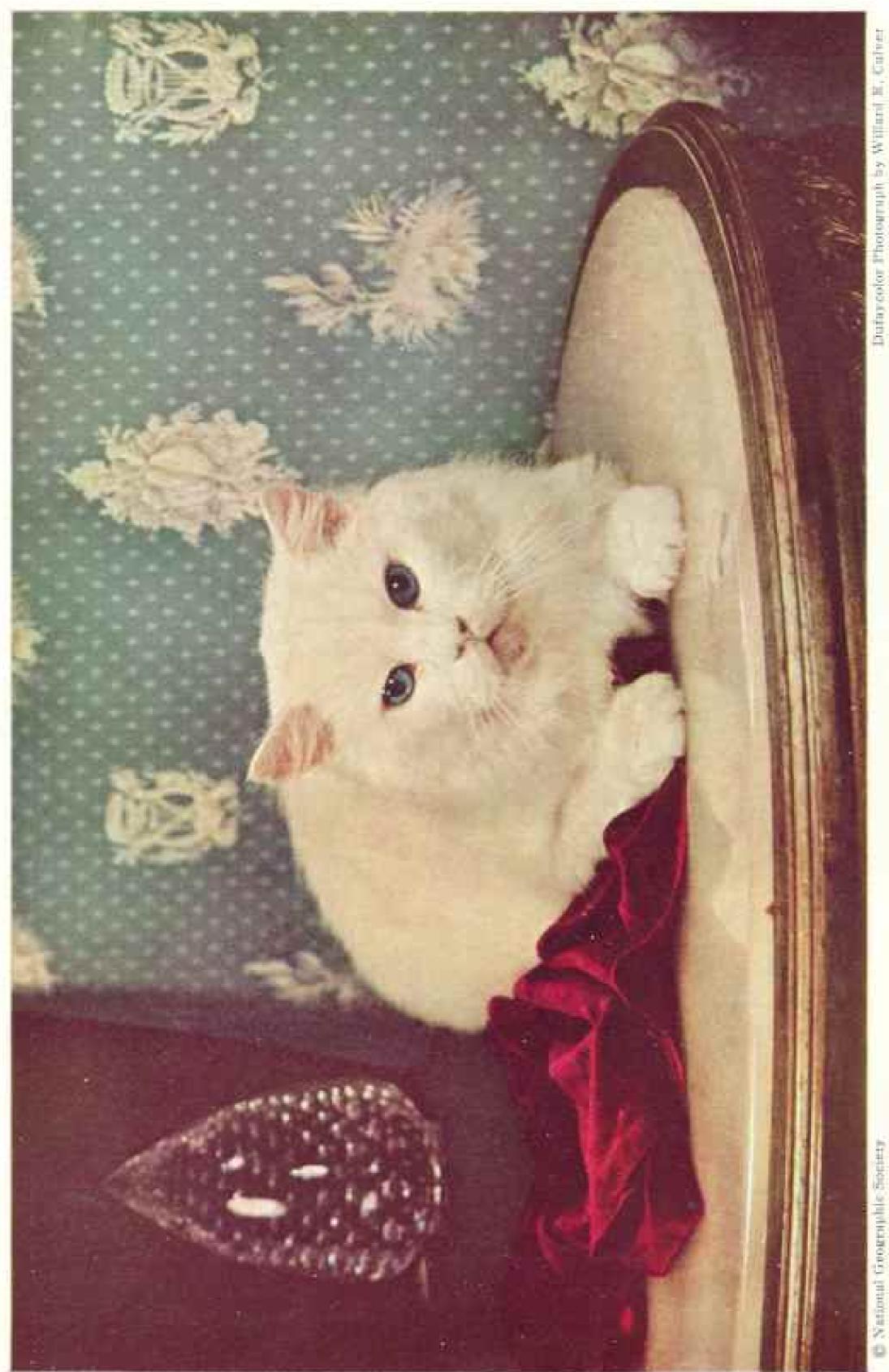
The Bills Pressan has probably won more. Best Cat in Show! awards than all other colors combined. A husky breed of splendid cont. This fong been a specialty of outstanding cutteries both in this country and in Europe. "Speedwell Apple Blossom," casting covetous glances fishward, was imported from England. Her owner is Miss Mary Fogurty of Washington, D. C.



These Bitte Persians. Chempion "Dreamined's Melissa of Allington" (left) and "Laveraler Westamps," are owned by Miss E. G. Hydon, WE'RE INTERESTRIS OTHERWISE DON'T PESTER US"

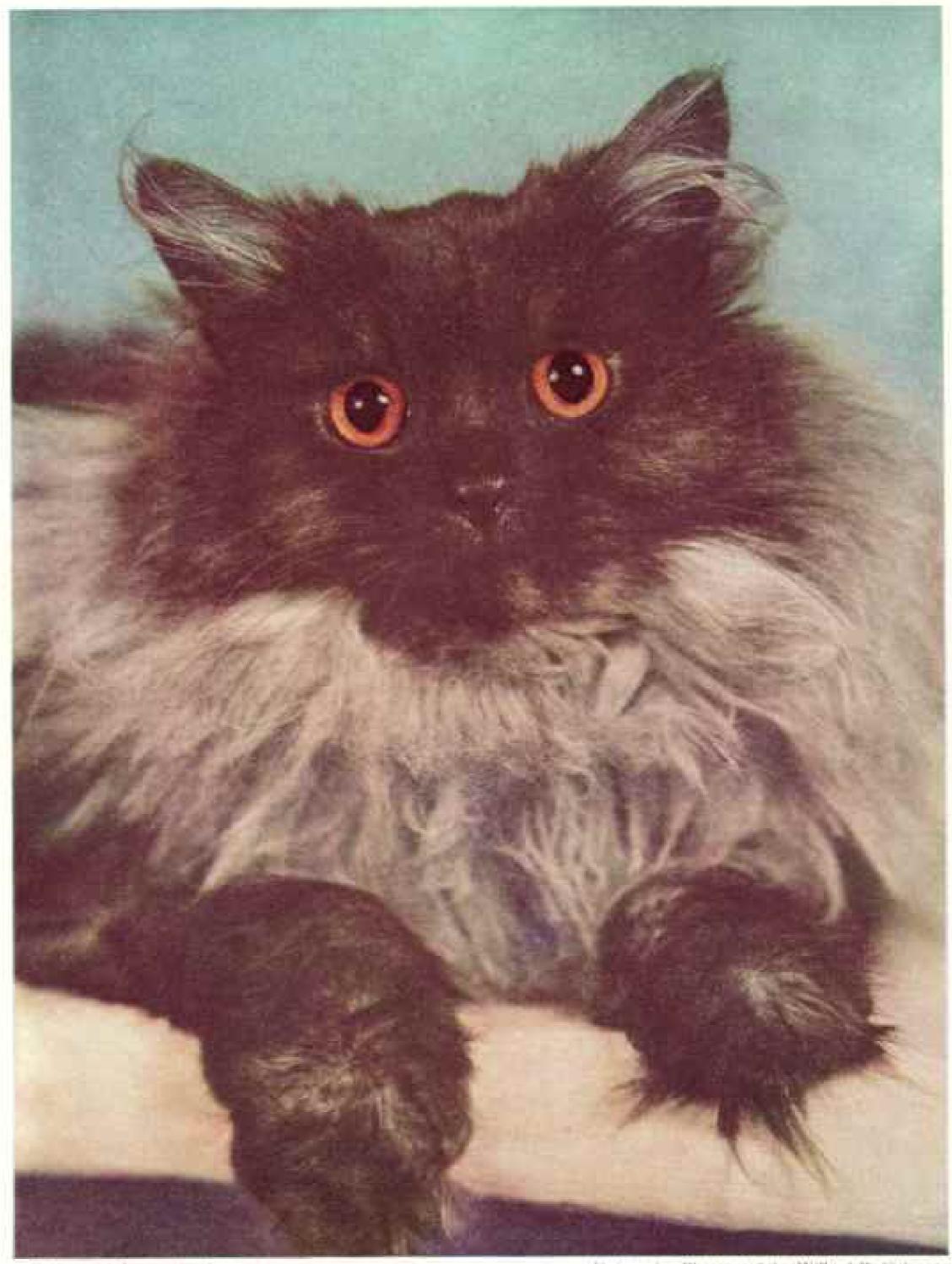


affectionate. Mrs. F. R. Condert of New York City owns this striking pet, a champion, WITH SILVERY FRILL AND HYPNOTIC STARE, SEEMS POISED FOR FLIGHT Yet the Sytokie Phiksian by reputation is unusually WARY TREINCRSS PAT" (PLATE VIII),



Not a cut for smoky, sooty cities! In years of string, this spotless Blue-gyer White Persian has always produced white kittens. Good show specimens of this variety must be pure white, without a mark or shading. Chambion "White Tempest of Tempest is owned by Mrs. A. M. Olmsted. MINGLY CAT IN A REGAL STITING, ALOOF "WHITE THMPEST" MATCHES ELEGANCE WITH MARBLE, GLASS, AND RICH VELURE

#### THE NATIONAL GEOGRAPHIC MAGAZINE

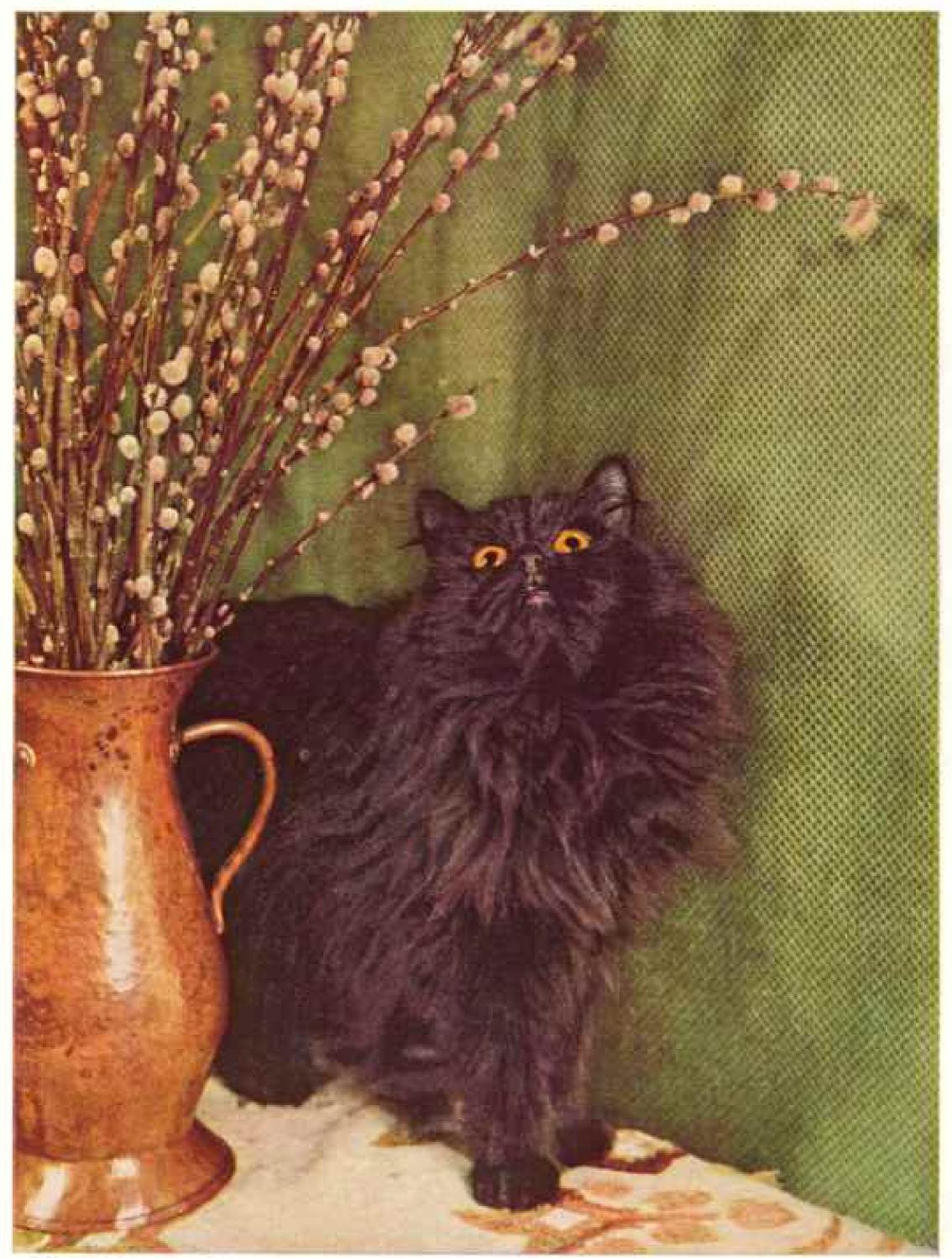


(D Namual Geographic Society

Datagoolog Photograph by Willard R. Chives

"THE CAT. WITH EYNE OF BURNING COAL" (SHAKESPEARE)

Silver ruff and ear tuits contrast richly with abony face and paws of this shaggy Smoke Perstan. See the glare of the flash bulb reflected in black pupils! "Smoke" kittens are all-black when born, and frequently the least likely-looking turn out to be the pick of the litter. This is Mrs. F. R. Condert's Champion "Princess Pat" (Plate VI). To become a champion, a cat must win ten or more championship points. Winners ribbons may earn for the cut one, two, three, or at most, four such points, depending on the importance of the show.

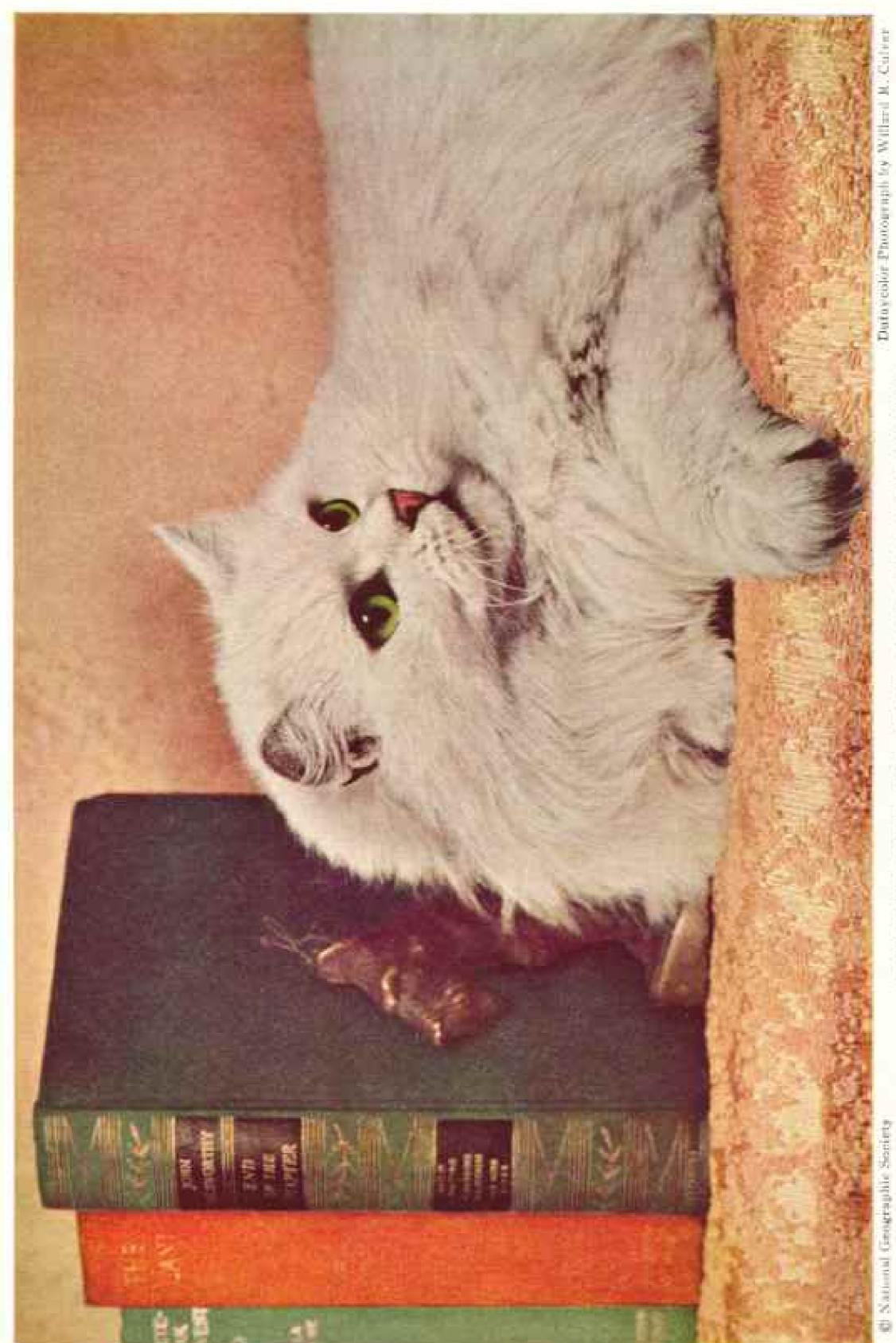


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Dufaycolne Photograph by Willard R. Culver

PUSSY WILLOWS PUZZLE PUSSY

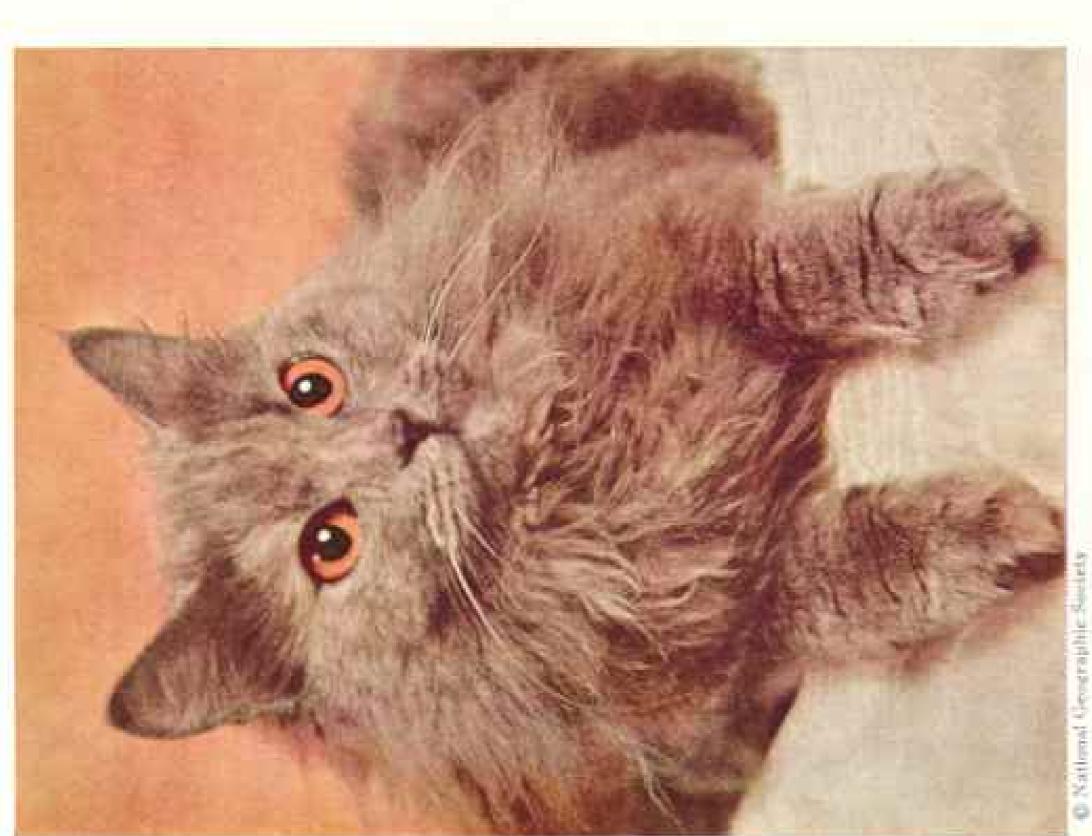
<sup>&</sup>quot;How absurd," she seems to think, "to compare those silly trifles with a creature as magnificent as 1!" Very difficult to breed to perfection, the BLACK PERSIAN nevertheless makes steady progress in quality and popularity. "Lavender Silhouette," with a distinctly upper-crust pedigree, belongs to Mrs. F. L. Tebbetts, Columbus, Ohio.



Lille a fordly little lion, Champion "Idalia of Pequossette," a sparkling Chinchilla Prastan, sprawls at ease, Mrs. J. G. Swartz of Bloomsburg. Pennsylvania, owns this swanky feline dowager. CREEN-EVED VENUS IN A SILVER CLOAK, PRAY DON'T DISTURBLY



The BROWN TARRY PERSTAN is the lamiliar alley cat dressed up in society clothes. Mes. F. R. Coudert owns this long-whiskered pass. "N. R. A."

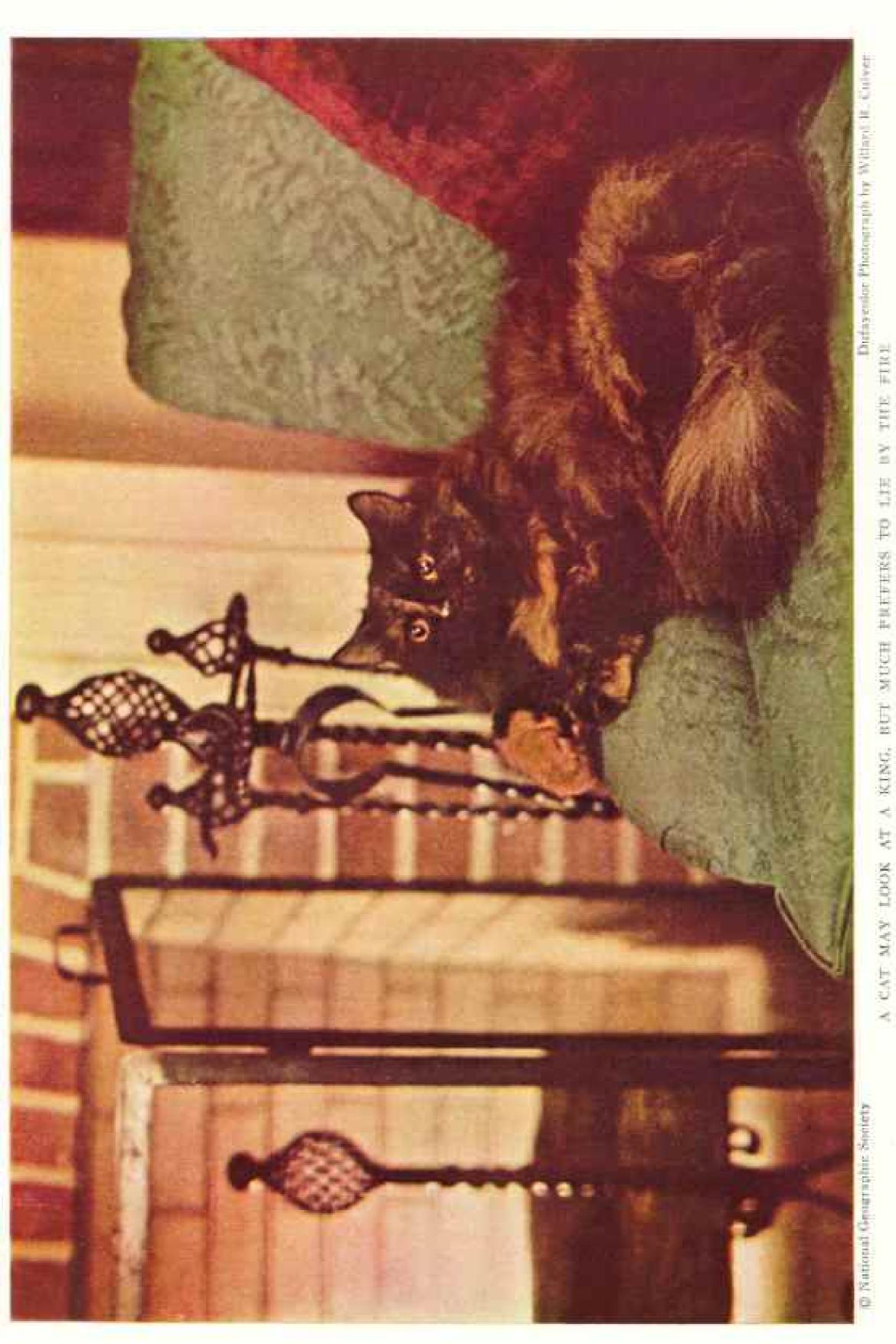


"Dolice," a Bruk Critan Preside, was bred by her owner, Miss E. G. Hydon, from cream, blue, and red cats to produce pure cream kittems.

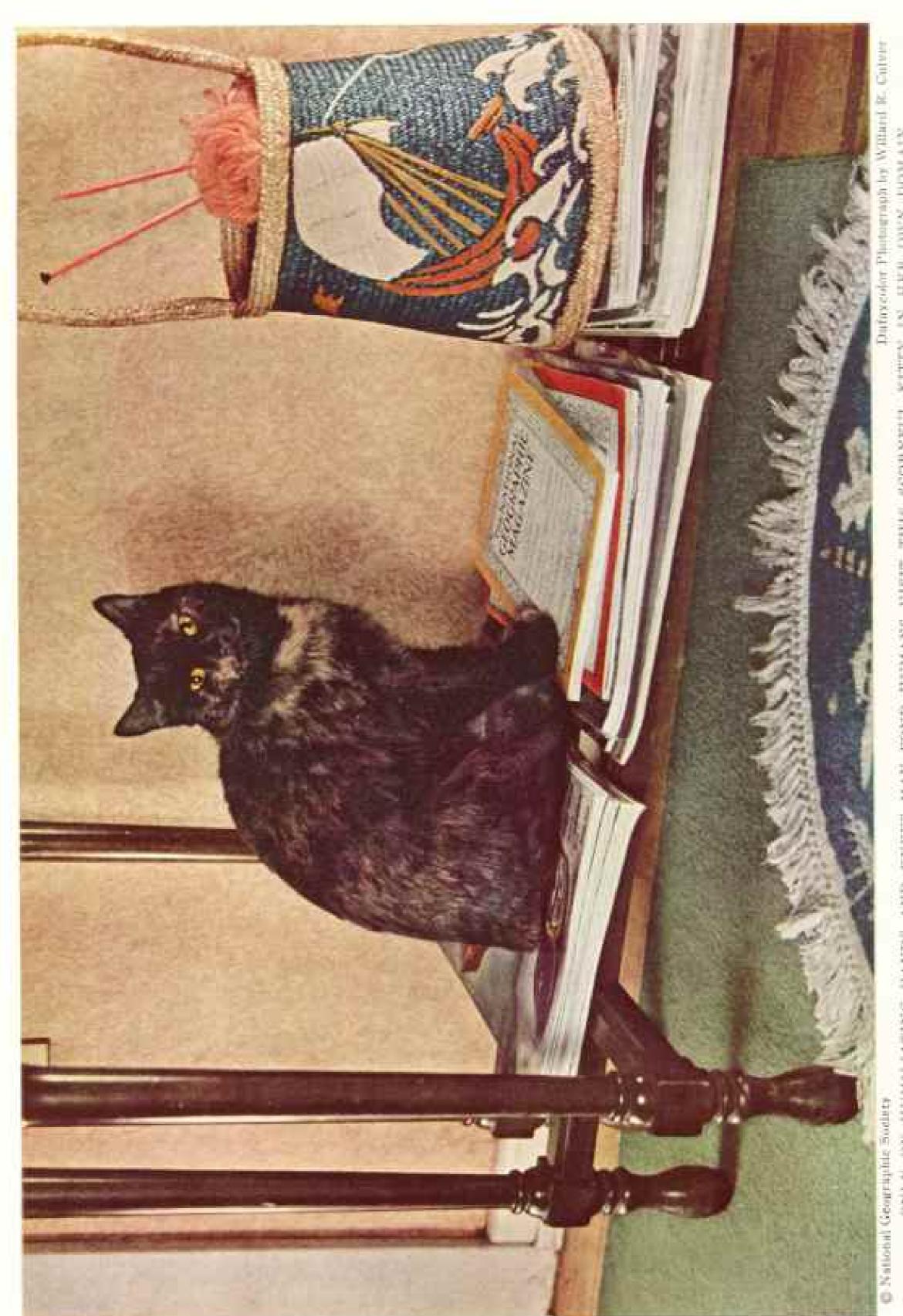


THE THE NO PUT ME TO THE SHILL !! THE TABLE, BUT "YOU CAN THROW ME ON

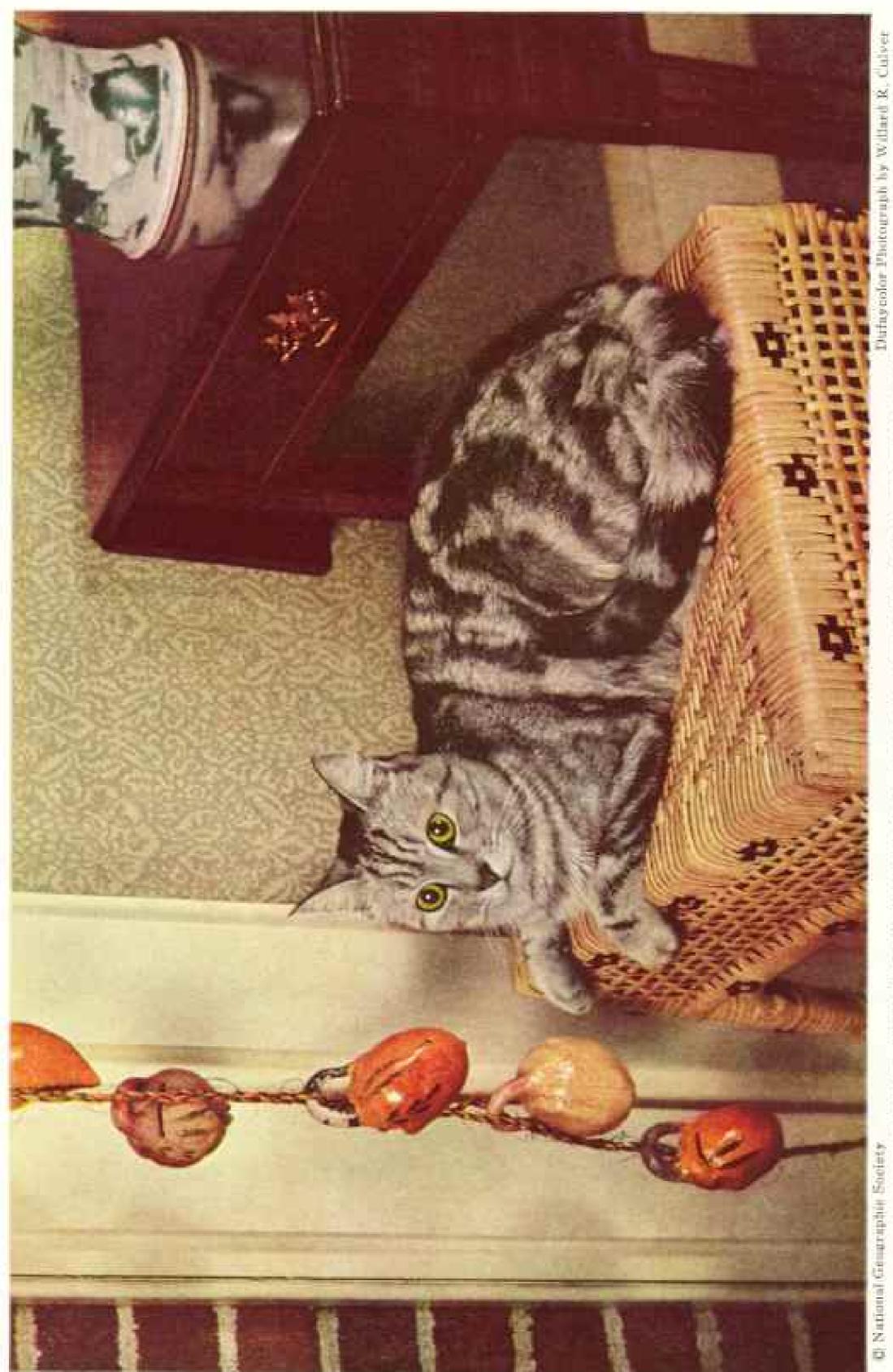
photographer, Like carrot-topped humans, red-haired cats often have tempers to match their had to be flung on the table and Pants of Nellansok," refused to pose, Annoyed and stubborn, this Kito Prinstan, Champion "Tempul Fancy instantly enapped by the National Grounaring's staff photographer. Like fiery cours, "Fancy Pants" belongs to Mrs. A. M. Olmsted.



The Touronsesser, Phrestax results from trossing solid-color, long-hair cats of different shades; bence its red, black, and cream "patchwork" cont. All "Torties" are females except for an occasional infertile male. Miss Mary Fogarty owns Champion "Kansas City Kitty."

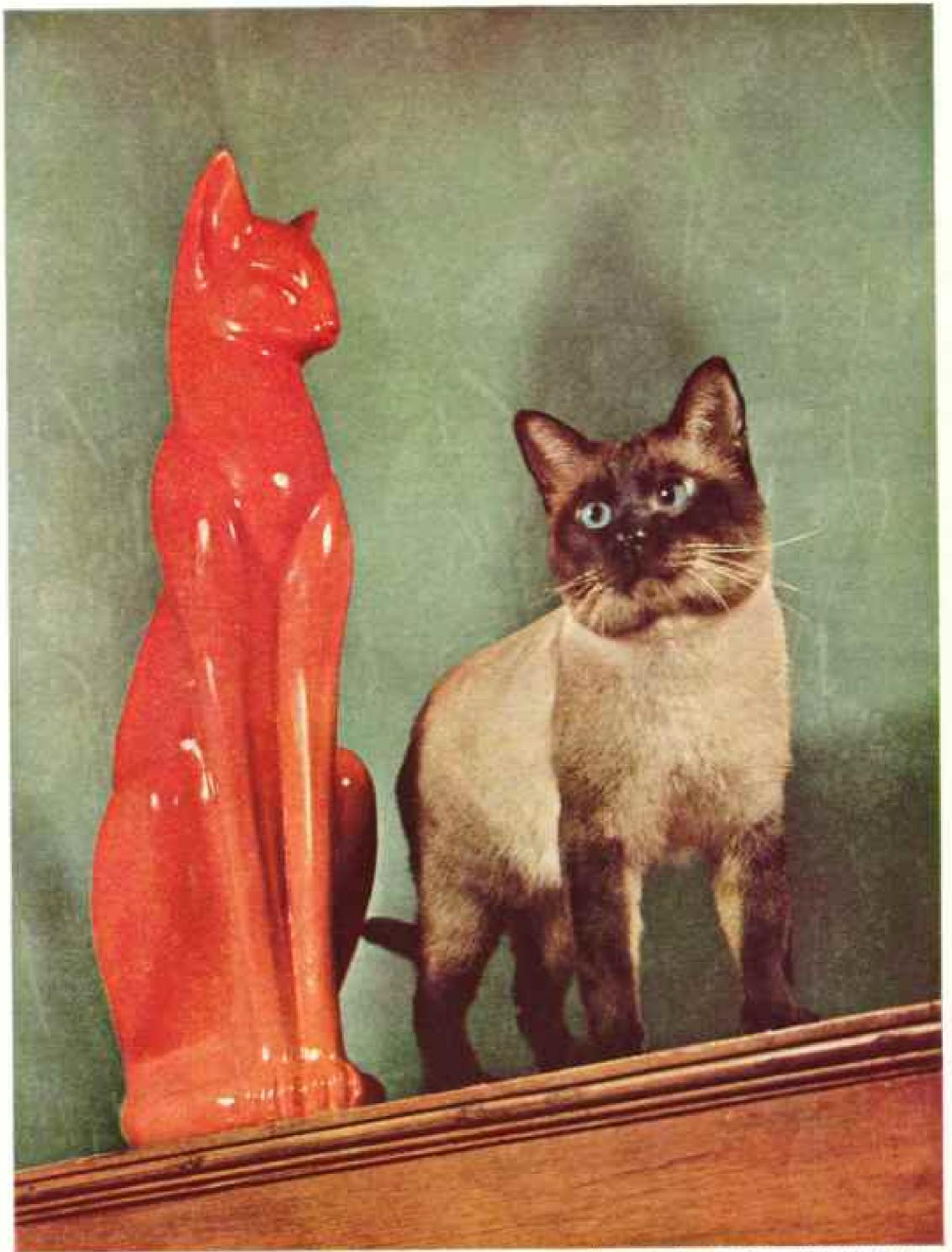


a merry chase until Named "Joseph" because the farmit a "coat of many colors," the Towronsesting, Dominstic Shorr-mark bed the photographer a merry can be "caught" her under the table with her paws on THE GEOGRAPHIC, Mrs. E. C. Slocum, of Washington, D. C., is the owner. ONLY ON HUMILIATING HANDS AND KNIES MAY POND BUMANS VISIT THIS SCORNFUL KITTY IN HER DWN DOMAIN



IN SUMMER HEAT, THE FAMILY PRIEND MAY ABANDON YIELDING PLUSH FOR THE COMFORT OF COOL CANE

The common domestic short-limit cut displaces the sophisticated Persian in our farmyards, fivehouses, meat markets, and even at most of our fire-sides. More active and usually more appreciative of attention that long-haired dandies of the shows, the ordinary tabby cat in "just like one of the family" in thousands of homes. Mr. Frederick E. Brown, of Braintree, Massachusetts, owns this Sulvin Tabby Domestry, called "Nikoteen."



O National Geographic Society

A BURLY, BLUE-EYED SLAMESE STANDS READY TO DEFEND HIS PORCELAIN PAL

From the courts and temples of Siam comes the most popular of the Short-hairs—the royal Stanuare. This oriental breed was first imported into the United States late in the 19th century. Scal-brown legs, tail, ears, and mask shade off into the rich, pale inwn-cream of the body. Slightly slant-cycl, and with the squint characteristic of some members of his breed. Champion "Sy Mingo of Newton," shown here, belongs to Mrs. Arthur C. Cobb. of Newton, Massachusetts (Plate XXIII).

much as a woman's life was worth for a black cat to be seen entering a window of her home.

A modern survival of these ancient superstitions is the belief, still current among more of us than would probably admit it, that it is unlucky-or, in some sections of the world, lucky-to have a black cat cross your path.

#### WHY A CAT IS ETERNALLY WASHING

An outstanding cat trait is cleanliness. Since its nature in a wild state was to hunt by stealth, not the chase, it was essential to remove all possible trace of telltale odor.

To this day, the cat washes over and over every bit of its fur.

Puss is curious, and sometimes critical. The introduction of a new piece of furniture into your home will convince you if you doubt it. Your cat will tell you in a very brief time, and in no uncertain manner, what he thinks of the acquisition.

Some of my own Siamese have a real appreciation of antiques; the wood seems to be just the right texture for sharpening their claws?

