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TWENTY FOUR PAGES OF ILLUSTRATIONS IN FULL COLOR

Imperial Rome Reborn

With 34 Illustrations

JOHN PATRIC

Caesar's City Today

21 Natural Color Photographs BERNARD F. ROGERS, JR.

Crater Lake and Yosemite

With 7 Illustrations and  
13 Paintings

WALLACE W. ATWOOD, JR.  
EUGENE KINGMAN

First Color Photograph from the Stratosphere

ALBERT W. STEVENS

Time's Footprints in Tunisian Sands

With 43 Illustrations and 2 Maps

MAYNARD OWEN WILLIAMS

The Mexican Indian Flying Pole Dance

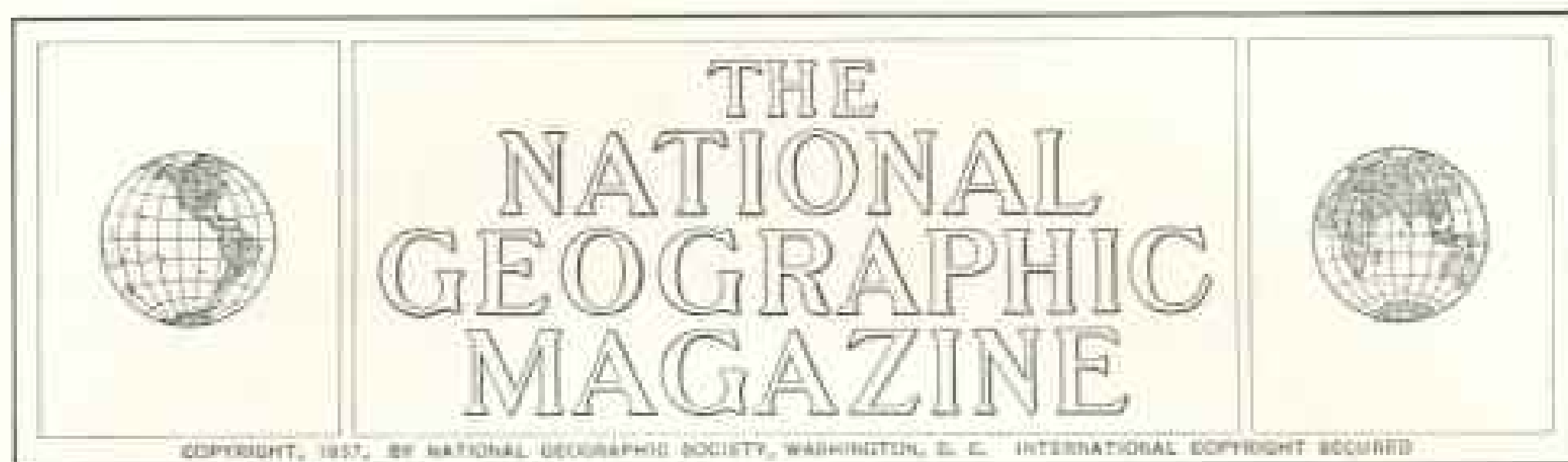
With 13 Illustrations

HELGA LARSEN

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## IMPERIAL ROME REBORN

BY JOHN PATRIC

I STOOD under Benito Mussolini's office window after Addis Ababa fell. I saw him throw up his strong right arm and say, slowly and distinctly: "The war is finished!"

The Roman Empire was reborn that night. Later it was named, "L'Impero Italiano," yet Romans rule it as surely as their fathers from the near-by Forum ruled most of the world they knew.

Empires have fallen. This one—and this one alone—has risen again.

More than 26 centuries ago the wolf-suckled twins quarreled and Remus was slain for leaping scornfully over the wall of Romulus' new town. Far from having been "built in a day," the Eternal City is unfinished even now; and to her seven hills more and finer roads than ever lead from far places.

One day I had been with newspaper folk in the reclaimed Pontine Marshes near Rome.\* As we lunched informally with Il Duce in a little Littoria restaurant, I learned upon what meat this modern Caesar feeds.

Mussolini talked some, listened most, and smiled often, rolling his eyes so much that my strongest memory now is a continual sight of their whites.

Above one close-clipped, iron-gray temple a large mole added homely character to his nearly bald head. Tucking a napkin protectively beneath his black collar, he ate with quick, nervous motions—bread,

noodles, cheese, pork-and-peas, an orange, and drank a little Frascati wine.

### DICTATOR SILENCES AUTO HORNS

"Tell us about the auto horns," someone asked.

"One day," replied Il Duce in Italian, of which I caught an occasional word, "Rome seemed too noisy. I called the police chief. 'Make no decree, but when you hear a horn and catch the driver's eye, do this'":

Finger to lips, Il Duce said, "S-s-sh!"

"In two hours the city was silent," he added, like a proud father of obedient children.

Motorists in Rome may lean from car windows and shout or whistle at unwary pedestrians. Taxi men have encouraged brakes to squeal. Automobile horn-blowing is forbidden.

He shook hands genially with us, and then, seeing the crowd in Littoria's public square, gave us more showmanship. He threw back his shoulders, lifted his chin, and strode between police lines so rapidly that followers trotted.

Had there been in Littoria the gay girls in bright provincial costume who had waited on the site of Aprilia, newest of the Pontine towns, he would have paused to kiss them.

Anciently, many of these marshes were farmed. Through them, over the Appian Way to Rome, came loads of grain to be distributed by Caesar's lavish hand.

Circe's mountain—visible from its top is St. Peter's in Rome—still stands southern sentinel over the former home of ducks, wild pigs, and malarial mosquitoes.

\* See "Redemption of the Pontine Marshes," by Gelasio Caetani, in THE NATIONAL GEOGRAPHIC MAGAZINE for August, 1934.



Photograph by Acme

"HOOP-LA" KEEPS ITALIAN GIRLS BOTH SHAPELY AND "IN SHAPE"

Group athletics for the feminine Fascist are balanced by courses in domestic science, languages, horticulture, applied arts, and other subjects selected by the individual.

In the uniformly built, four-year-old farmhouses of this made-over littoral, I expected to find modernity. They are almost as simple, except for screened windows, as the homes, unchanged by centuries, in the surrounding hills (page 318).

Farmers' wives wash clothes in the yard with hand-pumped well water, and bake in outdoor ovens preheated by twig fires, uninterrupted by jangling telephones. I saw neither electric wires nor radio aeri-als. What appear to be garages with arched entrances off ground-floor kitchens are well-kept stables for plow oxen and cows.

"We like them near—yes, in the house," said a farmer. "If they need us, we are at hand."

In the Middle Ages, when this farmland had reverted to marshes, fewer than 30,000 people remained in Rome.

Increase was eightfold by 1870, the year Italy was unified. In the next 30 years the population nearly doubled, to 462,743. In 1925, three years after the Fascist revolution, the figure was 767,983.

Today the capital is Italy's largest city, with more than 1,130,000 people. That ancient granary, and many another, is needed again.

Rome has virtually no industries; they are discouraged. Commerce on the silt-filled Tiber is almost impossible. Italy's population is a third that of the United States. In the last 75 years, her increase rate has been a fraction of ours, yet her capital has grown more than twice as fast as Washington, D. C., and, at the time of the last official census, was more than double its size.

These figures tell of a central government growing in power. They explain why modernity has come suddenly, if incompletely, to venerable Rome, and touched so lightly much of the Italy I was later to see. They speak eloquently of tax-gatherers' harvests pouring from afar as of old, making Rome rich again.

Next day I dined more humbly in a *trattoria*. These old-fashioned little dining rooms are to Rome what a "Dad's Lunch,"



Photograph courtesy ENIT

AMONG THE DONES OF OLD ROME RISES THE SYMBOL OF THE NEW ITALY UNITED

The huge, white marble National Monument to Victor Emmanuel II, unveiled in 1911, faces the Foro Italico and the Piazza Venezia. Adjacent lie excavated ruins of the ancient city. Like a misplaced lighthouse, Trajan's Column, right, towers above the once imposing Forum of Trajan. The tall shaft, built of Parian marble, is decorated with a continuous spiral band of scenes in relief sculpture of the emperor's wars with the Dacians.

patronized for good food and low prices, not style, is to the average American city.

"GLADIATORS' CAFE" RETAINS OLD  
ATMOSPHERE

There shuffled from the street a wrinkled old violinist. He seemed to play even more for love of it than for the battered coppers, worth about a cent, every diner gave him—even the goomelike little man who had brought his own bread and cheese and ordered only wine. The poorer the Italian the more generous he seems.

In this "Ancient Trattoria of the Gladiators" hung four discolored canvases. Nero's leering face was silhouetted on one against the burning city he had ruled so tyrannically. Horatius stood with broad sword in another, stubborn and alert, his back to the now-tottering bridge he had held while Romans wrecked it. He looked disdainfully upon Tuscans who would have

crossed, but who cringed at seeing their bravest lying dead at his feet.

In the third painting Caio Muzio Scevola, scornful of captors' cruelties, had thrust his fist in among branding irons heating in a forge. Torture had been threatened unless he betrayed Rome. In the last a deft gladiator caught a springing lion on his upthrust sword.

The cry, "Hail, Caesar! We who are about to die salute thee!" echoed from throats of the condemned, down the centuries, across the street and through an open window beside me. In fancy I heard the growls of hungry beasts, for I sat within the shadow of the grim old Coliseum, majestic still.

Restaurant checks are often decorated—a cut of game or a bowl of fruit is common. But here, in keeping with the spirit of the Ancient Restaurant of the Gladiators, I expected to see a savage animal's face





Photograph from Wide World

SURROUNDED BY EMBLEMS OF ITALY'S GREATNESS, MUSSOLINI IS ACCLAIMED ON THE FOURTIENTH ANNIVERSARY OF THE MARCH ON ROME.

In a setting of splendor at the Palazzo Venezia, Il Duce throws up his right arm in the Fascist salute fourteen years after the coup which put him in power. Black Shirt officials fill the balcony, except to the extreme right, where stands a delegation of visiting Germans. Central figure on the background tapestry is the legendary she-wolf (Plate V and page 269).

lighted with after-dinner satiety. The waiter brought my bill.

Grinning from it, big as life, was Mickey Mouse!

#### MIDGET CAR CALLED "MICKEY MOUSE"

In Italy he is "Topolino." His mischievous portrait is often displayed; it runs the Duce's and the King's a close third for popularity. Many things are named for him, officially and otherwise. Fiat's new sub-midget car, smaller even than its little "Balilla," was developed in an era of dollar-and-a-quarter-a-gallon gasoline. People call it "Mickey Mouse" (Plate II).

"While the rest of us in motion pictures produce only shadows of an imitation of life," said Tullio Carminati to me in Rome one day, "Disney is an artist who *created* something. That's why he's been officially honored in Italy."

Though most pictures Italians see today are American, a modern cinema city is rising near Rome. "Technically it will compete with the world's best," Carminati explained, "for Il Duce says so, and he's one politician who keeps his word. But productions should be suited to Italy, like the projected 'Scipio Africanus.' Unless releases gain world-wide distribution, they cannot return what great pictures cost."

A Government official told me he expected the new industry to be as effective as Government-controlled newspapers "in educating the people and welding them even more securely to Fascism's ideals. And," he added, "we don't like your cinema gangsters. You give them Italian names!"

#### LIBRARY NEEDED TO KNOW ROME

Temporarily settled in Rome, I went to the station to retrieve my checked baggage, and fell into conversation with an elderly American.

"Do you know a comprehensive guide-book," I asked him, "with history?"

"Start with mythology," he replied. "Study Rome's rise. Gibbon touches on its 'Decline and Fall' in ten or twelve volumes. Pick up where he left off. Fifty good books, to begin—"

I gasped. He smiled.

"Of course," he added, "some of my colleagues in the States teach Roman history after a summer here. I've known visitors to 'do Rome in two days.' A friend saw it between trains with me, later lectured on it to his Rotary Club.

"You needn't laugh," he added. "In an hour, for seven cents, you can make what Roman history you know seem real. From the Circolare streetcars you can see where much of it happened. They circle the heart of the old Empire."

We walked to the car stop. "Over there, opposite the station, stood the Baths of Diocletian. Condemned Christians built them; long afterward Michelangelo used their ruins as a quarry. That church, Santa Maria degli Angeli, resulted. It stands at the head of Via Nazionale, a street between the Quirinal and the Viminal, two of ancient Rome's seven hills."

"But they are scarcely hills," I protested. "The buildings seem higher, that's all."

"They *are* lower than they once were," he admitted, "and the valley between is not so deep. But they're hills just the same. You've lived among San Francisco's seven hills too long. I'll show you a steep one presently."

#### TOBACCO IS NEVER WASTED

We sat in the second of two connected cars. Smoking is permitted there. The man across the aisle took from his case a carefully extinguished, half-smoked cigarette, finished it in a holder that gripped its very end. A youth darted about the car, gleaning a few short cigarette stubs. Tobacco has always been costly in Italy.

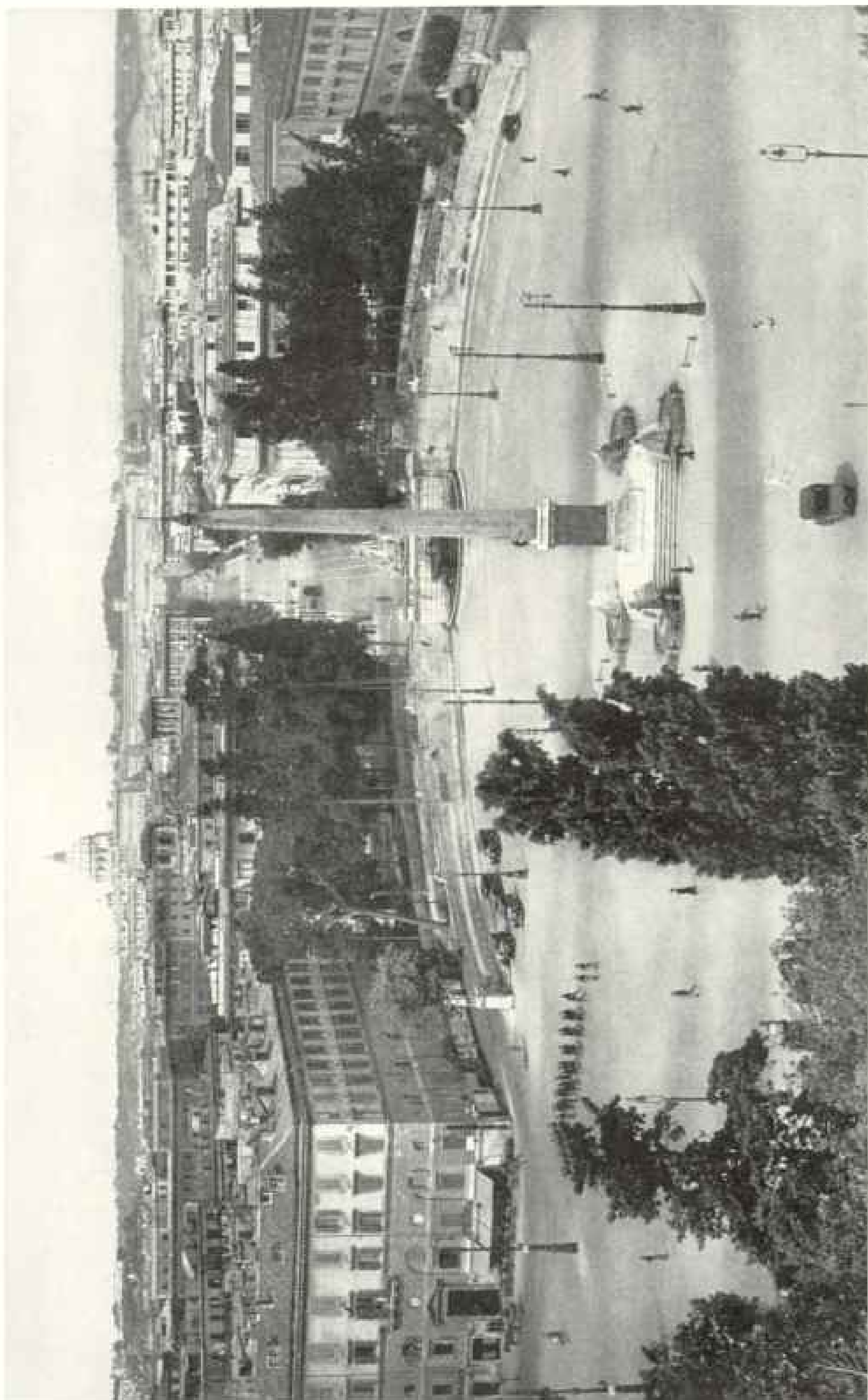
My companion folded our fare receipts into a narrow strip, and slipped them beneath his finger ring as other passengers did. "Inspectors come aboard," he explained.

"Here's the Church of Santa Maria Maggiore, a legendary landmark. The Virgin told a patrician to build it where he first found snow, on the slopes of the Esquiline Hill. On the summit stood gardens of Horace's patron Maecenas,\* Nero's 'Golden House,' and those scandalous baths, first Titus', then Trajan's. Some ruins remain."

"And there's the Coliseum!" I exclaimed. "One ruin you needn't point out" (Plate XIV).

"It was pointed out to me," chuckled the professor, "by a little boy who jerked his thumb toward it, said 'Colosseo,' and extended his hand for payment. That was 'guiding' reduced to ultimate simplicity."

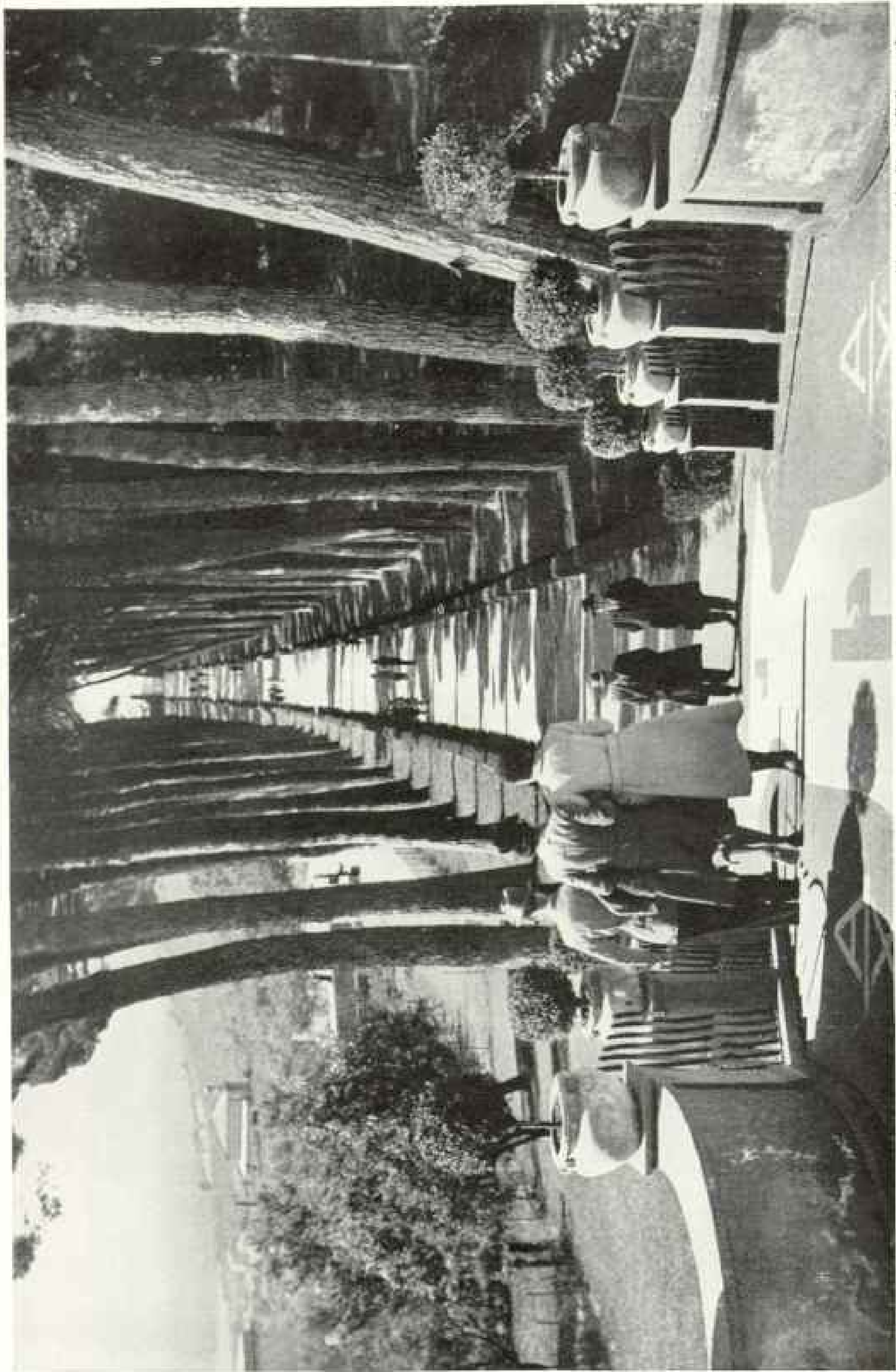
\* See "Horace, Classic Poet of the Countryside," by W. Coleman Nevils, in *THE NATIONAL GEOGRAPHIC MAGAZINE* for December, 1935.



Photograph by Harrop, De Cor.