Cats' nocturnal love affairs, accompanied by the caterwauling challenges of rival males, are known, perhaps too well, to many. Sometimes a silken-haired feline lady of fashion shows a marked predilection for some lean, battle-scarred freebooter of the roofs and alleyways.

Jealousy usually is strong between males. The only time my wife has been bitten by a cat was when she picked up Toby after having handled another male whom he smelled and mistook for a rival.

The queens, as female cats are called by fanciers, usually make the best of mothers. sometimes braving fire and other dangers to rescue their kittens if necessary. In silver fox farms, cats are sometimes used as foster mothers for suckling baby foxes.

A female cat may reproduce herself a hundred times or more in a lifetime of a dozen years.

Two litters a year are common, and the average is about four kittens to a litter.

One of the country's leading Siamese cats has given birth, in 12 years, to 87 kittens (Plate XXIII).

If there is one thing a cat likes as much as catnip, it is the pleasure of the hunt. In this connection, admittedly, birds are often the victims. But the cat is following the only law it knows. And for valuable birds killed there are eliminated a number of noxious rodents.

The characteristic tendency to tantalize is often seen in a cat's encounter with a dog. Just an inch out of reach of the dog's wildest leap, he will calmly wash and preen himself. If it comes to fighting, the cat's most effective position is squarely atop the dog's neck, raking its eyes with his claws.

The battle pose of a cat-strangely shrinking into itself, while the back rises, the hair stands on end, and curses are spat at the enemy-is a sight to give the opponent pause, and doubtless is intended by Nature for that purpose. It may also serve the useful function of making the attacker miss a vital spot and get a mouthful of hair instead of flesh and bone.

Incidentally, the cat, like the mongoose, has been known to kill snakes, including venomous kinds (page 616).

Cats are often perverse. They may take it into their heads to ignore their masters and display affection for a visitor who heartily dislikes and fears them.

Though not possessed of multiple lives, puss is usually hardy and adaptable. Cats introduced into large cold-storage plants as ratters have adjusted themselves to the continual low temperature by developing heavier coats.

### A THOUSAND WINNING WAYS

Cats, like humans, have their idiosyncrasies, and their masters often find them full of surprises.

One of my Siamese, my lovely Adamina, used to greet me with a cordial "Hello!" every morning. I mean that literally. She actually uttered a recognizable "Hello." And she would do it only in the morning.

My Miskin developed a dishcloth complex. When the door to the kitchen was open she would invariably jump up to the sink and bring us the dishcloth, apparently quite pleased with herself.

Toby has a penchant for dog biscuit and will beg for them, or rather demand them, quite shamelessly, standing on his hind legs the while. When I drop him a piece he catches it deftly in his forepaws,

like a baseball player.

Our Persian, Peter Whiffle, knew my step and always came on the run when I returned from business. He would growl when strangers came to the door. He developed a crush on the iceman and had no time for his successor. When the origi-



Photograph from Arme

A CAT STANDS GUARD AT THE ENTRANCE TO THE RESIDENCE OF BRITISH PRIME MINISTERS

At 10 Downing Street, London, while Mr. Chamberlain and Cabinet members discuss world affairs, a household pet keeps vigil.

nal iceman returned to our route, Peter's enthusiastic greeting of him was quite equal to that of any dog.

Considering such endearing traits, it is not surprising that many famous people have been numbered among cat lovers.

Among these was Mohammed, who cut off a piece of his cloak rather than disturb his pet asleep upon it.

Prelates have debated problems of theology with their favorite felines on their knees; Cardinal Richelieu signed his state papers with a host of kittens playing upon his desk.

Theodore Roosevelt had several cats in

the White House. Poincare and Clemenceau both loved cats, and the latter directed that he be buried near his pets which had given him so much joy.

Mark Twain has immortalized the cat Tom Quartz, in Roughing It.

Henry James often worked with a cat on his shoulder. Edgar Allan Poe loved cats, although his famous The Black Cat hardly gives an attractive picture.

Then there is Charles Dudley Warner, whose tribute to his cat Calvin has become one of the classics of American literature.

Booth Tarkington has a rare understanding of cats, as his description of the belligerent, looseliving Gipsy in Penrod and Sam plainly shows.

Even crabbed old Thomas Car-

lyle so enjoyed cats' society that his wife complained that his indulgence of their appetites was fast ruining the rug beneath the dining-room table.

#### NAPOLEON WAS AN AELUROPHOBE

On the other hand, there are people to whom cats are anathema. The dictionary even has a word for them, "aelurophobe," meaning one who has a morbid fear of cats.

Such a cat hater was Napoleon Bonaparte. The story is told that an aide found him frantically plunging his sword into the wall hangings, behind which a wandering cat had taken refuge.

Just as every agency for the care of dogs exists today, so the cat, though perhaps in lesser degree, is catered to. Veterinarians are paying more attention to puss than in former vears. Serums and inoculations are at hand for the most deadly scourges of cutdom.

The canine kitchens that serve your dog will be glad to cater to your cat, and the beauty parlors that glorify the American dog will do a good job on your cat.

In New York there is a shop exclusively for cats-no dogs allowed-where one can buy catnip, collars, blankets, baskets, and the thousand and one things that go to make feline existence more comfortable or pampered.

a n d M e n women go abroad to obtain fine specimens of the various breeds, and pay sometimes hundreds of dollars for specimens which have made outstanding records at the cat shows in England and on the Continent.

#### THE PERSIAN IS POPULAR

In our country at present the most popular cat is the Long-hair, or Persian, and of this variety the Blue, long the most numerous at shows, seems to be still holding its own (Plates IV and V).

The Silver Tabby, too, is deservedly popular (Plate III), and to my prejudiced way



Photograph by Studie Heinkis

"LOOK OUT BELOW!"

"The During Young Man on the Flying Trapeze" never flew through the air with greater ease than this diving Siamese cat, epitome of litheness, symmetry, and control. Most popular of the short-haired cats, the clever fawn- or cream-coated Stamese, with its scal-brown "mask" and "points," can be taught many tricks.

> of thinking there are few animate creatures handsomer than a striking specimen of the Black Long-hair (Plate IX).

> The Siamese is also coming into its own here as it did years ago in England (Plates XVI, XXI, XXII, XXIII, and XXIV). While our Siamese Cat Society shows seldom bench more than 50 specimens, in England the Siamese Cat Club thinks nothing of caging from 150 to 200 entries.

> In shows one sees few Domestic Shorthairs, as the garden variety of cat is technically known to fanciers. This is unfortunate, for a fine specimen of the so-called



Phistographs from Wide World

#### CAT MEETS SNAKE IN A PARIS GARDEN

Four photographs show the tense progress of the fight. There are no rounds, no rules, no referee, "Felix Felixe" lifts an inquisitive paw (upper left), only to freeze stiff when the odd, coiled creature raises its head, darts its tongue, and hisses a warning to "keep your distance." Puzzled and curious, kitty feints with her left (lower left), while "Sammy Serpent" gathers himself together for attack. Suddenly, the angry reptile lunges (upper right) and Felix, surprised, rears to safety before the slashing fangs. Pum comes back strong with a sharp right (lower right) and the cunning snake retreats. Between such evenly matched contenders, the encounter ended in a draw.

"alley cat" is just as beautiful in his way as the Long-hair is in his (Plate XV).

Fuzzy, an alley cat from Brooklyn, won a prize at a New York show despite its humble origin in the basement of an armory in the Bronx. Another time the prize-winners included a pair of all-white Short-hairs which had been picked up as miserable halfstarved kittens in the courtyard of a tenement house.

Often at cat shows visitors have happened to remark to me that they owned a black cat. When I asked why they didn't bring him to the show they usually replied, "Oh, he's just an ordinary black cat. There isn't a white hair on him."

Now a black Domestic Short-hair, which cannot be faulted on color, is a rare animal, and the chances are that if this tom had been given a chance he might have gone back home with a blue ribbon, a cup, and possibly a cash prize (Plate XVIII).

It was a fine black Persian, Captain Black Jack, that put on the most stubborn display of temperament I have ever seen in my years of judging cats.

As if in protest at the action of the judge who had failed to give him the blue ribbon, Black Jack flatly refused to leave the judging cage in a New York hotel after the prizes had been awarded. When anyone approached him the cat would make a leap, with threatening teeth and claws. His owner could not budge him.

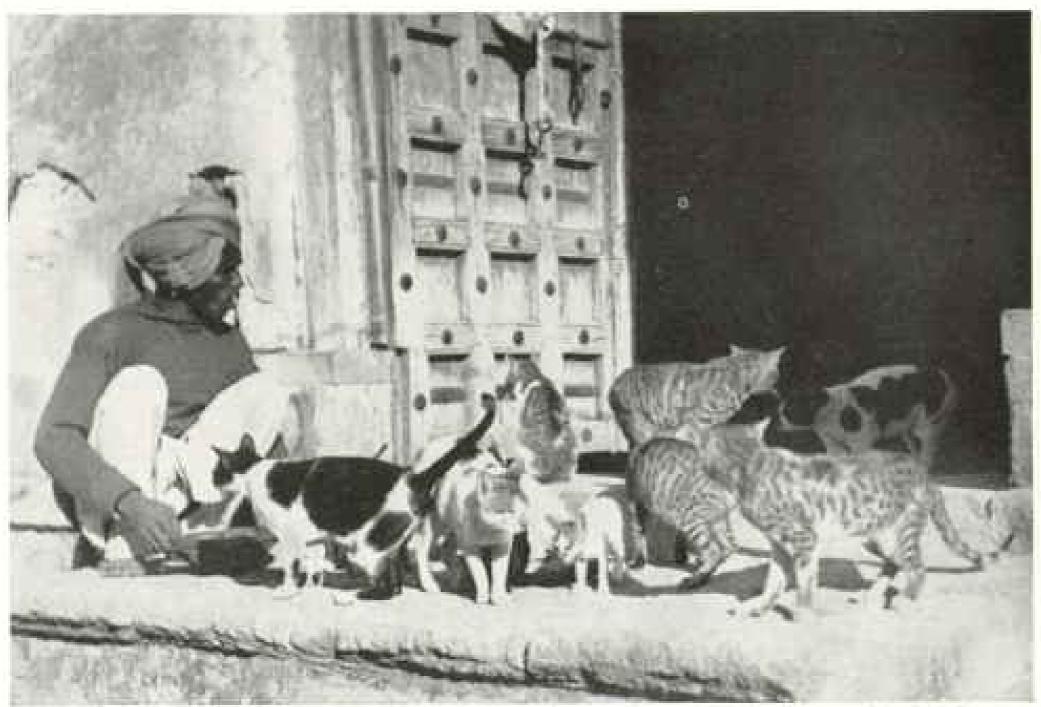
CAPTAIN BLACK JACK'S SITDOWN STRIKE

Someone suggested that she try giving him some catnip.

"No," she said, "that only makes him worse,"

All night the stubborn Captain stayed there, and his sitdown strike was not broken until morning, when a veterinarian succeeded in lassoing him through the bars of the cage.

Cat breeders and exhibitors, most of whom are women, have made notable progress in improving the breeds.



Photograph by R. J. Parmar.

## A CAT GARRISON OF INDIA TAKES TIME OFF FOR HEFRESHMENTS

Each recruit has a turn at the pan of food the servant holds, while others relax in the sun and a few apprehensive ones keep eyes peeled for the "enemy"—rats! In Navanagar, coastal city north-west of Bombay, India, a regiment of cats is enlisted to repel the onslaughts of invaring rodents. Apparently an occasional change is offered from the regular diet of rat meat.

Old members of the cat clubs to which I belong tell me that the cat of today represents a striking advance over that of twenty years ago.

"It's amazing how typy the average show cat is becoming," one of the foremost breeders remarked to me. "Twenty years ago a 'Best in Show' was thought to be a pretty fine cat. I doubt if he could get a Third in a first-rate class today."

## PERSIANS ARE THE "MOVIE QUEENS" OF CATDOM

It is a far cry from the temples of Egypt, from the deserts of Asia, to the roof garden of the Pennsylvania Hotel in New York, where, enthroned amid silken hangings and luxurious pillows, Puss, as the cat goddess Bast is now known, enters into competition with its fellows for blue ribbons and purple rosettes.

Yet the cat, characteristically, has accomplished the change. Hardship could not kill him; luxury has seemingly not affected him. He lives on, taking life as he finds it, glad to serve, to love, and to live upon his human friends, and giving them in return the privilege of his society.

Originally the Long-hairs included not only the Persians, brought to the Occident from Smyrna and other oriental ports, but also Angora cats from the Turkish province of Angora. Today, however, the two have become one as a result of interbreeding.

These Persians, or Long-hairs, are the movie queens of catdom. In a home of hixury they live a life of languid case, accepting the attentions and food of their owners as if they were theirs by divine right. In humbler homes they give their surroundings a touch of real distinction,

They know how to show off. Watch one of them walk into a room. His pace is regal. Note how, when he chooses a chair, a sofa, or a rug for a siesta he does it as gracefully as a star times her entrance in a play. And a Persian cat can high-hat any human being to such an extent that if he has a superiority complex it will quickly be deflated.

The Persian cat is like Joseph's coat, of many colors, and cat fanciers have three



© F. G. Radeliffe

#### FOUNTAIN SERVICE

On a New Zealand dairy farm, the only function of the "middleman" is to squirt warm milk directly from the bovine source to the feline consumer's mouth. While one cat licks a misdirected stream from its coat, others fight for first place in the feeding line.

main divisions under which the various hues are grouped.

In the Solid Color Division fall the Whites, the Blues, the Blacks, the Reds, and the Creams (Plates I, IV, V, VII, IX, and XII).

In the Silver Division are the Chinchillas, the Shaded Silvers, the Silver Tabbies, the Masked Silvers (so rare that classes in shows for them were dropped for a year), and the Smokes (Plates II, III, VI, VIII, and X).

In the Tabby Division we find the Red Tabby, the Brown Tabby, the Tortoiseshells, the Blue Creams (Plates II, XI, and XIII).

While of all the colors the Blues still seem to be the most popular, the Blacks and Creams and Red Tabbies are rapidly coming to the front. The Creams in particular are being bred with far more attention to color and type.

In the Silver Division lovely specimens are produced. It was a Silver that won the award for "Best in Show" most frequently during the 1934-35 show season, a Chinchilla of wonderful conformation and silvery coat.

The Tabby Division is becoming increasingly popular, especially in the Middle West. There the classes in the Red Tabby Persian group frequently outnumber the Blues and other solid colors.

SHORT-HAIRS RANGE FROM "ALLEY CATS" TO ROYAL STAMESE

The Short-hairs include the Domestic Short-hair, the common cat which we see about the farm and in so many homes. They also include such exotic breeds as the royal sacred Siamese, the strikingly similar Burmese, the Abyssinian, and that unique, rabbitgaited, tailless cat, the Manx. The "Maltese" is simply a bluish-gray variety of the Domestic Short-hair.

Herewith are presented brief "biographies" of the many longhaired and short-haired cats depicted in the accompanying Color Plates:

### Cream Persian

The Cream is one of the loveliest of the Long-hairs, and many fanciers feel that cream is the coming color (Plate I).

Although not usually numerous at shows at present, Creams are fast coming to the fore as one of the most popular breeds. Several times they have won "Best in Show."

The delicate tonal quality of the Cream Persian's coat is something any breeder may take pride in, when the color is up to standard. It is not an easy color to breed to perfection, and the fancier who produces an outstanding specimen is to be congratulated.

The color is the shade of thick, rich cream, even in tone without any lines or shadings. The English standard allows 35 points out of



@ Fox Photos, Ltd.

#### ONLY A FEW STRIDES TO LUNCH

"If all the cats in the world should die tomorrow," comments the author, "the rodents would come close to inheriting the earth." As rat-and-mouse catcher, puss has no equal. When Europe suffered from the scourge of the rat-borne bubonic plague, the relative abundance or scarcity of cats in particular localities was found to be a measure of the epidemic's prevalence (page \$89).



Photograph by Newton V. Binkeslee

# GRUDGINGLY, "DINTY" DEMONSTRATES HIS PRIVATE DOOR

With a contemptuous sneer for the photographer, kitty pushes through the swinging door-withina-door cut out for his convenience in passing back and forth between basement and kitchen. The novel gateway is in the Washington, D. C., home of Mr. Lewis M. Thayer, Dinty's owner.

a total of 100 for color alone, the American 25, The eyes should be copper or orange.

The color plate reveals the richness and evenness of the coat, and the lustrous copper eyes. Note, too, the fine body conformation and those massive legs.

Cream Persians are strong and hardy and reputed to be very clean in their habits. Their coats, as one can see from the illustration, are unusually heavy.

### Chinchilla Persian

Aristocratic and striking is the Chinchilla Persian (Plates II and X).

The fur at the roots is a pale silver, but the tip of each hair is a peculiar shade of lavenderish black which gives the coat an extraordinary sheen. Both the English and American standards state that the eyes should be green, the English specifying an emeraldgreen or blue-green shade.

The tipping of the fur should be evenly distributed giving the sparkling silvery appearance so characteristic of this breed. Chin. ear tufts, stomach, and chest are pure white. Any Tabby marking, brown or cream tinge in the coat is considered a drawback. The tip of the nose is a brick red; the visible skin on the eyelids black or dark brown.

The Chinchilla and the Shaded Silver are really the same, the distinction being simply the recognition of a change that comes when the coat is shed and grows in again. In general, the appearance of the Shaded Silver is considerably darker.

### Red Tabby Persian

Ranking with the Blue and Silver as one of the most popular colors is the Red Tabby Persian (Plate II).

Breeders have made notable progress in producing fine specimens of this attractive variety of the long-haired cat, and today in the midwest United States it outranks some of the Blues and Silvers in perfection of type and color. Red Tabbies have not infrequently won the coveted "Best in Show" rosette.

Fanciers recommend crossing with a Cream and also with a Tortoisesbell, for better Red Tabbles—the Cream to intensify the red, and the Tortie to strengthen the tabby markings. The kittens, when born, show clearly what their markings will be at maturity; then these grow less distinct. At about six months the red deepens and the permanent color becomes more apparent.

The cut shown in Plate II is a Red Tabby of the Peke-face variety. This variation occurs in two breeds, the Solid Red and the Red Tabby. Peke-face cats should conform in color, type, and general markings to the regular standards. The variation is in the head, which should resemble as much as possible that of a Pekingese dog.

## Brown Tabby Persian

Seen much more frequently at cat shows today than in former years is the Brown Tabby. It suggests nothing so much as the well-known Domestic Short-hair dressed up in a big fur coat, Cinderella after the fairy godmother had dolled her up in silks and furbelows (Plates H and X1).

An attractive, hardy cat with a fine, heavy coat, the Brown Tabby is also one of the most affectionate of pets.

The ground color of the coat is a rich tawny shade with dense black markings clearly defined and broad and conforming to a definite pattern laid down in the standards.

## Silver Tabby Persian

One of the outstanding varieties is the Silver Tabby Persian, combining as it does the beauty of the Chinchilla and the Shaded Silver with the charm of the Tabby (Plate Incidentally, this is one of the most difficult of the Persians to breed to perfection, for the Tabby markings are not usually "true" and are seldom sufficiently distinct. The standards call for a ground coat of pure silver with broad dense black markings.

"True" Tabby markings follow a prescribed pattern, even bars on the legs and tail, a stripe down the back, a broad black oval on the sides. then a silver oval within it and an oval of black within the silver; a circular ring of silver on each shoulder, then a circular ring of black within the silver, and finally another

black spot within the silver.

A notable member of the cat tribe, the Silver Tabby Persian is steadily growing in excellence and popularity.

#### Blue Persian

Still the most popular breed among the Long-hairs is the patrician Blue Persian (Plates IV and V and page 595).

Blues have probably won more "Best in Show" awards, both here and abroad, than all the other colors combined. A far stronger breed than the Whites, they are, when fine specimens, massive in build and gorgeously coated, with wonderful deep-copper eyes.

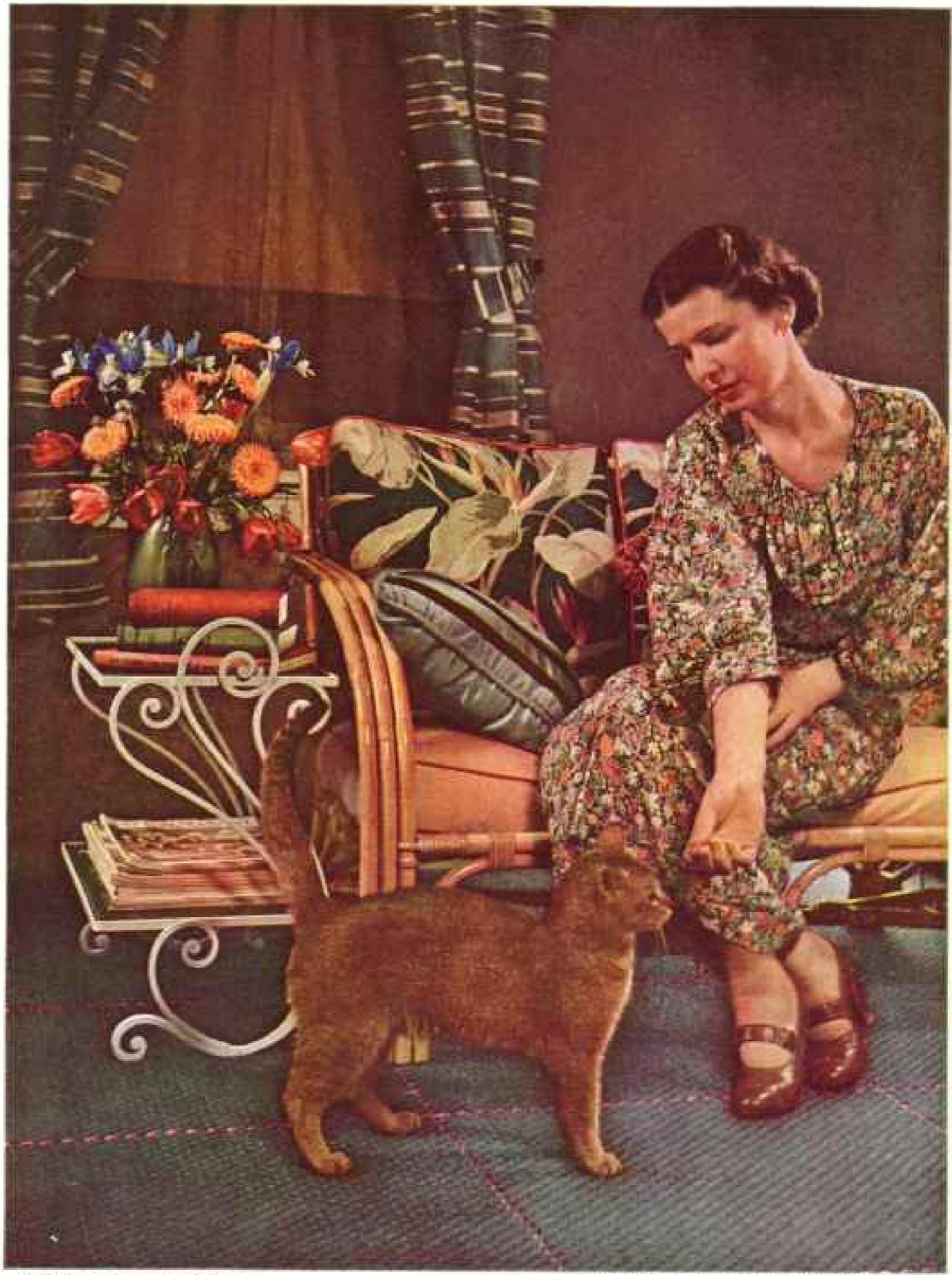
The best breeders in this country, in England, and on the Continent have long specialized in Blues; hence it is not difficult to understand their present outstanding perfec-1100

Fine kittens bring from \$50 to \$100 and an exceptionally good stud as much as \$300 and more.

Most of the stock in the United States came from imports from England, and it is not unusual for a promising queen to be shipped abroad to be bred to some stud that has made a big record at the English shows.

In buying a kitten, see that the coat is free from markings, shadings, or any white heirs

# CATDOM'S ROYALTY PHOTOGRAPHED IN COLOR



C National Geographic Society

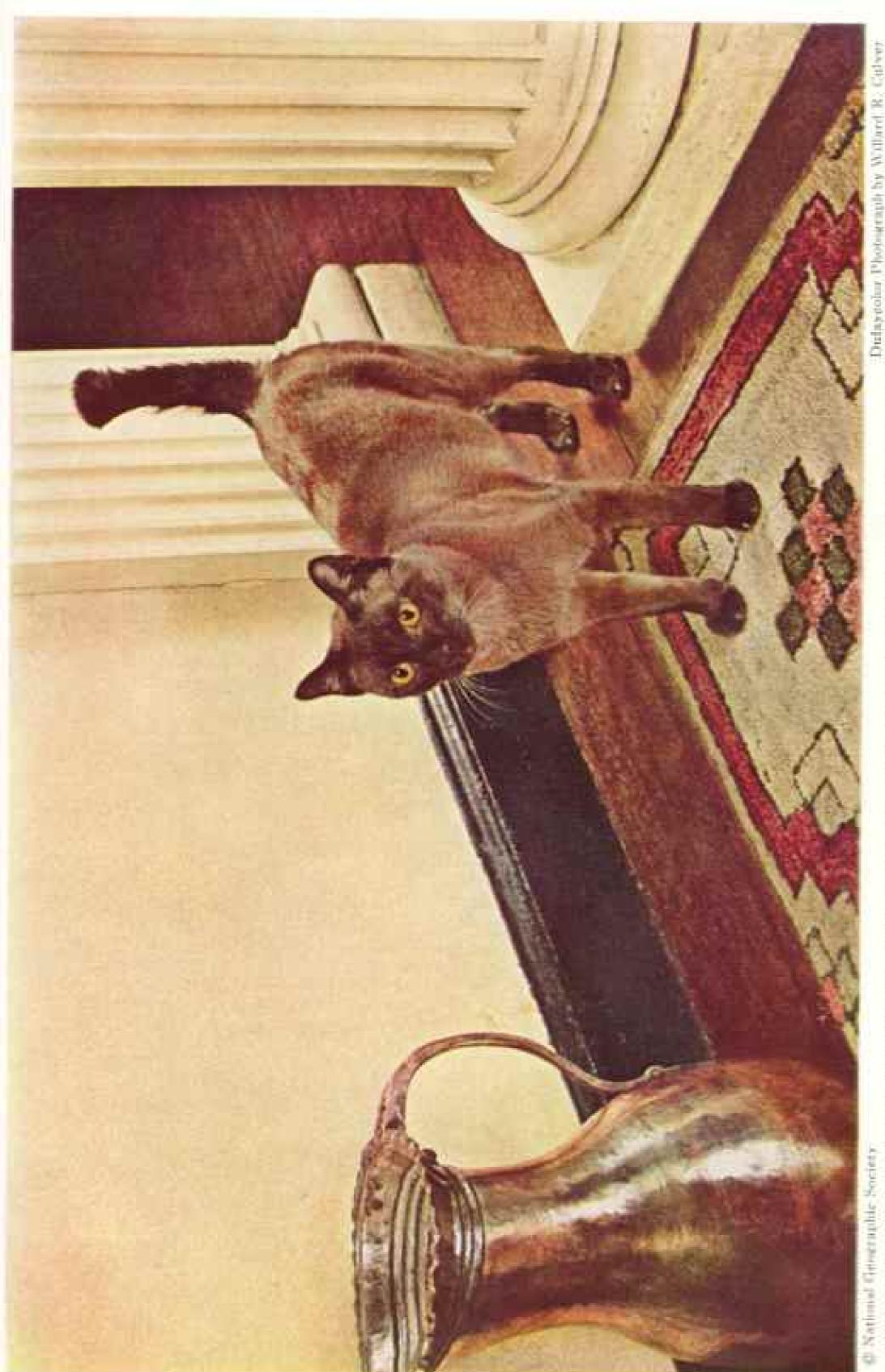
Diffusesion Plintneraph by Willard R. Calver

ANCIENT EGYPT'S SACRED CAT HAS A DESCENDANT IN THE LITTLE AND TAWNY AUYSSINIAN.

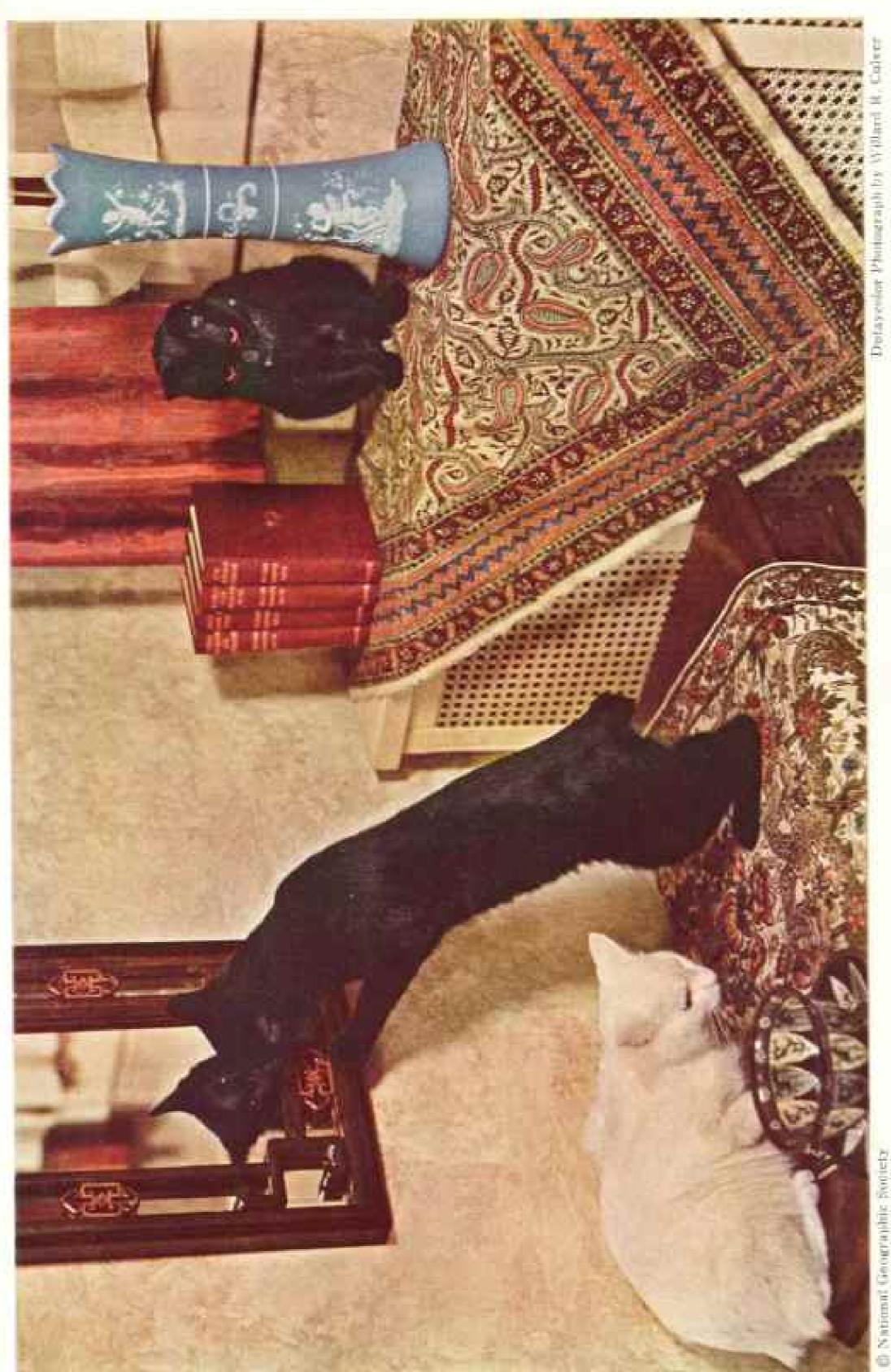
Cat owners may agree with Montaigne's saying: "When I play with my cat, who knows whether I do not make her more sport than she makes me?" The Anyssixias has been so rare, even in its African land of origin, that a marriageable girl there who owned one of these cats was thought an exceptional "catch." Here shown is Champion "Woodrooffe Ras Seyum," one of the few adult male sires of this breed in the United States. He is owned by the Djer-Mer Cattery, of Washington, D. C.



C. owns this Baack Donakene Short-hair, blue-ribbon winner in many a show. She came (should) Without a single white hair, "Midnight" has brought down many an expiritive on her head when TO BE DRAGGED, SMARING FROM UNDER THE SOFA FOR A SPLIT-SECOND FOSE Mr. Rextord L. Hallmes, of Washington, D. C., owns this Br.Ack, Domistic Short is the whispered 2) from a corner grocery store! Without a single white hair. Midnight on her lawful occasions, the crossed in front of superstitious nictorists and pedestrianal "MIDNIGHT," DISCISSING THE CAMERA, HAD

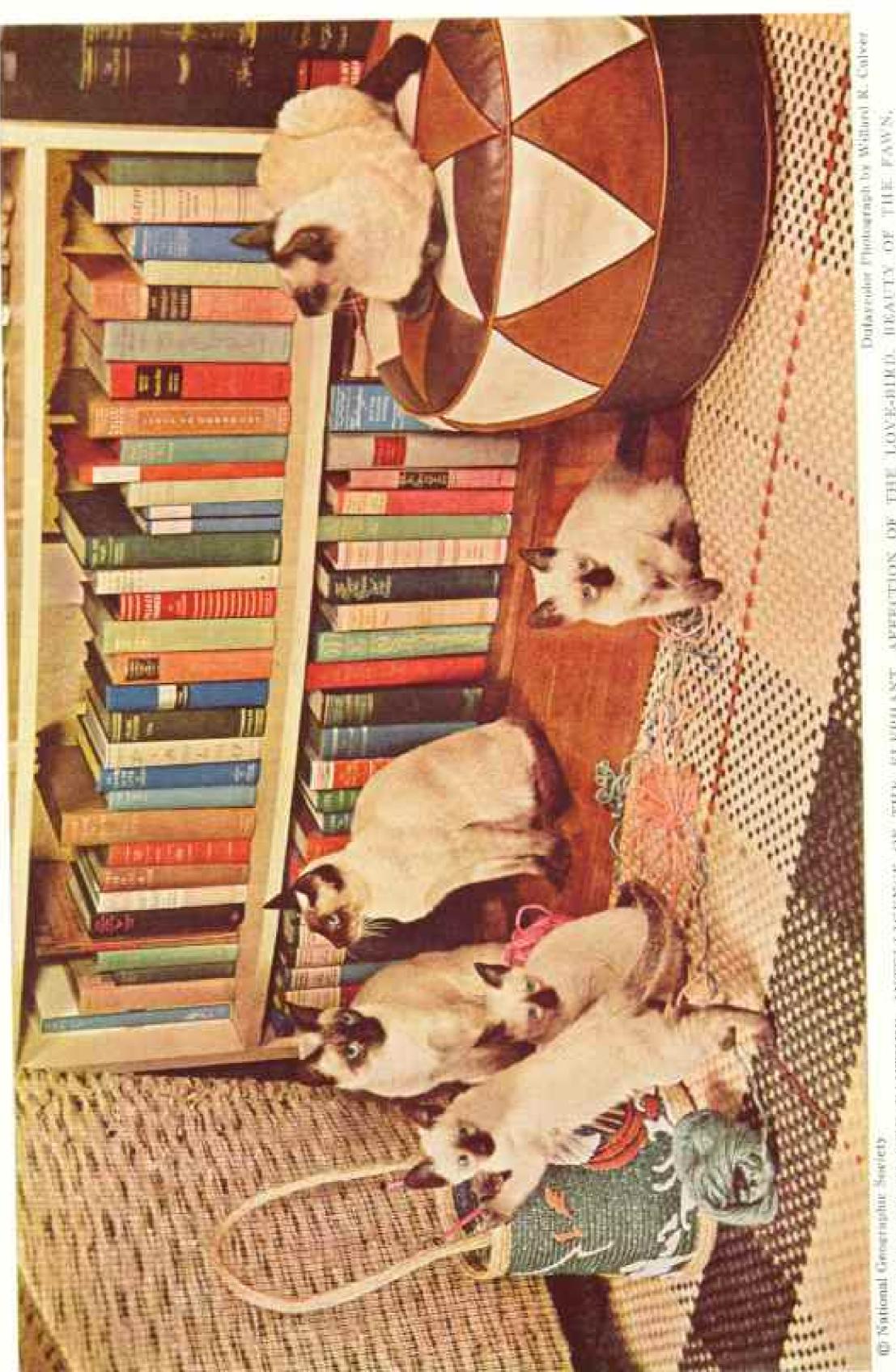


Or any other relative, for that matter! "Elmer" is one of two or three Brawless in the casters. United States. Many Pacific coast families of this breed, which conforms to the Siamese but has a darker coat and topas or orange eyes instead of blue. With sharing brash tail, this princeling, owned by Mrs. Vincent Lambridge, Massachusetts, seems to be thinking. "Well, what do you want?" AND HIS CONTSINS, AND HIS AUNTS" PURS IN THE CORNICE WOULD HAVE TO LOOK LONG AND PAR TO FIND ANY OF "HIS SISTERS.