TRAVELLERS ON THE "GRAND TOUR" USED TO ENTER ROME THROUGH THE SPACIOUS PLAZA, AS MOTORISTS STILL DO

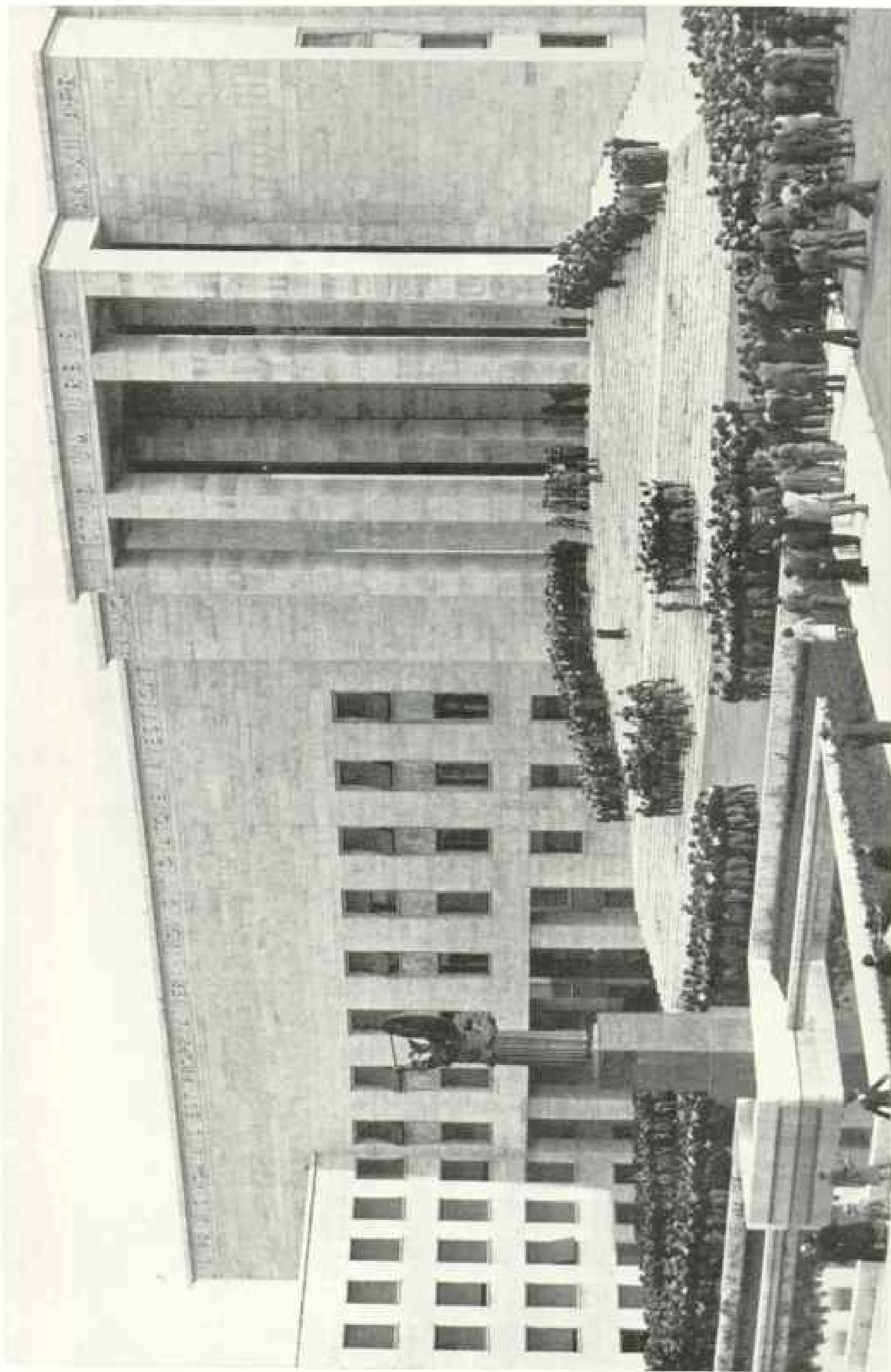
Before the days of the railroad, visitors from countries to the north came by coach, horse, or on foot, along the ancient Via Flaminia, across this Piazza del Popolo, and on into the heart of the city. Brought to Rome from Egypt by Augustus some years before the birth of Christ, the 79-foot obelisk was first erected in the Circus Maximus. In 1589 it was moved to the Piazza. Westward beyond the Tiber to the hill occupied by Vatican City stretches one of the capital's broad avenues. On the sky line St. Peter's rears its dome.



Photograph by Bernard F. Rogers, Jr.

ALONG A SHADOWED WALK AT ALBANO STROLLERS SAUNTER BETWEEN WALLS OF PINES OVERLOOKING THE CAMPAGNA

This region is celebrated for its "Wine of the Castles." Letters on the pavement indicate it was laid in the tenth year of Fascism, 1932.

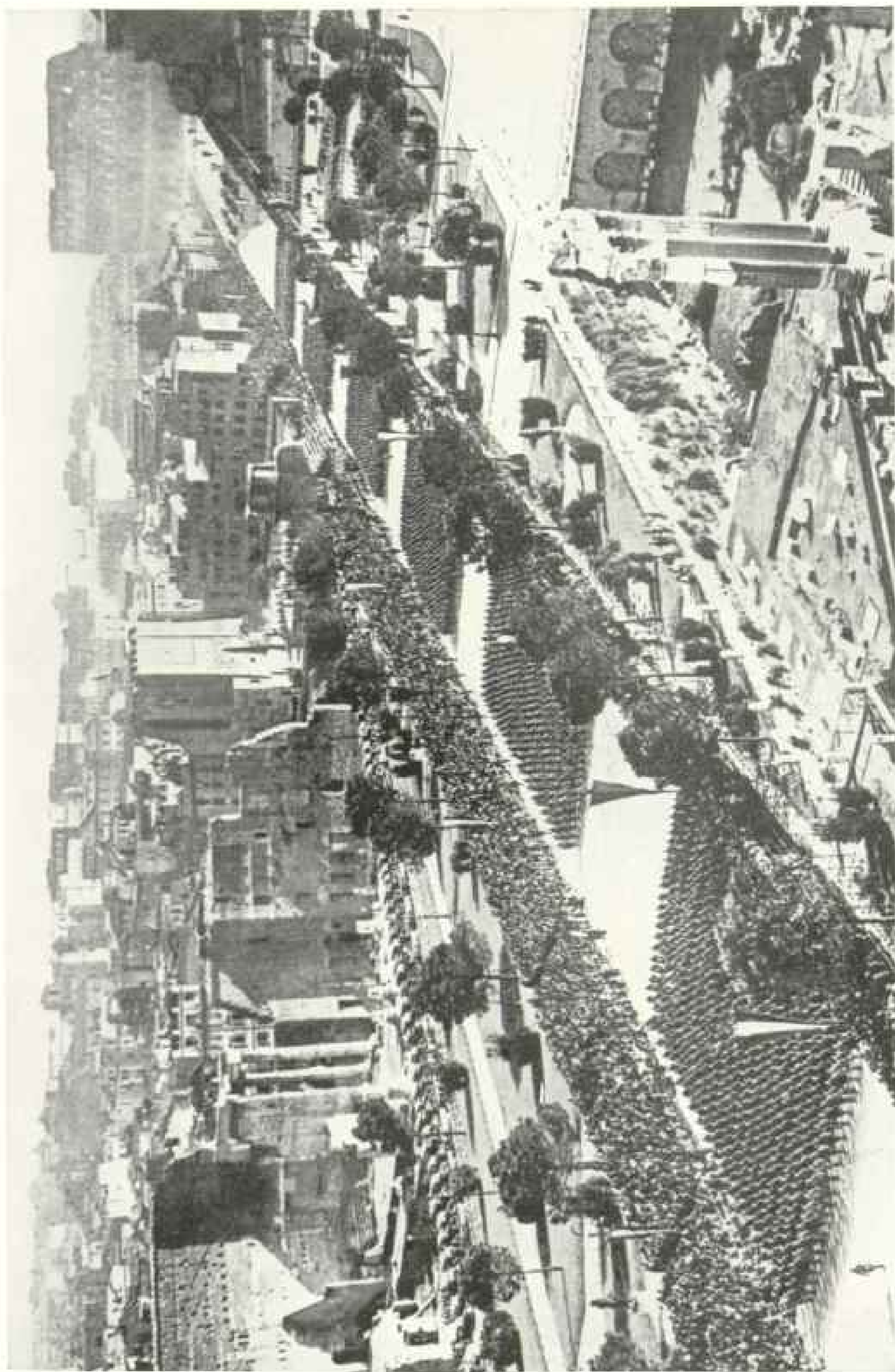


Photograph by Bernard F. Reprints, Jr.

ITALIAN YOUTHS ARE AWARDED GOLD M'S FOR INTELLECTUAL VICTORIES

On the steps of the Rectorate of Rome's new University City, winners in cultural contests receive the letter, initial of Mussolini's name. This new campus brings together most of the schools of the University, which were formerly scattered all over the city.

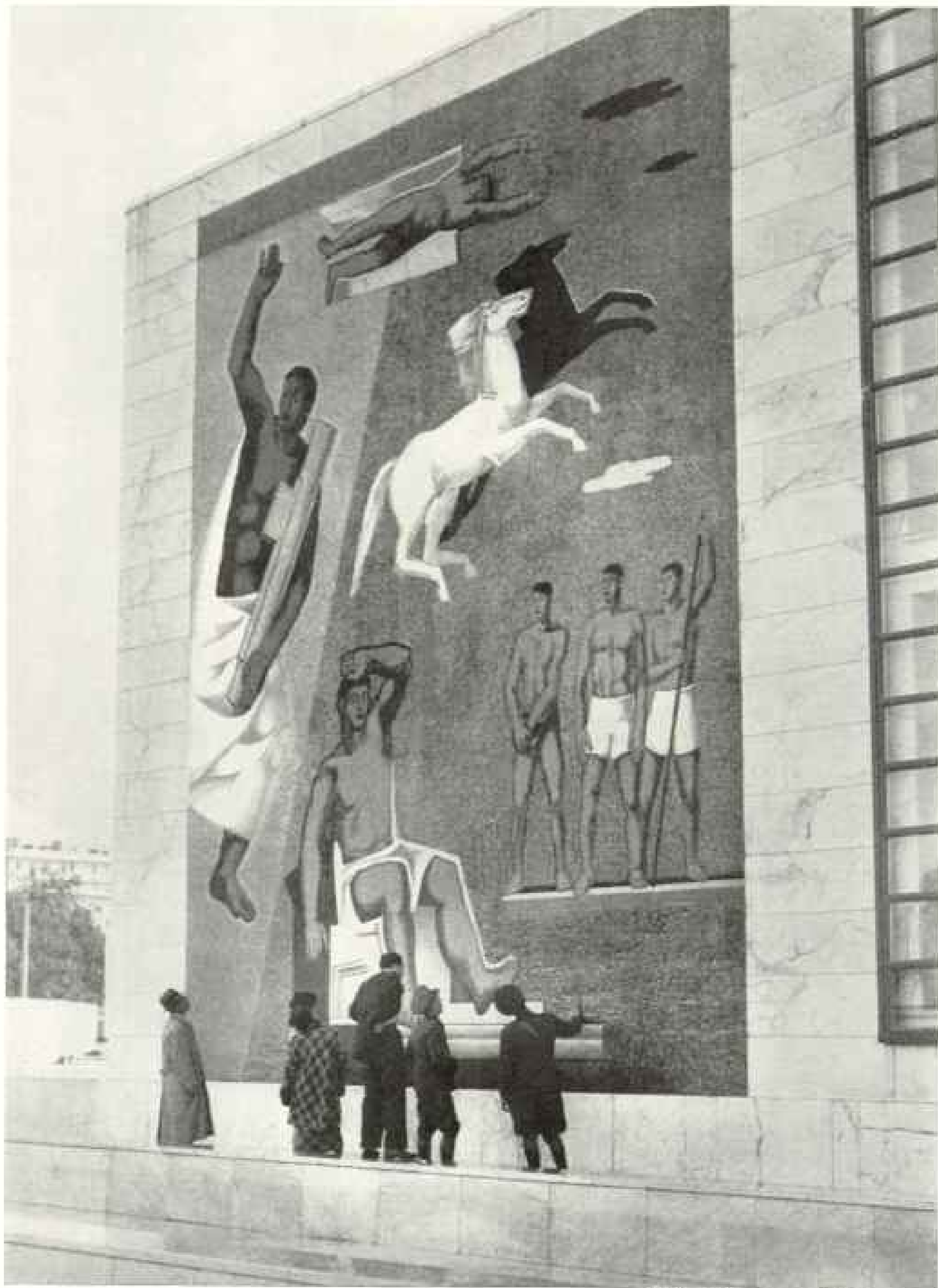




Photograph from *Wide World*

LIKE MOVING CARPETS, COMPACT BLOCKS OF FASCISTI MARCH WHERE CAESARS TRAMPED AND CONQUERED PRINCES WALKED IN CHAINS

To honor Admiral Horthy, visiting Hungarian Regent, this parade was held along the new Via dell' Impero in November, 1916. The Coliseum towers in the far distance and, on opposite sides of the boulevard, are columns of the Temple of Venus Genetrix (right), and the Forum of Augustus, across the way.



Photograph by Bernard F. Rogers, Jr.

A MOSAIC "BILLBOARD" GLORIFIES PHYSICAL TRAINING

The huge marble-framed mural decoration covers one end of a classroom building in the new Mussolini Forum, Italy's physical education headquarters. Two stadiums (Plate II) and many lecture and study halls are provided where the Nation's athletic instructors are trained.

"Did it work?" I asked.

"Sure. Candor and brevity in a guide merit reward.

"But look! We're going around the Coliseum, a third of a mile at the base. See it once by moonlight! Friezes of the near-by Arch of Titus, tragic forbears of our 'comic strips,' tell of his siege of Jerusalem, one of history's most terrible. The Sacred Way runs through it to the Forum, where we see those columns. Beyond the Forum is Capitoline Hill (page 304). From a steep-sided rock named for treacherous Tarpeia traitors were hurled to death. The Palazzo Venezia, once Embassy of the Venetian Republic, is near."