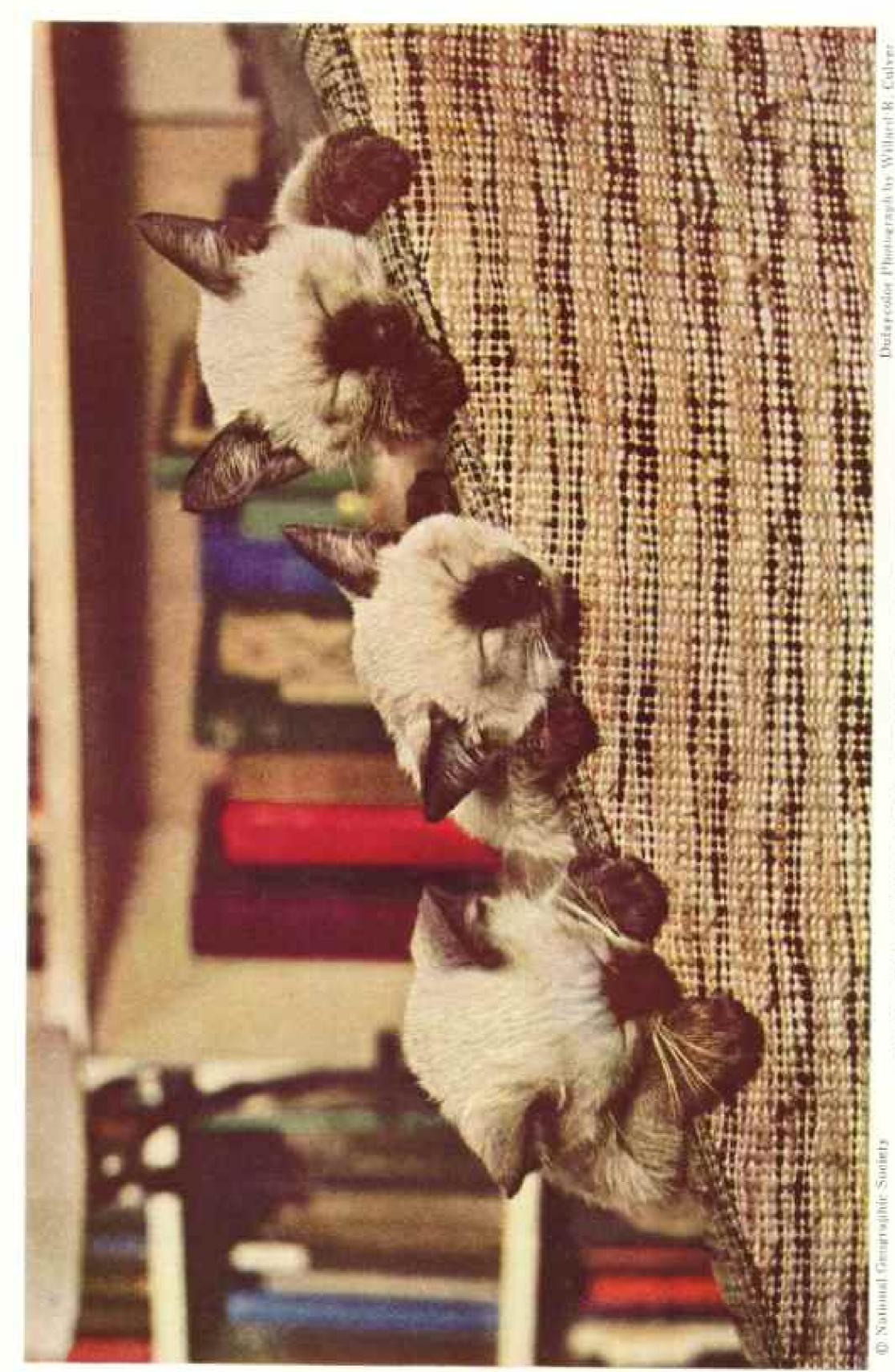
DUZZE AND PRY, AND GLARE LIKE ANY OTHER TAILLESS MANXES

Named for the Isle of Man, its place of origin, this cut shares with Russian breeds. "Captain Kidd" comes face to lace with himself in the mirror, while Champion "Snow Maiden" nods drowally, and "Bobble" (right) seems to be watching for a mouse, Mrs. P. M. Bailey, of Washington, D. C., owns all three, Absolute taillessness, without even a stub, is the criterion of the perfect Manx.

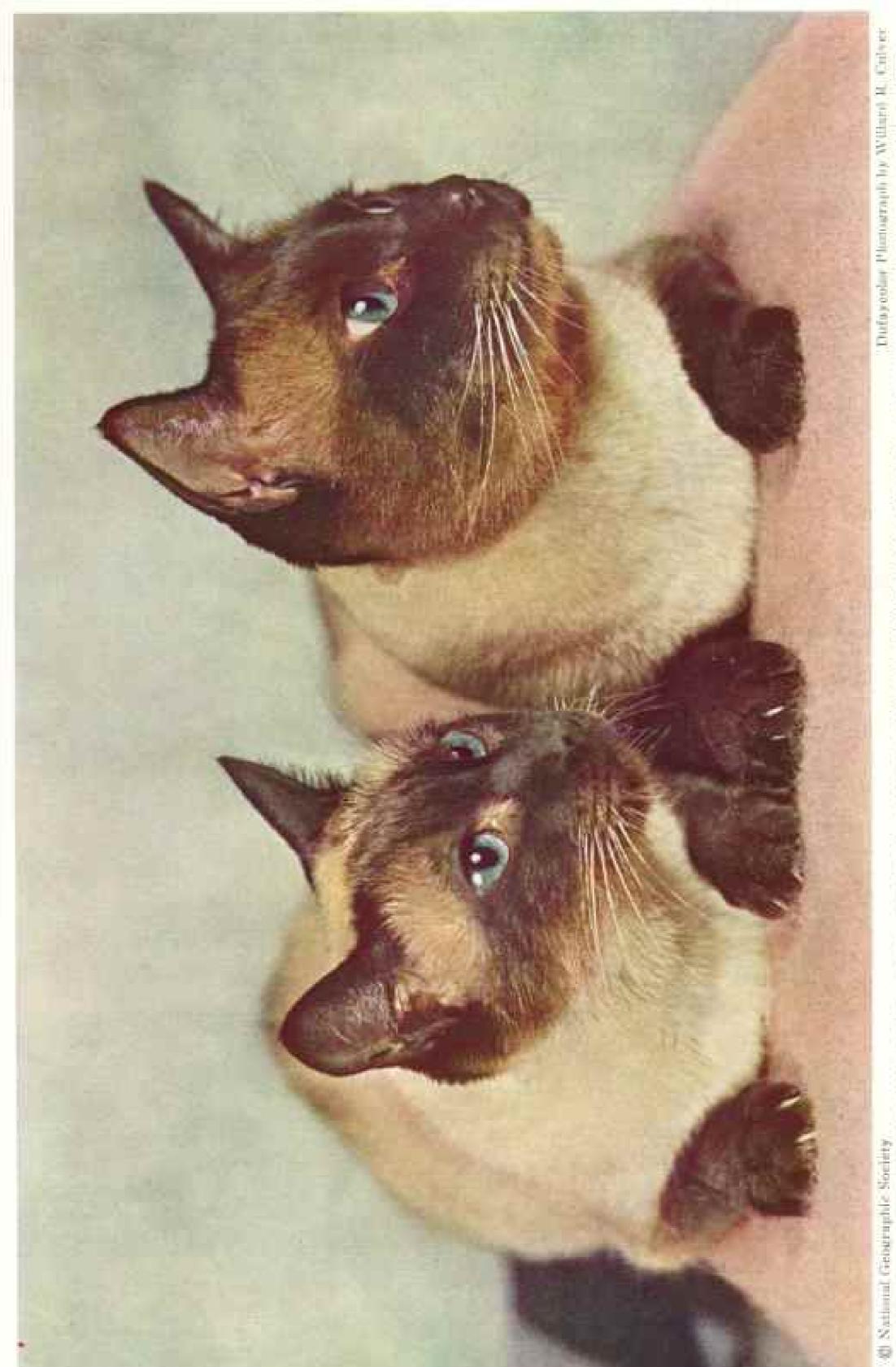


\*GRACE OF THE PANTHER, INTELLIGENCE OF THE ELEPHANT, APPECTION OF THE LOVE-MIRE, INCAUTA OF THE FAWN, SCHLOSS OF LIGHT"

Petitioned by a leminitie lavorite for a per, so the legend goes, an Hastern god blended these qualities into the Stammic cat. "Chandabari Rokulo," on the ottoman, pays no attention while her three lettens (foreground) tend to their mintress knithing. "Chieng Wee" (left rear) and "Chanda Tu" gossip earnestly. Perhaps the subject is: "What are these spoiled youngsters coming to!" Miss Marjorie Ellis, Washington, D. C., is the lucky owner.

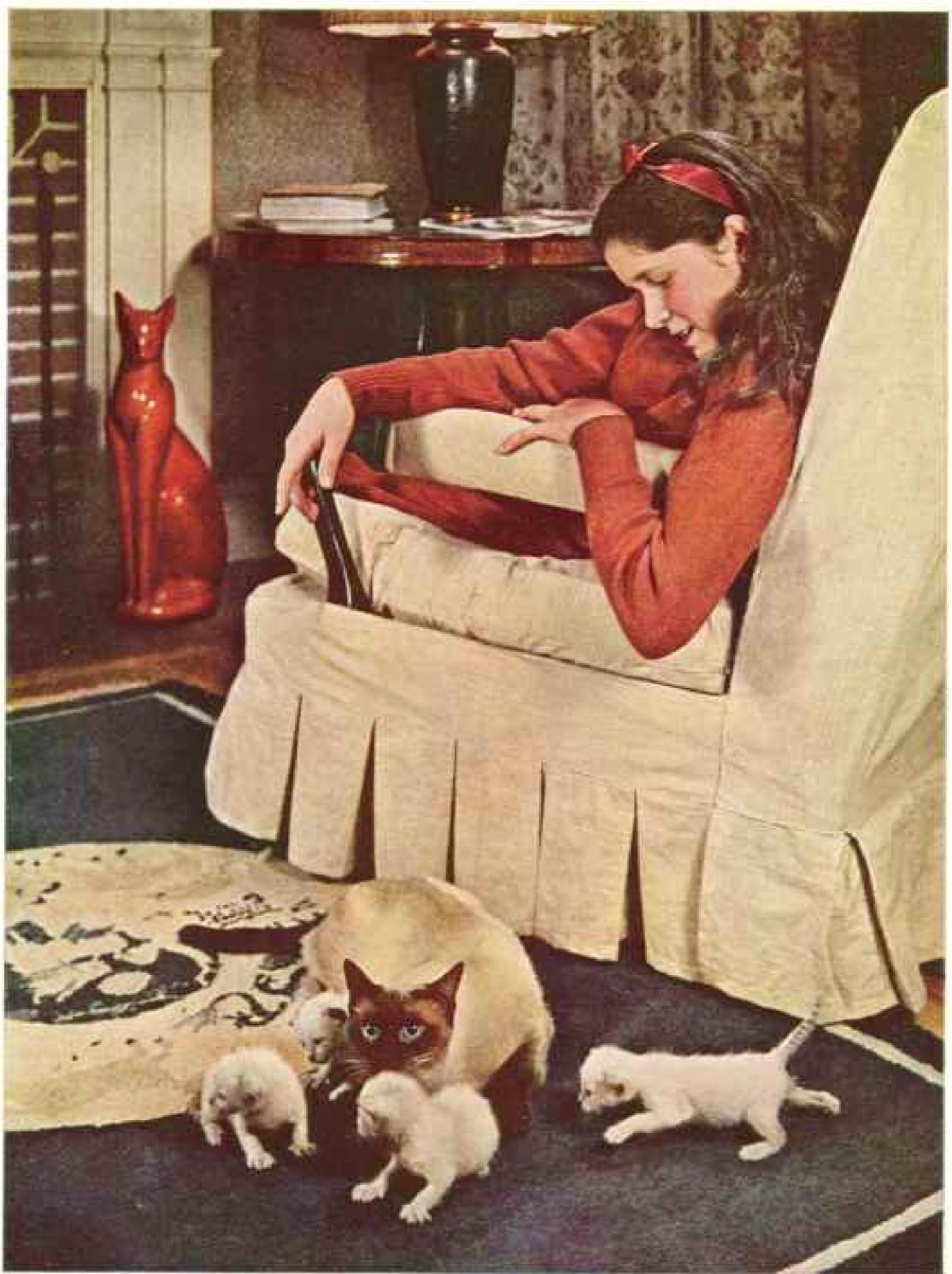


little Siahinsh rest weary heads in the home of their owner. "Wynken," "Blynken," and "Nod" they might be call



In 12 years "Chinkaling" (Plate XXIV) had 87 bittens; many of them inherited their mother's grave. The Standest interly unlike the problem of a Persian or Domestic. It may be broken to a least and trained to come to heel like a dog. This pair belongs to Mrs. Arthur C. Cobb ESE ARESTOCRATS "SY MINGO" (PLATE XVI) AND "DIER KITS CHINKALING" (LEFT) TWO OF A KIND MARK ONE ROYAL PAIR SIAM

### THE NATIONAL GEOGRAPHIC MAGAZINE



D National Geographic Society

Durfuy color Photograph by Willard R. Culver-

FOR CLUMSY INFANT STAMESE, THE "GREAT UNKNOWN" DEGINS ONE LENGTH FROM MOTHER:

One scrawny youngster hurries back from a daring exploration to the rug's edge —world's end to him! Stamese kittens are born pure white, and litters have been carelessly destroyed because they lacked the scal-brown "points!" Watchin! Champion "Dier Kits Chinkaling of Newton" (Plate XXIII) guards jealously her 82d, 83d, 84th, and 85th kittens—only eight days old.

The coat should be even in color, one shade throughout. The eye color should be copper or orange, copper preferably, and the deeper in tone the better. The three cats in the plates are well known to exhibitors at shows throughout the country. The two presented in Plate V have enviable show records:

### Smoke Persian

Striking among the Long-hair breeds is the Smoke, with its silver undercoat all tipped with black and its frill a delicate silvery shade (Color Plates VI and VIII).

The Smoke is regarded as unusually hardy and most affectionate. It makes a highly desirable pet and one that is sure to attract attention from the animal lover.

The head, face, and paws are jet black, the eyes a deep copper. Most Smokes that have done much winning at shows have come from selective breeding with Blues and Blacks, and there is sometimes a tinge of blue in the coat, but progressive breeders are eliminating this fault.

Smoke kittens are usually black when born, and it is best to keep them for some time, since frequently the least likely one turns out to be the pick of the litter.

### Blue-eyed White Persian

A most regal and beautiful variety of Persians is the Blue-eyed White, but if you happen to live in a smoky city you may find your pet unequal to the task of keeping his coat clean (Plate VII).

Whites are not numerous at shows, probably because many feel that they might be difficult to keep immaculate, and a cat must be benched with a perfectly clean coat.

In buying a kitten of this color, be careful to see that its hearing is normal, as deafness is a defect of this particular variety.

Two classes are given to the Whites, one for the Blue-eyed and one for the Orange-eyed. Emphasis is placed on coat color; nothing less than snow-white will do. Notice in the color plate the absence of any bairs other than white, the complete freedom from marks or shadings of any kind.

Breeders of Whites are loud in their praise of them, stating that they are affectionate as well as attractive. And of course they blend harmoniously into any color scheme.

### Black Persian

To me there is nothing in the Long-hair division more attractive than a jet-black Persian (Plate IX).

Blacks are usually difficult to breed for showing, and, curiously enough, the finest Blacks at maturity have often been the brown and poorly colored kittens.

If the cat takes many sun baths—and what cat doesn't?—the coat has a tendency to acquire a brownish tinge. Breeders of Blacks
often cross them with Blues to improve the
type and coat, and the eye color, which is
getting consistently better. The cat in Plate
IX, for instance, has Blue ancestry. The eye
color should be deep copper or orange, with
no green rim.

Blacks make admirable pets and add distinction to any home.

### Blue Cream Persian

Though fairly popular across the Atlantic, the Blue Cream is seldom seen on the American side. The two colors which give the breed its name should be "softly intermingled," according to the English standard, while the American standard calls for the colors to be "well broken into patches, bright and well defined," The eye color is a brilliant copper or orange (Plate XI, left),

Like the Tortoiseshells, the Blue Creams are nearly all females. When, rarely, a male does appear in a litter it is always impotent and the stock is replenished by breeding to one of the colors from which this variety is derived.

### Red Persian

The solid Red Persian is a handsome animal with a disposition which sometimes seems to match its fiery bair (Plate XII).

It is less numerous than its half-brother, the Red Tabby (Plate II), however, probably because it seems to be much harder to breed. A really good solid Red is seldom seen, as most of them carry markings and the body color, which should be deep, is too often pale.

Mrs. Buckworth-Herne-Soame suggests a good Cream cross to do away with the stripes, the Cream to be the sire and a Red Tabby to be the queen, with as few markings as possible. From a litter of such progenitors select the likeliest females and mate them to the best Red Persian obtainable. Red Persians should have deep-copper eyes.

### Tortoiseshell Persian

A favorite among funciers is the Tortoiseshell Persian, with her colorful "Joseph's coat" (Plate XIII).

The colors—red, black, and cream—should be bright and in clearly defined patches over the body and legs. A distinctive mark of the Tortoiseshell is a triangular "blaze" covering half of the face. The eyes should be copper or deep orange.

As no fertile males are born, Torties must be mated to a cut of one of the solid colors that have been used in producing the variety. The litters often present all combinations of the hues that appear in the mother's coat.

### Tortoiseshell Domestic Short-hair

Here we find the Tortie in sports attire (Plate XIV).



Photograph by Horydezak

"WHAT WAS THATP"

Perhaps it was only a yelping, playful puppy that frightened this little black "panther of the hearth" into battle pose—back arched, hair standing on end, claws bared for action. The belief, which still is provalent, that it is unlucky to have a black cat cross one's path is probably a survival of the ancient association of the sable felines with witches (page 596).

The Short-hair Tortoiseshells are judged by virtually the same standards as the Long-hair, so far as color and type are concerned, the one great difference, of course, being the coat. Domestic Short-hair Torties, like their more ritay Long-hair sisters, are all females, or, if an occasional male does appear, it is infertile.

### Silver Tabby Domestic Short-hair

The Silver Tabby, whether he wears the dress clothes of the Persian or the business suit of the Short-hair, is one of the handsomest of cats (Plate XV).

A good Silver Tabby is hard to breed suc-

cessfully. The ground coat should be a pure pale silver and the Tabby markings black and distinct. The kittens, when born, are usually quite dark, if they are to grow up into outstanding Silver Tabbles, Not for some months does the real coat begin to come in showing what the mature cat will look like.

The English standard culls for a green eye "as deep as watercress if possible." The American standard is less specific, calling simply for a green.

Some fanciers maintain that the Silver Tabbies will be improved if breeders will mo back and mate them with specimens having hazel eyes, which were formerly not regarded as a defect. These breeders think that the dark stripes will be improved when this is done.

Meanwhile, the Silver Tabby, both Long - bair and Short-bair, gains steadily in popularity and in excellence of type.

### Siamese

The most popular and fascinating cat of the Short-hair group is the royal sacred Siamese (Plates XVI, XXI, XXII, XXIII, XXIV, and page 615).

Striking in appearance, utterly unlike any other cat in coloring, this blue-eyed oriental, consort of kings in its native Siam, is fast becoming a favorite among all classes of Americans.

The Siamese was originally imported into England as early as 1885, and though at first delicate and difficult to acclimate, is now the most popular cat in that country. It reached the United States shortly after, and here, as in Europe, it has won the hearts of lovers of cats and devotees of beauty. At the various shows it is seen in numbers and its cages are the mecca of visitors.

The Seal Point Siamese attracts attention at once by its unique appearance. The ideal Seal Point is n clear pale fawn or cream in body, with legs, tail, and ears a deep seal brown. Its head is wedge-shaped and carries a "mask" of dark, almost black, seal brown. The eyes are a gorgeous sapphire blue, and are oriental in appearance, slanting toward the nose. The body is medium in size, graceful, lithe of movement, and the hind legs are slightly longer than the forelegs.

Comparatively rare strains are the Blue Point and Chocolate Siamese (not shown in the color plates). The Blue Point is not quite so striking as the Seal Point.

for the color is either a pale blue or cream, with the "points" (legs, tail, and ears) a deeper blue. It has a tonal beauty that reminds one of those Copenhagen china cats one sees in gift shops. The Chocolate Siamese is much darker than the Seal Point; its head is rounder, and the "points are almost sable in their density."

Unusually intelligent and affectionate, Siamese make admirable companions and can be taught many little doggy tricks, which they will perform when they feel like it. They can even be broken to a leash, taught to retrieve, or developed into admirable watchdogs. Curious, with a weird and peculiar cry-



© Pierce W. Hangge, by Rossell E. Froelich

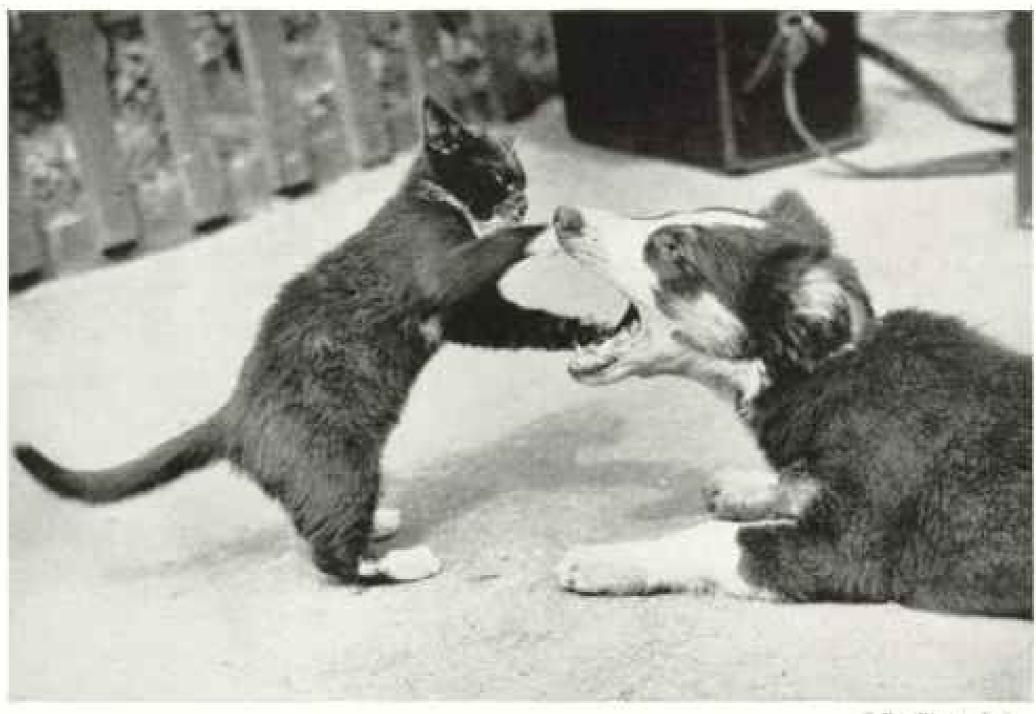
"HAW, HAW! THAT'S A GOOD ONE!"

This comical shot was a lucky accident. A St. Louis newspaper photographer was about to take a picture of his sleeping cat when it suddenly sat up and yawned. The camera clicked. Result: "The Laughing Cat," one of the most widely published news pictures ever made. It has been used on thousands of calendars, match boxes, cheer-you-up cards, drinking glasses, and even for insurance advertising.

unlike that of the Persian or the domestic cat, they will give warning of any stranger prowling about the premises.

The kittens are born pure white; in a few days the markings or "points" begin to appear and at first look like smudges of dirt. As a Siamese matures, its coat darkens and stays quite dark for about eighteen months; then, after shedding, it comes in light again.

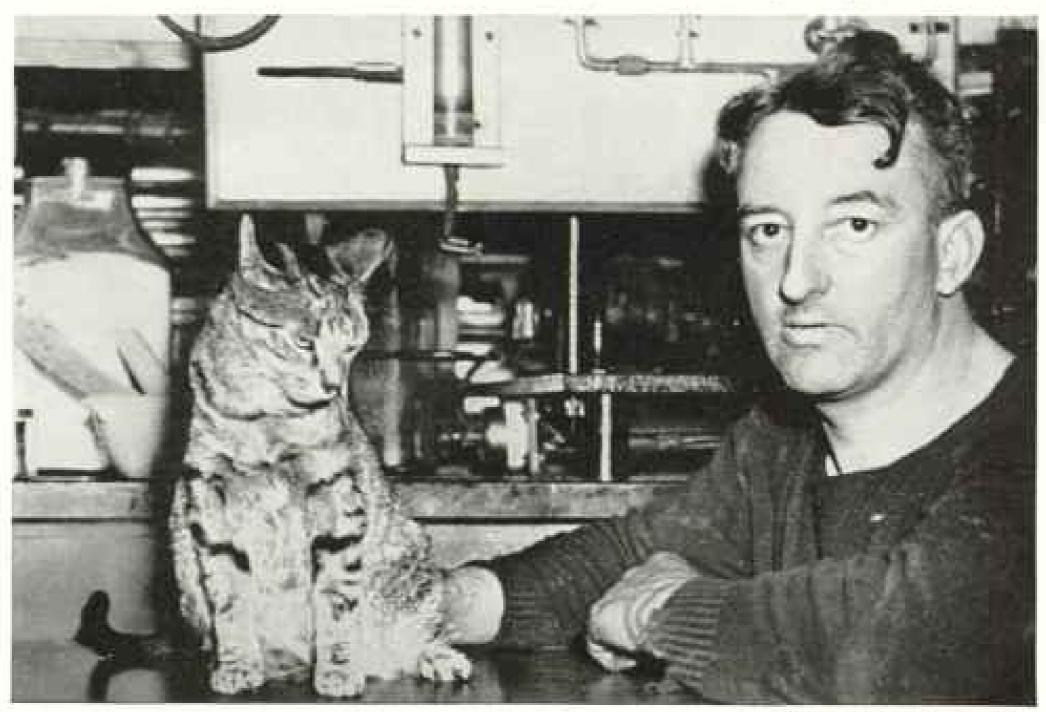
A Siamese will "talk" to you by the hour, and will entertain you by his antics for the whole course of his life. He wants what he wants when he wants it, and will make you give in eventually, as you know if you ever owned one.



@ For Plutas, Ltd.

"SAY AH!-THIS WON'T HURT!"

Inspecting its playfellow's glistening fangs, kitty seems to be tempting fate. Actually, the two friends romp together without accident for hours at home in Poplar, a district of London. When allowed to get acquainted with each other, cuts and dogs are often stanch puls (page 596).



Photograph from Wide World

FAITHFUL "MINNIE THE MOUSER" EARNS A MONTHLY PAY CHECK

Although of undistinguished parentage, she receives a check for \$3.70 every month with which to purchase salmen and milk in return for her services as mouse catcher at the Standard Oil Company's refinery laboratory at Bayonne. New Jersey. Chief clerk E. H. Bengough, who cashes Minnie's checks at the grocery store, calls her the "most faithful and effective mouser the plant has had."

Many Sinmese have cross-eyes. This feature the judges consider a fault, the British and American standards calling for straight eyes with no tendency to squint (Plate XVI).

Many cats of the East have a kink in their tail, and the Siamese is no exception. However, the standards of both the Sinmese Cat Club of England and the Siamese Cat Society of America call for a long and tapering tail, either straight or with only a slight kink near the end. Short-tailed Siamese are not regarded as desimble:

According to one story, the Siamese is supposed to have acquired the kink when some god of the Buddhist pantheon, whose memory was poor, tied a knot in his cat's tail to remind him of something!

Many years ago, runs another legend, a Buddhist monk dwelt in an old temple whose greatest treasure was a golden goblet from which Buddha had once drunk. Two Siamese cats helped the old monk tend the temple.

When the monk, full of sanctity, reached his appointed time and died, one cat, Tien, set out to find another monk to take charge.

Chula, the other, left alone, watched the precious goblet ceaselessly for three days and three nights; in fact, she gazed at the relic so tirelessly that she began to squint and continued to do so for the rest of her life.

At length, feeling sleep overpowering her, she lay down beside it and curled her tail about the slender stem, so that she would be awakened at the slightest touch.

When finally Tien and the new monk arrived, they found Chula lying beside the goblet watching her six kittens at play in the moonlight which shone through the broken roof of the temple. They all had kinks in their tails and they all squinted,

### Abyssinian

The Abyssinian is the present-day survivor of the sacred cat of ancient Egypt (Plate XVII). It has been known in England since 1882, and the Abyssinian Cat Club of that country flourishes, but in the United States the breed is rare.

The Abyssinian is somewhat similar to the Siamese in body type, though its tail is shorter and thicker, and the ears are large, The color is a reddish fawn or gray, with each individual bair ticked. A good specimen should be entirely free of any Tabby markings.

### Black Domestic Short-hair

Like the Persian Black, the Domestic Shortbuit of this color is a strikingly handsome animal, and Midnight, the cat pictured on Plate XVIII, well deserves to have won her blue ribbons. Her sleek, glossy, ebon coat indicates that she is in the pink of condition, and her body conformation is excellent.

Many fine specimens are hidden away as pets in homes or in the corner grocery, never getting a chance to vie with the aristocrats of



Photograph by F. Seymour Heney

CAT BE NIMBLE, CAT BE QUICK

Or you won't catch that butterfly! Springsteel muscles and effortless coordination permit purs to accomplish marvelous feats of agility. To match proportionately a first-rate feline high jump. a man would have to leap over a house (page 593).

the showroom because their owners think they would have no chance. Grocery-store-born Midnight and her record as a prize winner show the fallacy of that notion.

### Burmese

One of the rarer breeds in the United States is the Burmese (Plate XIX).

In France, where a cat called "Burmese" is often exhibited, the specimens benched have blue eyes, a bushy tail, white feet, and a fawn coat which seems to show Long-hair ancestry, as it is longer than a Short-hair coat should be. The suspicion is that the French Burmese is the result of a clandestine affair between a White Persian and a Siamese.



Photograph from Wide World

"TOO DANGEROUS A JOURNEY TO RISK THE CAT'S LIFE"

This was the reason Colonel Charles A. Lindbergh gave for not taking muscot "Putsy" with him on the history making 1927 transatlantic flight. Kitty casts an approving eye over the Spirit of St. Louis at Curtiss Field, Long Island, before the take-off from near-by Roosevelt Field.

The Burmese shown in the United States have none of these characteristics. The standard of the Cat Fanciers' Association calls for a body color of even sable brown, shading to a trifle lighter on chest and abdomen; kittens paler and brown at birth. The mask, cars, legs, and tail are clearly defined and a darker brown than the body.

The ideal is medium in size, with body long and syelte, legs proportionately slim, hind legs long and tilting the body slightly downward from pelvis to shoulder; feet small and oval. Eyes are round, ranging from a golden turquoise to yellow, with no tendency to squint; ears large and wide at base; tall straight or slightly kinked at or near the extremity

The Burmese as we know it in America displays the same affectionate and intelligent disposition as the Siamese. While it is seen quite frequently on our west coast, there are only two or three Burmese in the East.

### Manx

The Manx, from the Isle of Man, conforms to the standard of the Domestic Shorthair except that the hind legs are much longer than the forelegs and there should be a complete absence of tail (Plate XX).

There is an amusing story of the reason for this taillessness. Centuries ago the warriors of

the Isle of Man took a fancy to adorning their helmets with the bushy tails then common to the cats of their country. One wise old mother cat, seeing how things were going and noting the rapid decimation of her race, determined to do something about it.

So, as the legend goes, she climbed to the top of a high mountain and there gave birth to five kittens. And as fast as they were born she bit off their tails. When the kits came to cathood she communicated to them the reason for the taillessness and cautioned them to go and do likewise!

The gait of the Manx, like that of a rabbit, is another distinctive feature.

Some cats have appeared on the stage. A well-known breeder writes:

"A Manx cat has recently made his debut on the stage, playing the part of Nerferti of Stoner in the play Other Gates. He behaved in the most exemplary manner and won the hearts of all those taking part. So well did he play his part that he had a 'call.' Walking on at the end of the play, he stood calmly to receive the applause and then retired gracefully-a born actor."

A specialty club of breeders of this fascinating variety has recently been formed in the United States and is making solid progress in making the Manx better known.

# WONDER ISLAND OF THE AMAZON DELTA

# On Marajó Cowboys Ride Oxen, Tree-dwelling Animals Throng Dense Forests, While Strange Fishes and Birds Help Make a Zoologist's Paradise

### By Hugh B. Cott

ARAJÓ ISLAND, situated in the mouth of the greatest river in South America, has been compared by one writer to an egg in the jaws of a dragon. This egg is certainly a very large one, and there are few people, I suppose, who realize that the Amazon River boasts an island in its estuary whose surface area is twice as large as that of Massachusetts (map, page 638).

This tract is almost equally divided into two regions: that in the southwest, covered with dense tropical forest, and the northeastern half, consisting of vast, open grazing ground where thousands of cattle

are raised.

The objects of my expedition to Marajó were to study the natural history of the island and to make a collection of zoological specimens for the British Museum. I also hoped to bring back a number of living reptiles, birds, and mammals for the Zoological Society of London.

Moreover, I was glad to have the chance of observing the life and customs of the natives, for Marajo's interior is seldom visited by travelers, and little has been pub-

lished about it.

The expedition was made possible by the hospitality of Dr. Demetrio N. Bezerra, who allowed me to stay as a guest on his ranch.

### CROSSING THE PARA RIVER

One Saturday night in November I found myself on shipboard preparing for my first voyage in an Amazon River steamer. We were to leave Belem (Para) at midnight for Soure, chief town of Marajó.

There are two decks on these ships, the upper reserved for first-class passengers, the lower accommodating engine, baggage, cattle, and second-class passengers. Above the top deck is a flat roof provided with a number of metal rails which run along the ship from end to end, serving as supports for the hammocks, for everyone supplies his own and hangs it up wherever there is a vacant spot.

I was closely surrounded by a curious

mixture of people—smartly dressed citizens off for a week-end holiday, ranch owners, priests, cowboys, women with squealing babies, negroes, and other samples of the life of the place, all swinging in hammocks of every size, shape, and color.

Conditions had not improved by 4 o'clock the next morning, for we were now well out in the river, which is here about 20 miles wide, and usually very rough at this

time of the year.

The ship was rolling in a horrible manner, so that everyone swung and crashed into his neighbor's hammock. One minute I bumped into the girl on my right, and the next my left-hand companion would be trying to thrust his shoes down my throat!

I was, therefore, not altogether sorry when we came alongside the little wooden

landing stage an hour later.

### A CITY HAS STREETS OF SAND

I was met by my host, who has a house close to the waterside. Here we had breakfast, and soon afterward I went out to in-

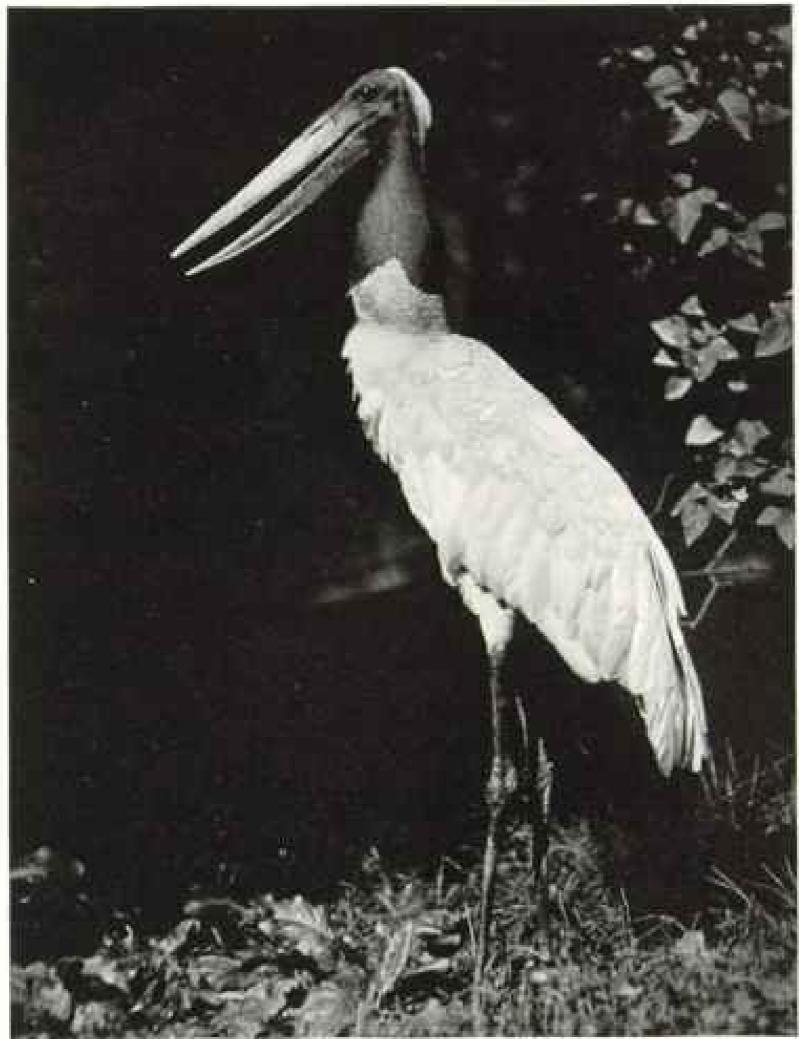
vestigate the surroundings.

Soure's gally painted houses, with their red-tiled roofs, are laid out in squares on either side of the broad, unpayed streets, which are many inches deep in soft sand. Along the center of each of these highways is a row of fine mango trees. The inhabitants bring out chairs and sit in their shade for hours at a time. These mango trees are also highly appreciated by large flocks of golden-headed parakeets, which keep up an incessant chatter and screaming overhead.

Outside many of the houses small red flags were flying, signs to show that either meat or arraky, the native drink, was for

sale within.

Assahy is made from the fruit of the assahy, or assai, palm (Plate VIII). The round, purplish fruits, each about the size of a marble, consist of an outer skin and a large hard stone almost immediately beneath. Between stone and skin is a thin layer of pulp, used in making the beverage, so that a large quantity of the fruits is nec-



Photograph by Arthur H. Fisher

JABIRU STORKS, UNGAINLY ON LAND, GLIDE MASTERFULLY THROUGH THE AIR

Marajo Island teems with bird life. Thousands of white berons, great blue heroms, scarlet ibises, and cormorants speciale the skies at daybreak as they pass out to their fishing grounds. Above them all sour the fleets of giant jubiru storks, in graceful, widening circles, with never a flap of their wings.

essary to prepare a comparatively small amount of assahy.

First the fruits are soaked in hot water to soften the skin; then they are rubbed against one another by hand in a large bowl containing a little water. This treatment separates the skin and pulp from the stones.

The liquid, after being strained, is ready for use. It is rich purple in color, and has the consistency of thick soup.

Usually it is sweetened with sugar and taken with farinha, the principal food of the people, be they Brazilians or Indians. This is the flour or meal made from the manioc, or cassaya, from which we also get the familiar tapioca.

A BRASS BAND AND FIREWORKS

This was a festa. day in Soure, At 5 o'clock in the evening we saw a long procession, led by a man carrying a cross and a woman with a banner, marching around the town. It was accompanied by the local brass band and an explosion of rockets. The rockets are always a prominent feature of these occasions and delight the people, who seem to love as much noise as possible.

Behind followed a large crowd, all with bare feet. The women wore dresses of pale colors, pink, blue, yellow, or white. The deep green of the mango trees, the streets

lined on either side by brightly painted houses, and the little white church formed a suitable background for a very beautiful picture.

After supper we walked toward the church, outside of which was an open space where all the people were assembled. Here were a number of stalls, each having an appropriate name written above, such as "Bar Nazareth," where supplies of sweet-meats and assahy could be obtained.

Round these were gathered the holiday makers from Belém, natives of Soure, cow-



EUTURE COWBOYS OF MARAJO ISLAND LEARN EARLY TO USE THE LASSO Running barefoot in boyhood develops leathery feet and toes that will cling to the stirrups (Plate III).



ONCART EQUIPAGE ARRIVES TO TAKE THE AUTHOR INTO THE MARAJO INTERIOR

On the balcony of the ranchhouse stand his host and hostess, owners of a large ranch 12 miles from the coast on the Igarapé Grande (page 638). Mr. Cott's baggage, augmented by collections on the return trip, was transported in the two-wheeled cart.