#### WHEN ITALY WAS ONLY A "GEOGRAPHIC EXPRESSION"

"Embassy to what?" I asked, unsure of my history.

"To the Papal See. When Napoleon handed Venice over to Austria in 1797, the city changed flags. In 1814, you remember, Metternich said: 'Italy is only a geographic expression.'

"It was more than that—a political mess. Parts of Italy were controlled by one foreign monarch, then by another. Some heavily armed city states held out.

"Now the Palazzo Venezia is Mussolini's office (Plate I). Future historians may call today's extreme iron-handed nationalism the zenith of a long, slow pendulum, swinging back to early Rome.

"Look to your left. See those young Fascists in the athletic field. Beyond them lie ruins of Caracalla's Baths. Vast in size and equipped with every luxury then known, they marked beginnings of Rome's fall. Here men accustomed to hard campaigning grew soft on enervating pleasures."

Impressive was that modern running track beside the grand ruin that spoke so eloquently of opulence and physical decay.

We passed the Circus Maximus, long and narrow, lying between the Aventine (with its feet in the Tiber) and the Palatine. Little remains except its cleared site. Exciting it must have been to see charioteers round turns at the ends. The Circus seated 250,000!

"The Palatine," continued the professor, "is a Latin hill, in legend Rome's oldest. By the river still stands the so-called 'Temple of Vesta,' a name which is probably erroneous (page 301).

"Perhaps here the cradle of Romulus and

Remus—their mother had been a vestal virgin, Rhea Silvia—was cast ashore. In the church beyond is a marble mask, the 'Mouth of Truth,' where oath-swearers thrust their hands. It closed, they say, on liars' wrists.

"Horatius' bridge spanned the river near Isola Tiberina; across it were Lars Por-sena's invaders."

"The island, except for its bridges, looks like an anchored ship, even to the upriver prow," I mused aloud, "like Alcatraz in San Francisco Bay."

#### CONCRETE FLOATS IN THE TIBER

The Circolare streetcar rumbled along Lungo Tevere, atop the Tiber's flood-restraining masonry embankment. A few gravel boats churned slowly up the yellow stream. Along the shores, shells of Fascist-encouraged rowing clubs were stored in floating boathouses. Wood is scarce, so even hulls of boat sheds, like many fences and telegraph poles, are reinforced concrete.

We saw perhaps a dozen bridges, dating from Caesar's time to Mussolini's. One was suspended from cables; others were steel, masonry, or concrete.

"St. Peter's is six blocks west. So much of the marble beneath that dome you see came from the ruins we've passed!" My companion shrugged. "In 500 years another sentimental old historian will sorrow for buildings wrecked today to isolate what's left of ancient Rome.

"This isolation program is remarkable. Old ruins are more imposing if surrounded by parks and squares instead of slums. If Duce may by inference point and say, 'That's what you once were; I'll make you great again.'

"There's a contrast: the modern Palace of Justice and Castle Sant' Angelo, built by Hadrian as a tomb (page 298). Benvenuto Cellini was imprisoned there. You may still read an execution list.

"Italians are kind-hearted, for all their swagger. Perhaps it's natural reaction from excesses of the past."

#### CHILDREN AND ANIMALS TREATED KINDLY

In three months I did not see one animal badly fed or ill-used. I did not see a child punished corporally. Laws are stern and strictly enforced. Yet I cannot believe, even after visiting Roman prisons, that political prisoners suffer physical cruelty in Italy today.



Photograph by Arnes

WEIRD VISITORS FROM ANOTHER WORLD? NO; SCHOOLBOYS PREPARING FOR WAR

Drilling with gas masks and miniature rifles, they stand as rigidly erect as Roman legionaries. Italian youngsters don uniforms at six and receive real weapons in their 18th year on the traditional anniversary of Rome's birth, April 21.

"That's the Ministry of Marine upriver," the professor remarked as we recrossed. "It's a busy place. We're coming to the Borghese Gardens at the foot of Pincio Hill." I looked through a stone gateway at a broad tree-darkened avenue.

"That," observed my fellow countryman proudly, "is Via Giorgio Washington!

"Near by is a street named for David Lubin, of California. More than 30 years ago he suggested the International Institute of Agriculture to Victor Emmanuel III, who built its palace in the Borghese Gardens. The United States, with some 70 other countries, is a member of this pioneer 'League of Nations,' founded in 1905."

Where the Tiber did not protect the medieval city a well-preserved wall still circles it, and through the arched Porta del Popolo we glimpsed an obelisk, brought from Egypt before Christ was born (page 274). We wound along steep masonry banks of the Pincio, a garden now as always. From the top I was to see many Roman sunsets. An uphill road paralleled the tracks. Carts upon it paused in shady spots that horses or men who pulled them might rest.

"Look through the gate, Porta Pinciana, as we pass," said my friend, "at Via Vittorio Veneto" (page 299).

I knew the street. It curves uphill from the Piazza Barberini, named for the nepotic, luxury-loving pope whose old palace fronts it. Along this wide, tree-bordered way are fine hotels, Government buildings, and fashionable restaurants whose patrons sit outside on pleasant days (page 305). There are chromium-and-marble shops. Stock, fixtures, and patrons reminded me of Hollywood. When I first saw it, the street was gay with perky primroses in large oblong beds in grassy parkways. A few days later, as if by Aladdin's genie, these flowers had vanished. Instead, stately, deep-hued cyclamens cast starry eyes modestly at fresh-turned earth around them.

HERE IS NEVER A "LAST ROSE"

Thousands of plants are dug up and replaced every few weeks; the street is ever blooming. Via Vittorio Veneto is often the first promenade of foreigners in Rome.

We continued along Corso d'Italia. The car popped suddenly through a gap in the



Photograph by Acme

CHINS HIGH, SHOULDERS SQUARED, BOY BLACK SHIRTS EMULATE IL DUCE'S POSTURE

"Eyes left!" is the command as jaunty Balillas quickstep with toy rifles and blanket rolls during a review at Rome. Their corps is named for an 18th-century boy hero of Genoa who threw a stone at an Austrian soldier, thus starting the revolt that freed the city from foreign rule.

wall, traveled on narrow Via Campania, then returned to the newer, wider Corso.

"This wall is inhabited," averred my guide. "Even a few artists have studios in the hollow interior. See the entrances, and high windows."

I saw much of old Rome in that wall, bits of sculptured white marble and thin, ancient bricks. I am glad it is not yet a quarry.

"That heroic statue commemorates Rome's fall, in 1870, to Victor Emmanuel's *bersaglieri*, the soldiers with bunches of wavy hat feathers. That wide street you see through Porta Pia is named for the day they entered it, the 20th of September. Then Italy was reunited.

"Now we pass Castro Pretorio, a military post. Plumed golden helmets are copied from armor of ancient legions.

"Here is the station. Amazing as that trip of less than an hour seems, you've glimpsed only a few fragments. How much more there is!

"I hope," was my companion's parting professorial advice, "you do some close-up studying."

My next lessons, self-assigned, were

Rome today. I went afoot to classes. I roomed in a little pension, or boarding house, on a dark street, but did not eat there. Tired, I rested sometimes chatting with a friend whose home was in a magnificent hotel.

#### ALFONSO OF SPAIN IS GENIAL

We often saw former King Alfonso of Spain, who lived there incognito, safe under a strong government. He greeted genially all who spoke, talked little except to intimates.

"I heard him mention himself once," remarked a clerk to me. "He saw troubled Spanish headlines. 'My country was happier,' he murmured, 'when I was King.'"

Rome is haven for many an alien. I talked with Jews running busy auto wrecking shops and wondered how many old cars America would scrap if metal jumped to war prices and four gallons of gas cost five dollars.

"There are perhaps 25,000 of us in Rome," remarked the father of a large family whose younger members watched him melt babbitt from bronze bearings.





Photograph by Fritz Henle from Eurasjean

WHAT THE HALF-MILE VATICAN RAILWAY LACKS IN LENGTH AND PASSENGER VOLUME, IT MAKES UP IN EXCLUSIVENESS

From Vatican City's own station (center background) the papal train runs south a scant half mile to join the main Rome-Viterbo line. In the left foreground is the Palace of Justice; new mosaic workshops are located in the low, flat-roofed building. Occupying only 108.7 acres, the city has a population of about 1,000 and is a sovereign State, the exclusive property of the Holy See.

"Many of us fought in Ethiopia. We are free to worship as 'Judea,' but we are Romans, too."

Another Jew, a retired clothing merchant, said he lived in Rome because "here I feel more equality than I ever knew."

The city is hospitable, but not in our sense. One Italian, long in the diplomatic service in America, spoke eagerly: "I liked your country. Friends invited me to their houses. If I had a visitor, they'd say 'Bring him along. It's O. K.' That couldn't happen here, where homes are for the family—our ties are close, you know—and for life-long friends. But our reserve tends to melt."

Suiting action to words, he took me to

dine with his father, one of Rome's distinguished attorneys, at the latter's apartment.

The compact, high-ceilinged rooms were in fine taste, dark with heavy furniture and art objects as yet un-supplanted by creations of modernistic designers whose hand is everywhere in Rome. Romans prefer apartments, often own them outright. Moving day comes seldom.

LAW REQUIRES BATHROOMS

"I heard much, in America, of Italian lack of these conveniences," remarked the diplomat, showing me a well-equipped bath, "and among the poor it has been bad. Today, permits to build houses, however inexpensive, are denied unless plans include

bathrooms for each family."

We dined on omnipresent, well-oiled salad, served with large cowhorn fork and spoon. There were meat and soup and spaghetti. The latter two dishes were sprinkled with grated, long-aged Parmesan cheese—used in Italy more often than tomato catsup in America.

Over tiny cups of black coffee in the library I talked law with the diplomat's father, still actively practicing. Legal delays, he admitted, were as common in Italy as in America.

I asked about jury trials.

"We believe in them. But we don't think judgment by 'twelve of a man's peers selected by lot' is fair either to the accused or to the State. A jury of masons, housewives, and shopkeepers cannot know the law, cannot examine evidence dispassionately. Our jurymen are especially selected for each case by the court for their knowledge of its subject, their scientific fairness, and legal training."

#### ALI BABA PUZZLE SOLVED

I paused in the doorway of an olive oil shop to light a fine Italian brier pipe, economically half-filled with treasured American tobacco mixed with Italian to make it last.



Photograph by John Patric

#### PALAZZO ZUCCARI MAKES A FACE AT PASSERS-BY

The grotesque giant's mouth is a side entrance to the 16th-century building, now occupied by the Biblioteca Hertziana, one of the leading libraries of modern art in Italy. A workman resting on the steps wears a newspaper hat, popular headgear in many parts of the world.

Oil was stored in brick-colored jars where Primo Carnera could have hidden. That solved a childhood puzzle, how the Forty Thieves could get into the jars in which they were killed with boiling oil.

I walked beside the Tiber, enjoying intimacy with the ancient river, but forced to go cautiously lest I tread upon ill-smelling refuse. An old man fished patiently from the bank. Useless were hook and line in that muddy water; he used instead a large dip net, like a child's toy parachute made of a handkerchief with strings tied to the corners. It rested on or near the bottom; occasionally he withdrew it fruitlessly with a rope and pulley. In the hour I talked to him, he caught two fingerlings.

#### SIMPLEST WORDS MOST DIFFICULT

In a few weeks I had learned to talk with patient Italians who knew no English. I knew "z" generally has a "ts" sound, learned when "g" was soft, remembered Italian pronunciation of "c" in "Santa Lucia," and practiced vowel sounds.

My first efforts, using simple Anglo-Saxon words of pidgin English, had been vain. I was far from Italian in using "like," which is "piacere," but on common ground with "ammirazione" or any "ion" words.

A startling pronunciation lesson had come from an Italian asking of "Mrs. Alice Wallace." He called her "Ah-lee-chay Val-lat-chay."