Drawn by Raiph E. McAleer

### WITHIN THE MAW OF THE AMAZON LIE THE UNTAMED JUNGLES AND VAST, FLAT PRAIRIES OF MARAJO

The spacious delta island is a wilderness to the west, a broad expanse of open plains to the east, with dismal awamps in the center and on the fringe of the jungles. The prairie region is under water for months each year, because of the heavy rains that fall from February to June. Half a million cattle graze on the open land, often standing in water above their knees during the wet season and feeding on the rich grasses that extend above the surface.

boys wearing blue shirts and trousers and wide-brimmed straw hats, negro women with gaudy Jewelry and dresses, and little naked black children, while the band and an occasional swish-bang of a rocket provided suitable accompaniment for the closing bours of a festa day.

Next morning, before it was yet light, we started sailing up the river known as the Igarapé Grande (Indian for "canoe path"), at the mouth of which the town of Soure lies. Our objective was Fazenda Alegre, a small ranch situated on the north bank about twelve miles inland.

There was scarcely a breath of wind at this early hour and hardly a ripple on the surface of the water, which reflected the trees on either bank like a mirror.

The silence was broken only by the mournful hooting of tree frogs in the woods far away on each side, and by the gurgling of the water underneath the prow.

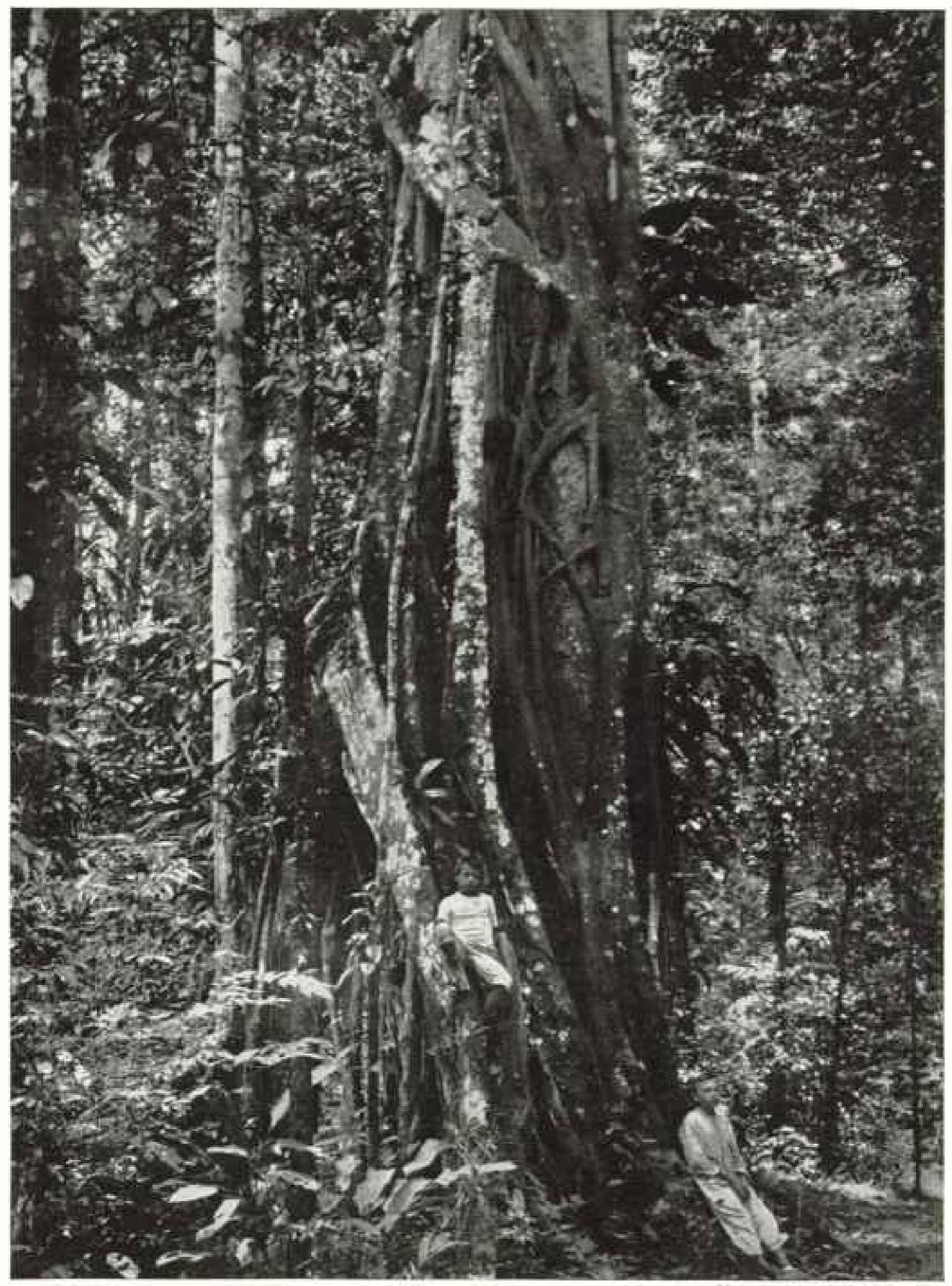
Presently, as it grew lighter, we heard a harsh screaming overhead, and I saw a large flock of brightly colored parrots, all flying in pairs, as is usual with these birds. I counted thirty pairs, while numerous egrets and herons, disturbed by our presence, flapped slowly away down the river.

The island of Marajo is entirely flat, and no part of it except the artificial burial mounds attains a height of 25 feet above sea level, so that the water in all the streams rises and falls with the tide (page 641).

On either bank there is a thick growth of mangrove trees, whose long adventitious roots are left high and dry at low water.

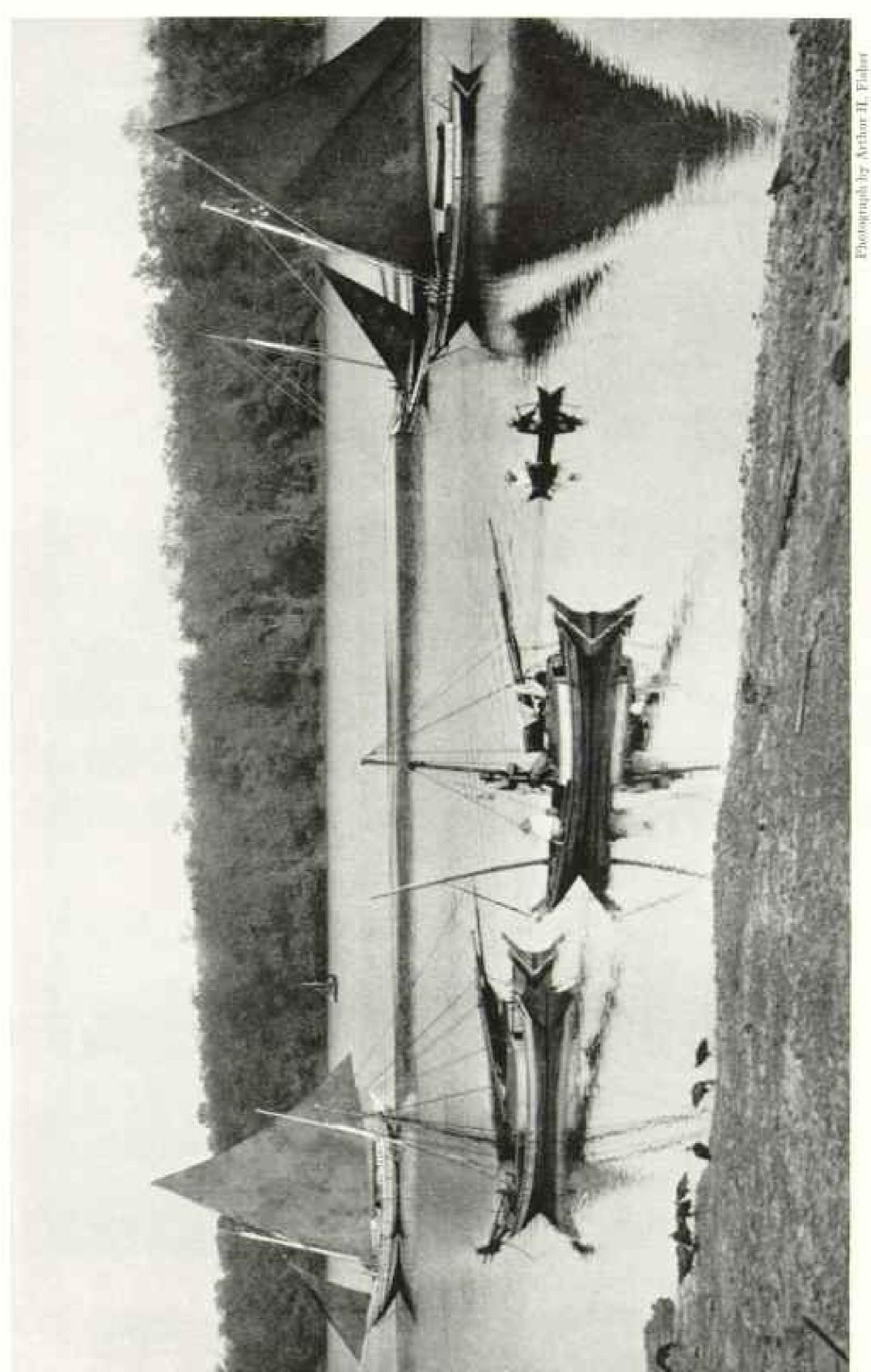
Numerous small crabs live in the slimy mud at the foot of these trees, while the branches are inhabited by monkeys and innumerable birds. Here I was delighted to see a fine pair of red coatis (Nasua rufa) nimbly running along the lower branches. These small carnivores I afterwards found to be common on the island. They are almost entirely arboreal and hunt in bands for the large iguana lizards (page 668).

After a few hours we rounded a bend in the river and Fazenda Alegre came into



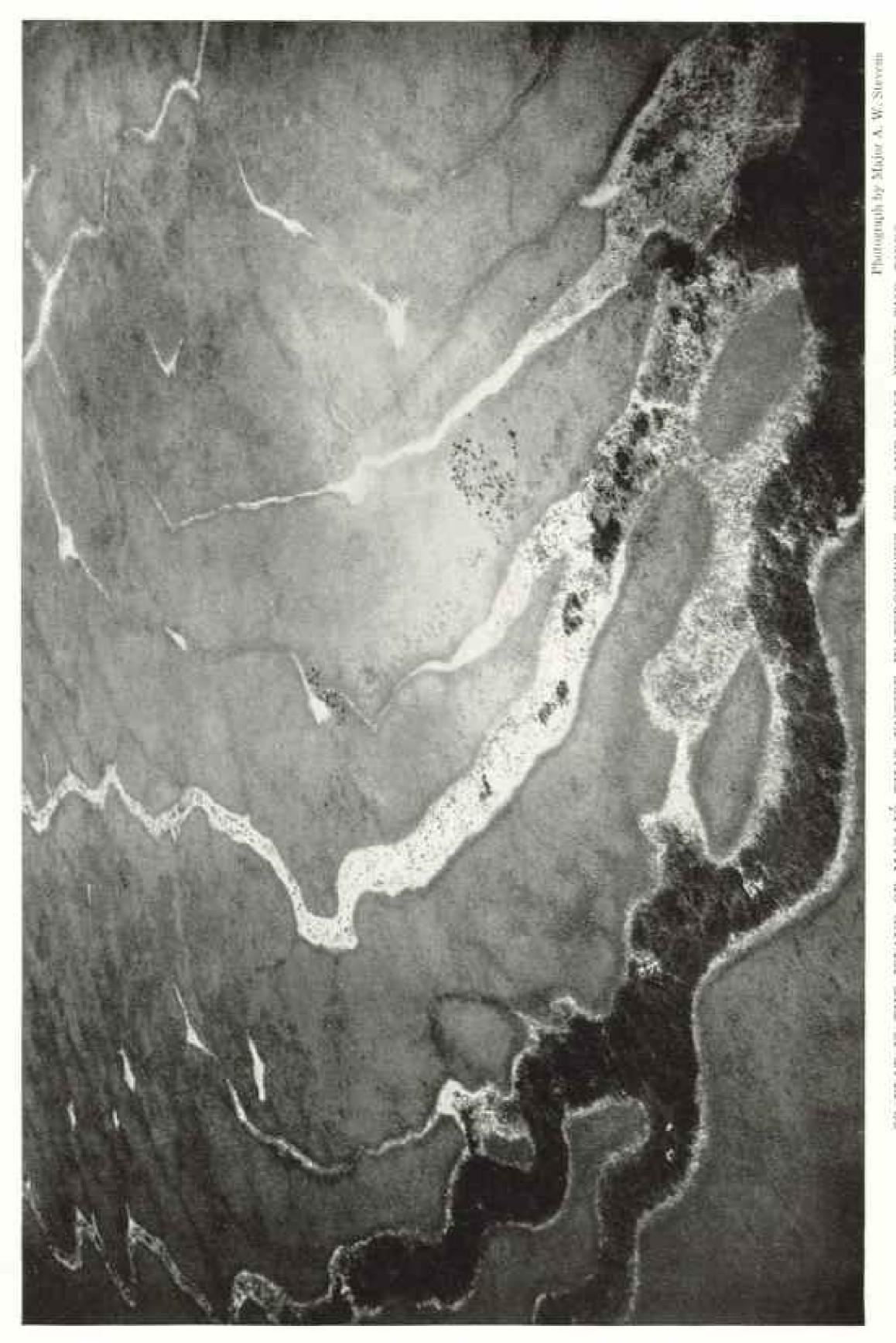
Photograph by Hugh B. Cott LOFTY FOREST TREES MEET IN SHADOWY ARCHWAYS IN MARAJO ISLAND'S JUNGLES

Flexible stems of climbing and creeping foliage, some twisted like cables, others forming trellises and ladders for garlands of flowering vines, wind around the tall trunks that tower skyward. Rivers meander for miles through such vegetation before emerging upon the open plains. In more open and sunlit spaces, masses of feathery hamboos form harriers, interspersed with drouping fronds of palms and the greens of wild bananas.



FISHERMEN PUT IN AT SANTA BOULZ, ON THE ATLANTIC SEABOAND, TO BRY THEIR ENOUNCES CATCHES

ted out on long, narrow platforms. Black turkey vultures on the shore awalt discarded scraps. Here at the important fishing centers of Marajó. Altbough the rivers of the island, and the entire northern area of of the principal staples among mative foodstuffs all over Amazonia. Back from the beach, thousands of sea cuffish are stretch the mouth of the river locally known as the Pacoval is one of Brazil, abound in edible fresh fish, the dried product is one of



Streams overflow their banks in the rainy season and stretches such as this are turned into yast swamps, with forests and fine prolete land inundated in all directions.

In June one may travel overland across large areas in a shallow-draft sailbout. SO PLAT IS THE BEAND OF MARAJO THAT ENTIRE WATERCOURSES RISE AND PAIL WITH THE TIDES



PAIR AWAY REPORE THE WIND-A MARAJO CRAFT WITH "SAILS" OF BRUSH

If the river abruptly bends or the breeze veers, then the paddler must go to work again, for these fishermen cannot tack with their foliate "canvas." Dense woodland borders the streams and covers wide stretches on the westward portion of the island:



Photographs @ Kart Severin

### BULLDOG OF THE FISH WORLD IS THE BLOODTHIRSTY PIRANHA

Steel-like plates sheathe the undershot jaws of this savage creature, also known as "caribe." Double rows of sharklike teeth inflict terrible wounds. Traveling in large schools, these fish, 8 to 10 inches long, become frenzied at the smell of blood. Attacking wounded prey, they lish the water into a foam as they strip their victim of every shred of flesh within a few minutes (page 653).

view. The house, like all those in this region, is built on piles and raised about eight feet from the ground, this being necessary on account of the floods during the rainy season. At that time (January to July) the larger part of the island is under water, in some parts as much as six or seven feet deep.

Shortly after our arrival, an oxcart came to the house, bringing a cow which had been found with its leg broken. The creature was to be killed, and I watched the cowboys at their work. Having tied the legs together, they dragged it beneath the house. Then the killer, armed with a huge hunting knife, put his foot over the eye of the terrified beast and thrust the knife into the neck and deep

down in the direction of the heart.

Hardly was it dead before the boys began to skin it. In a few minutes the meat had been cut up and the skin was pegged out to dry in the sun, while the black turkey vulture, or urubú (Coragyps atratus) helped the dogs pick it clean.

### "ISLANDS" OF THE POREST

We stayed at Fazenda Alegre for only one night, and on the following afternoon we rode across the plain to Fazenda Ritlandia, 18 miles to the north.



Photograph by Arthur H. Fisher

A BOA CONSTRICTOR IS AT HOME UP A TREE ON MARAJO ISLAND

The boa has an even temperament and may be quickly tamed, unlike his close relative of Central America, which has a violent disposition. Markings of the handsome scrpent are a combination of pale tan and dark brown or black. The pale marks are in a series of clongated saddles on the back. This snake seldom exceeds 12 feet in length.

Soon the forests were left behind and our ride lay across the open savanna which is typical of this half of the island. Here one has an unrestricted view for many miles in every direction, as far as the level horizon, so that if it were not for a few isolated groups of trees one might almost imagine one was on the sea. The natives call these woods "islands of forest," and during the wettest months the title is literally correct.

There are no roads across this vast plain, and often the narrow paths leading from one ranch to another disappear altogether; in such places it was only possible to walk, for the ground is broken up into little hillocks with deep cracks between them, so that the footing is dangerous for horses.

During the hottest hours of the day the mirage is very conspicuous. As one approaches a distant line of forest, perhaps ten miles away, only the upper parts of the trees are visible. Below lies a clear space, stretching immediately above the horizon, in which frequently can be seen the inverted images of the higher masses of vegetation, thus giving the exact appearance of reflections in water. The illusion of a lake is remarkable.

A strong east wind blows all day long, which renders the heat less oppressive, and the nights are cool. Moreover, there are no mosquitoes to disturb one's slumbers.

Here and there a troublesome insect pest is the chigoe, a species of flea known as bicho do pé, or "chigger," but not to be confused with our familiar red bug. It is far too common to be at all pleasant on some ranches. The dogs suffer even more than the men from these parasites; the poor canines constantly gnaw at their feet in their efforts to get at them.

# BOTH WET AND DRY SEASONS IMPERIL THE CATTLE

The cattle are exposed to two extremes of climate. On some ranches they have to stand continually in water for three or four months during the wet season, while toward the end of the dry period, in December, water is difficult to obtain. The lakes contract and many of them dry up altogether, and the grass shrivels under the sun's scorching rays, so that in some bad years the animals become very much weakened and large numbers die of starvation or thirst, especially if the dry season is prolonged.

Sometimes at this period the weakened cattle get bogged in the mud at the side of a lake when going down to drink, and then they are subject to attack by caymans.

The vultures will stand on the back of a sick ox, waiting until it dies, and a few hours afterward there is nothing left but a heap of skin and bones.

These birds are protected by law on the mainland, for, together with the dogs and hosts of ants, they are exceedingly useful in taking over the function of drains and garbage carts.

Ants clean up the smaller refuse. I once saw the remains of a snake, which I had skinned an hour previously, covered so thickly with a species of minute red ant that it appeared to be coated with a kind of red fur, while the surrounding grass showed countless hundreds of these insects hurrying to and from the feast. The ants are often troublesome because they plunder stores of provisions in the houses.

### A COLLECTOR AMUSES THE COWBOYS

I remained at Fazenda Ritlandia for a month. Each day was spent observing and collecting animals, and in the evenings I was busily occupied in skinning specimens, making drawings, writing up notes, and developing photographs.

It always amused the cowboys to see me skinning birds and mammals, and they would patiently stand by the hour to watch the performance, showing the greatest interest in what was to them such a novelty. It was utterly beyond their comprehension how anyone could be so absurd as to wish to collect bickers, and I was continually bombarded with questions: "What good are they? What do you do with them? Do you sell them?"

They regarded my applications for any lizards, snakes, toads, etc., as the climax of absurdity, and would laugh long and loud about "O Inglez" (the Englishman) and wonder how anyone could be foolish enough to take any interest in such things.

### SOME BATS ARE EXPERT FISHERMEN

For photographic darkroom I used a small hut, the roof of which sheltered innumerable bats (Molossus obscurus) whose accumulated droppings made a heap several inches high in one corner.

The large number of bats is one of the most striking features of this region. Every hollow tree formed a hiding place for hosts of these creatures during the daytime.

Besides that already mentioned, two other species were particularly prominent: Noctilio leporinus, a bandsome animal with orange breast and brown back, and Dirias albiventer, smaller than the last, with a whitish breast, as its name would imply:

Both of these are remarkable in that they add fish to their insect food, and the feet are furnished with unusually long, sharp claws, perhaps used in hooking the prey out of the water (pages 662-3).

I found it possible to locate members of the larger species easily because of their powerful, unpleasant smell. Many times

## COWBOYS AND CAYMANS OF MARAJO

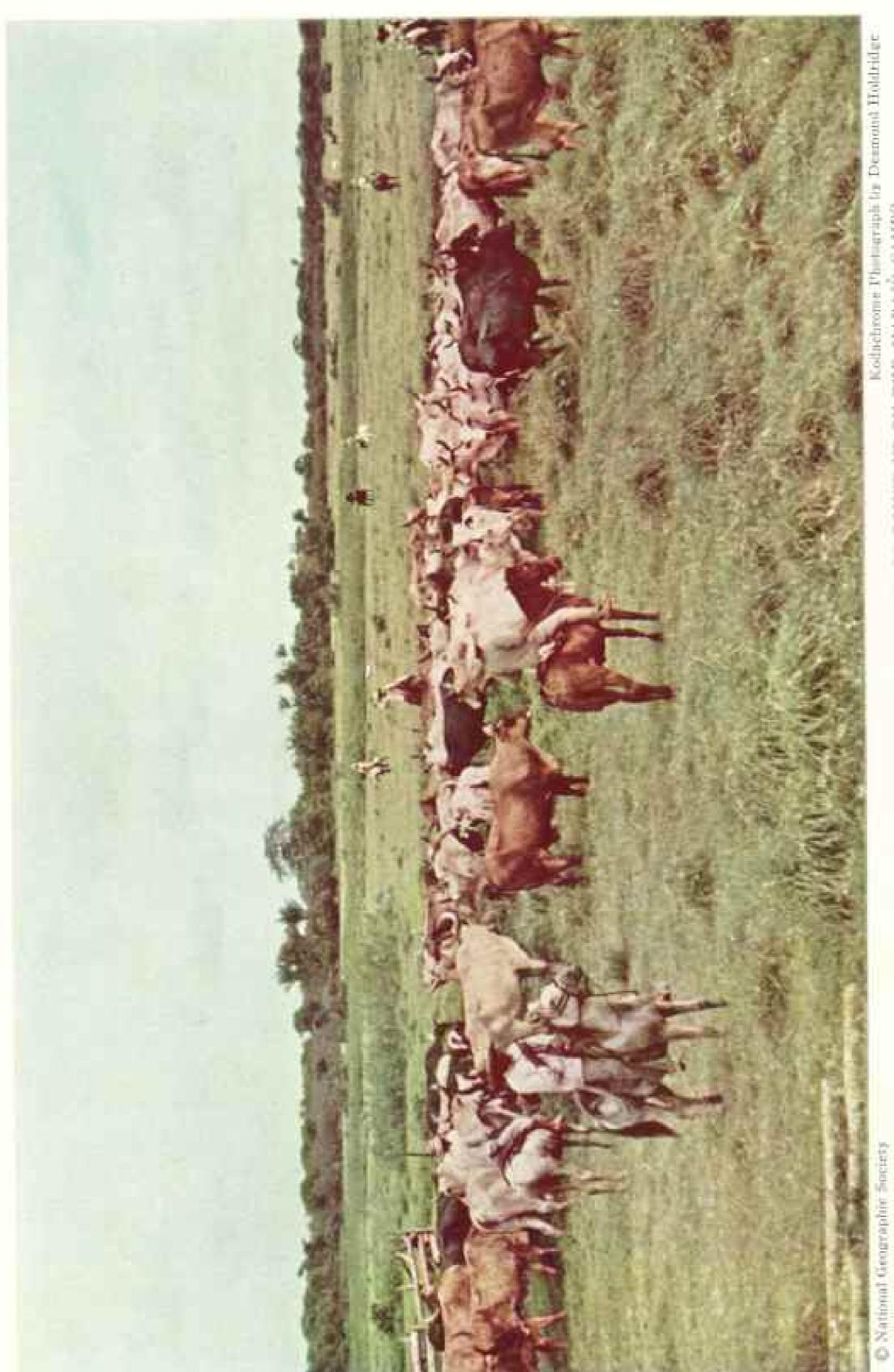


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SINCE THE ISLAND IS PRACTICALLY FLAT, THE COWBOY MUST STAND ATOP

HIS-PONY "TOWER" TO VIEW HIS HERD

Quirt in hand and barefoot, he supports himself with a long pole. Twice the size of Massachusetts is this broad expanse of forest and carrie-grazing land, between the mouths of the Amazon and the Para Rivers in Brazil. With the exception of ancient burial mounds, the ground level never rises more than 25 lest above the sea. Vegetation in the foreground, known as "wild cotton," is a worthless weed mostly inhabitated by ants.



have used bovine mounts. withstand the rigors of both Cattle first were imported from the Cape Verde Islands in the seventeenth century. Later they were crossed with Indian sebus, Western Hemisphere as Brahmans. A similar strain has been developed in southwestern United States. These animals withstand the day and rainy seasons. A century ago, discase destroyed thousands of horses and ever since the majority of the "punchers" have used b VAQUEROS DRIVE PAT BERVES TO THE CORRAL FOR THEIR LAST ROUNDAIT ON THE MARAJO CAMPO

known in the



PRET TOUGH AS LEATHER-AND THEY DON'T WEAR OUT

Two or three toes clamp firmly in the tiny stirrup. The vaquero shaves the inner side of his logs, where they rub against his borned seed. Thus he avoids infection from chuting of the bair follicles, More formidable than Little Red Riding Hood's wolf are the cavern-our month and jaws of the Marajo cayman (Chimon nigre). Larger than North American alligators, the reptiles destroy bundreds of cattle every year. Larger than cattle every year.

EAR "THE RETTER TO EAT YOU WITH, MY

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Once he is thrown, his horns will be sawed off as a lesson to him. The lasso is fastened low on the saddle, so that the horse is not thrown off balance by the pull and can run in a wide arc.

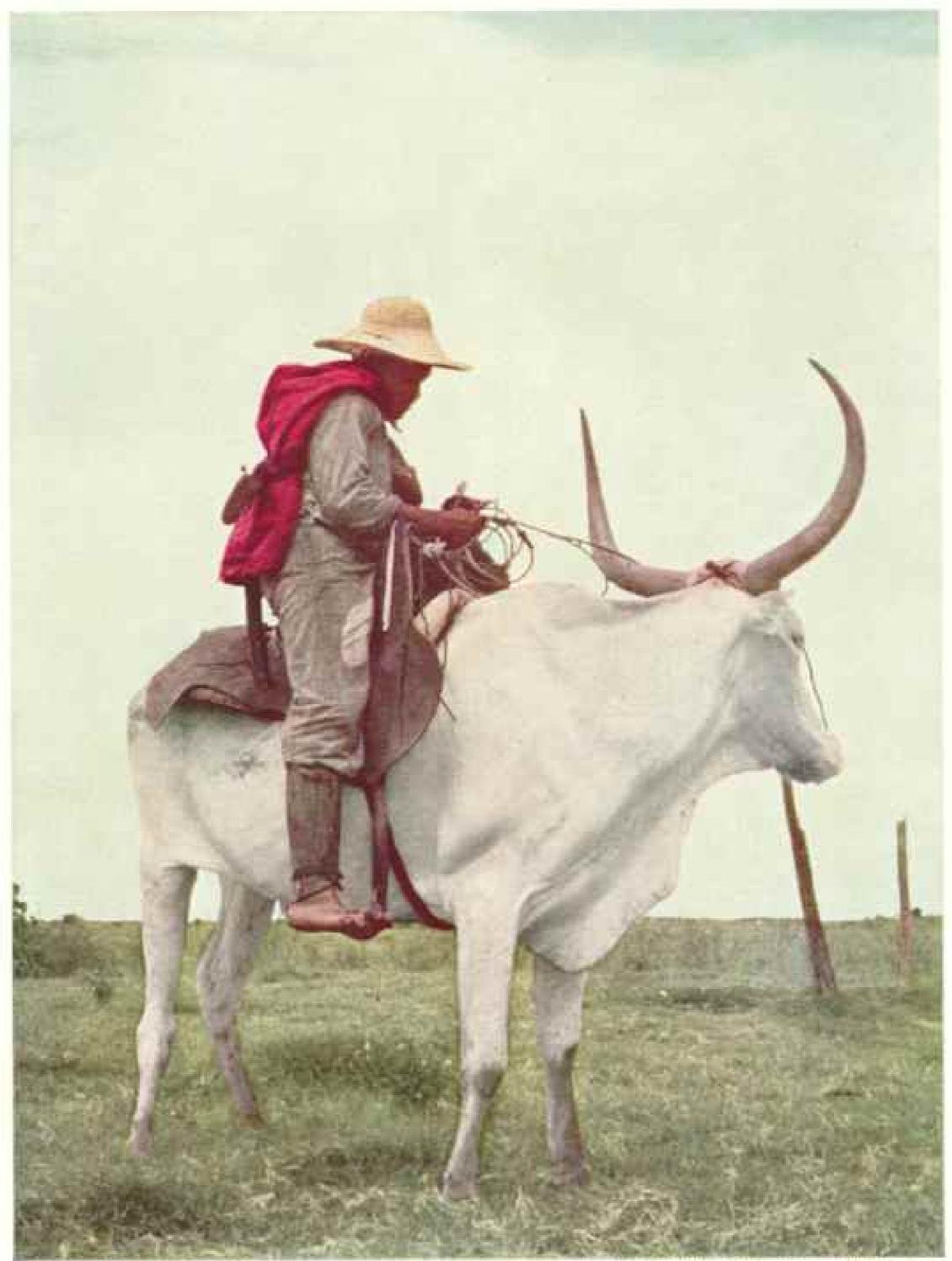


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Kodachrome Photographs by Desmond Holdridge

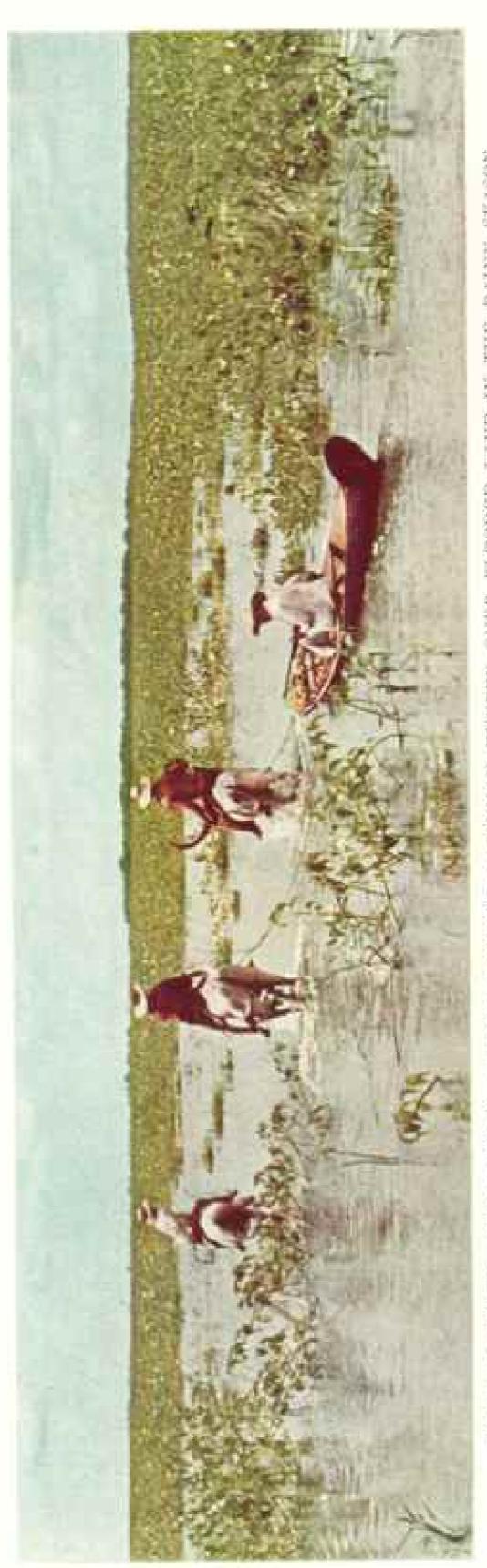
TEETH FILED TO A POINT ARE STYLISH IN MARAJO

The young mother, in whom the Indian strain predominates, also believes that pointing the teeth prevents decay. On the line behind her hangs one of the heavy red flannel capes which cowboys and their wives wear when they travel.

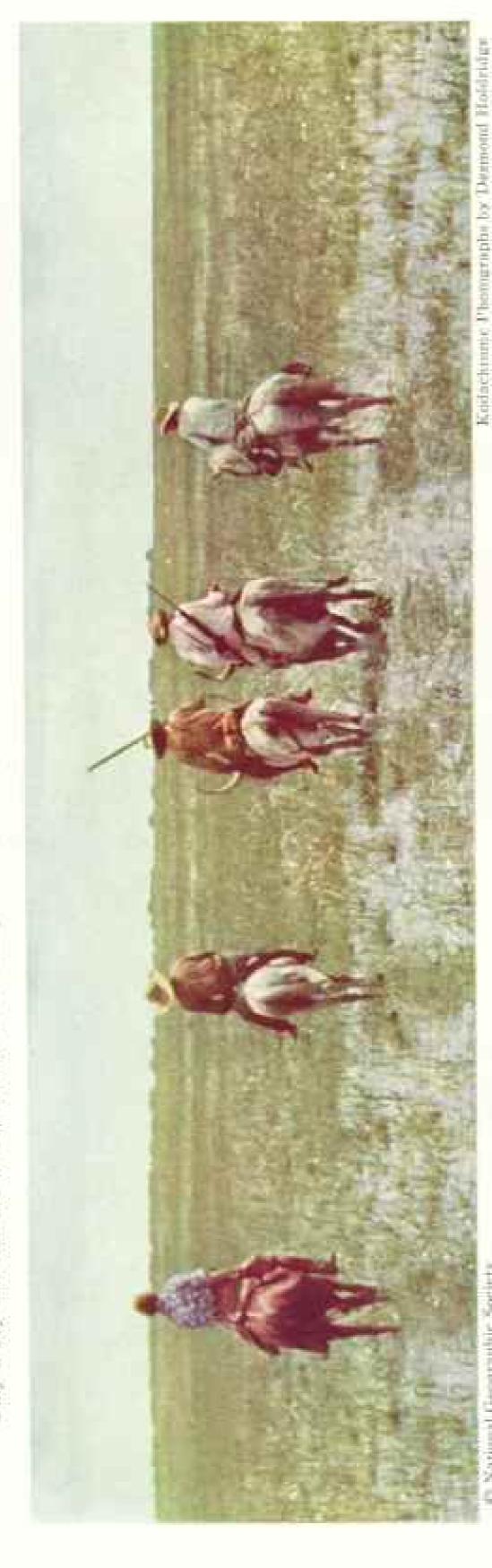


(II) National Geographic Society Kodachrome Photograph by Desmand Holdridge BACK FROM A DUCK HUNT IN THE MARSHES RIDES A VAQUERO ASTRIDE HIS HALF-ZEBU ON

On his shoulder are his gun and indispensable red flannel cape, the latter keeping him warm in cold rains and, he says, cool in hot sunshine. He wears leggings as a saleguard against chafing, but his leathery feet and toes need no protection. The ox is guided by a single line, tied to a hole in its nose. In the rainy season travel by horse is almost impossible because the weight of a man makes his mount sink deep in the mire, quickly tiring it. Oxen, with cloven boofs which spread apart and act like pads, therefore are as indispensable to Marajo travel as the camel in the Sahara.



In the distance are "islands" of woodland, probably still dry. A CAYMAN HUNTER OVER PLOODED LAND IN THE RAINY STASON sticky muck (Plate V). CARRIES TOWED "AT THE DXEN'S TAIL" A CANOR Only a boy can ride the horse, at left, in the



ARE KILLED IN ONE DAY (PLATE HUNTERST MOUNTS SUMETIMES TREAD UPON CANMANS, OFFEN HUNDHRIDS OF THESE CROCODILIANS O National Geographic Society



The only traces left of an ancient Marajo civilization are numerous burial mounds. Some of their mines of funeral pattery are seventy feet high, the only "mountains" visible on the otherwise flat surface of the island. HUNGRY LITTLE PACES PERCH ON THE RISE OF THE PLATE THE MARAJO COWBOY ROLLS HIS OWN CHARRETTES

Watternal Compressible Society.

grantled hunds straw hat and Tireless ability to sit in the saddle; hard and lean body, accustomed to lasso and quirt, all prove his worth. Old flannel cape shield him from the sun.



O National Geographic Society

TO MAKE MARAJO ICE CREAM, FIRST GET PURPLE NUTS FROM AN ASSAHY PALM

Between the outer skin and the large, hard stone of the nut lies a layer of pulp. When crushed, it produces a thick, delicious purple drink. In Para, the beverage is the principal ingredient of ice cream, which enjoys an excellent sale. Men lost in Amazon forests have sustained themselves, sometimes for as long as a month, on the nourishing beverage from the fruit of this palm.

when riding past the trees where they lived, I have smelt them from a distance of over a hundred yards.

### LAKES ALIVE WITH CAYMANS

During these weeks I spent much of my time in studying the habits of the caymans (Plates III and VI and pages 658, 659, 660, 670).

Almost every lake is swarming with these huge reptiles, and their abundance is particularly noticeable in December, when they are driven into confined quarters by the partial drying up of the lakes they inhabit.

Some of the swamps dry up altogether at this time of the year; the caymans then bury themselves in the mud and lie dormant until their swimming pool is once again restored by the rains in January.

The cowboys never lose an opportunity of hunting and killing these monsters, because of the damage they do to the calves.

The boys enter the water, drive the caymans together at one end, and then lasso them. When one is caught, they cut the base of the tail first with a stroke from their hunting knife. After this organ has been disabled, it is safer to approach the animal, which is dispatched by a second blow on the back of the neck or a stab in the eye, amid the hoarse cries of the cowboys.

In spite of these onslaughts, the crocodilians do very well and seem as plentiful as ever. We came across many of the large nests, beaped up in the swampy vegetation at the sides of the lakes, or half hidden in the groves of giant arums (Caladium arborescens), which grow commonly in these places. The eggs are found from September to January and as many as 70 may be taken in a single nest.

The jacaré anni, or black cayman (Caiman niger) of the natives, is the largest species; monsters up to 20 feet long have been recorded. The spectacled cayman, jacaré tinga (Caiman sclerops), on the other hand, seldom exceeds about six feet in length.