The fisherman pointed to an unattended, homemade boat tied to a bridge pier in swift water. On poles at right angles to a long shaft were two dip nets, and between them were intermediate paddles.

Around with the current went the contraption, occasionally lifting high a netted fish and dropping it neatly into a funnel-shaped container.

"Some day," he said, "I make a boat like that to fish for me."

"How long have you been fishing?"

"Many, many years," he replied.

I bought his afternoon's miscellaneous catch for about sixteen cents. For dinner I had them incorporated into *zuppa di pesce*.

I liked "soup" of fish, boiled in tomato broth and poured over sliced bread on a flat plate.

A certain Neapolitan restaurant in Rome is decorated with painted night scenes, softly illumined from behind in translucent spots. Vesuvius spits fire; stars and moon

shine on a twinkling city; lights gleam from boats in the Bay of Naples. Even a square old lantern carried by a fisherman looks real. There I once ordered soup of fish.

Straddled on the steaming heap was a delicate baby octopus, tentacles curling tenderly over shrimp, mussels, fresh sardines and a mullet.

#### ITALY HELPS PAY RÔME'S BILLS

Rome, ruling the Italian Empire, does not rule herself. Municipal self-government ended in 1925. In the mayor, an appointee, is vested power formerly exercised by mayor, aldermen, and council.

Citizens of all Italy help bear the burden of civic beautification. Rome could not pay her enormous bill alone; dreams of artist-engineers are too far-reaching.

Streets even in old quarters are clean. Where dark stone tenements are demolished for parks and squares, former inhabitants move to gigantic apartment houses on the edge of the Roman countryside. I visited one, the home of 500 poor families, imposing, yet simply built within and furnished usually with humble, long-used tables, chairs, and beds. Two rooms rent for about \$9.50 monthly, four for \$20.

Italian upper and middle classes, who staff growing Government bureaus, dwell usually in ultramodern apartments, five or six stories with elevator, outside the "old city" walls. I saw little construction, except Government buildings, in "downtown" Rome, although many expensive shops are modernized to attract what United States advertisements call "exclusive patronage."

Even Rome's oldest parts, swarming with well-fed stray cats, are virtually fireproof. I saw no fire apparatus. Hydrants, seldom needed, are hidden beneath iron covers at sidewalk level.

The Apostle Peter was crucified, they say, on Vatican Hill where stood the Gardens of Nero, one of the cruelest oppressors of Christians. Nero is but a dim, hateful memory. Peter and his words still live, and Christendom's largest church stands above his tomb.

Ending long strife between Church and State, Mussolini signed the Lateran Treaty in 1929, making the State of Vatican City sovereign. By this accord it cannot engage in political controversy except when disputants unanimously ask it to mediate. Its power is moral and spiritual.

Otherwise the Pope is absolute legislative,

CAESAR'S CITY TODAY



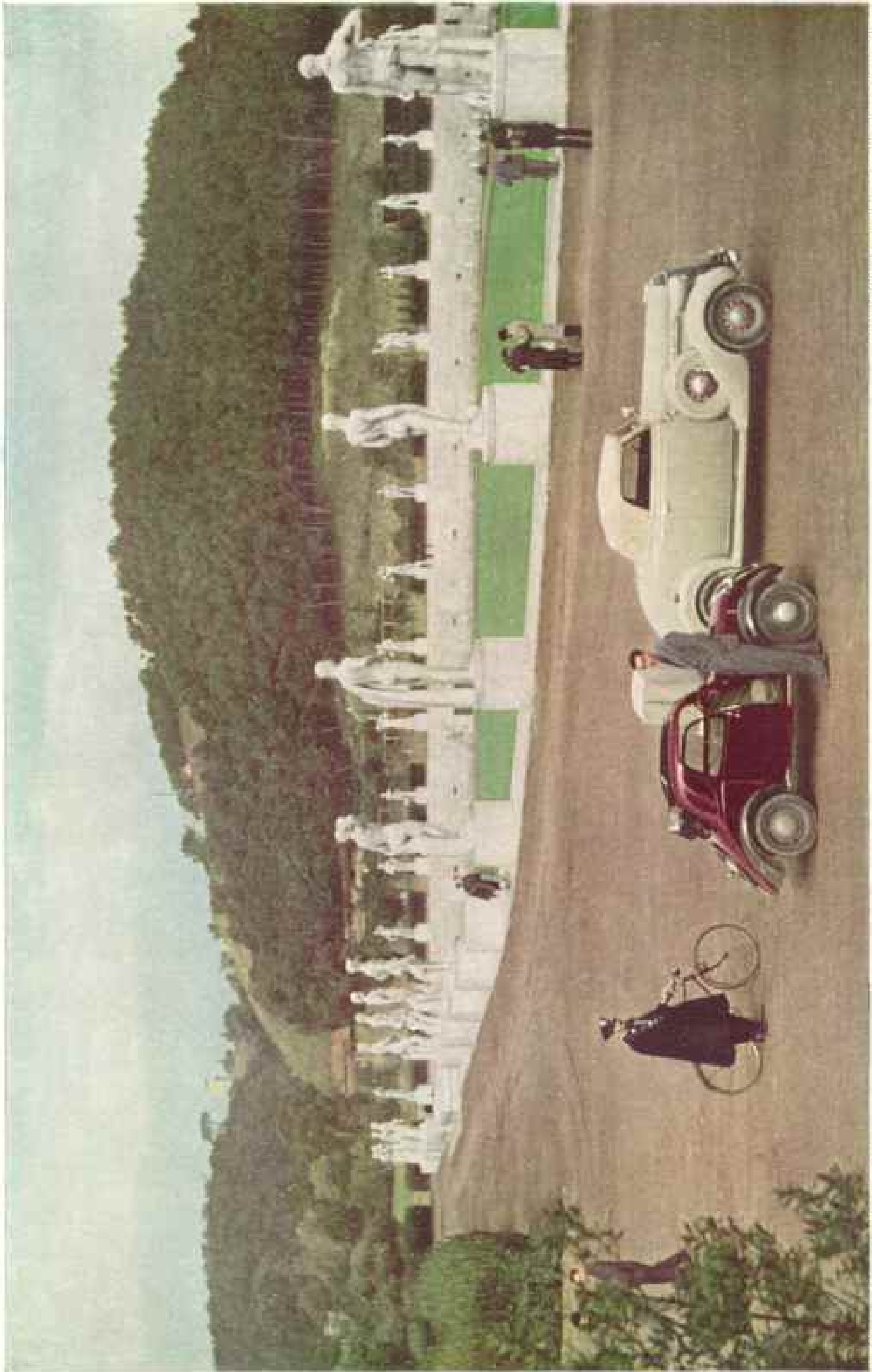
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Dufaycolor Photograph by Bernard F. Rogers, Jr.

ROMANS SWARM PIAZZA VENEZIA AS A MODERN CAESAR REVIEWS  
"LEGIONS" OF UNIVERSITY STUDENTS

Bright neckerchiefs mark the Fascist University Groups, who parade slowly past Premier Mussolini's reddish reviewing stand in front of his headquarters, the Palazzo Venezia (left), built in the 15th century with stones from the Coliseum. This review on October 28, 1936, commemorates the 14th anniversary of the Fascist March on Rome, when Il Duce came into power. Italy's flag waves on the colossal National Monument to Victor Emmanuel II, symbol of the Nation's unity.





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"MICKY MOUSE," ITALIANS DUB THIS MIDGET COUPÉ, DWARFED HERE BY AN AMERICAN CAR AT THE MUSSOLINI STADIUM  
"Fiat 500" is the tiny two-seater's trade name. A section of the top may be pushed back if one prefers a breezy ride. Huge marble athletes, gifts from Italy's Provinces, seem ready to compete in the stadium.

Filmy Photograph by Bernard F. Rogers, Jr.





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ROMAN GIRLS DON PROVINCIAL COSTUMES FOR THE ANNUAL GRAPE FESTIVAL

Vine products from many districts are displayed in the Basilica of Constantine, for vineyards flourish near the Eternal City as in the days when Horace "dipped his Roman nose in good Falernian wine."



Fishy Photographs by Bernard F. Rogers, Jr.

"ACTION!" BEGGED THE PHOTOGRAPHER, AND THE BOYS CHEERFULLY OBLIGED

These Young Fascists were resting between drill periods at a camp near Rome, to which they came from all over Italy for a review by Mussolini on their organization's sixth anniversary, in October, 1936 (Plate IV).



IN UNIFORM-LOVING ITALY, NO TROOPS OUTSHINE THE ROYAL BODYGUARDS

Of equal height and strapping build, these cuirassiers are picked from the carabinieri (police) and the Army. After preening before a full-length mirror in the gateway, this detachment is ready to report to the palace on the day of U. S. Ambassador William Phillips's presentation to King Victor Emmanuel III.



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Finlay Photographs by Bernard F. Rogers, Jr.

"SPEED" IS NEW ITALY'S MOTTO, SO MODERN ROMAN LEGIONARIES TRAIN ON MOTORCYCLES

White pup tents house the husky Young Fascists (Plate III), who join this organization at 18 and become full-fledged Black Shirts at 21. Their neckerchiefs bear Rome's colors, red and yellow.

CAESAR'S CITY TODAY



"PLUMPY BACCHUS" ROLLS HIS TONGUE AS IF LAPPING UP A STREAM OF WINE

When the oxen get under way, the barrel-like tongue revolves. Bacchus (Dionysus) was the ancient Roman and Greek wine god. Girls in the costume of near-by Frascati toss bunches of grapes to spectators during the parade, a part of the Grape Festival. About 25 floats were entered.



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Pinlay Photographs by Bernard F. Rogers, Jr.

MASCOT OF THE FRASCATI FLOAT IS THE SHE-WOLF, FOSTER MOTHER OF ROMULUS AND REMUS

Tradition says she suckled Rome's legendary founder and his twin brother. Treasured in the Palazzo dei Conservatori is the original Etruscan bronze figure of the animal, 2,400 years old.



© National Geographic Society

UNIVERSITY STUDENTS SIP COFFEE BETWEEN CLASSES

Their clubhouse bar serves the popular *caffè espresso*, made by forcing steam through a chamber containing freshly ground Brazilian beans. The vapor condenses to make about half a cup of potent, tasty coffee. Each student's neckerchief bears colors denoting his course.

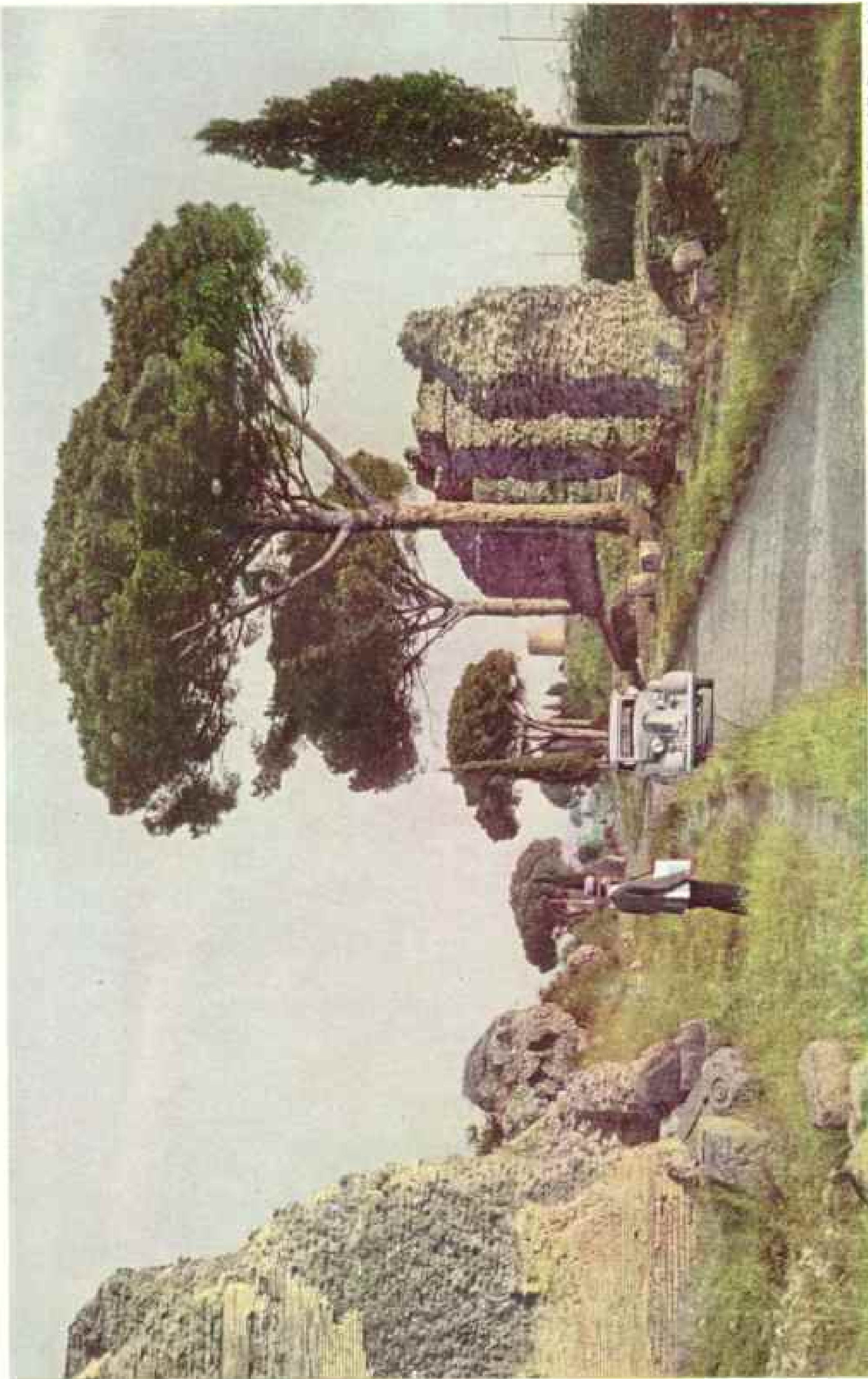


Finlay Photographs by Bernard F. Rogers, Jr.

"SHAVE ME AND I'LL SHAVE YOU"

A smiling Young Fascist operates on a comrade in camp, while another bristly face waits its turn (Plate III). On the truck door is painted Fascism's badge, derived from ancient Rome's fasces, or symbol of authority—a bundle of rods with a protruding ax blade.





Fujlay Photograph by Bernard F. Rogers, Jr.

CHARIOTS ROLLED AND HELMETED LEGIONS CLANKED ALONG THE APPIAN WAY WHEN THESE RUINS WERE STATELY TOMBS AND TEMPLES

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Saint Paul, Emperor Augustus, the poet Virgil, and other figures of antiquity traversed the Via Appia when this was chief among all the roads that led to Rome. Built more than 2,200 years ago, the paved military highway led southeastward to Capua and across the peninsula to Brindisi, on Italy's "heel," thus linking Rome with the Adriatic, Greece, and the Empire's eastern provinces.





© National Geographic Society

Finlay Photograph by Bernard F. Rogers, Jr.

AS BIG AS PING-PONG BALLS ARE SOME OF HER PLUMP TABLE GRAPES

Two bunches on a stick make a heavy handful for this petite salesgirl at the Grape Exhibition (Plate III). The telltale wrist watch shows that she is no country lass, despite her old-fashioned festival costume with embroidery and gold buttons. Many of the pretty vendors at the exhibition are movie extras from a big local studio.

judicial, and executive head of his 108.7-acre, art-treasure-packed State. Italy guarantees right-of-way by wire, highway, rail and air to the world. Exempt from Italian taxes, Vatican City may issue stamps and coin money (Plate IX and page 282).

The Tsar of all the Russias once visited the Pope. He paused beyond rainbow-shot spray to watch two enormous fountains scintillating in the sunny colonnade-encircled piazza at St. Peter's.

"They're gorgeously beautiful!" he exclaimed. "Now you may turn them off."

He was astonished, they say, to learn that Roman fountains, not operated solely for him, played constantly.

#### ROMAN FOUNTAINS EVER FLOWING

"Men may come, and men may go, but I go on forever." Every old fountain seems to murmur these lines, and well they may, for many have played virtually without interruption since the repair of barbarian-destroyed aqueducts from the same mountain rivers supplying Rome today.

The late Professor A. D. Tani, who loved his city and knew it as few contemporaries did, apologized that his "Fountains of Rome" contained only 300 illustrations!

Water flows from mouths of animals and fishes, drops down artificial waterfalls, pours in unbroken sheets like shimmering glass, shoots skyward, geyserlike, and returns as misty rain into great marble basins green with moss. It trickles down rock ledges; it gushes sometimes in torrents like a mountain trout stream, always pure enough for drinking (page 295).

Imaginative Roman artistry has found wide scope in such creations as Bernini's Fountain of Trevi, or the stone ship at the Piazza di Spagna.

There are numberless utilitarian fountains of iron, where men and horses drink, where housewives wait for jugs to fill. Water is not piped to every Roman home. Cold, even in summer, a stream of it is used for refrigeration by restaurants and coffee shops. Fruit, milk, soda pop are so cooled.

This use of stone and mortar instead of wood, and of pastel shades of calcimine sprayed with air brushes, instead of bright paint, gives the city a look of solid security. Names of streets are graven in marble slabs fastened to corner buildings and garden walls.

Though Italians, like Chinese, hide ornate gardens behind dull masonry, I recall sur-

prise at Rome's outward physical beauty. My first impression was that Fascism's public works were transforming the country's aspect completely. Only after I began to wander about the peninsula, particularly in the south, did I realize that Italy is not mirrored by Rome. Unlike other Italian cities, she is capital of a growing Empire—and looks it.

#### GOLD BRICKS AND COUNTERFEIT MEDALS

Curious to know what happens when the "fine Italian hand" turns to crime, I persuaded Torquato C. Giannini to show me a "crime museum" firmly closed to the public. He was admitted because he had been Chief Justice of the Supreme Court of Italy's best friend among sovereign world States, the 38-square-mile Republic of San Marino, in the heart of Italy but independent.

Exhibited was a complete set of plates for counterfeiting American passports. There was a breastful of shiny medals, struck in his basement by a harmless megalomaniac, who delighted to wear them all and awe the neighbors.

Ingenious lethal weapons were numberless. There was a mask of iron to curb a gossiping wife, a chastity belt, an over-ambitious taximeter, and even a few gold bricks!

Most mystifying in a crime exhibit were two musty old paintings. Most interesting were crude mints; but *that* collection was incomplete. Profusion of counterfeit five- and ten-lire pieces forces Roman shopkeepers to test each one. I saw much bad money rejected.

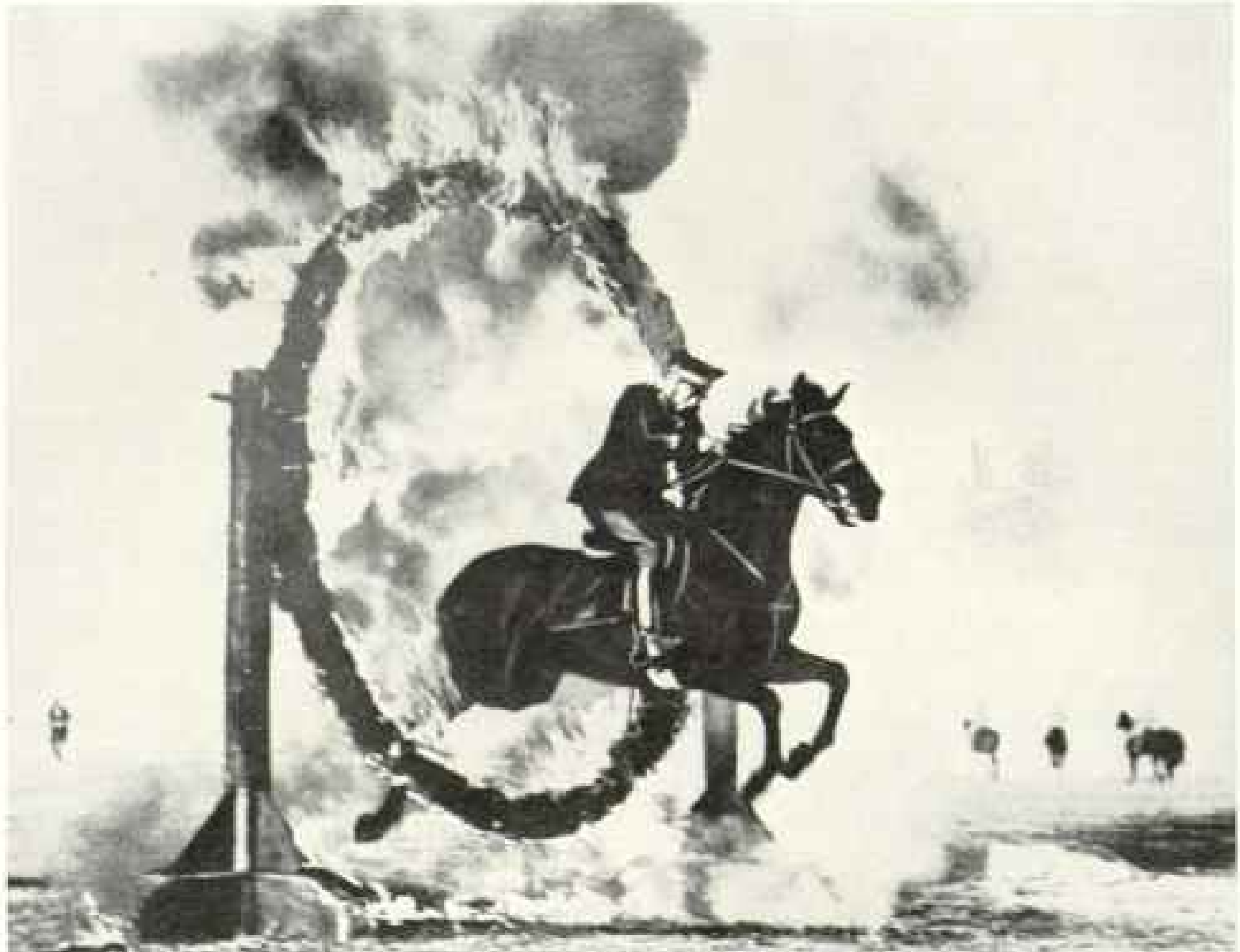
Modern decorative art had transformed the old prison that now houses the museum. A painted monk looked benevolently upon a suppliant wolf.

"Peasants appealed to Saint Francis of Assisi when the Wolf of Gubbio stole sheep," explained the custodian. "Is it because you are hungry?" asked the holy man of the thieving animal. Receiving an affirmative reply, he promised food always, and here exacts a reformation pledge."

"That's appropriate," I commented. "Who painted it?"

"An artist, ignored by critics, studied old masters. Soon he was painting similar subjects, aging them, and having his masterpieces 'found.' They brought high prices.

"The artist grew bolder. When he sold these two 'old' paintings you saw a moment ago, he was found out and imprisoned. All



Photograph from Wide World

#### JUMPING THROUGH FIRE FOR THE GLORY OF "THE FORCE"

A mounted policeman pierces the flaming ring during a review held before Mussolini to celebrate an anniversary of the department.

Italian prisoners work; his job was decorating this museum. He painted Saint Francis and the Wolf.

"He is a success now. Customers think a man who could paint a new subject with the touch of a dead genius must have ability."

#### THE AUTHOR SAMPLES PRISON MENU

In Rome my companion was often Nika Tucci. His family were of the nobility; his education included several recent years at Amherst and California.

Tucci was sympathetic with Italy's new order, "because the old was so bad," yet looked upon his Government with penetration, more enthusiastic over the panorama as a whole than over certain parts of it.

He translated foreign papers, redelivered Il Duce's speeches in German for the Government broadcasts to Germany.