I found members of this species are great cowards; they will not allow one to approach closely, but always dive or swim slowly away, so that it is safe to go among them in the water on horseback, or even on foot.

Jacaré assú is less timid. I have frequently shot bullets from an automatic pistol so that they splashed in the water a few inches from the heads of these creatures, and yet they would remain motionless, too lazy to swim away. When mortally hit, they roll over on their backs.

In spite of their size and ferocious aspect, members of this species will not readily attack a man in the water, except in self-defense. No doubt they would be more offensive were they not so well supplied with food; but fish, which form their chief article of diet, abound in the pools, and are so easily obtained in large quantities that the creatures usually are too lazy to attack any large animal.

### FISH AND THEIR ENEMIES

Near one ranch I visited, I was shown a small lake which furnished two or three cartloads of fish for the markets of Belém every day, even though the fish had also to sustain the predatory attacks of swarms of caymans, as well as those of innumerable bats and fish-eating birds.

The pirarucii, largest strictly fresh-water fish in the world, is obtained here in enormous quantities and provides an important article of food for the natives. It was a common sight to see the flesh of these huge fish hanging out like washing to dry in the sun.

The bird life of these lakes, in its abundance and variety, forms one of the most impressive features of the savanna district.

Here the traveler may see, as he rides toward one of the marshes, a white line stretched out far away on the horizon; as he approaches, he will suddenly realize that it is a huge flock of egrets, dressed in their beautiful white plumage. These birds, the garça of the Brazilian, are unfortunately rarer now than they were in former years, because of the merciless way in which they were slaughtered by the hundreds.

### HEADQUARTERS OF THE WILD DUCK

Besides the egrets, there are countless other members of the heron tribe as well as storks, including the large "maguari stork" (Euxenura galatea), common jaçanas (Jacana jacana), plovers (especially Belonopterus chilensis cayennensis), and the roseate spoonbill (Ajaia ajaja), locally known as colhercira. But perhaps the most beautiful sight to the naturalist is a flock of the stately scarlet ibis, or guard, which inhabits some of the lakes in immense numbers. Incidentally, it is good to eat and makes a pleasant change from the usual diet of fish, beef, and farinha.



Plantsgraph by Arthur H. Fisher

### TRUSTFUL BIRDS BUILD THEIR AERIAL APARTMENTS CLOSE TO MAN

Striking orange-and-black caciques leave small openings near the tops of their long, pendent nests, which resemble well-filled Christmas stockings. These gregarious birds may practice polygamy, as females outnumber the males. The whole colony often leaves the nests and noisily returns with food for the young. The birds keep up an incessant chatter from dawn to dusk (page 667).

One day I was out shooting with one of the cowboys and he suddenly crept off in the direction of some tall aquatic plants, whispering to me as he disappeared, "Wild duck." I remained still and waited for him, fearing to disturb the birds if I followed.

Presently came the "bang!" and words fail me to describe what I then saw—a flight of birds numbering tens of thousands, so that the sky was black with them, like a thundercloud.

The extraordinary abundance of life may be estimated by the fact that eight ducks were brought down dead by that single 12gauge shell, not to mention many others which were wounded and managed to get away in the undergrowth.

Among the scattered woods we found many different species of birds, including hawks, turkey vultures, owls, cuckoos, woodpeckers, nightjars, parrots, parakeets, toucans, and innumerable smaller birds.

### THE COWBOYS RIDE ONEN

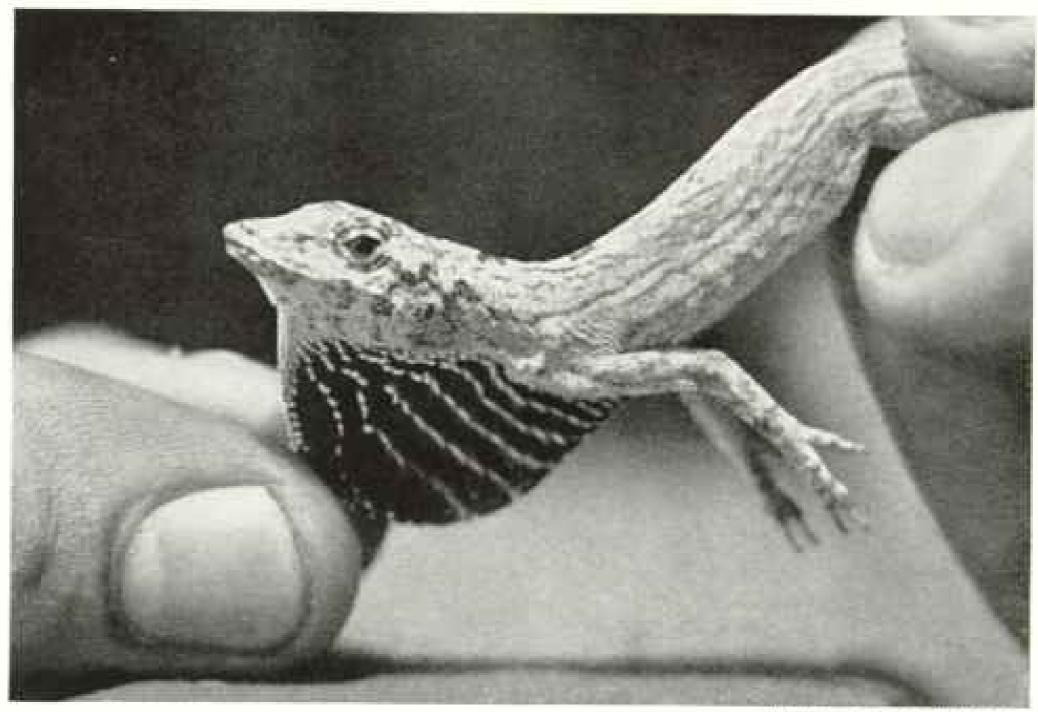
There are horses on the island, but the cowboys break oven for riding. The oven are more sure-footed and less likely to get bogged in swampy ground than the horses, because of the shape of their feet, which spread out as they sink into the mud and fold up again as they are withdrawn (Plate V).

The boys always ride with bare feet, usually putting the first toe only in the stirrups, which are very small and far too narrow to take even the smallest shoes (Plate III). All the harness and ropes used in lassoing are made locally on the ranches from rawhides.



STICKLIKE TAIL HELPS TO CAMOUFLAGE A MARAJO ISLAND "CHAMELEON"

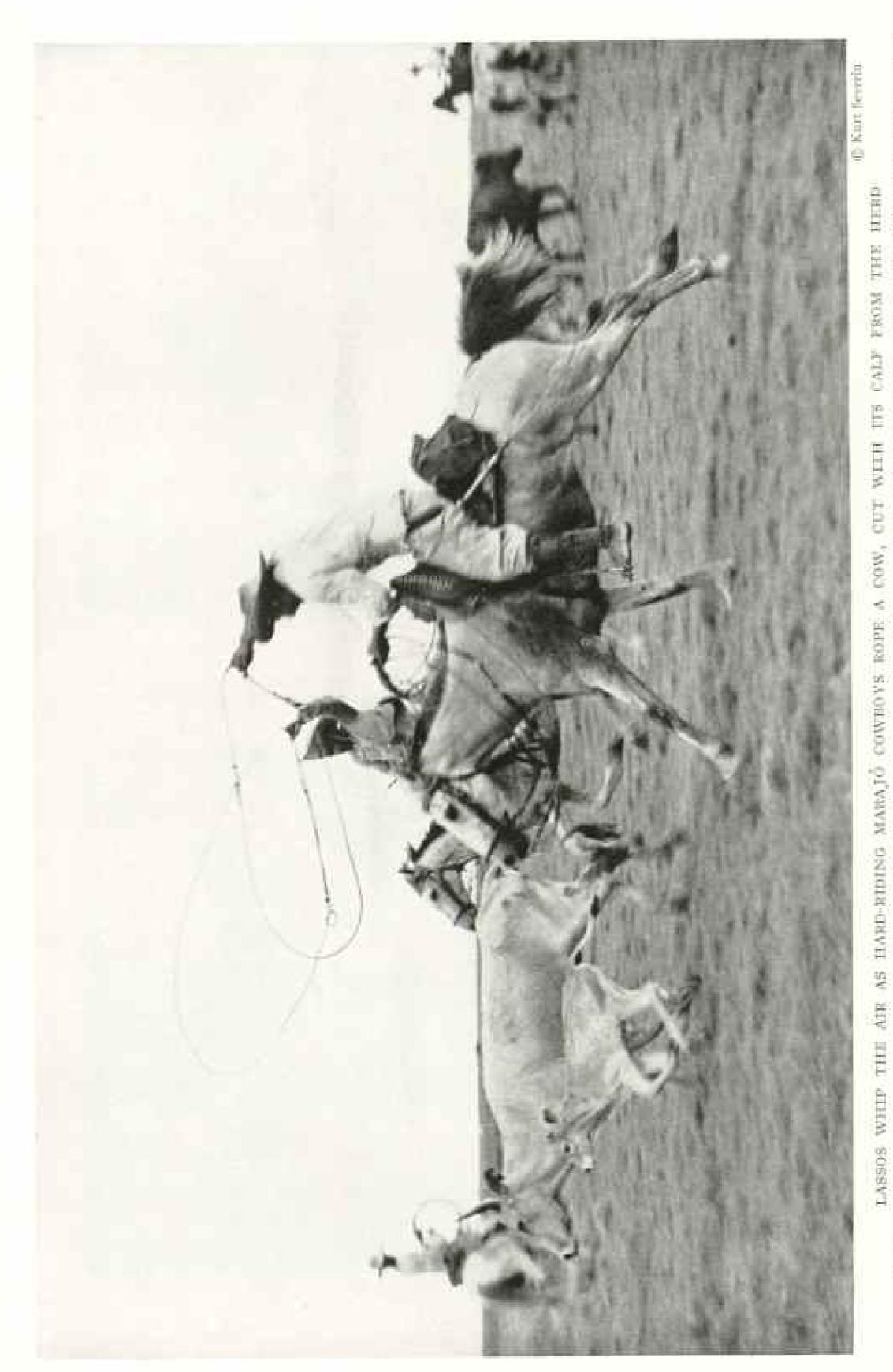
With the long, narrow, whiplike appendage, the tree lizard keeps its balance as it stands on its hind legs. Much like the true chameleon, it can change its usual green coloring into a dull brown. When motionless, this lizard is difficult to detect among foliage (page 655).



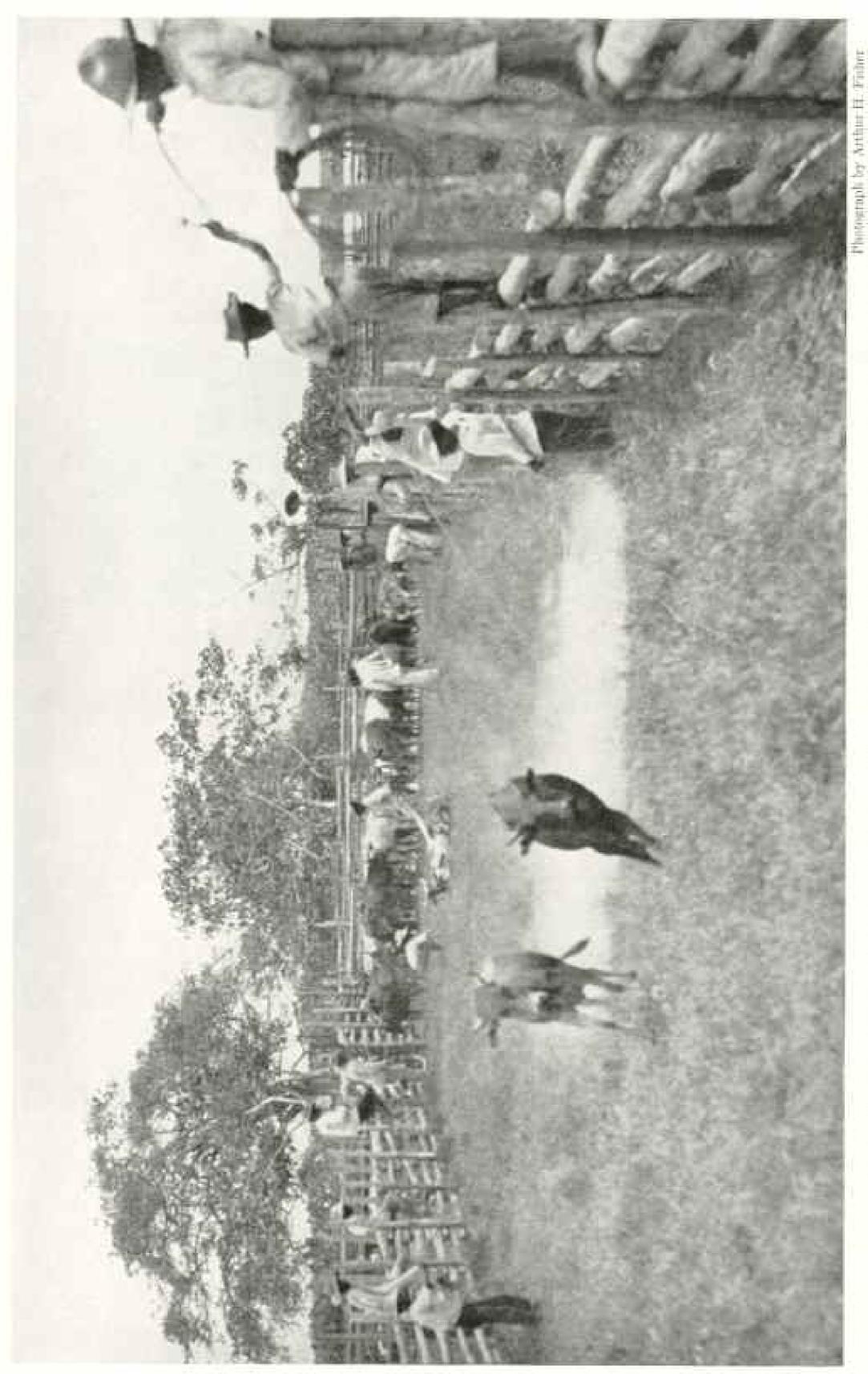
Photographs by High B. Cott

DISTENDED THROAT POUCH OF THE "ALLIGATOR LIZARD" SIGNALS DANGER

When this Marajo reptile becomes excited, its throat sac puffs up, flashing dazzling bues of red or yellow. The little fellow is an expert climber and also rushes about on fences after insects. It can change its color from brown to yellow or shades of green to fit its environment.



Gripping the tiny stirrups with one or two powerful toes (Plate III), the yaquanes thunder along on their well-trained ponies. The season. The cattle are exported to Belom, an overnight sail across the Paris River, when they are ready for market.



AND CAPTURE THE BEASTS FOR BRANDING N THE CORRAL, LASSOS WHIRL AS FRIGHTENED CATTLE DASH DOW

Then cowhors armed with spiked poles maneuver A vaquero sits on its back or head while the legs When the loop settles over an animal's bend, a few turns of the other end of the rope are taken around a fence post, their charge loward the funce. The slack in the rope is taken in until the beast is near the railing, where it is thrown, are used, and the animal is then branched and released (page 654).



Exert Sevenin

TARGET OF THE SPEEDING HARPSON IS A CAYMAN, NEAR THE WATER'S SUBFACE

Only the hunter saw the crocodilian, burely submerged and as yet undisturbed by the boat's approach. Despite constant warfare against this menace to calves, the reptiles continue to be plentiful. Their large nests, in swampy vegetation at the sides of the lakes, sometimes hold as many as 20 eggs (page 653). The pirarical (page 653) is taken in the same way.

When cattle are to be branded, they are driven into a corral about 100 yards long by 10 yards wide. All the boys then enter the enclosure on foot, some standing along the fence with lassos, while the rest, each armed with a long pole which has a sharp metal spike at the end, drive the animals along the enclosure (Plates II, IV, and pages 656, 657).

As each beast dashes down the corral the lasso is thrown over his head, and the other end of the rope is secured by a few turns around the top of the nearest post; he is then driven toward the side, and the slack of the rope taken up as he advances, just as a ship is maneuvered in dock, until he is near the railing.

The cowboys then strike the animal a heavy blow on the side with their pikes; having thrown it, one of them sits on its back or head while another ties up the legs with strips of hide.

Some of the cowboys are very strong, and I have often seen one of them throw a bull by seizing the tail and giving it a sudden jerk to one side. The terrified and infuriated animals rush at their assailants. When charged by a maddened bull, the cowboys will calmly stand their ground, facing it with their spiked poles, or else leap up the railing just in the nick of time and let the creature's sharp horns pass by a few inches beneath.

Many times the boys escaped a tossing by a hairsbreadth, without showing alarm or surprise; in fact, they seemed to regard it as rather a good joke. Once I saw a young fellow jump onto the back of a bull as it charged past him, just for the fun of it.

### GETTING CATTLE ABOARD SHIP

One day I watched the cowboys embarking cattle at Fazenda São Laurenço. The
animals, herded into a funnel-shaped enclosure, were dragged, driven, or pulled
down the passage which led to the river
side. As each in turn arrived at the end
near the water, where the steamer was
anchored, two ropes were thrown over its
horns, and the creature was then rushed
across the gangway.

Sometimes one would plunge to one side at the last minute, falling into the river with a mighty splash; whereupon one of



WITH THEIR LASSOS, COWDOYS REMOVE ONE MORE THREAT TO MARAJO CATTLE

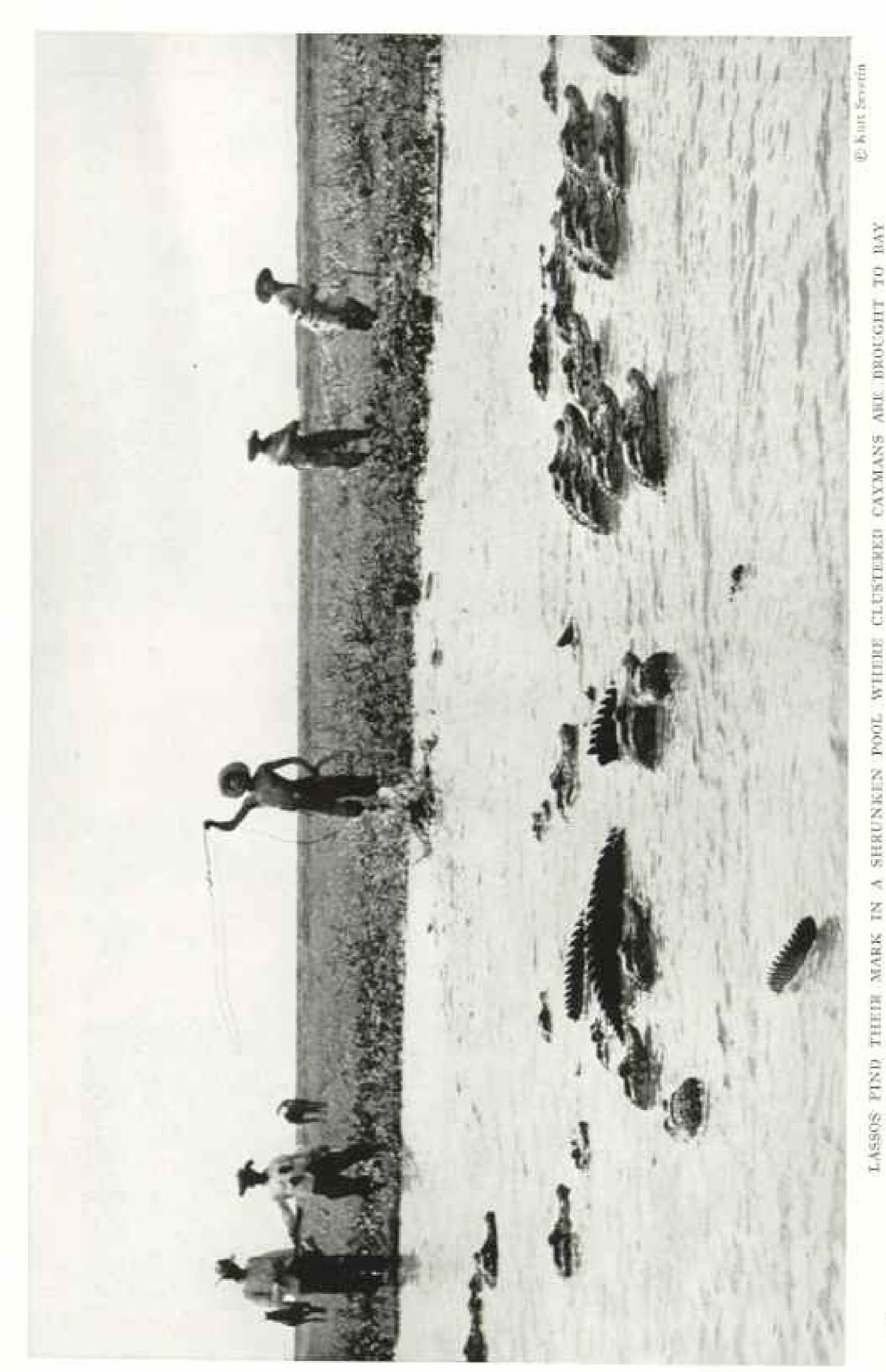
Thousands of caymans infest the swamps of the island in the rainy season (Plates III and VI). Hunting these crocodilians at night is a favorite sport. From a cance, hunters disturb the beasts. The beams from a flashlight reveal the glow of their eyes, which burn in the darkness like smoldering embers and provide a perfect target for a rifle.



Photographs @ Kuri Severis

CAPTORS GIVE LETHAL JAWS AND TAIL OF THE INFURIATED CAYMAN A WIDE BERTH

Lassoed and pulled ashore, the angry crocodilian fights for his life. Often the mutilated body of a slain beast is pushed back into the stream. Like a pack of starving wolves, a school of piranhas (page 642) fall upon it, churn up the water in their frenzy, and leave only the hare bones.



When swamps, rivers, and lakes of Marajó Island dvy up in November and December, cowboys relish the sport of roping their hard-pressed enemies. They drive the caymans foward a side of the pool and then expture them, one by one. After the quarry is dragged from the water, the loss of the pool and that is severed by a stroke of a state by a blow on the back of the neck or a stab in the eye (pages 553 and 559).



# JUICE PROM THE INDIA-RUBBER TREE TURNS INTO A BALL

The milky liquid is slowly poured over a pole rotated by hand, and a layer of sap adheres to the wood. This layer is hardened in the smoke of the fire. The operation is constantly repeated until a large sphere has been built up (page 667). The protesting unimal, embarking at Fazenda St. Lawrence, Marajó Island, for Belém, across the river, is hauled on board by a rope attached to its horns. Behind, a boy urges the "passenger" onward by twisting its tail (page 658).



# AN UNWILLING STREET GOES FOR A RIVER VOYAGE



Photograph by Hugh B. Cott SHARP CLAWS OF THE FISH-EATING BAT

MAY CLUTCH PREY FROM THE WATER

Enlarged to about three times its actual size is this photograph of the leg of a nocturnal prowler on Marajo Island—the leg's use still being in question. Smaller of the two varieties that are known to devour fish (page 563), this creature has a membrane stretched between its bind legs, including its short tail, which also is used to scoop up fish and hold insects caught on the wing.

the cowboys would immediately dive in after it, catch hold of the rope and swim with it to the bank. It was then hauled on board by a crane (page 661).

When an animal is to be slaughtered, two cowboys on horseback secure it with lassos, while a third delivers the blow with his knife. The beast is skinned and cut up at once where it falls, and the meat is brought into the ranch and cooked almost immediately. Portions of the carcass are cut up into long thin strips and hung outside the front door of the house on poles made for the purpose. This meat eventually dries in the sun, and later provides the household with the well-known Brazilian dish of dried meat.

The cowboys wear short trousers and shirts of pale-blue cotton. During wet weather they also put on thick coats of crimson baize, for although the area is just south of the Equator, it is often cold during the rainy season.

It was a thrilling sight to see them galloping across the plain, attired in their redand-blue uniforms and large-brimmed straw hats (Plates I and VII).

### RODENTS RESEMBLE GIANT GUINEA FIGS

On our rides we frequently came across capybaras (Hydrochocrus capybara), which would run off at top speed toward the nearest swamp or lake as we approached. These animals are the largest living rodents, average specimens measuring 4 feet 6 inches in length. They look rather like giant guinea pigs.

Capybaras spend much of their time in the water; in fact, they never stray far from the banks of their native lake.

Being extremely timid creatures, they can be approached only with the greatest difficulty, for, upon the first sign of danger, the whole herd takes fright and rushes into the water at full gailop. Here they are at home, for they swim and dive well and can remain under the surface for a considerable time, eventually coming up at some distance. Frequently they hide motionless among the thick growth of aquatic plants, with just their noses out of the water, so that they are almost invisible.

Next to man, their chief enemy is the jaguar, which kills them in large numbers, even entering the water after his quarry. The cowboys also assured me that the jaguar, when hungry, will attack caymans. Seizing them in the eyes with its claws, it drags them out of the water and gets to work on the fleshy part of the tail, which affords an excellent supper.

### AN OPOSSUM CALLS

As I was lying in my hammock one night, I was aroused by cowboys shouting and dogs barking outside. On going out, I saw a number of the boys armed with hurricane lanterns and sticks, searching about beneath the sheds. My inquiries as to what was going on were answered by yells of



Photograph by Hsigh B. Cott

A FISH-EATING BAT OF MARAJO, SMOKED OUT OF HIS DAYLIGHT LAIR

Hundreds of these night prowders make their daytime headquarters in bollow trees, from which they may be driven by a little smoke and captured in butterfly nets. Enlarged to about four times actual size is this picture of the head of the smaller of two fish-enting species on the island (pages 644 and 662). They do not cut fish exclusively; insects form a large part of their diet.

"Opossum! Opossum!" Presently the animal made an appearance on one side of the hut and was at once seized by the nearest dog (page 666).

It turned out to be the mother of a newly born family. The young are born in a very imperfect condition and remain permanently attached to the teats of the mother for several weeks.

The opossum is really an arboreal form, but the animals frequently come into the ranches at night to steal eggs and fowls, and at such times they are killed because of the damage they do.

Another time a female was caught with eight young ones, which were well developed and as big as small rats; they had not yet left the pouch, and so the mother had a good load to carry.

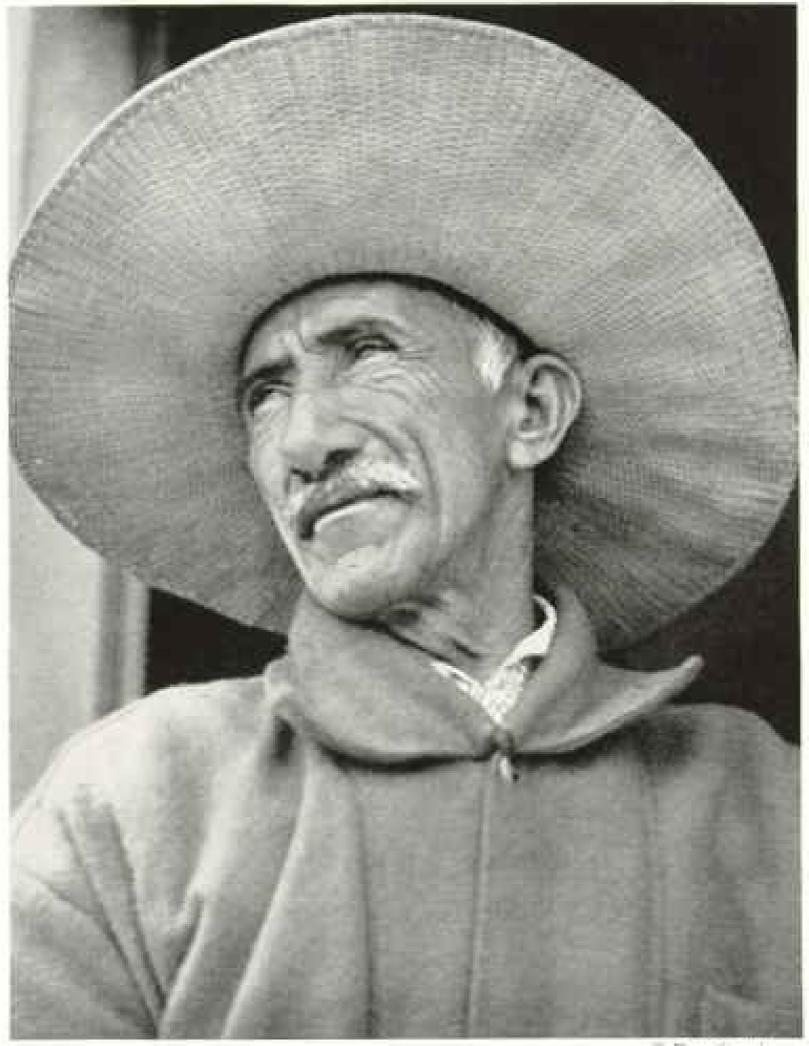
### COWBOYS FOND OF MUSIC AND DANCING

In the evenings, after their work is over, the cowboys sit below the house, singing and playing guitars, favorite and almost universal instruments on the lower Amazon. On these they strike up monotonous airs, one accompanying while the rest gather round, dancing or chanting their melancholy songs, with frequent repetition of the same three or four minor chords for hours at a time.

One night at a festa, the central room of the house was cleared for the cowboys and women servants to have a dance. The orchestra consisted of three cowboys with guitars and a fourth who scraped a tune out of a cracked old violin, which had been broken into three pieces, but had been tied together with string before the ceremony.

Later in the evening, before departing, they performed the native dance. Each man has a partner, who continually circles in front of him just out of reach. The men take short, rapid steps, at one time holding their arms in a curved fashion above their heads, and at another propping their hands on their hips. Every now and then they spin rapidly around, while the women dance with the arms hanging loosely at the sides.

The group of mammals known to zoologists as Edentata, containing the anteaters, armadillos, and sloths, is South American in distribution, and examples of all three families occur on Marajo Island.



© Kurt Severiu

BRONZED BY AN EQUATORIAL SUN IS THE FARMER OF MARAJO

Seldom is he without his red flannel jacket and wide sombrero. When the island is baked with the heat of the dry season, from July to December, hat and coat protect him from the burning rays. When the rainy season turns the land into lakes and quagmires, his cloak keeps him dry.

To the naturalist these animals are of particular interest because of certain marked dissimilarities from other living forms. They are believed to be the surviving remnant of an archaic group, and have become highly specialized in many respects, as an adaptation to their peculiar modes of living.

#### AN ANTEATER THAT LIVES IN TREES

I was pleased to hear one afternoon that a tamandua, or little anteater (the larger of the two arboreal forms), had just been captured and brought in by one of the boys (page 669).

The tamandua, like the other anteaters, has a tapering snout and a long, wormlike tongue, which is protrusible and sticky, an admirable organ for licking up the ants on which it lives. But, unlike the great anteater, or "ant bear," which is terrestrial and has a large bushy tail, the tamandua spends its life in the trees, and in adaptation to this habitat the long, muscular tail is prehensile.

Anteaters feet are armed with remarkably strong claws, which are used in tearing open the ant galleries and also, in the arboreal species, for ripping up bark to bring to light lurking insects. They are also serviceable as weapons of defense, for with one stroke they have been known to eviscerate a dog.

Moreover, the coat is thick, the skin tough, and the limbs powerful, so that he is a formidable creature to attack, even though he has no teeth to bite with.

One evening a few days after the capture of the tamandua, the ranch owner burried up to me and exclaimed, "I say, your tamandua is having sons!"

We hurried down to the fowl run in which the animal was temporarily imprisoned, and found that it had just given birth to a single young one, which was hairless and most grotesque looking. Unfortunately it did not live more than a few days.

I had hoped to bring the mother home to England with me for the Zoological Society of London, but the rough weather at sea and cold northerly winds proved too much for her and she died just as we reached Lisbon, having devoured as her daily ration from three to six raw eggs regularly, up until the last morning.

# THE FORESTS

The southwestern part of the island is covered with dense forest. Here the faunais very different from that found in the plains region.

An early impression of the
traveler upon entering these vast
forests is the apparent scarcity of
animal life, for,
apart from a few
gaudy butterflies
and grasshoppers,
he will at first see
little in the ani-

mal world to attract his attention. Where are the sloths and the troops of monkeys? Where are the tree frogs and great lizards? Where are the parrots and macaws in their dazzling plumage, and the large-billed toucans about which he has heard so much?

#### HANDY TAILS OF TREE DWELLERS

All this abundance of life is far above in the treetops, and only with the greatest difficulty and practice is one granted a glimpse of the forest dwellers.

These animals are admirably suited to their arboreal habits, and some, like the



Photograph by Hugh B. Cott

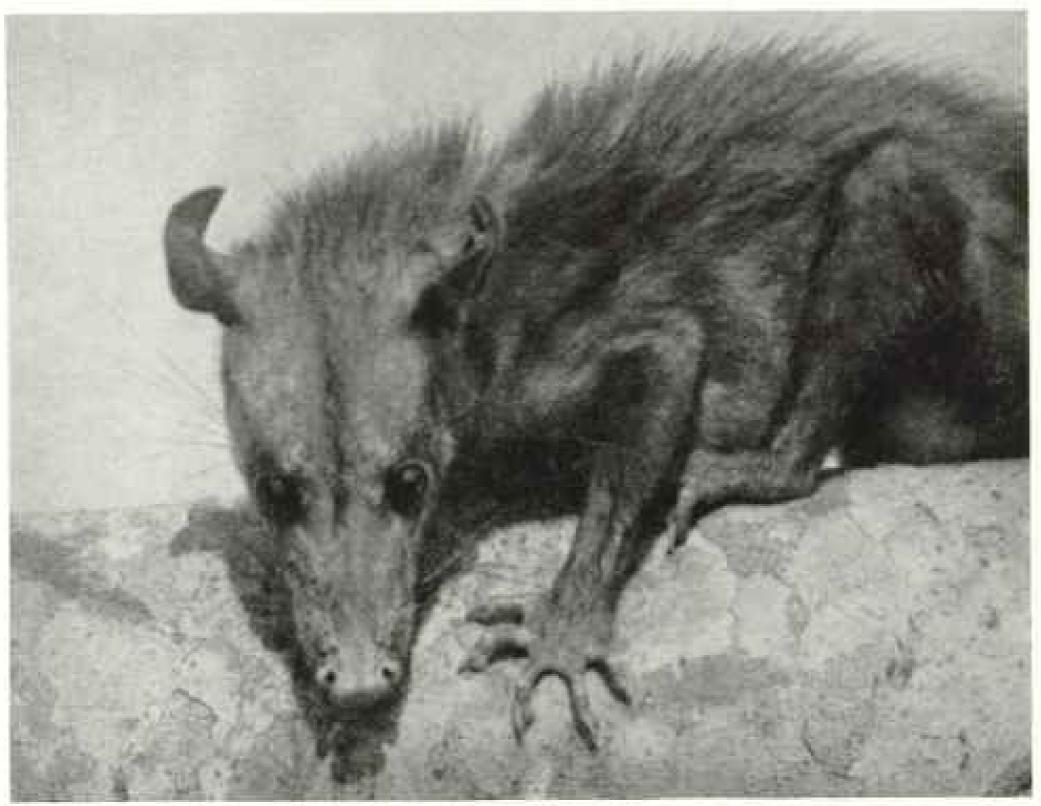
#### BRINGING HOME FATHER'S SUNDAY BEEF

Butchering is a rapid process on hot Marajo Island. As soon as the animal is killed, skinning begins where it fulls. In a few minutes the meat has been cut up. The hide is pegged out to dry in the sun and black turkey vultures help pick it clean (page 643):

sloth, are so specialized that they hardly ever descend to the ground, where their movements are painfully slow and clumsy.

Many have prehensile tails. Thus, besides the tamandua and opossum, many of the monkeys, notably the spider monkeys (Ateles), the coati, tree porcupine, and kinkajou, use the tail as a prehensile organ, as do many tree snakes and lizards.

One of the latter, Polychrus marmoratus, is a remarkable creature with a slender tail nearly three times the length of the head and body combined. This organ assists the animal in keeping its balance when



Photograph by Hugh B. Cort.

#### MOTHER POSSUM WAS CAPTURED AS SHE PAID A NOCTURNAL CALL

Although the little opossum lives in trees, she visited the sheds near the author's sleeping quarters one night and was caught. Her family of newborn youngsters was clinging to her (page 662).

standing on its hind limbs in the act of as the so-called "stick insects," "leaf inreaching upward for another branch. The sects," etc., but few vertebrates have been tip is also frequently wrapped around a so ambitious as to attempt this kind of twig for additional support.

The body is green, with diagonal stripes of a darker shade running across the sides, so that it has the general appearance of the underside of a leaf. Moreover, the tail is like a stalk, so that it is very difficult to detect the animal as it stands motionless among the foliage (page 655).

The giant toad  $(Bufo\ marinus)$  is common on the island. To these large and powerful creatures nothing seems to come amiss in the food line, for I found cockroaches, cicada nymphs, ants, leaves, grasshoppers, and even small birds in their stomachs.

Skulking among the fallen leaves on the floor of these forests is a small green toad, known to zoologists as Bujo typhonius, which is of great interest because of its leaflike appearance.

Everybody is acquainted with the wellknown cases of "protective mimicry," such

camouflage.

The shout of this little toad is pointed, the back flat. There is a sharp ridge running back from each eye along the flanks, so that a clean-cut shadow is cast on the underside of the body, making the general resemblance to a leaf remarkable. Moreover, it is a very sluggish creature, being in the habit of sitting perfectly motionless for long periods, and is on that account less likely to be noticed.

#### "FLYING" FROG NEEDS NO PARACHUTE

No one can spend a night in the forest without being impressed by the large number of tree frogs, whose mournful croaking and hooting can be heard in every direction.

Many of them are entirely arboreal in habit, and one species, Hyla venulosa, is actually able to take gliding flights among the branches. This it does by leaping and spreading its arms and legs to their utmost



ill Kurt Severin

FISHERMEN PARK NEEDLES AND STRINGS ON THE BROAD BRIMS OF THEIR HATS

When they find rents in the nets, they simply reach upward for their mending kits. Fish are plentiful in nearly all the lakes on Marajo Island. The pirarucs, largest strictly fresh-water fish in the world, is taken in quantities and is an important item of food for the natives (page 653). This species sometimes is 15 feet long and 400 pounds in weight.

extent, to open the webbing between the toes, thus exposing as much surface to the air as possible.

I was able to show, by experiment, that this little frog can survive a sheer drop of 140 feet onto short grass without sustaining injury. Indeed, after accelerating in its fall for the first few feet, it maintains a constant gliding speed, which is insufficient to hurt the creature even should it alight on hard ground.

#### BRAZIL NUTS AND RUBBER TREES

As we sailed along the streams we often passed the huge Brazil nut trees (Bertholletia excelsa), towering many feet above their fellows and dwarfing the surrounding vegetation.