One day we went to a city prison across the Tiber.

We paused at the archives, where Roman

crimes of past centuries were set down briefly. I took one old book from the dusty shelves.

"What did he do?" I asked, pointing to an entry.

"Murder. Sentenced to ten years, but pardoned in three by a duke's intercession."

"And this one?" I continued. "He was 17? And isn't this word 'candles'?"

"Yes. Stolen 'from a church.' He got three years and served them. The next man stole something, it says, 'not church property, but from a sacred place.' Two years. Those days are gone. It's fairer now," said Tucci.

A guard brought soup and fresh bread to the director. He tasted carefully. "This is required of me to prevent bad food," he explained. "Last week I rejected 300 pounds of meat."

"Let me try it," I asked, and sampled beans, chopped green vegetables, and macaroni bits in thin broth. I ate enough to think its food value superior to its flavor.



Photograph by Bernard F. Rogers, Jr.

#### JETS AND SPRAY FORM A TALL HEDGE ALONG THE AVENUE OF 100 FOUNTAINS

Generations of Romans have come holiday-making to the peaceful green gardens of the 16th-century Villa d'Este at Tivoli, near the capital. Water is pumped from a stream to the terraced hill, where it flows in rivulets and splashing fountains throughout the cypress-shaded grounds. Cardinal Ippolito d'Este, former owner of the estate, is said to have lodged in the palace here his "suite of two hundred and fifty gentlemen of the noblest blood of Italy."

"You don't like it?" hazarded the director.

"No," I replied. "But I liked the bread."

Then he explained that prisoners, whom I had seen in the printing shop and other departments, were paid in money, and allowed to buy salads, pastry, vegetables, even lamb cutlets.

We went, at my suggestion, to cell blocks where men who worked together in silence ate in "solitary." Guards carried trays of choicer food, occasionally passed one dish or another through cell doors to supplement soup and bread.

#### GOOD PRISON MEAL IS COSTLY

I asked to taste them, and was taken to a well-manned, efficient-looking kitchen, where soon appeared a complete lunch, even a small pack of cigarettes.

"You see," said the director, "they can have anything!"

"Molto buono!" I said expansively to the kitchen staff, but their faces, indicating pleasure in even so small a break in routine, formed no words. "Talking is forbidden," I was told.

A conscientious "taster," I ate heartily of fish, omelet, meat, salad, artichokes boiled in oil, and spaghetti with tomato sauce and cheese.

Tucci helped me to see the price list—about the same as that of a trattoria.

"How much are the men paid?" I asked.

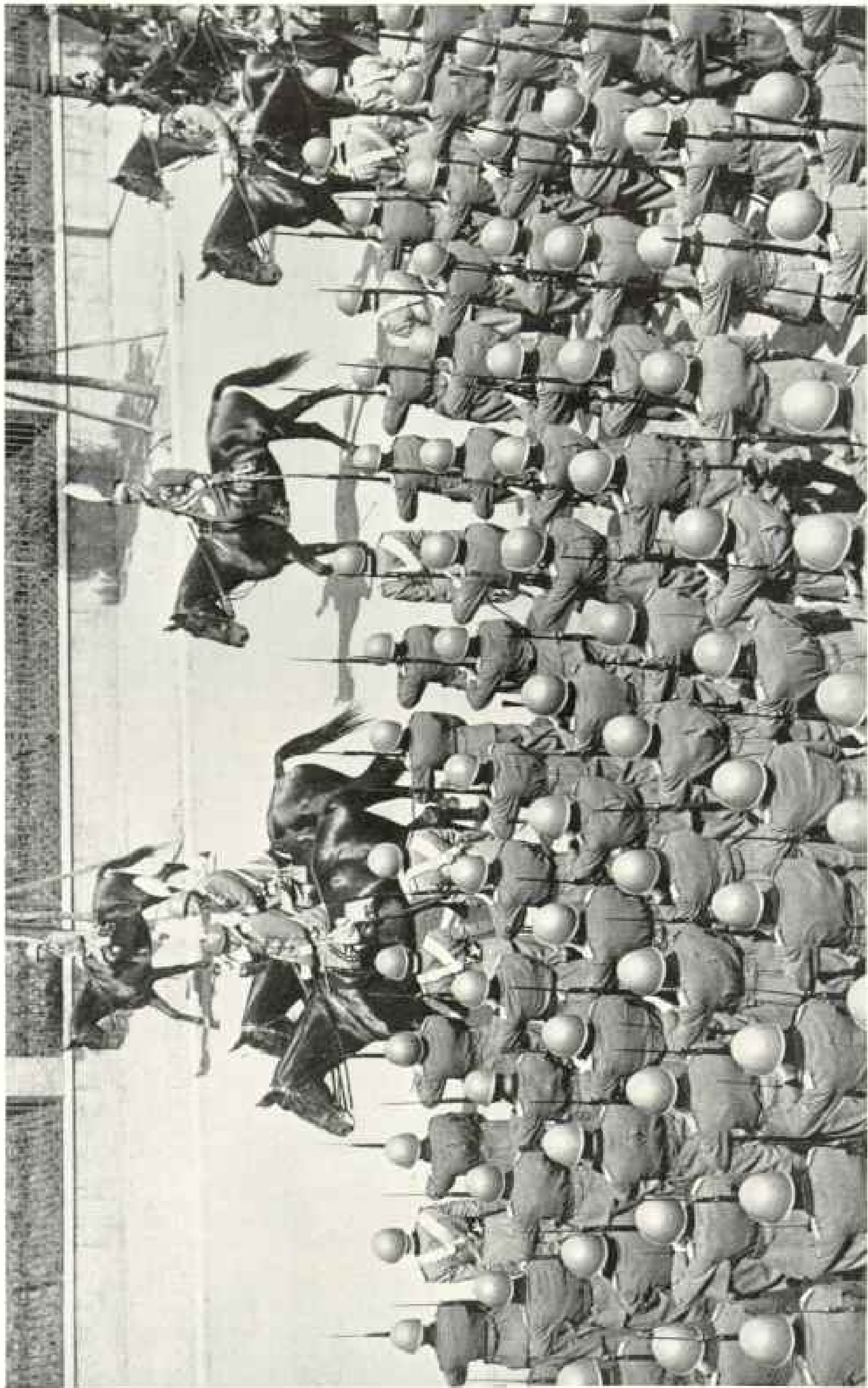
"Most skilled artisans, ten dollars a week, maybe more."

"But the average man," I persisted. "Like me. If I were here, I'd feed a printing press, probably. How much would I get?"

"Two lire a day."

The lunch I had so blithely and substantially sampled would have cost, with cigarettes, more than a week's salary!

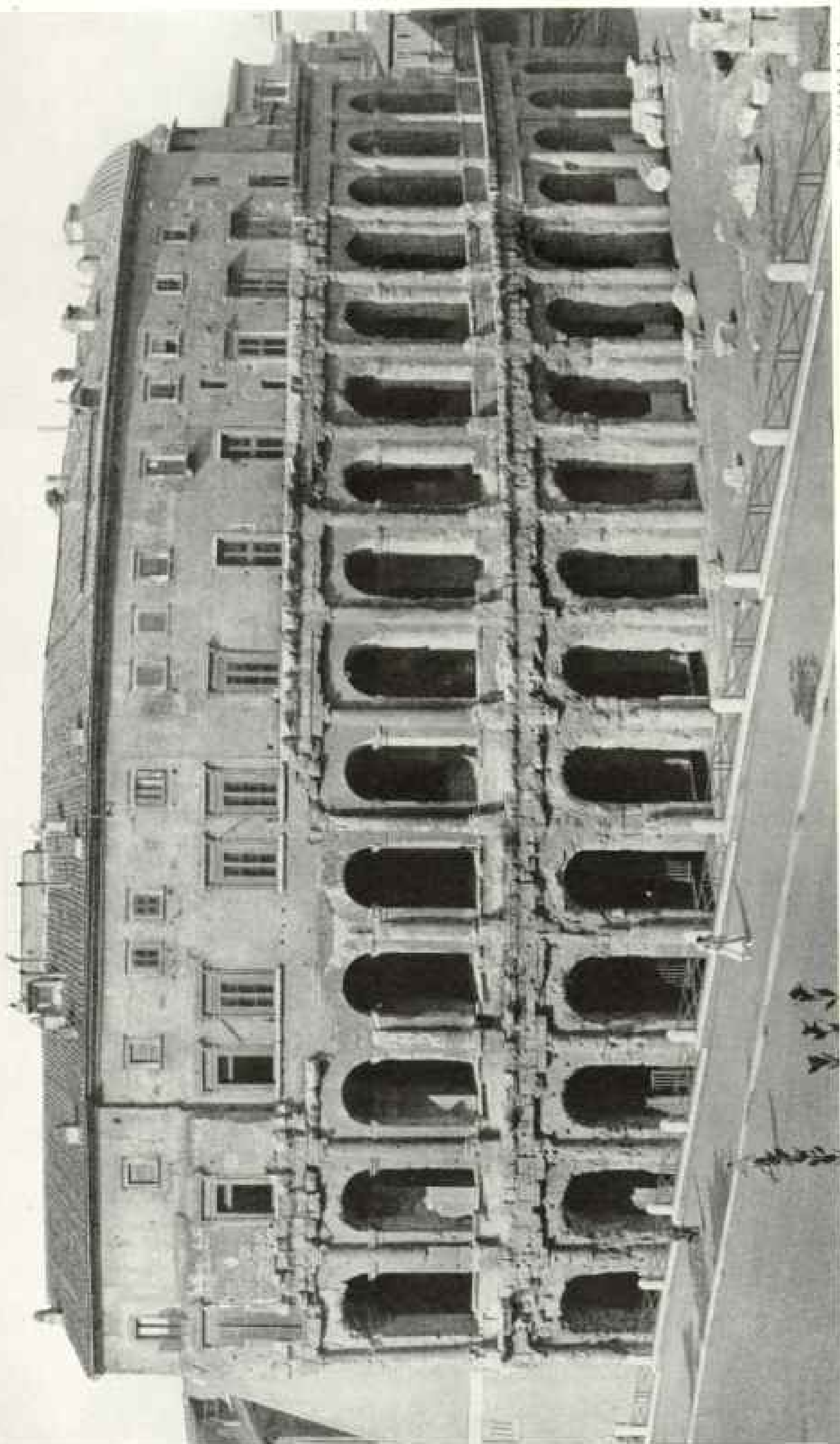




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WHEN THEIR KING PASSES, ROMAN LEGIONS OF TODAY "PRESENT ARMS"