Several times I saw these trees occupied by nesting colonies of the beautiful blackand-orange cacique, or japim (Cacicus cela). This bird builds a long purseshaped nest which hangs down from the branches and has the entrance hole on one side near the top (page 654).

Here also is a home of the India-rubber tree. Having collected the milky juice, the natives prepare it for the market by pouring it over a pole, which is rotated by hand, so that a layer of the sap adheres to the wood. This is then placed in the smoke of a fire to harden, a second coat being afterward poured over the first. The process is continued until a large ball has been obtained (page 661).

#### THE WET SEASON BEGINS

On the morning of December 29, after the long weeks of dry weather, the rain began to fall in torrents. Soon large pools of water were lying around the ranch and the hard, dried-up ground became converted into soft, slimy mud.

I was amused to see the servants busily engaged in arranging huge earthenware jars underneath the gutters of the roof to catch



JAUNTY SAILBOATS PENETRATE THE ISLAND LABYRINTH OF THE AMAZON DELTA

The nuther, returning from Soure, Marajo Island, to Belem (Para), in a bout similar to these, was caught in a violent squall and suffered terribly from seasickness. So mighty a volume of water does the Amazon pour into the ocean at the northeastern tip of the island that sailors along the coast at that point may fill their drinking-water cooks at sea.



Photographs by Hogh B. Cott

MARAJO'S VERSATILE IGUANA EYES THE WORLD COMPLACENTLY

Happy on land, in water or up a tree, this lizard subsists chiefly on vegetation, varying its diet with an occasional bird or small mammal. Although it may grow to a length of more than five feet, it is inoffensive. Properly cooked, the iguina tastes like chicken, although not so tender.

the rain water. The reason for this could be readily appreciated by anyone who had seen and tasted the water which we had been drinking previously, obtained from the bottom of a well. A glass of that liquid was opaque and about the color of orangeade. It was a novelty to see clear water again.

The cowboys will drink the filthiest water, without, apparently,
suffering any ill effects. I have
seen them gulp down quantities of
the tea-colored liquid from a halfdried-up pool in which numbers of
caymans were wallowing, without
even waiting to allow the mud to
settle to the bottom.

#### A NOAH'S ARK CANOE

The following day I left Fazenda Ritlandia and rode to Fazenda São Laurenço, on the river side, where a fine dugout canoe, some 30 feet long, was in readiness to convey me and my collections to Soure. This was well loaded, for besides twelve persons and several trunks and other packages, there were large packing cases containing my menagerie, which included two anteaters, two capybaras, some iguana lizards, and a number of parakeets.

As one glides down the atream in a canoe, it is possible to obtain an excellent view of the luxuriant tropical vegetation which clothes the banks, for it is usual to paddle close to shore, and the speed is necessarily slow.

But this mode of travel is not always quite such a bed of roses as it might seem. A drizzle had been falling all the morning. Scarcely had we embarked before the sky was overcast by black clouds, and a deluge descended, so heavy that

we could scarcely see the opposite bank of the river, 200 yards distant. The downpour, together with a strong head wind, continued for several hours, so that our progress was slow.

There is no shelter on these canoes, so that in about thirty seconds none of us possessed a square inch of dry clothing. I cannot say that I enjoyed the fun, because of the anxiety I experienced for my photographic plates.



THE AUTHOR'S ANTEATER STRIKES AN ATTITUDE OF SUPPLICATION

This Marajo tamandua gave birth to a single youngster, which lived only a few days. Nor did the mother survive the rigors of the sen voyage. This species of antester dwells in trees, where its long, muscular, prebensile tail is of great assistance. Strong claws enable it to tear open ant galleries at one stroke, and they are also formidable defense weapons (page 664).

When we finally reached our destination, cold and dripping, I found that the contents of one suitcase were all soaked, including my cameras and some of the plates, and it was not easy to discover a dry change of clothing anywhere.

#### A STORM ON THE PARA RIVER

Arrangements had been made for me to return to Pará in a sailing boat, because the steamer was not due until a few days later.



Photograph by Hugh B. Con-

#### CAYMAN HUNTERS RIDE OVER A BAKED-MUD LAKE BOTTOM IN DRY SEASON

Partial drying up of the lakes and swamps on Marajo Island drives the crococilians into narrow quarters, where the cowboys kill large numbers (page 653). Some of the caymans bury themselves in the mud as the waters recede in the late fall and its dormant until the rains of January.

Accordingly, I embarked at 5 o'clock the next morning.

As we left, Soure presented a very different aspect from that on my arrival some weeks previously.

#### BEFORE THE RAINS -AND AFTER

The sandy roads were now converted into tracks of soft, sticky mud, rain was dripping from the mango trees into pools beneath, and the town, which on my first arrival had been thronged with holiday-makers, seemed at this early hour to be deserted. The only sounds to be heard were the croaking of distant tree frogs and an occasional thud as a mango fruit fell to the ground.

Before it grew light, we were well out of the Igarapé Grande into the wide Pará estuary. Presently a violent squall arose, and in a few minutes the sea was white with foam, a hurricane of wind was screaming around the mast, and the little boat rolled and pitched in a most alarming manner. I was drenched by the waves that continually broke over the side, and for about five hours suffered terribly from seasickness.

However, at midday the weather improved, and it was a relief to be able to get warm and dry again in the sun.

The following week, as I once more sailed down the Para River, this time on my way to England, a long blue line of treetops was visible far away on the borizon in the west.

That was the last I saw of Marajó, and it was with sad thoughts that I bade farewell to the island on which I had spent some of the most interesting days of my life.

# TRISTAN DA CUNHA, ISLES OF CONTENTMENT

# On Lonely Sea Spots of Pirate Lore and Shipwrecks Seven Families Live Happily Far From War Rumors and World Changes

#### BY W. ROBERT FORAN

Horn many years I had cherished an ambition to visit Tristan da Cunha, but no opportunity presented itself. There were times when I almost despaired; yet I never abandoned hope of reaching the islands. Finally, my patience was rewarded. I persuaded the Danish captain of a whaler, who was about to leave Durban for the South Atlantic, to sign me as a "third mate." Weather conditions permitting, he contracted to land me on Tristan and bring me back to Durban in due course.

The Tristan da Cunha group, consisting of five islands, is situated near the center of the South Atlantic Ocean, about midway between South Africa and South

America (map, page 674).

Until early in 1937 Tristan, the largest of the group, was the only island inhabited. Aptly named Inaccessible Island is 24 miles southwest of Tristan and 13 miles to the northwest of the Nightingale group—Nightingale, Middle, and Stoltenhoff Islands.

This lonely outpost of the British Empire is one of the most difficult in the domain to visit. There is no regular steamship service to Tristan, no trade or manufacture offering inducement for making it a port of call; no harbor or safe anchorage except in fair weather; and, more often than not, communication with the outside world is rendered impossible by dense fogs, fierce gales, and mountainous seas:

#### ONCE A WHALERS' RENDEZVOUS

Until the middle of the last century the ocean surrounding Tristan da Cunha was a favored hunting area for American whalers out of New London and New Bedford; 60 to 70 whalers have been known to be in the offing at one time. In the age of sail, inhabitants carried on a brisk trade by bartering potatoes, other vegetables, and fresh water for the supplies they lacked.

With the advent of steam, and the movement of whales south to the neighborhood of South Georgia, Tristan ceased to be visited habitually by whalers or other vessels. Calls at the island became less and less frequent. Several years passed during which not one vessel put in at the settlement, and Tristan became known as the "Lonely Island,"

From 1886 until the beginning of this century the British Admiralty dispatched a warship annually from False Bay, near Capetown, with mails and stores for the

isolated community.

The mailbag was a postal curiosity. The average accumulated correspondence of twelve months rarely exceeded a dozen letters. Parcels were a rarity. Within the past two decades, however, the world has displayed a keen interest in the well-being of the inhabitants, and nowadays the mail for Tristan, when chance offers to deliver it, is of considerable size.

#### WORST VOYAGE OF 40 YEARS

My voyage to Tristan was the worst I have experienced in forty years' travel about the seven seas. The whaler was tossed about like an empty barrel; the stench of whale oil was nauseating; the food plain and the cooking of it crude; and the accommodation available was of the roughest type—for, after all, a whaler is not built for luxury.

Approaching Tristan da Cunha, we encountered strong gales and for several days in succession had no glimpse of the sun. A hint of even more tempestuous weather when eventually we closed with Tristan Island did not augur well for my chances of landing there. The Danish captain was not enthusiastic about the prospect, and still less so about taking me off again.

The island is green and the towering cliffs are mostly fern-clad; yet Tristan can only be described as forbidding. As we closed with Falmouth Bay, the roar of the surf on the rocky coastline was almost deafening.

Tristan is an extinct volcano, the crater now filled with a lake of ice-cold water which makes a natural reservoir. The island rises sheer out of the sea to a height of 1,000 feet; and above that there is a cone, the Peak, which has an altitude of 7,640 feet above sea level. The circum-



C Lieutemant G. I. B. Ballour, R. N.

#### BOTH MAY WEAR THE SAME WEDDING DRESS

Until recently no bride on Tristan could outshine another. After each marriage ceremony the white satin bridal dress, with train, veil, and orange blossoms, was carciully stored in the rectory until time for the next nuptials. "God bless father, God bless mother, and send a good shipwreck so I can get married," was a prayer of the days when the island lacked marriageable men. In 1885, loss of a bout-load of island men left Tristan a community largely of women and children.

ference is approximately 27 miles; and the base is formed of hard columnar lava with alternating layers of basalt, agglomerate, scoria, and cinders.

As the rainfall on the higher levels is considerable, the erosion is correspondingly great; and, at a few spots on the cliffs, there are cascading waterfalls (page 680).

#### AN ISLAND OF AWESOME CONTRASTS

But Tristan, viewed from seaward, offered a grand spectacle and many awesome contrasts in color: the snow-white surf breaking constantly over the black lava rocks; the terrine sayagery of the giant rollers battering the coast with relentless fury, flinging clouds of white spray high into the blue sky; and the white splash of the waterfalls against the background of green ferns and brown cliffs.

The tempestuous winds shrieked down the nearly perpendicular slopes of the Peak with almost supernatural effects.

As soon as we came within sight of the small settlement, named Edinburgh in honor of the visit of the Duke of Edinburgh in H.M.S. Galatea in 1867, some of the hardy islanders put out from Little Beach in one of their surfboats, which are light-draught and double-ended (page 675).

Built from

scant and unpromising materials, these boats are works of art, light and seaworthy. The largest is about 30 feet in length, with a beam of five or six feet. The stem, stern, and keel are made from hardwood salvaged from shipwrecks; the timbers, knees, and breasthooks are of twisted apple bough, which grows on the island, and the entire craft is covered over with a single thickness of canvas.

Through my glasses I perceived signs of busy activity ashore. The arrival of any vessel is a major event in the drab lives of

these people. The entire population assembles to aid in landing mails or stores for the settlement. Our whaler, unfortunately, carried none of these things for them.

MAIL NEARLY TWO YEARS LATE

In April, 1932, the Carinthia, on a Luxury Cruise," undertook to call at Tristan with mails and stores. The latter included two ship's lifeboats as gifts from the Tristan da Cunha Society in Capetown. Because of terrific seas the Carinthia was unable to make delivery, though she waited in the vicinity for 16 hours. Eventually these mails, stores, and the hieboats were delivered safely on February 23. 1934, nearly two years later, by another cruise ship, the Atlantis.

Though our whaler was un-

able to anchor because of the heavy seas running, the islanders succeeded in getting alongside. They were disappointed when we explained that neither mails nor stores for the community were aboard. But they readily undertook to put me ashore. Happily, I had brought with me a supply of pipes, tobacco, and matches, and these small gifts were accepted gratefully.

The journey to Little Beach was extremely rough, but the islanders are skilled seamen and negotiated the gigantic rollers with remarkable dexterity. We landed safely, even if wet to the skin,



Lientemant G. L. B. Ballour, R. N.

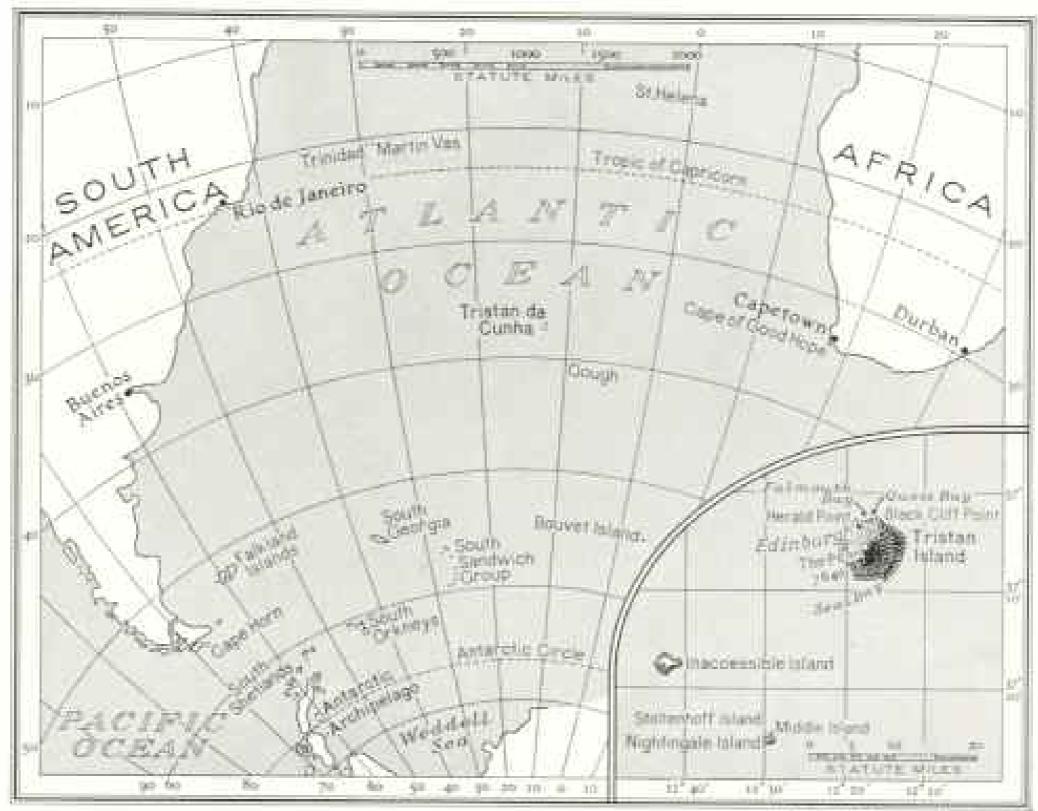
AT LAST A FINGER OF LIGHT DECKONS TIMED SHIPS

On the chart revised by the H.M.S. Carlitle in 1957 appears this crude lighthouse, newly crected on a rough whitewashed pedestal above the anchorage, From sunset to sunrise its oil lamp burns steadily. The chaplain last year brought back from England a radio for which a windmill will supply power. Tristanites did not get word of the end of the World War until 1922.

> The inhabitants are mixed in descent-English, Scottish, Dutch, Italian, American, and natives of St. Helena; but their common language is English. They have a limited vocabulary and speak with a lazy drawl and high-pitched intonation, seldom raising their voices. At times I found difficulty in comprehending purely local idioms.

> At first they were shy and reserved, with not much animation or expression; but once this reserve was conquered I found them alert, kindly, and revealing a courtesy not always met with in people of their simple

walk in life.



Drawn by Newman Bunstead

#### ALMOST MIDWAY BETWEEN AFRICA AND SOUTH AMERICA LIES "LONELY ISLAND"

The isolated group of five volcanic islands, known as Tristan da Cunha, juts out of the South Atlantic 1,730 miles from Capetown, South Africa, and 2,080 miles from Rio de Janeiro, Brazil. Only Tristan and Inaccessible are inhabited; the nearest other populated place is St. Helena, some 1,500 miles away. The little group is the only known breeding ground of the greater shearwater, familiar on the far-away North Atlantic fishing banks. Penguins, petrels, skuas, and albatrasses are other winged "first settlers" that still maintain here at least seasonal residence.

They have little chance for knowledge outside their island affairs; but in their own sphere they display skill and intelligence.

The community is deeply religious. Crime and punishment are unknown; the standard of morality is unimpeachable, and there is no show of undue baste, for time is of no object to the people. There is also a noticeable absence of noise, save only that of the howling winds, the roar of the angry seas on the rock-girt shore, and the vocal efforts of the domestic animals.

#### EDINBURGH, OF THE SOUTHERN SEAS

Edinburgh settlement is situated on a narrow shelf between Herald Point and Black Cliff Point, about 200 feet above sea level, on the northwest corner of the island (page 677). The homes occupy the grassy slopes of this narrow plateau, which is about 5 miles long by one mile wide, located at the base of the cliffs.

No other part of the island is really habitable, though in some sheltered coves around the coast the community grows small quantities of apples and other fruit.

#### VISITING VESSELS ANCHOR OFFSHORE

All vessels calling at Tristan are compelled to anchor about two miles offshore, in Falmouth Bay facing Little Beach, or in Quest Bay where is located Big Beach. The former is the chief landing place of the islanders. Communication between ship and shore is by local boats or ship's boats (page 678).

Automobiles or other modern means of transport have not invaded the island; probably they never will. Roads are rough cart tracks, and over them travel donkeys with panniers, augmented by a few quaint wooden-wheeled carts drawn by pairs of oxen (page 681).



Photograph from Authenticated News

A CHIP OF A BOAT FOR STORMY SEAS, BUT TOUGH AS ITS DEARDED BUILDER

In such small, double-ended craft early Tristanites made during rescues from wrecks of sailing vessels. Hidden often by clouds and fog, the island took heavy toll. The shattered craft provided wood to a land almost devoid of useful timber. Unusually seaworthy, considering their light frames, the homemade boots are about 30 feet long, with a five- or six-foot beam. Stem, stern, and keel are built of hardwood recovered from wrecks or driftwood. Timbers and knees are fashioned from twisted apple bough. The whole is covered with canvas.

These small carts are peculiar to Tristan. Young boys act as the drivers.

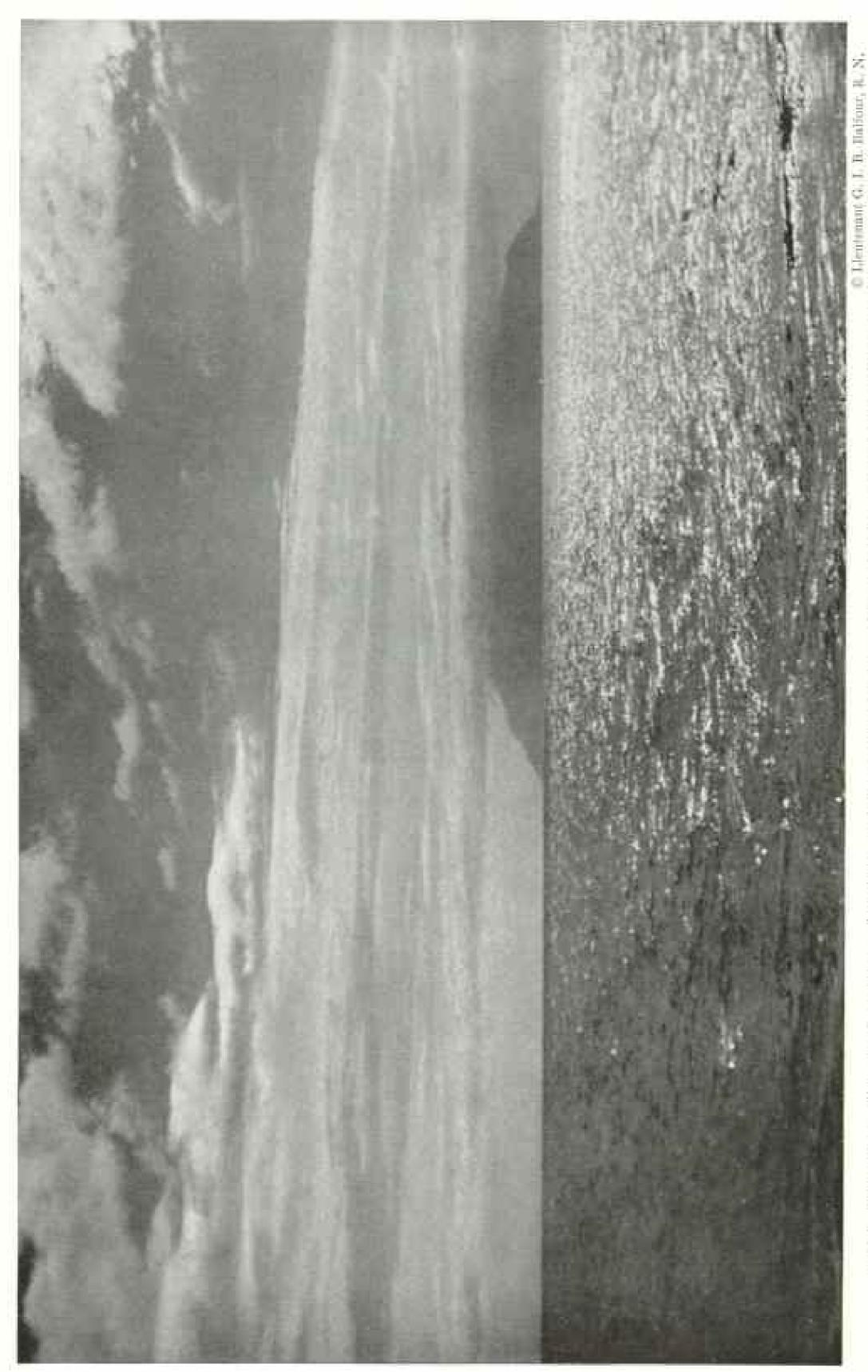
NO MONEY TO SPEND; NOR ANY PLACE TO SPEND IT

There are no shops and, therefore, no money in circulation. Coal is unknown. Apart from driftwood, each household depends upon a large shrublike bush growing on the island. It is a species of buckthorn, known as the "island tree" (Phylica nitida), which is found only at two other places, Gough Island, 250 miles south of the Tristan da Cunha group, and Amsterdam Island, in the Indian Ocean.

As there is now very little wood left near the settlement, fuel problems are acute. Collection of firewood entails hard labor and long hauls for the diminutive oxcarts. Fortunately the "island tree" burns well even when green. Gas, electricity, and telephones, of course, are nonexistent. Candles are imported, but are used sparingly, as there is no knowing when the next supply will arrive. The normal lighting system is by crude lamps burning sea-elephant oil. The islanders are firm believers in the wisdom of the old Scottish saying, "Gang to bed with the lamb and rise with the laverock."

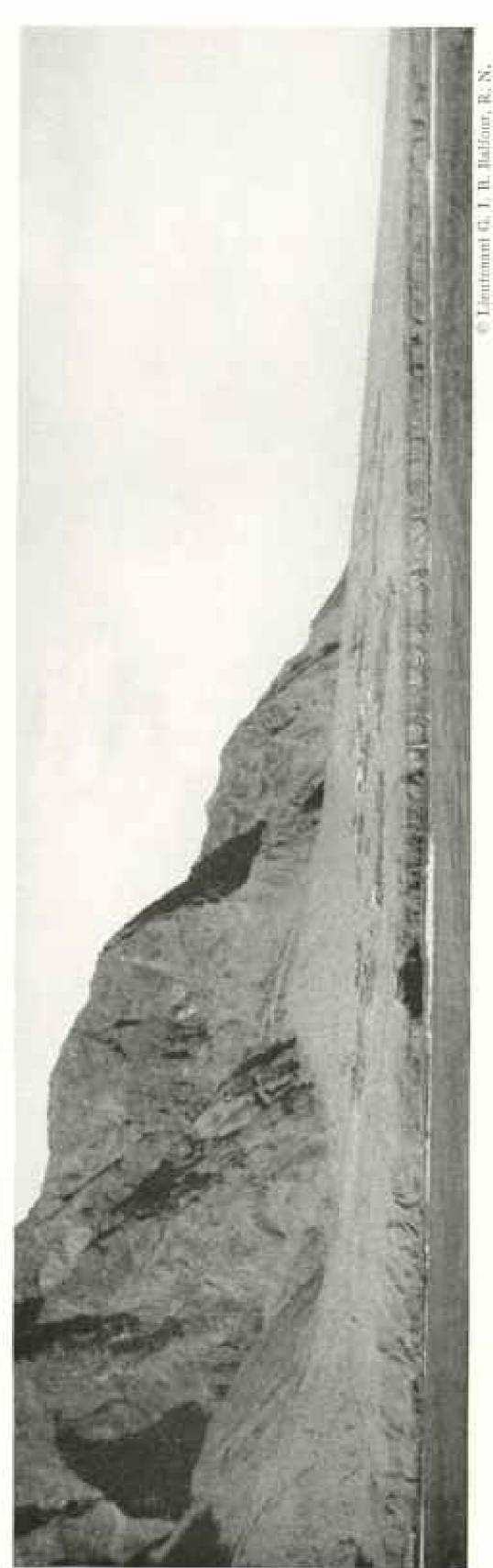
Within recent years, at the instigation of the present chaplain, the Reverend Harold Wilde, the community has erected a lighthouse near the settlement; this now appears on the chart revised by H.M.S. Carlisle in February, 1937. The oil lamp in this primitive lighthouse burns nightly (page 673).

Clocks and watches are rare. People tell the time by the sun, and are experts at doing so. A cinema or similar place of relaxation has yet to make its appearance; but the communal storehouse serves as a school and recreation hall. There the islanders dance to tunes played by a gramophone, a gift

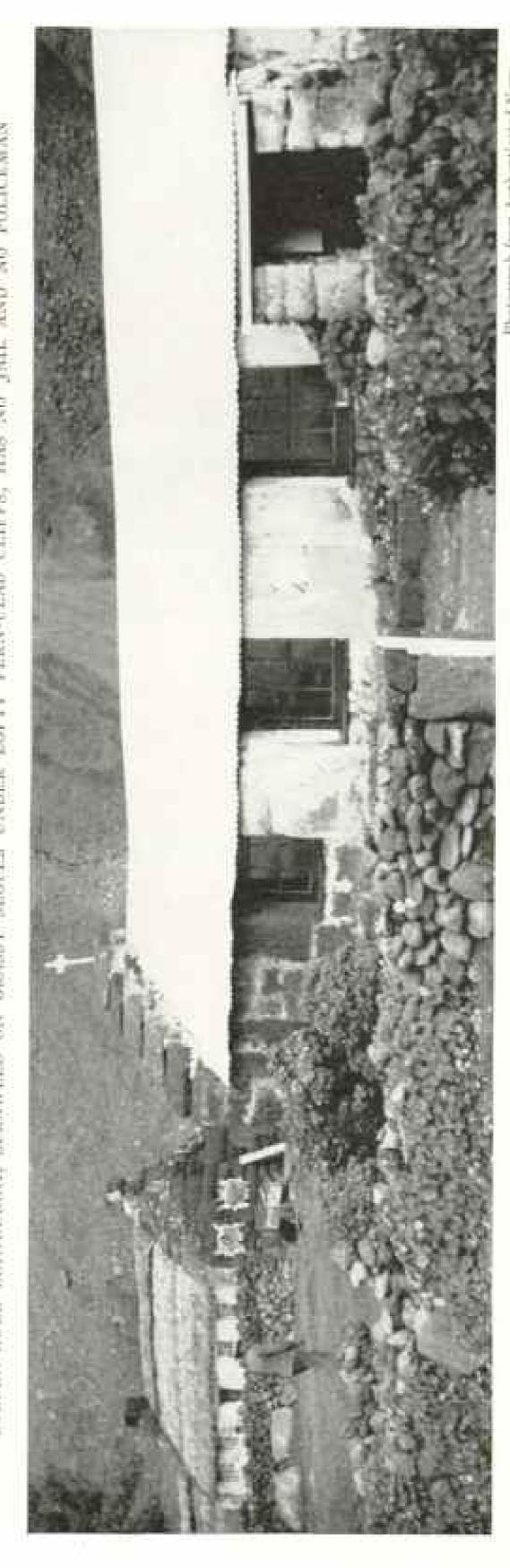


ONCE A GOAL OF WHALERS AND A LANDMARK FOR CLIPPER SHIPS, TOWERING TRISTAN NOW BROODS ABOVE A DESERTED SEA

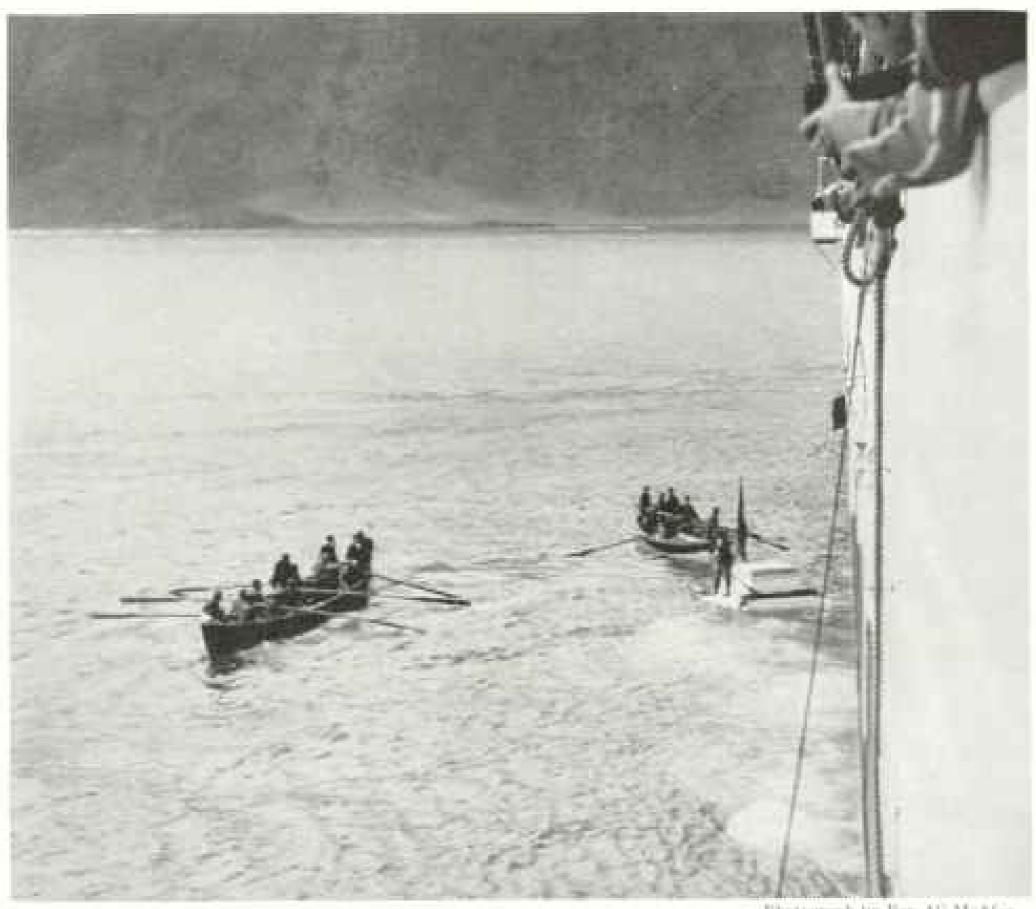
Tristão da Cunha, Portuguese admital, gave his name to the isolated plands he discovered in 1506. The first part of the name was later Angliched to "Tristan." Formal annexation to Great Britain was effected in 1816. When the British garrison was with his wife and two children. Descendants of this family still live on Tristan (page 689).



JAIL AND NO POLICEMAN UNDER LOFTY PERN-CLAD CLIFFS, HAS NO GRASSY SLOPES GOLDEN-RULE EDINHURGH, SPRAWLED ON



BIFORE THE TIN-ROOFED CHURCH OF ST. MARY THE VIRGIN WAS BUILT, SERVICES WERE HELD IN AN ATTIC ROOM (PAGE 630) No must of Triston will go to church without "dressing up" by placing a flower in his buttonhole. Stretched skins dry on an adjacent tottage wall,



Photograph by Ben Ali McAfee

FROM THE MOTOR SHIP "ASTURIAS" A RAFTLOAD OF SUPPLIES IS TOWED ASHORE

In sailing-ship days harborless Tristan was a convenient "filling station" for whalers and Orient-bound clippers that swept past on the blustering southeast trades. Then the residents had substantial commerce with the outside world. However, the advent of steam vessels isolated the island, because it was far removed from all modern steamer routes, except the little-used track between South Africa and South America. Even today, when at least one ship a year calls at Edinburgh, the island "capital," violent storms may make contact between ship and shore impossible (pure 671).

from the late King George V, or to those of a local accordion player who offers oldfashioned jigs as a variation.

Having no knowledge of modern dances, the islanders have evolved a jig step which is adapted readily to either waltz or fox trot played by the gramophone records. The older men contribute sailing ship songs, reminiscent of old-time sea chanties.

The houses are built of large, roughly fashioned slabs of stone obtained from the cliffs in rear of the settlement; and the roofs are thatched with coarse flax, which grows profusely in every garden. Each homestead started modestly enough, with only a living room and kitchen, but other rooms were added as the family outgrew existing accommodation.

The older houses are lined with boards and have wooden ceilings, which are denied to later buildings. Timber is now far too scarce to be spared for such luxuries. The flooring is of bare, hard-beaten earth. Furniture usually consists of a plain wood table, wooden chairs, and bunklike shelves for beds arranged around the walls; and there is an inevitable crude cradle for immediate or future requirements.

#### THESE WIVES REQUIRE NO HATS!

Women wore ankle-length and rather voluminously skirted dresses, of gay-colored materials, girdled tightly around the waist. I saw no hats; heads were covered with bright scarves (page 672).

Wives are hardy and weather-beaten



Photograph from Audienticated News

AN ANCIENT MUZZLE-LOADER HELPS MODERN TARS "FIRE" A MESSAGE TO THEIR SHIP

Perhaps the old cannon was salvaged from an ancient wreck, or it may be a relic of early occupation by a British garrison (page 689). While a sailor from a visiting warship spells out a message with flugs, another prepares his telescope to read the answer, and a third stands by to jot down the reply. At the left is a heliograph for sending messages by reflecting the sun's rays from a mirror.



Photograph by Ben Ali McAfee

SHY ISLANDERS EXPLORE THE LUXURY OF A CRUISE SHIP

Twelve months had passed without a call from any vessel when the 22,500-ton Asturius arrived. It was the largest ship the natives had seen up to that time. Within the past decade, several liners have included lonely Tristan da Cunha on cruise itineraries.



Photograph from Authenticated News

"ADAM'S ALE" BREWED ON TRISTAN'S PEAK

From this plunging stream the tiny village draws fresh cold water. Overcast weather predominates and there is much rain. A small clear lake, a natural reservoir, occupies the extinct crater at the summit of the island. Some streams are potential sources of hydroelectric power. souls, endowed with a sense of humor and pulling their full weight with the menfolk. The younger women were often comely, but beauty was not much in evidence. All were obviously "house-proud," and maintained their simple homes in spotless cleanliness.

Apart from the herds of island cattle which have gone wild and roam the southern part of Tristan, and a few rodents remaining from a former rat plague, there are no wild animals. Cows are used solely for dairy purposes, milk being the usual drink on this island where tea is seen very seldom and alcohol never (page 687).

There are about 700 sheep, all in fine condition, kept mainly for their wool and slaughtered for food only at Christmas or on other festive occasions.

Some pigs, ducks, fowls, and a few excellent geese are preserved for trading purposes—even the eggs. Oxen and donkeys, and a number of intelligent dogs of unusual breed complete the roster of domestic animals (page 693).

When H.M.S. Carlisle visited the island in February, 1937, she landed a pedigreed Ayrshire bull (page 691), two pedigreed pigs, a few pens of Rhode Island and Australorp fowls, and some ducks to introduce much-needed new blood into the island stock. Men of the Royal Navy also planted 700 young trees in sheltered spots.

#### DAY BEGUN BY GOING TO CHURCH

The long, narrow, whitewashed church of St. Mary the Virgin, erected in 1922 and 1923, is architecturally similar to the dwellings. Each morning the people rise with the sun and, on the way to work, call in at the church to ask a blessing on the labors of the day (page 677).

When the chaplain conducts a service or holds a meeting, the entire population, even the children and infants in arms, attends. Lacking an organ, the singing is accompanied by a harmonium, a gift from royalty. Though it



Photograph from Authenticated Nesus

#### WHAT RELIEF WHEN LONG-AWAITED SUPPLIES ARE SAFELY DROUGHT ASHORE!

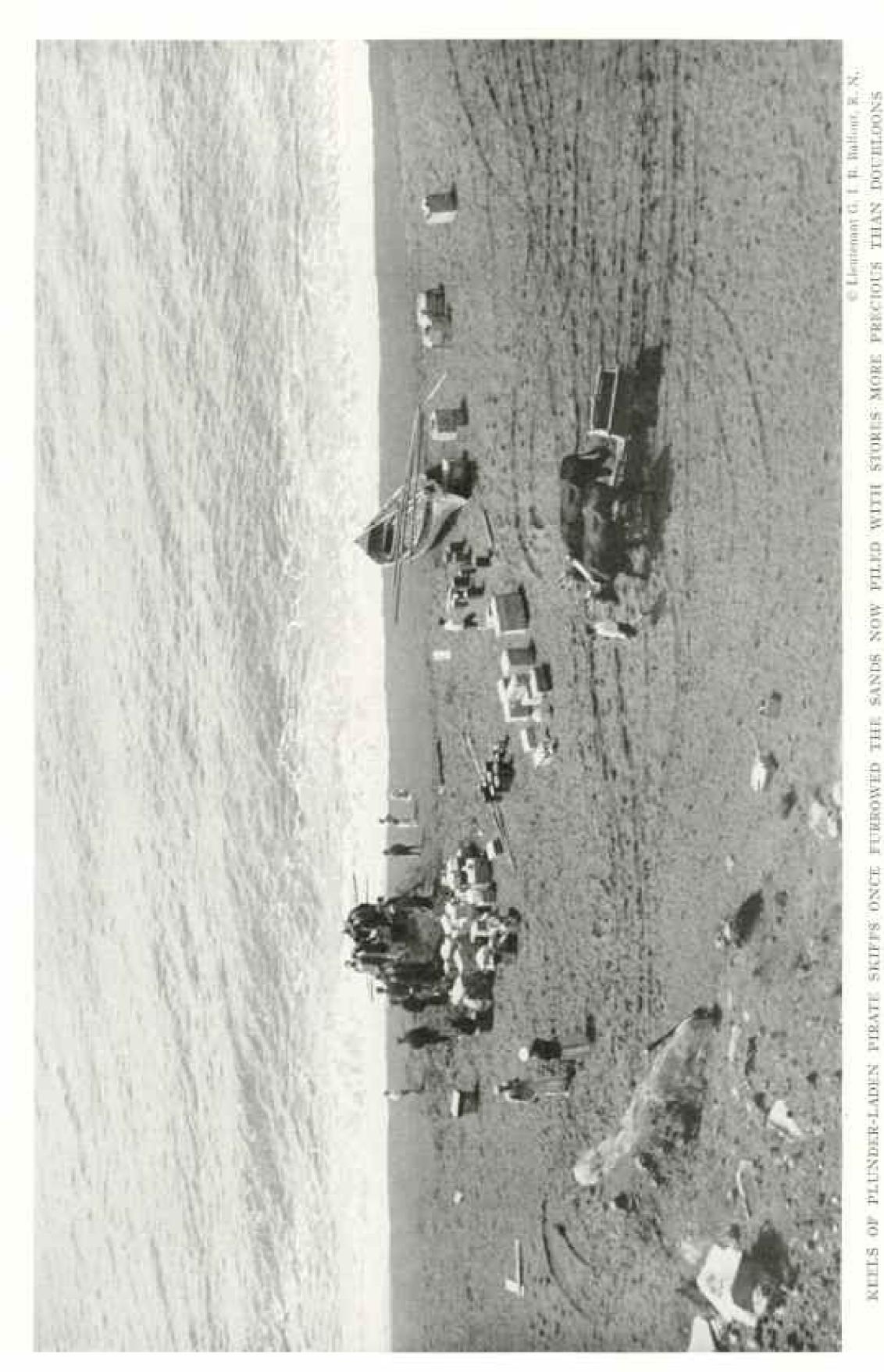
Willing hands beach a laden lifeboat from a supply steamer. Tables of the anchored ship are laden with delicacies, but the stores unloaded for Tristan are such staples as flour, sugar, canned meats and fruits; blankets, soap, and clothing; medical supplies, salt, tobacco, tea, and tools.



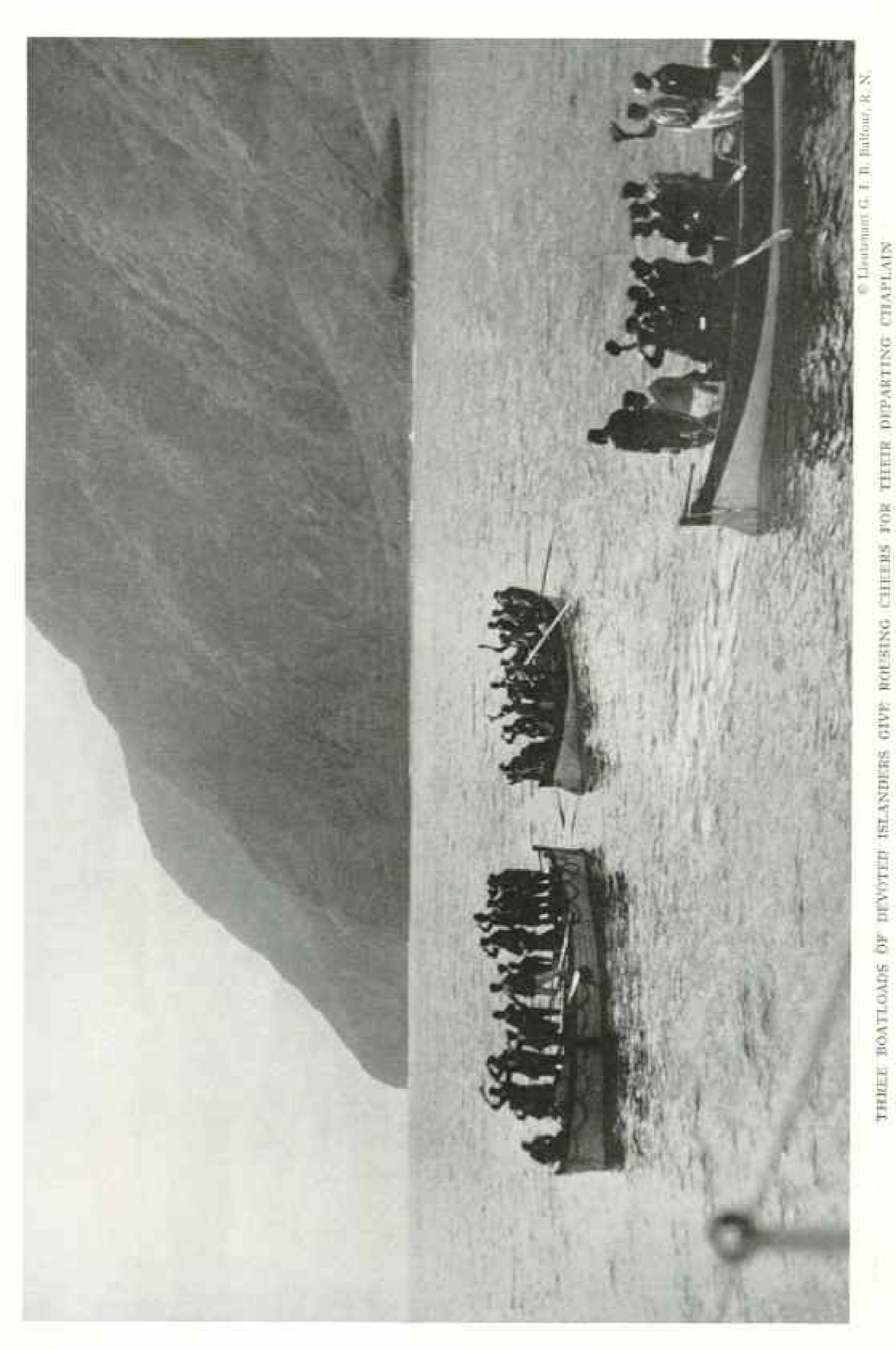
C Lieutenant G. I. B. Balfour, R. N.

EVEN FOR STURDY ONEN, IT'S A STIFF PULL FROM SHORE TO STOREHOUSE.

Tough little carts with solid wooden wheels haul sacks of supplies from the deep sands of the beach to the village three-quarters of a mile away. Groceries are apportioned to each family every two weeks. At the right, a lifeboat has been crailled well out of reach of the thundering suri.



Within rifle shot of Quest Bay, strewn with supplies unloc da Cunha," is reputed to have buried, around 1811, a large of pirate-settlers, tantaliked the first English garrison by vanishin

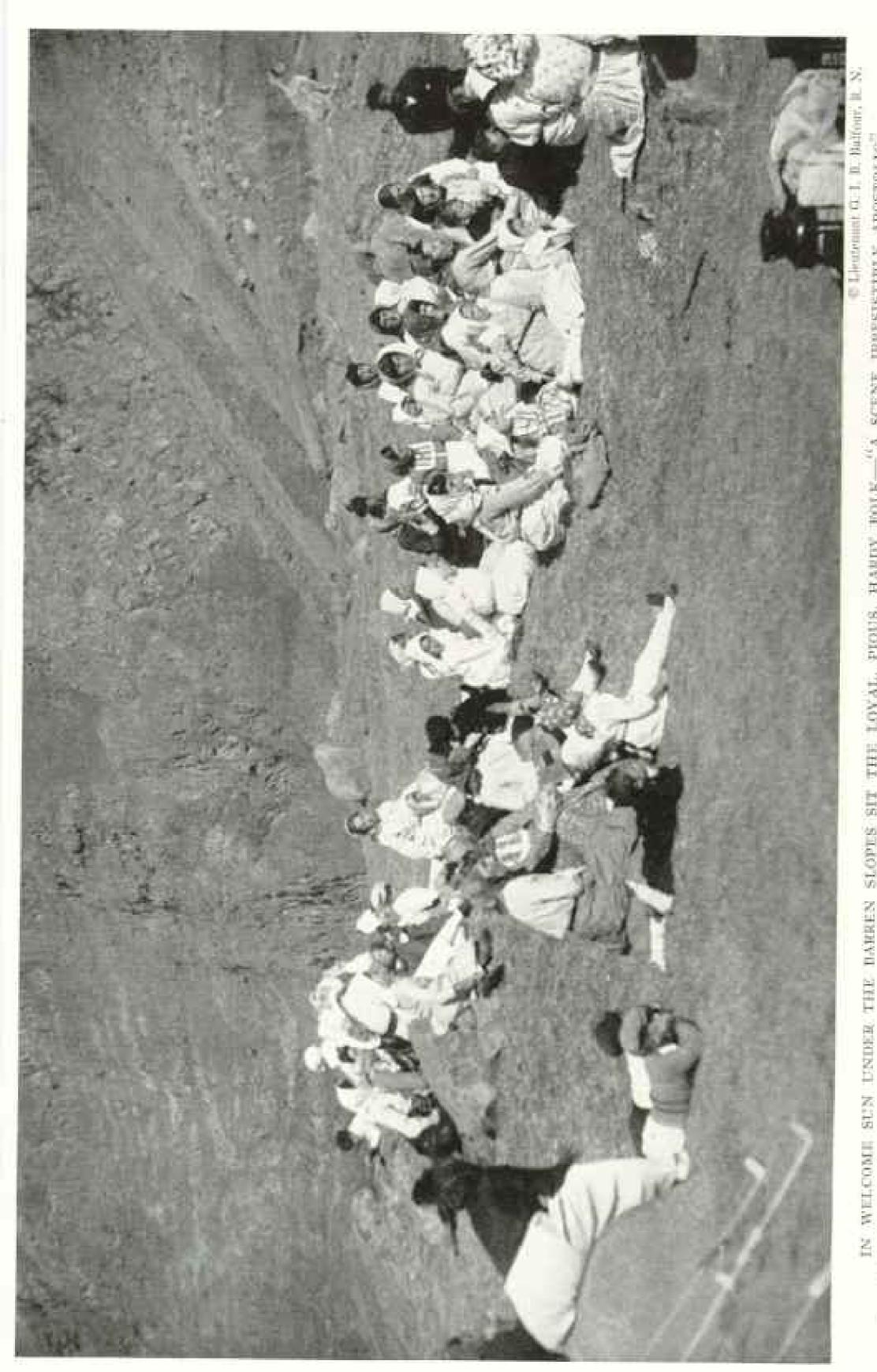


After three years of missionary service as elergyman, indge, teacher, doctor, and administrator, the Reverend Harold Wilds sailed away from the blank lebral on H.M.S. Carliste for a furbough in England. Two lifebouts sent as gifts from Capetown on the Curintina in 1932 were finally delivered to Tristan in 1934 by the Albania (page 673).



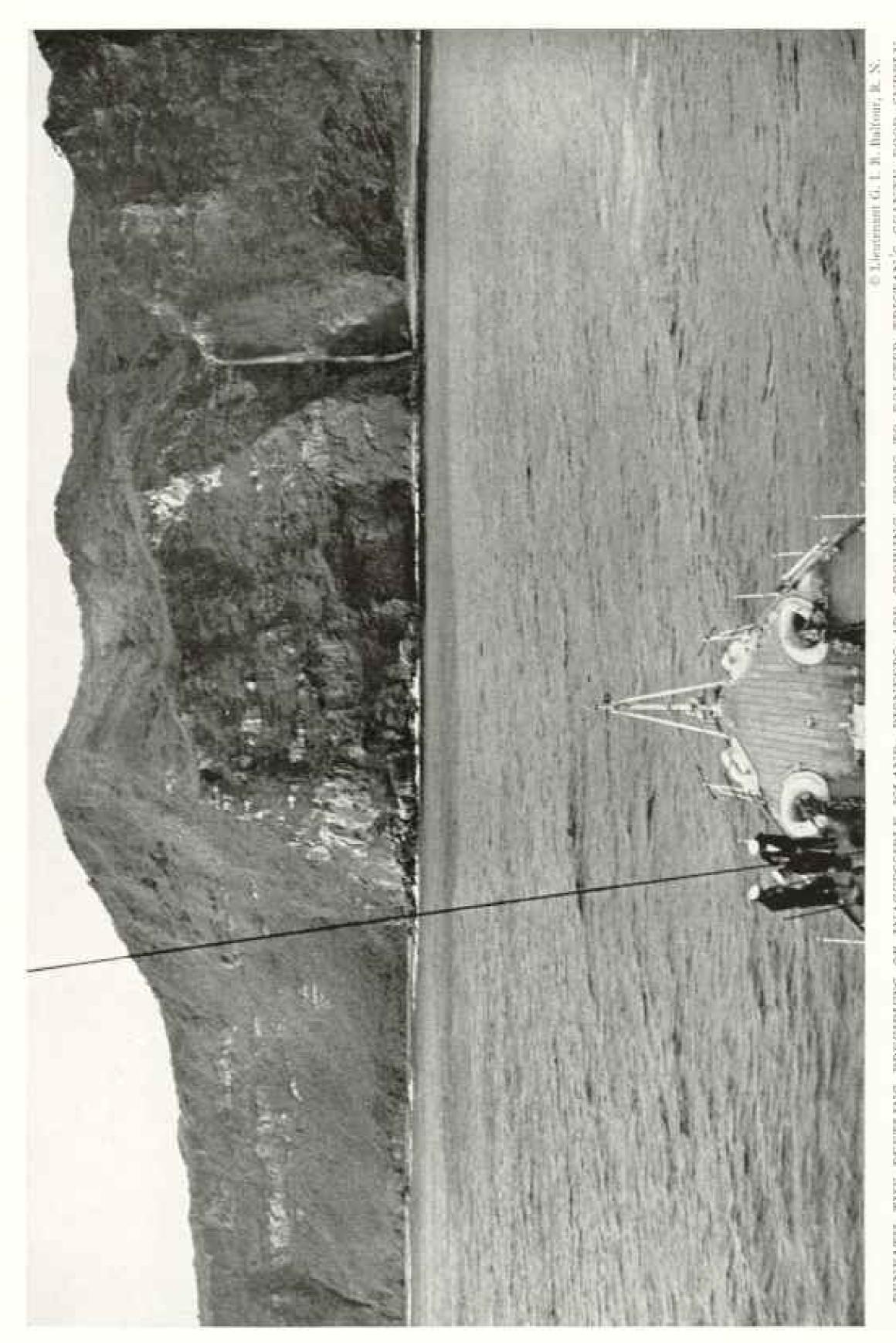
ASSUMBLE FOR DENTAL INSPECTION -SOCIAL CLIMAX OF THE SUMMER SEASON "HEALTH-BLESSED ROHINSON CRUSORS"

Generations of intermarriage have not enfeebled the people of Tristan, according to medical officers from H.M.S. Carlisle, who made a thorough inspection in February, 1937. Despite soft foods and neglect of toothbrushes, 134 out of 156 islanders in an earlier examination had teeth entirely free of decay. Many were classed as "dental models and sturdings were altributed to an active outdoor life. While awaiting their to "open wide," women and children to their bright, marvels." General good health and stundings were attributed to an active outdoor life. While awaiting their turn to "open wide," women and children in their bright, old-fashioned dresses and acarves sat quiet and happy, fashinated by the strange proceedings (pages 685 and 692).

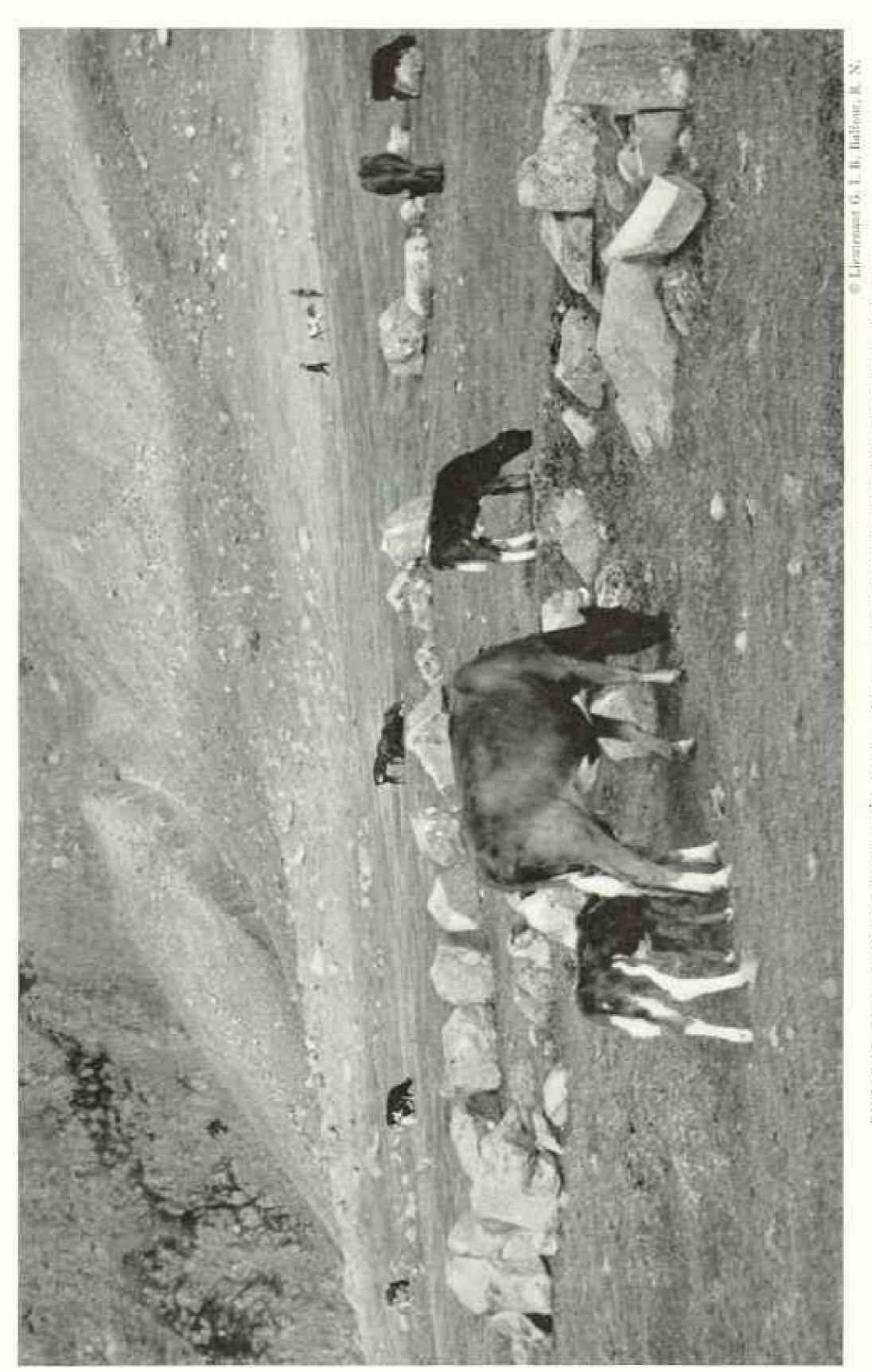


SCENE IRRESISTIBLY APOSTOLIC SLOPES SIT THE LOYAL, PIOUS, HAMBY FOLK It might be St. Paul instead of a visiting dentist who hold

On the Sunday following a ship's visit, a fashion parade precedes the service, when everybody About once a month is held a dance, for which an accordion provides the se man appeared in a bowler hat, old dinner jacket, red waistcoat, white duck trousers, and Dutch class. shows off new clothes just landed from England. Recently, one man appeared in a bowier hat, old dinner jacket, red waistcoat, white duck trousers, and Dutch Oner a week there is a concert on the grammophone given to the islanders by King George V. About once a month is held a dance, for which an accordion providence. A nudge with the elbow is the correct invitation to the old-fashioned policie, and waltzes. Refreshments include for and one biscuit apiece.



In 1936 the Reverend Harold Wilde, chaplain of Tristan, led a colonizing expedition to Inaccessible, 27 miles southwest of Edinburgh settlement, second largest of the Bolated group's five islands. Here youthful farmers entired wheat and potatoes and raise sheep, cattle, and pigs on a marrow tract to the right of the waterfull (pages 693-4). BENIATH THE BEHTLING PRECIPICES OF INACCESSIBLE ISLAND, PIONIERS ARE GROWING CROPS TO BOLSTER TRISTAN S SCANTY FOOD SUPERY



DILIGENT COWS CONVERT TRISTAN'S CHIEF RAW MATERIAL INTO ITS MOST POPULAR DRINK

For example, one the original cattle have gone wild and new herd together at the southern end of the island. Beef, as is all number of mouths to be fed. The community councils have approved simple taxation, by which a part of or even "scrip," an agreed scale of payments for services has been prepared call is the price of making a cart or hauling several loads of kelp for fertilizer. other food, is distributed to families in strict accordance with the number all potato crops must be stored away for seed. Their being no money shoup is the price of cutting and carting six loads of wood; one call is t Grass thrives on the bowlder-strewn volcanic soft. Some of



D Lieutemant G. L. B. Halfour, R. N.

SHE ONCE WAS "HEADMAN": HER SON WON A JUHILEE MEDAL

Mrs. Frances Repetto, wislow of one former headman of Tristan and daughter of another, stands with startling dignity at the gateway to her humble home. Upon her husband's death, she was recognized as chief of the island (page 690). When, in 1930, the chaplain was appointed Commissioner and Island Magistrate, Mrs. Repetto's authority was curtailed. William Peter, her eldest son, is headman of the Council of Men and the proud possessor of the island's only King George V Jubilee Medal, awarded for his long service to the community.

A dulcitone was safely delivered by H.M.S. Milford in 1938 when the Reverend Harold Wilde was landed at the island on his return from leave in England.

#### EARLY PIRATES AND BURIED TREASURE

Tristan enjoys a romantic halo of pirates and buried treasure. One of the first settlers was Jonathan Lambert, a fugitive from justice after a stormy career of piracy, who arrived in a small lugger with six companions in 1811. He is reputed to have brought a large chest filled with valuable plunder obtained along the seaboard of South America.

For a time these men carried on agricultural pursuits and traded their produce with 
passing sailing 
ships. They 
prospered, for the 
American whalers and other vessels proved good 
customers.

With quaint conceit, Lambert styled himself "Emperor of Tristan da Cunha," and he issued a flamboyant proclamation inviting all the world to trade with his "kingdom," bidding none "molest or injure my sovereign rights of the island and others in the group." None challenged him.

Lambert and his companions soon began to quarrel violently over the equita-

ble division of the booty; and, one by one, they died violent deaths. When the English garrison arrived from Cape Colony in H.M.S. Falmouth on August 14, 1816, there remained only one survivor of these pirate-settlers, an Italian, Tomaso Corri.

This man constantly boasted of the great riches buried in some secret spot on Tristan—silver plate, pearls, diamonds, and large numbers of Spanish gold coins. At intervals he would vanish into the bush and return with handfuls of gold coins. Corri died suddenly, and the secret of the whereabouts of the pirates hoard died with him. The only clue which he ever vouchsafed to the English garrison was that "the treasure is hidden somewhere on the right-hand side of the last house in the settlement, down in the direction of Little Beach and between the two waterfalls." Intensive search has never revealed the booty.

In 1816 the British Government formally annexed Tristan da Cumha by dispatching a small garrison of troops from Cape Colony

to occupy the island.

In 1817 H.M.S. Julia was sent from Capetown to take off the troops and a large body of Hottentot camp followers; but, when lying at anchor in Falmouth Bay, she was driven ashore during a sudden gale and completely wrecked. Sixty officers and men perished. Their bodies were recovered and buried at Big Beach, but today no memorials mark the graves. Another warship was dispatched from Capetown. This time the garrison, Hottentots, and survivors of the Julia were embarked without mishap. What may be a relic of this military occupation of Tristan is still found on the island in an ancient cannon (page 679).

At the last moment, when it seemed probable that Tristan would cease to be occupied, Corporal William Glass of the Royal Artillery, a native of Kelso, Scotland, unexpectedly put in an application for permission to settle permanently on the island with his wife and two young children. The request was granted. Thereupon Samuel Burrell and John Nankeville, musons in the Royal Navy and both bachelors, elected to join the Glass family. Their request was

also approved.

#### RECORDS FOUND IN CONNECTICUT

Precious records of the founding of the settlement in 1817 were brought to light a few years ago in New London, Connecticut. It is a far cry from Tristan to New London, but the explanation is simple. Some American whalers persuaded sons of William Glass to join them in the whaling industry, and they settled permanently at New London. Later, some of their sisters married American whalemen, also going to live at the same whaling port.

After the death of William Glass in 1853, his widow joined her children there and took with her all the family records. She died in New London in 1858 and was buried in the same cemetery as her sons, William and Robert, and one of her daughters, Isabella, James, another son, was buried at Groton, Connecticut.

The rights of these pioneers were determined by written agreement, dated November 7, 1817, which was signed by all three men and formally witnessed by Lieutenant Aitchison. All stock and stores were to belong equally to each; all profits and expenditure were to be treated likewise; and, to assure harmony, all must be regarded as equal in every respect. Thus the settlement was founded and maintained upon purely communal lines, although certain modifications had to be introduced later.

The three pioneers were soon joined by three more men, all bachelors from St. Helena—Thomas Swain, Alexander Cotton, and a man named Riley. These men had fought under Lord Nelson and were then serving with the St. Helena squadron of the Royal Navy, which safeguarded Napoleon in exile.

Thomas Swain is credited with being the seaman who caught the mortally wounded Admiral in his arms as Nelson fell on the deck of H.M.S. Victory at the Battle of Trafalgar. He lived to be a centenarian, dying on Tristan at the age of 102, April 26, 1862. He was buried in the modest little cemetery beside the grave of William Glass, who had died nine years earlier.

#### WANTED: FIVE WIVES

Among the correspondence in the custody of the Glass family in the United States are two letters from the Governor of St. Helena during Napoleon's residence on that island (1815-21).

One of these sanctions the proposed departure of five island women for Tristan, resulting from an application for wives submitted by the five bachelor settlers. They had enlisted the aid of Captain Amm, of a Norwegian whaler visiting the island, in arranging their matrimonial affairs.

In due course, Captain Amm returned to Tristan with five women who had agreed to take potluck in the marriage mart of the new settlement. When the women landed on Little Beach the five prospective bridegrooms inspected and appraised them; then they indicated their choice. Luckily for the future harmony of the community, no two men desired the same wife.

William Glass performed the marriage service for the five couples, who are stated to have lived happily and been content with their lot.

In 1821 Samuel Burrell and his wife withdrew voluntarily from the island and existing partnership, settling permanently in Cape Colony and there, for a number of years, he acted as the islanders' agent. The two men remaining, Glass and Nankeville, gave Tristan da Cunha a constitution, which has been retained for more than a century.

The small community on Tristan was later increased by the arrival of Peter Green, shipwrecked on the island about 1835 probably in the schooner Emily. He settled there permanently and married one of the island girls. Again, about 1850, two American whalemen, Rogers and Hagan, joined the settlement. Forty years passed before new blood was introduced by two Italian sailors, Repetto and Lavarello, who were shipwrecked and saved by the islanders. Repetto, who had been a petty officer in the Italian Navy, married a daughter of Peter Green; and Lavarello married another island girl.

#### AN ISLAND DIRECTORY WOULD CONTAIN ONLY I SURNAMES

Seven surnames suffice for the entire population of Tristan-Glass, Swain, Green, Rogers, Hagan, Repetto, and Lavarelloand only those of Burrell and Nankeville no longer survive among the community. Although the original agreement constituted a definite partnership, subsequent acknowledgment of ownership of land, stock, and stores by Glass and Nankeville was voluntarily made when the population increased.

Judged by what I saw on Tristan, the community may now be defined as a simple republic bound by customs enforced by common consent. The men work as hard as they have to, grumble some, and each considers his own family the best on the island. Yet all work together for the good of the community, and in any major enterprise everybody does his bit.

There has always been a beadman, elected by the votes of the community. William Glass was chosen by the unanimous wish of the islanders, and ruled Tristan for 37 years with firmness and justice. Glass was deeply religious, of good education, outstanding ability and character, and endowed with administrative gifts of no mean order. His laws on the island have varied little since his death. He raised a family of 16

children. A handsome marble monument, sent to the island by his descendants residing at New London, marks his grave.

After his death Peter Green was unanimously elected headman of the island. Green carned renown for many gallant and successful efforts in saving lives from wrecks on the group; and Queen Victoria sent him an autographed copy of her portrait in recognition of his heroism. He died on the island in 1902, being then 94 years of age.

Green was succeeded by Repetto, and again the choice was unanimous.

#### A WOMAN BECOMES "HEADMAN"

Upon Repetto's death in 1912 his widow, Frances, was recognized as chief of the island. As a daughter of the second headman and widow of the third one, the community saw nothing incongruous in being governed by her. In 1930, however, the chaplain was appointed commissioner and island magistrate; therefore, Mrs. Repetto's authority was curtailed (page 688).

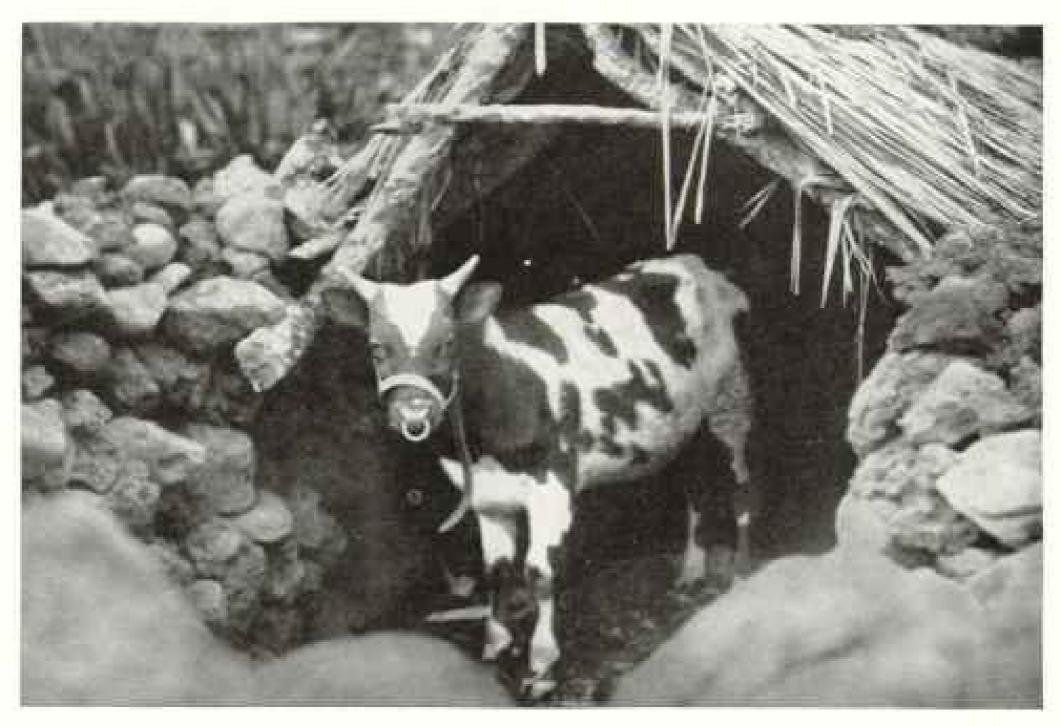
The resident chaplain is under the spiritual jurisdiction of the Bishop of St. Helena; and, by Letters Patent under the Great Seal, King George VI declared the Tristan da Cunha group to be a dependency of St.

Helena as of January 12, 1938.

In the absence of a chaplain, it is essential to have a leader for the community. Early in 1937, Will Repetto, eldest son of Mrs. Frances Repetto, was elected headman during the year's leave granted to the Reverend Mr. Wilde; but his mother still has a large voice in the affairs of the settlement. Will Repetto possesses the only King George V Jubilee Medal on the island, the award being made to him in recognition of his splendid work over a period of years.

The chaplain, in addition to his spiritual duties and those of commissioner and island magistrate, is also the postmaster, schoolteacher, storekeeper, and scoutmaster. The font used in the little church was the gift of the second chaplain, the Reverend E. H. Dodgson, brother of "Lewis Carroll," author of Alice in Wonderland.

When the present chaplain returned from England this year, he brought a wireless receiver with a windmill battery charger, presented to him in response to an appeal by the Tristan da Cunha Fund. This was installed by the Royal Navy, two directional aerials being rigged with a change-over switch. Excellent results were obtained on both the Empire and other broadcast programs.



"CARL" INTRODUCED PEDIGREED BLOOD TO IMPROVE TRISTAN'S HERDS
Mildly curious, the young Ayrshire bull (page 680), stands at the entrance to his thatched stall.
Cattle are kept for their milk; meat is a hixury rarely served. Grassy slopes support about 700 sheep that provide wood for clothing and mutton for holidays and special feasts.



HOMEMADE MOCCASINS ARE THE "LAST WORD" IN FASHIONABLE FOOTWEAR

Hitle of bullock or dankey is preferred for the best shoes, although sheepskin is also used. Light, soft, hand-sewn footwear fits snugly over stockings knit from yarn spun from the fleece of local sheep. Recently, the Netherlands sent a large gift of wooden clogs, which seem to have reduced the asthma that afflicted some of the people.



Photograph from Authenticated News

#### PICTURES ARE PREFERRED WHERE THERE IS LITTLE TIME TO READ AND SCANT LIGHT TO READ BY

Missionary teachers have slowly raised the percentage of literacy, but constant struggle to survive leaves little leisure for reading. Some years ago the British Government offered to provide a school-master if the inhabitants would contribute 75 pounds a year toward his salary. How, came the reply, could they manage that when, during the past year, only five shillings had come into the island? Imported candles are used sparingly. Usually lamps burning sea-elephant oil must serve.

I was hospitably entertained in a humble cottage, the face consisting of boiled potatoes, fish, and sea-bird eggs. These dishes constitute the staple food of the community.

#### ONE FOOD ONLY AT EACH MEAL

Meat is a luxury; fat is so scarce that even fried potatoes are considered an exceptional treat. The inhabitants adhere to a strict rule of diet, never mixing food at a meal. This one-dish menu must grow monotonous, yet they patently thrive upon it; indeed, a more healthy community would be difficult to find.

Surgeon-Commander Sampson reported, in 1932, after the first medical inspection carried out by H.M.S. Carlisle, that the physique of the islanders was good, in spite of constant intermarriage in such a small community. Among the children he could find no evidence of rickets; while such infantile ailments as mumps, measles, scarlet fever, whooping cough, and diphtheria were unknown (pages 684-5).

At the same time a dentist made thorough

examination of the islanders and reported that their teeth were practically perfect. Among 156 cases, ranging from childhood to 92 years, he found 131 persons entirely free from dental decay. Samuel Swain, aged 75, possessed a complete set of his own teeth and none showed the slightest impairment.

The homely potato, grown in lands three miles from the settlement, is the chief island crop. The volcanic soil is thin and of poor quality; and a failure of the crop, as occurs in some years, is a serious matter. Apart from cereals and other luxuries dispatched from London at irregular intervals, the inhabitants depend mainly upon potatoes. There have been times when a vessel has arrived with stores just in time to avert famine after the failure of a season's crop.

For the past three years the potato growers have enjoyed good seasons, so the community has accumulated a surplus stock. Every house has a potato shed attached, wherein the family stores its hoard of the

all-important tubers.



C Lieutenant G. I. B. Balfour, R. N.

"BE YOUR FRIENDS WELL, MAYBE"

Lop-eared and quizzical, "Towser of Tristan" seems willing to receive overtures of friendship.

Though mongrels, the island dogs have the intelligence and somewhat the appearance of an English collie. They help their masters berd cattle and sheep.

The islanders augment their larder with fish and crayfish, plus sea birds and their eggs in season. Penguin eggs are a special delicacy. On Inaccessible and on the Nightingale group are huge rookeries of penguins and other sea birds. Periodically the men row over to the other islands to collect driftwood, sea birds, and their eggs. It is ever a perilous adventure.

It was formerly the custom to share out all stores arriving at the island, and for a space everybody lived in plenty. When these imported luxuries were expended, they reverted to the island's produce until the next supply ship brought relief. Now there is a communal storehouse behind the church, where everything is carefully conserved. The chaplain issues rations every fortnight, and has accumulated a small reserve of luxuries—salt, flour, sugar, tea, and tobacco.

#### RESIDENTS SPURN REMOVAL

The only industries are fishing, agriculture, making woolen goods (stockings and shawls of good quality), cloth weaving, and the manufacture of penguin-skin mats. There are possibilities for various local industries to be developed, such as canning crayfish and the export of guano; but the lack of regular communication precludes trade with the outside world.

Evacuation of the inhabitants to the mainland of South Africa has been proposed more than once, but nothing could persuade these people to forsake their homes. Many told me with emphasis that nothing save force could induce them to abandon Tristan.

Between 1934 and 1937 only one death occurred, and that the result of an accident; while there were 13 births recorded. Today the population numbers about 200 souls.

It has been estimated that Tristan can offer a reasonably comfortable existence for about 80 people. The mounting population, therefore, presents a grim economic problem. The chaplain has sought to relieve the pressure by establishing a small colony of youthful pioneers on Inaccessible; and he hopes to do likewise on Nightingale.

Inaccessible is about an hour's steam from Tristan, has imposing and precipitous cliffs rising to some 1,100 feet, and a total area of about four square miles (page 686). The summit resembles a section of typical English landscape, with valleys and rolling hills, and trees grow wherever they can obtain shelter from winds.

The young colonists did well during the first six months; and, from latest reports, they are continuing to make a success of the bold adventure. They have erected a communal residence and storehouse close to the beach, and cultivate potatoes near at hand on the only strip of soil available below the high cliffs.

At present this small settlement is restricted to the diminutive stretch of arable land at sea level, for the interior of the island lives up to its name and there is no easy path up the precipitous walls of cliff.

Although in good weather a landing is possible below the new settlement in Carlisle Bay, the beach is littered with rocks; and, as at Tristan, there is a stretch of kelp offshore. When the weather is favorable, however, the light canvas boats of the islanders can be drawn up on the rocks.

The Nightingale group is entirely different from Tristan and Inaccessible. Nightingale Island is only about 1½ miles long, with twin peaks each about 1,000 feet in height; but the cliffs are not so formidable as at the other larger islands. There are attractive valleys and wide open spaces available for settlement.

#### A HAVEN FOR SEA BIRDS

Thus far no colonization has been attempted on Nightingale, Middle, or Stoltenhoff Islands, for unless the weather is virtually perfect it is impossible to land.

This group is visited only during the nesting seasons, when the sea birds' eggs, young penguins, and mollyhawks are collected; otherwise, the Nightingale group is left to the occupation of the vast rookeries of sea birds. As a result of this huge bird colony, the soil is extremely fertile.

When properly cultivated, as it may be soon, Nightingale should yield a valuable addition to the produce of the islands. Should the crops on Tristan fail in any year, the chances are that those on Inaccessible will not do so, for the fields face in the opposite direction.

Normally, for eleven months in each year the islanders are cut off from the world and are largely dependent upon outside aid for luxuries. They spend their time from dawn to dusk in steady toil to wring the bare essentials of life from their rocky home or the encompassing ocean; and their greatest ambition is to render the community wholly self-supporting.

For 122 years, through grievous trials and tribulations, the people of Tristan have maintained this isolated outpost in the South Atlantic Ocean. It would not have been possible to keep this small community on their island home but for the generous and practical interest long forthcoming from the Tristan da Cunha Fund.

Every islander with whom I conversed insisted he was happy and content. Certainly they all appeared to be so. I prefer to think of Tristan not as the "Lonely Island" but as the "Isle of Contentment," for I found there more of that spirit than the cross of deadly loneliness.

#### A DIFFICULT DEPARTURE

Insistent signals from the siren of the whaler cut short my visit to Tristan. Wind and sea were infinitely worse than on landing, so the journey back in the island boats promised to be an even rougher adventure.

After a heroic struggle with gigantic waves, the rowers put me safely aboard. I am unlikely to forget that experience. Once they had fulfilled their contract, these gallant men lost no time in fighting their way back to Little Beach.

I have a deep admiration for the courage and sterling good qualities of these people. Yet I am not envious of their lot. Most of the earthly havens depicted for us turn out, on close examination, to be disappointing.

Tristan struck me as being the genuine thing; certainly so if robust health, longevity, innocence, and contentment of spirit are the true sum of human ambition. But how many would accept the offer of transport to Tristan, with the sole stipulation that they remain there permanently? I seriously question if a rowboat could be filled with aspirants for immolation there.

Such invasion would not be welcomed by the islanders. A disturbing note would thereby be introduced into the symphony of the "Isle of Contentment," while the newcomers' incompetency to contribute to the life of the community would embarrass such self-reliant people. There would also be the acute problem of feeding and housing such an excess of population.

The present indications are that Tristan needs a thinning-out process rather than an influx of new settlers.

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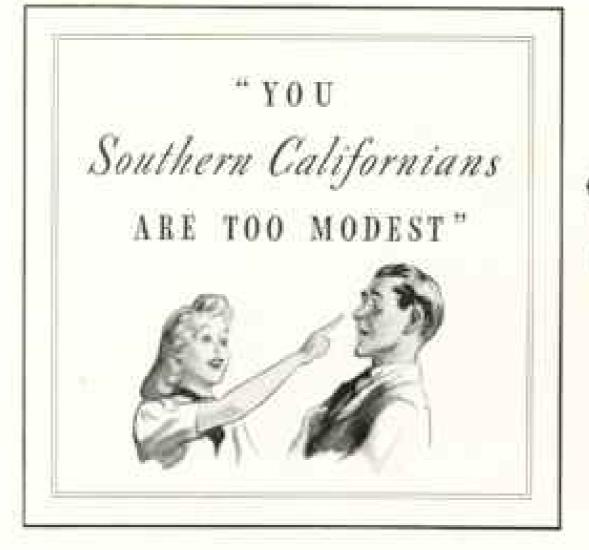
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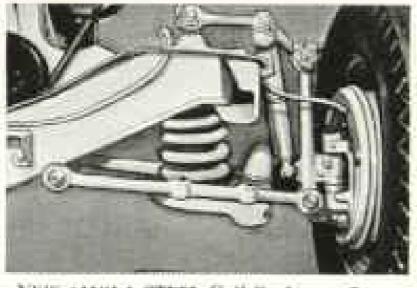
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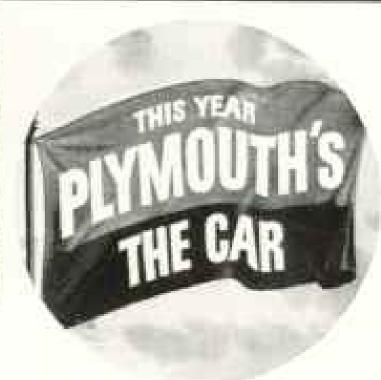
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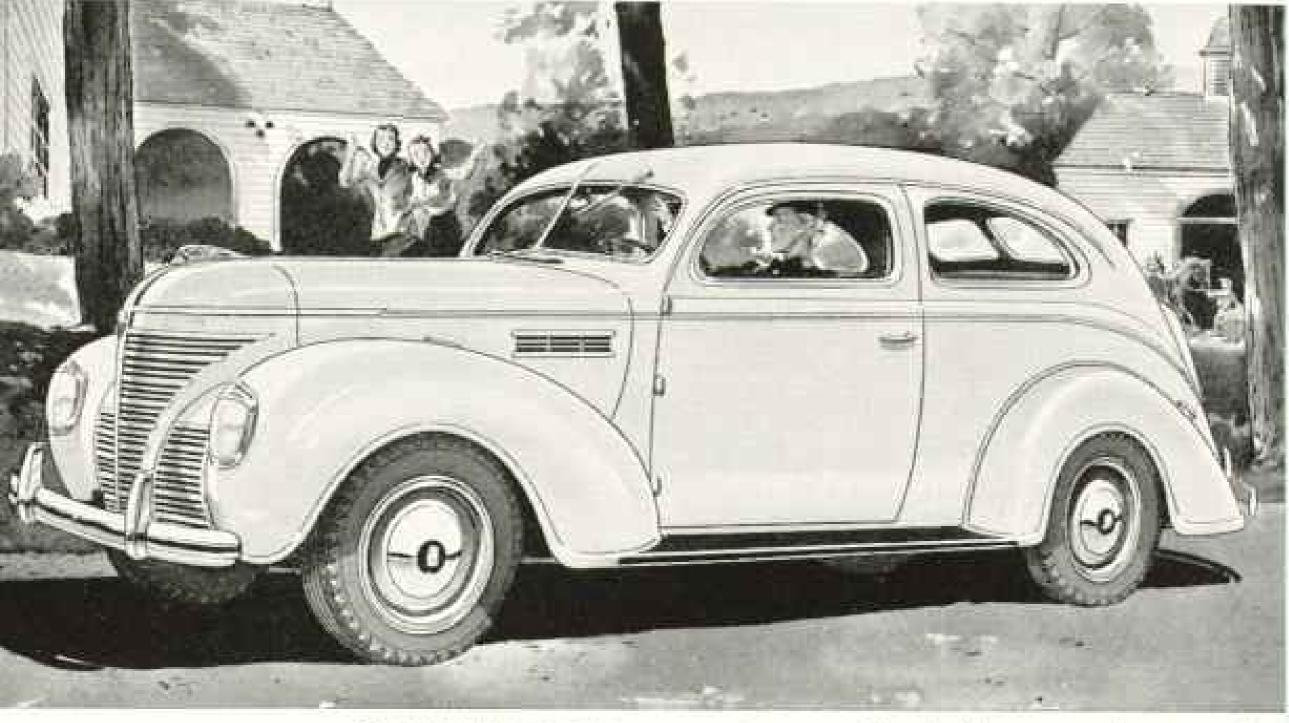


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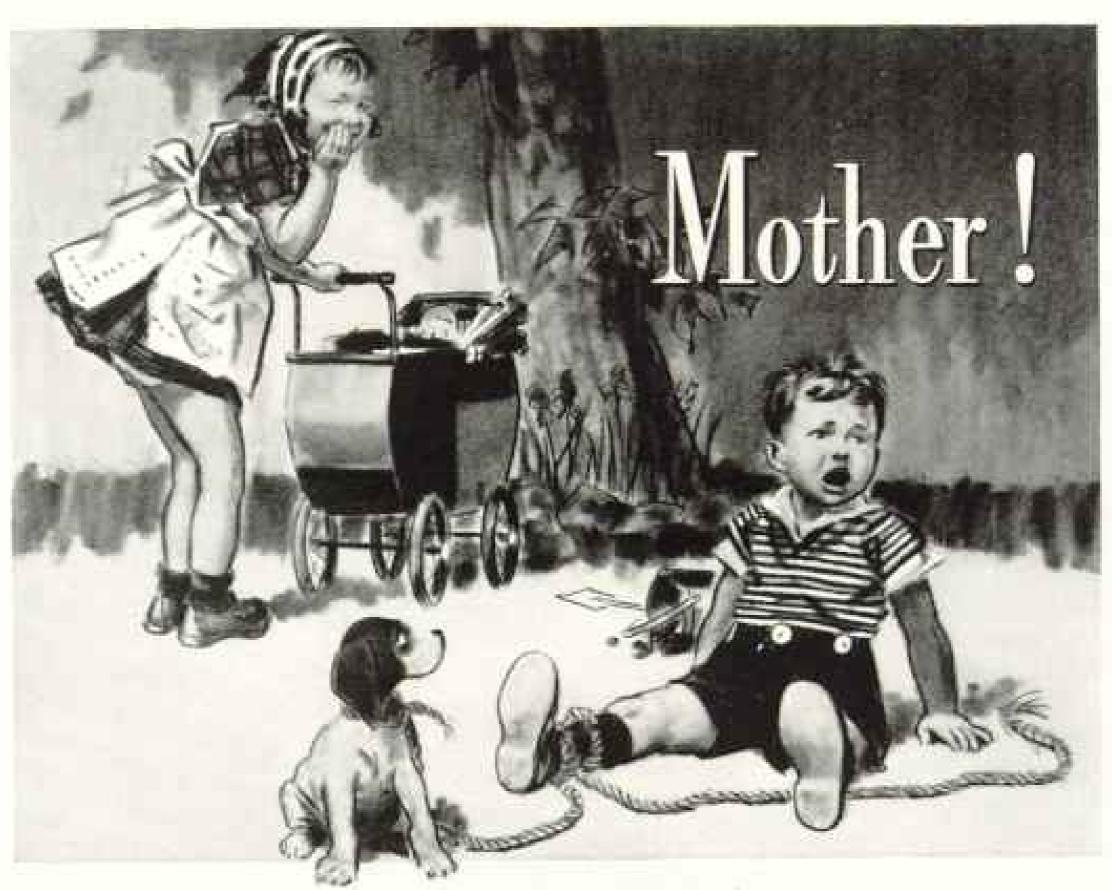
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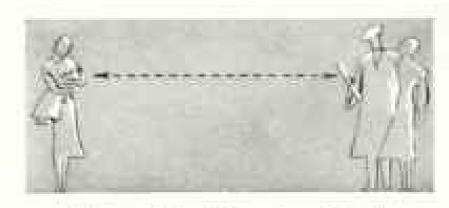
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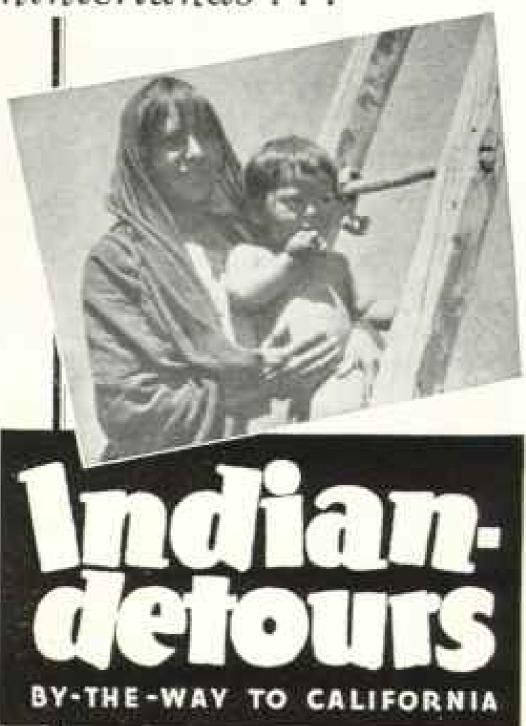
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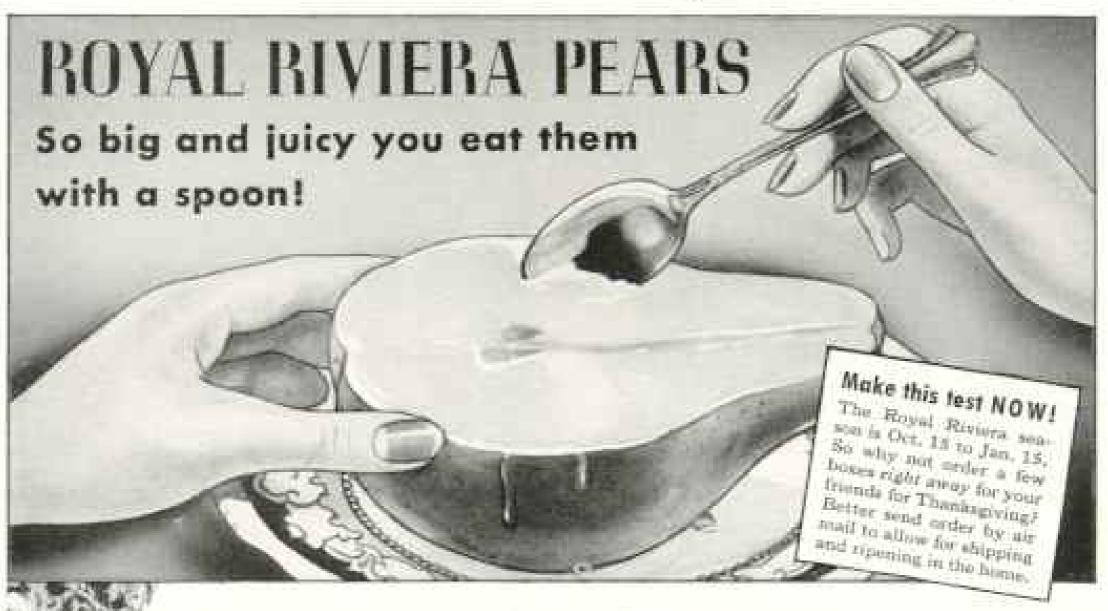
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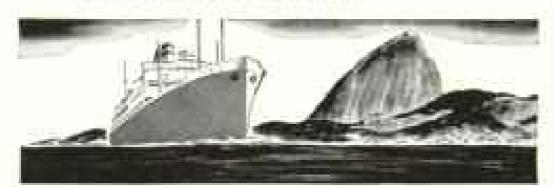


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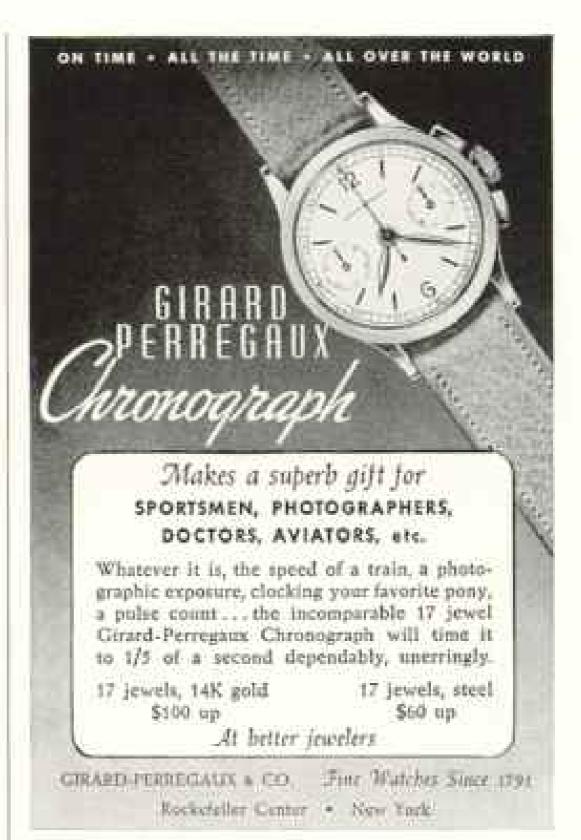
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MODEL	1	1% 6%	2 sa.	21/2 CML	MODEL		11/2	
AUBURN 654, <sup>1</sup> 36 852, <sup>1</sup> 30	+12 +17	- 4 + 6	-27 - 9	-56 -28	LAFAYETTE 6, '34, '35, '36 "400", '37, '38	+15 +35	‡ <del>;</del>	-16 -12
BUICK 40, '34, '35, '36, '37, '36 60, 50, 50, '36, '37, '38	+ 6 +11	-13 - 4	- 54 - 27	-59	LA SALLE 35-50, '35; 50 (5tr. 4), '36 365-C, '33; 50, '37, '38		- 4 +12	
GADILLAC 85, 37	+19 +20 +22	- 4 + 12 + 15 + 4	- J + 1 + 8	-19 -12 0	LINCOLN  Zephyr, '36, '37, '38  V-12, '33 to '38  NASH  3720, '37; 3820, 3880, '38  3620, 3840, '36; 3780, '37	+10		+10
CHEVROLET	+ 8	-12 -18	-43 -54		Adv. 8, '34, '35; Amb. 8, '36 OLDSMOBILE F. '35, '30	+17	+ 6	- 9 02
CHRYSLER 6, '32, '33, '34, '35; AF, '37 Royal, '37; C16, 19, 20, '38 Del8, '30; Imp., '37	+12 +16 +18	1+1	-27 -12 - 0	-59	L, '37, '38 PACKARD 120, '35, '36; 6, '37 6, '38	+14 + 18	+ 6 -12	- 9 -21 -43
DE SOTO 6, '34; AF, AS, '36; 6, '37; S-5, '38	+16	4.4	-12	-34	8, '38 1400-1-7, '30; 129, '37; Super 8, '38 Super 8, '33, '36	+16	+ 4	-34 -12 - 6
DODGE 6, '22, '32; D-2, '36; D-8, '38 Senior-6, '30; DU, '25; B-5, '27	965	-12	S- 118	-50	1500-1-2, '37 12, '33 to '38 PIERCE ARROW 1601, '36; 8, '37, '38 12, '36 to '38	1152	+21	+10 +15 +15
FORD V-6, *32 to *36; V-8-78, *37, *38	+10	+ #	- 6	-23 -02	PLYMOUTH PF, PG, 134 PS, P6, 138 P1, P2, 136; P3, P4, 137 PONTIAC	+ 6	-18	-54 -43
GRAHAM 80, 90, 110, '35; 95, 116, 120, '37, '38 74-9, '35; 85, '37		- 8 -34		-62	8, '33, '34, '35; 6, '36 6, '37, '38 8, '36 8, '37, '38	$+10 \\ +12$	- 8 - 4	-43 -34 -27 -10
HUDSON  6, '35 (late); 6, '36 to '38  8, '36, '37  6, '35 (easiy); 8, '48  112, '38	$+15 \\ +14$		-12 -21	-34 -50	5TUDEBAKER 6, '36 to '38; Com., '38 Dic., '34, '35; Pres., '37 Pres., '36, '38 TERRAPLANE	+10	- 8	- 54 - 34 - 27
HUPMOBILE 6-618-G, '36; 6, '37, '38 422, '36; 8-621-N, '36; 8, '38 527, '35; 627, '36; 8, '37	+16 +18	+ 4	-12 - 6	-34	4, '36, '37, '38 WILLYS 77, '33 to '36 '37, '38	-21	-25 -47	-63



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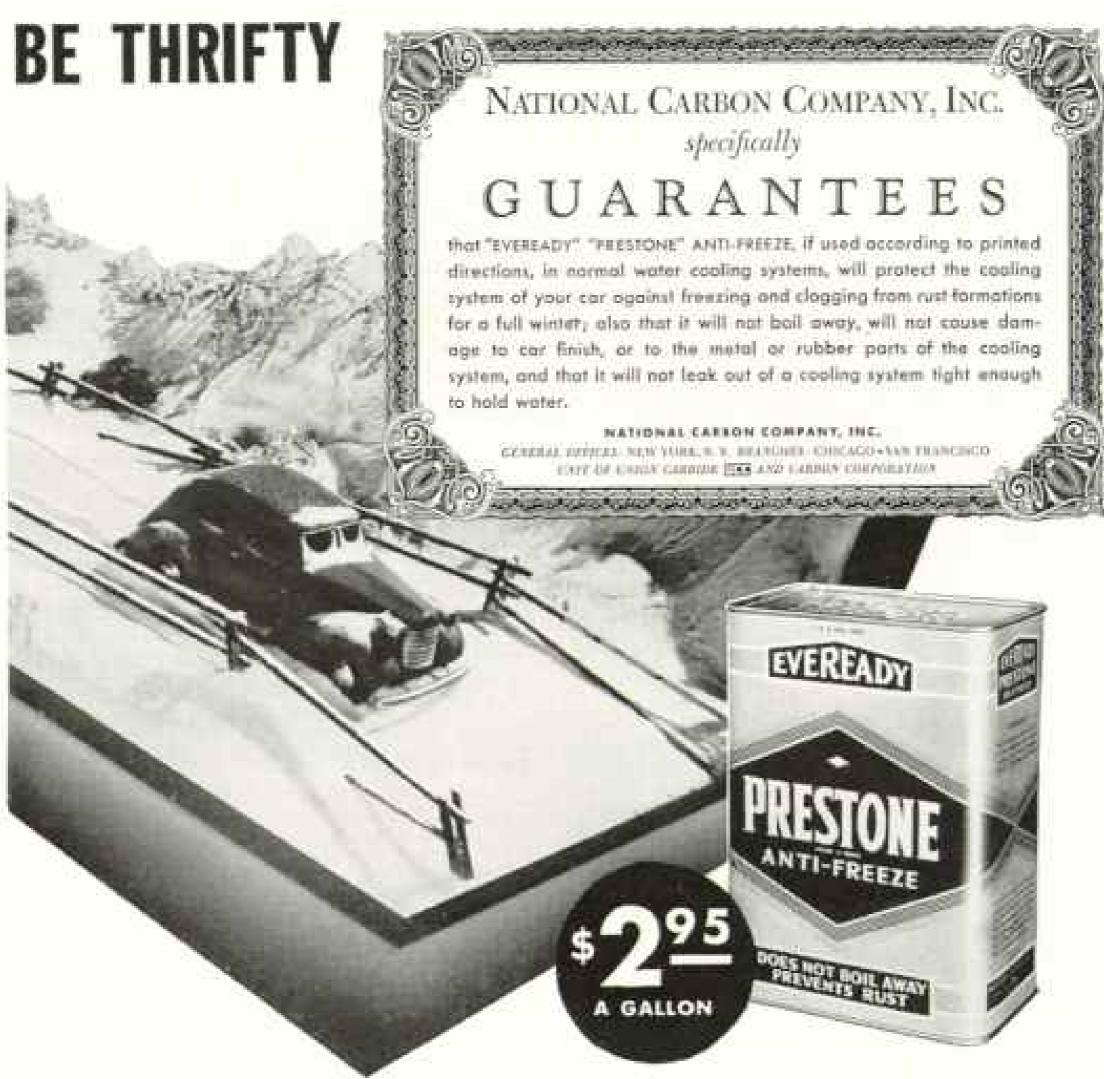
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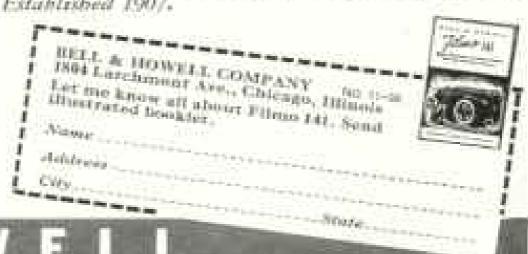
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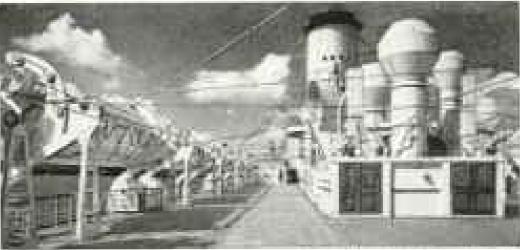
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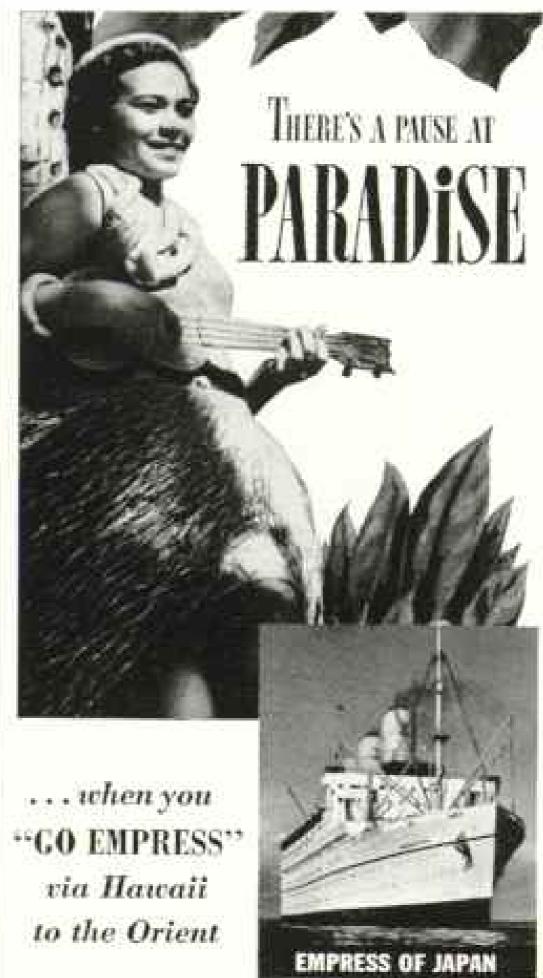
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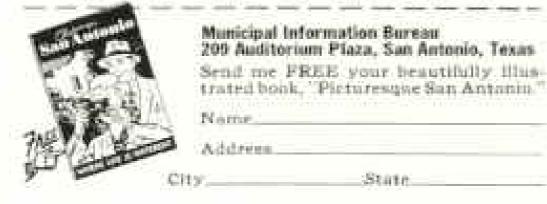


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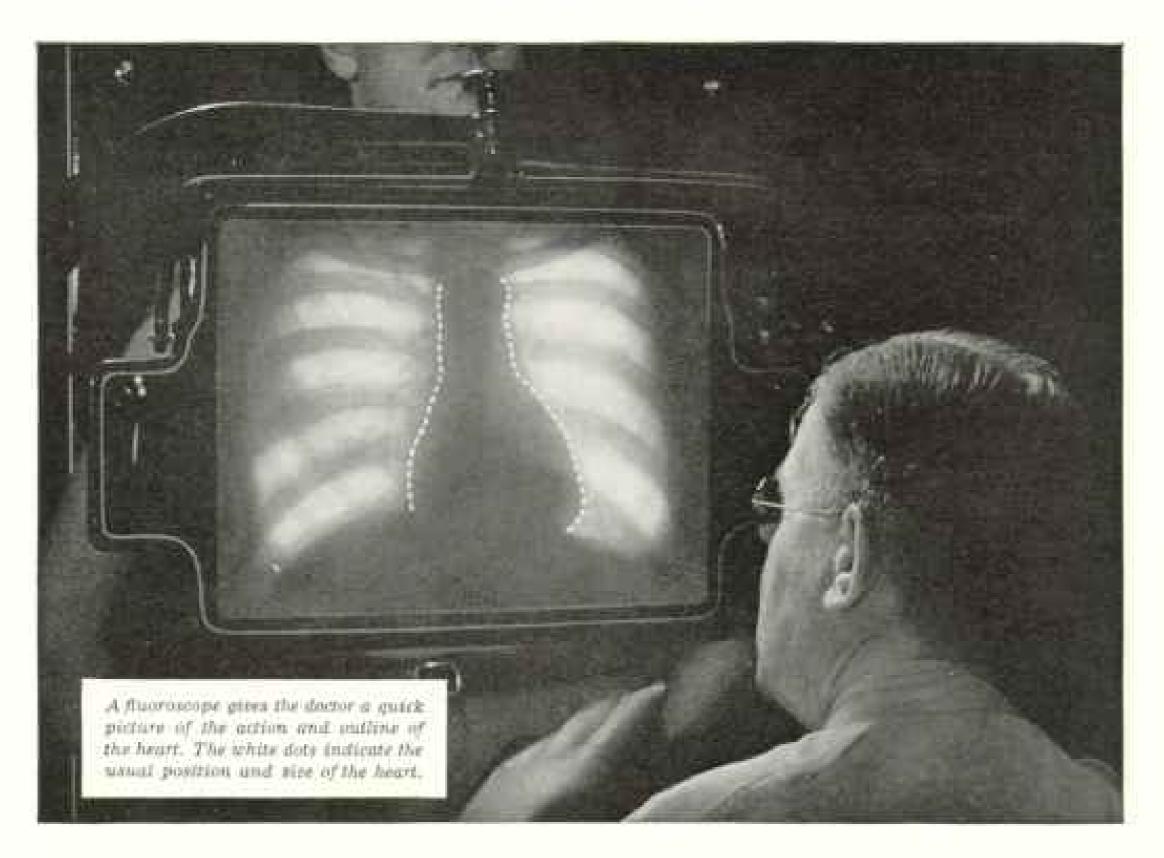
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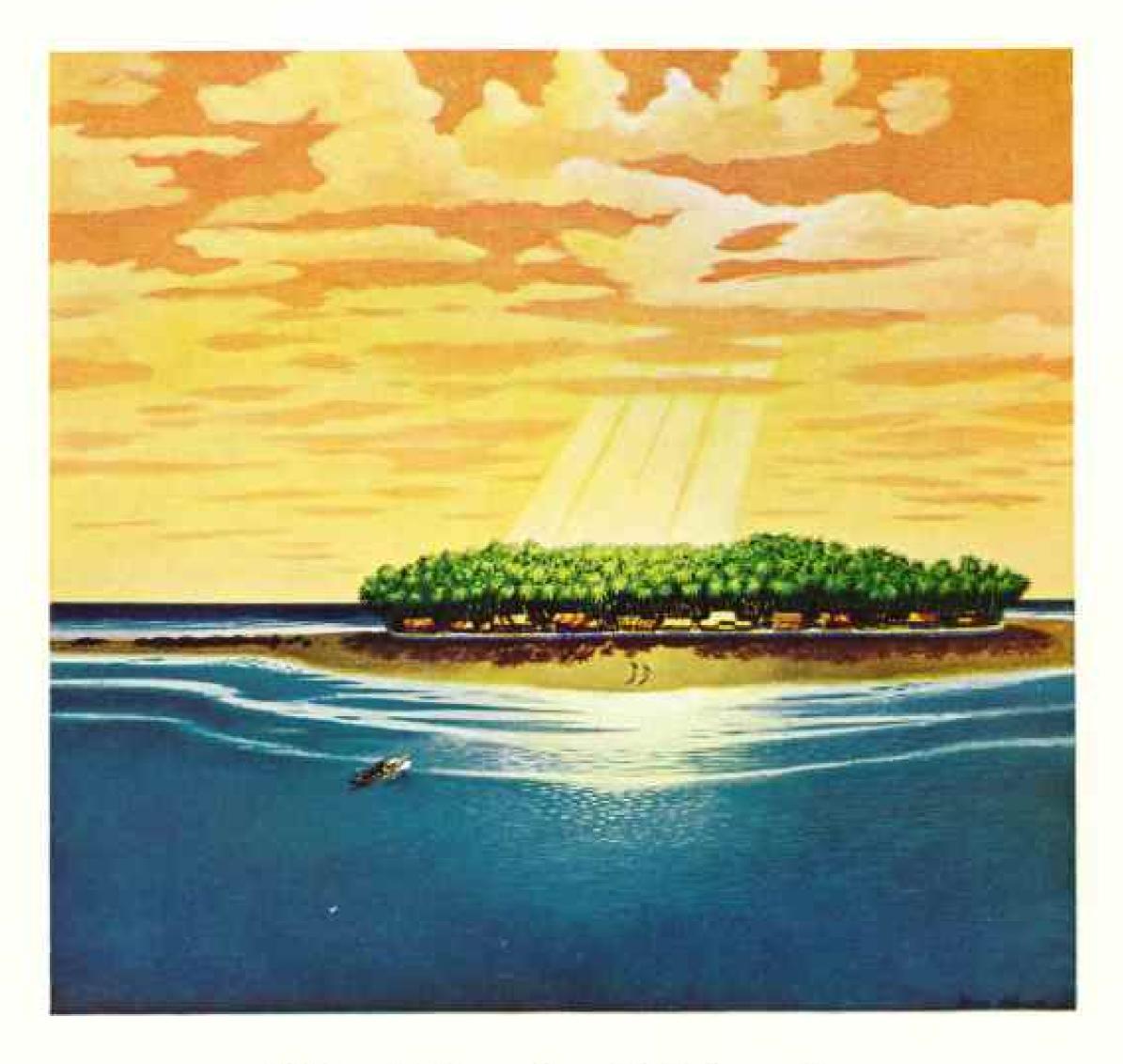
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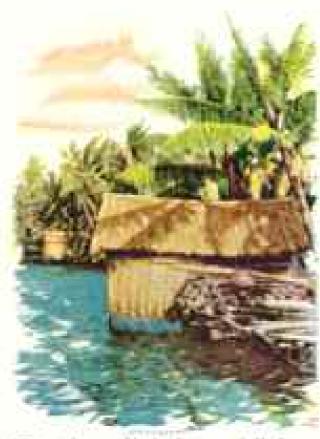
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about a sixth of a mile in diameter. The natives built it upon a coral foundation, erecting a wall of coral blocks around the outer edge and filling in the center, so that the entire island rises about 15 feet above sea level.

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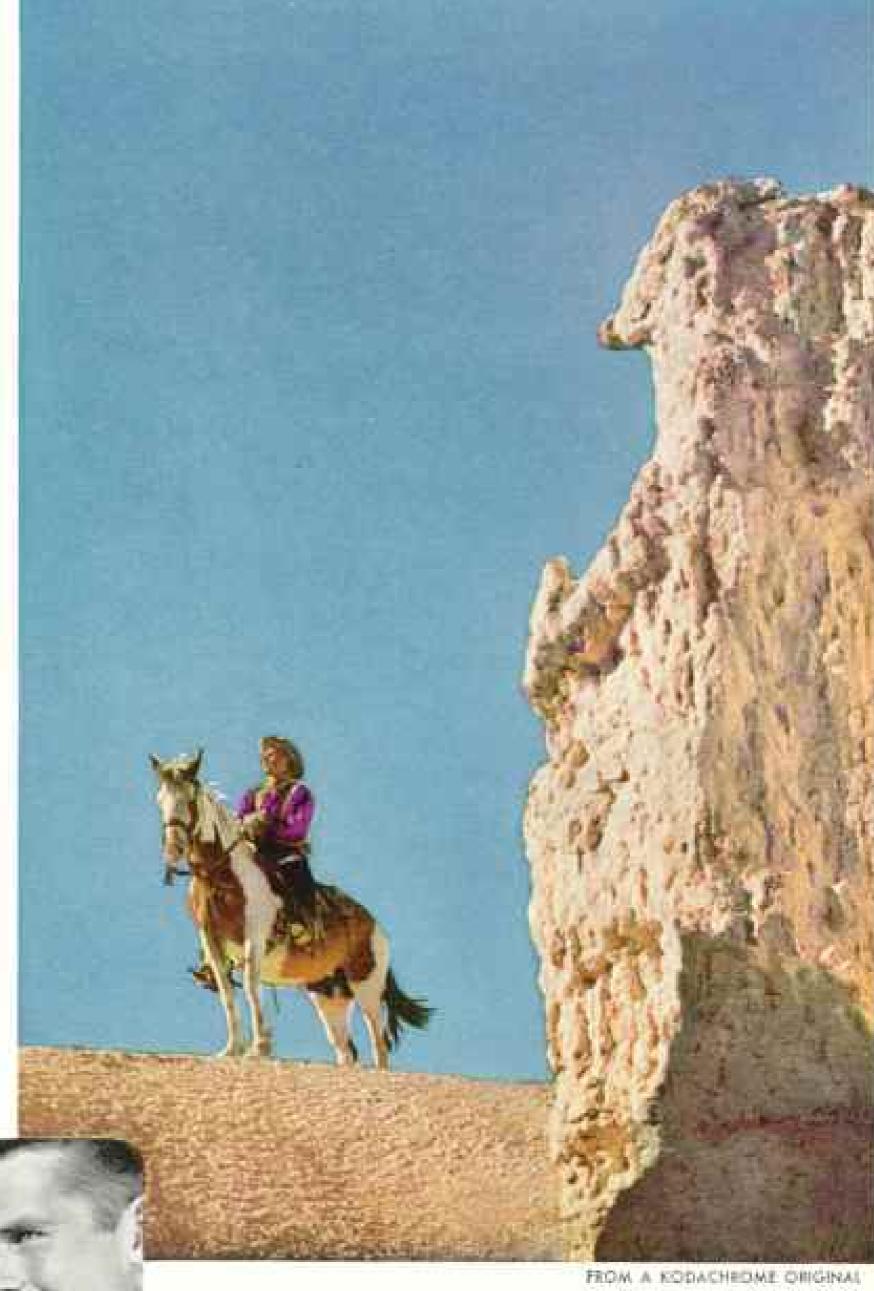
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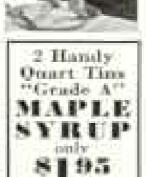
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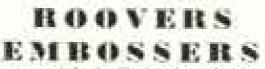
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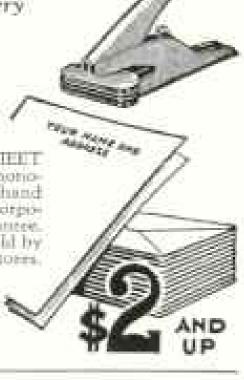
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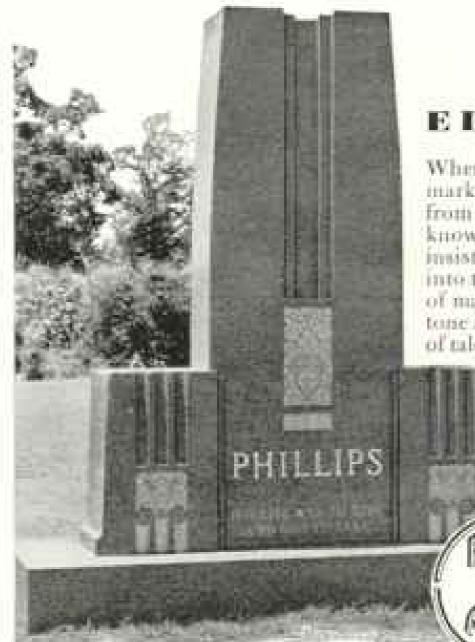
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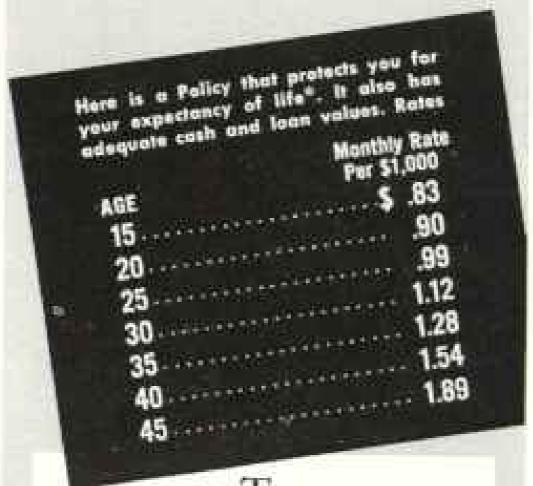
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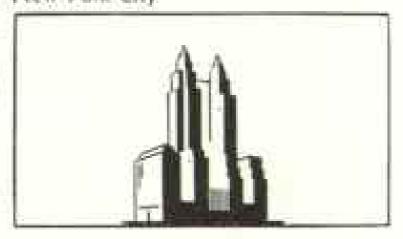
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