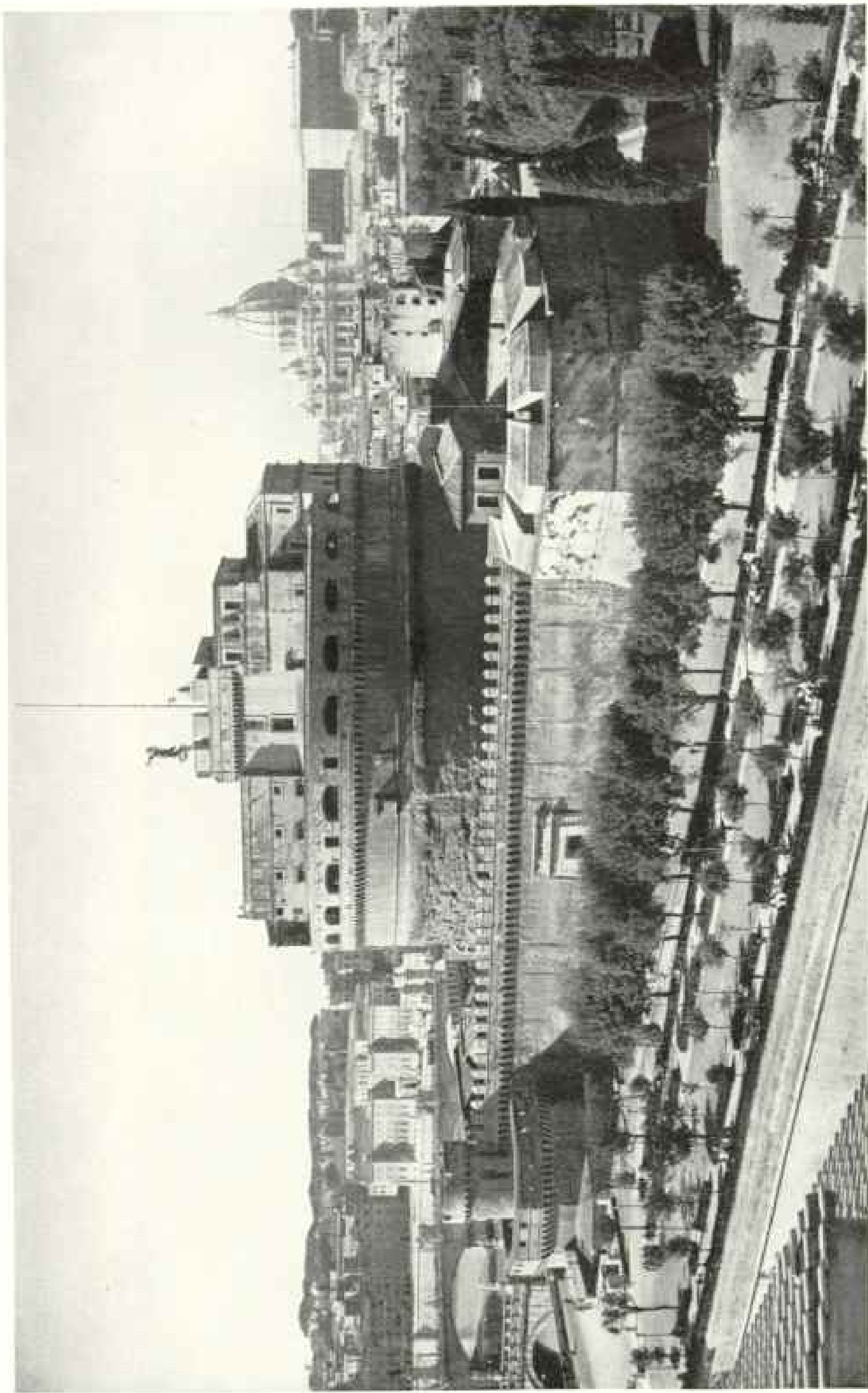
At the right center, wearing a plumed cap, rides Marshal Badoglio, hero of the Ethiopian War. On October 10, 1926, the Premier announced a rearmament program in which a principal item was the construction of two huge military airports near the Adriatic.



© Donald McCrebb

CHEERS OF THE ROMAN MULTITUDE ONCE ECHOED THROUGH THESE SPLENDID ARCHES

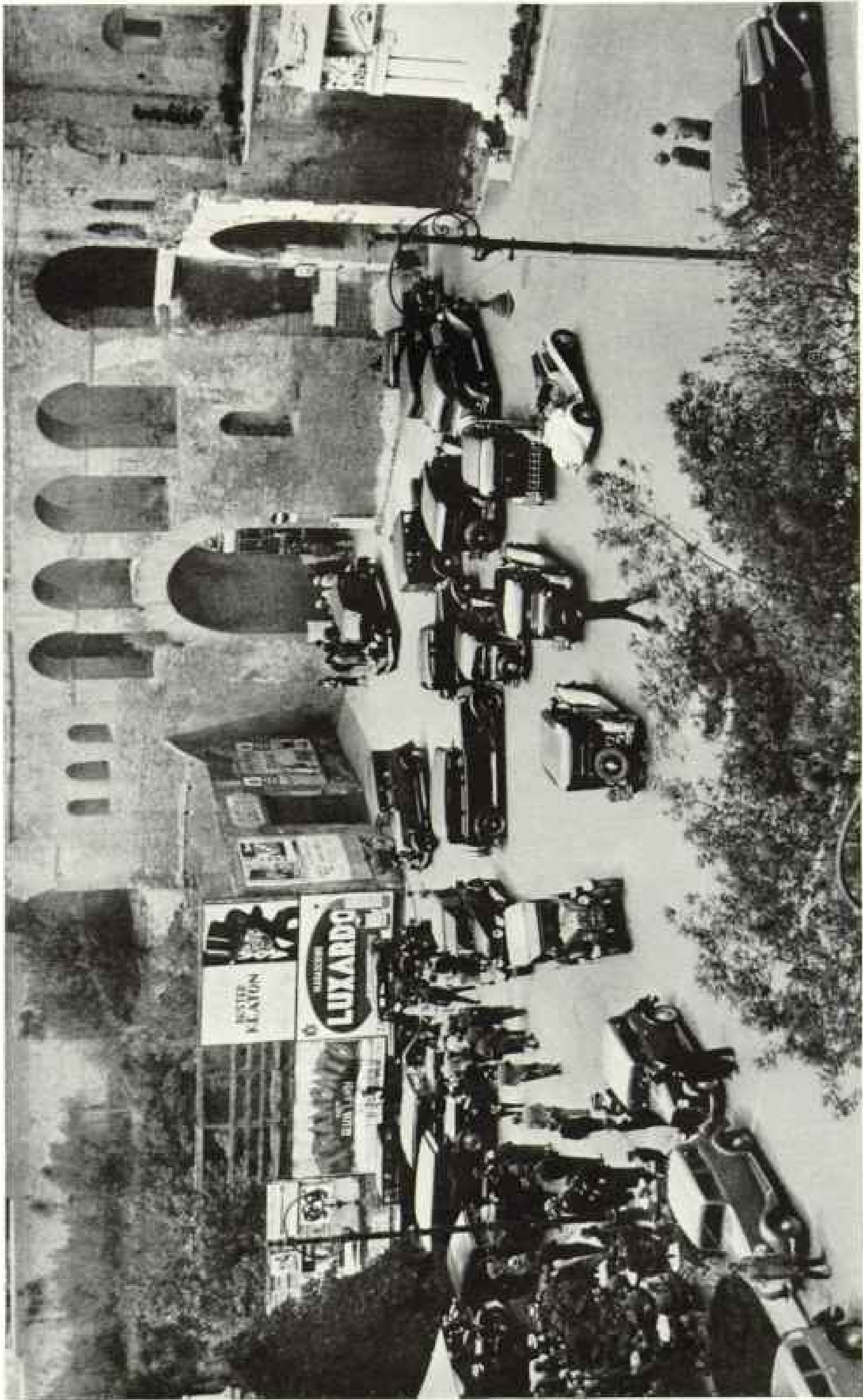
The Emperor Augustus dedicated the Theater of Marcellus in 13 B.C. to his youthful and promising nephew who had died ten years before. Thirteen thousand spectators once jammed its stone seats to enjoy pageantry, pantomime, and plays. Of the elegant triple colonnade that backed the building, only this battered section remains. The third tier of arches was absorbed into the medieval Orsini Palace, which still crowns the ruins. Archeological housecleaning of recent years has cleared away dwellings and shops that cluttered the lower arches.



Photograph by Bernard F. Rogers, Jr.

**FOURTEEN CENTURIES AGO, DEFENDERS OF CASTEL SANT'ANGELO HURLED MARBLE STATUARY ON ASSAILANTS' HEADS**

Built between 135 and 139 A.D. as a tomb for the Emperor Hadrian and his successors, the round Castello was repeatedly attacked and often taken during the Middle Ages. Successive popes and anti-popes fought for its possession. Benvenuto Cellini, the soldier-artist, broke a leg while escaping on a rope from the fortress' ramparts (page 279). Behind appears the dome of St. Peter's, visible from almost any point in the city. At the left, bridges span the Tiber.

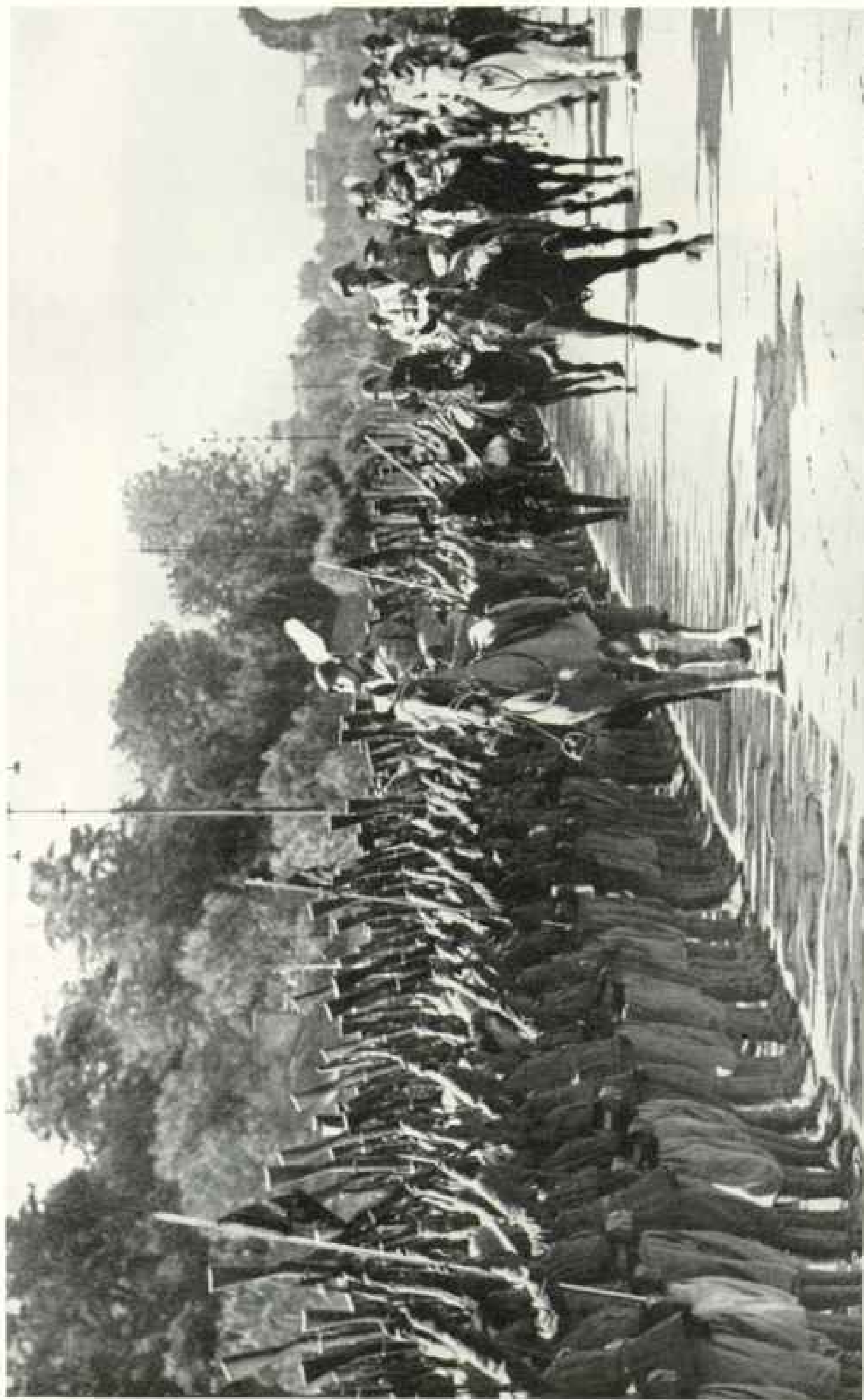


Photograph by LUCE from ENCI.

CABS JAM A "BOTTLENECK" WHERE THREE ROADS MEET AT THE PINCIANA GATE IN AURELIAN'S WALL

Posters advertising American movie stars fill two billboards at the left. Here ends Via Vittorio Veneto, a wide, tree-bordered street with fine hotels, mansions, cafes, and shops (page 260). Beyond the gate, fortified by Belisarius against the Goths in the sixth century, lie the gardens, museums, and fountains of the Villa Borghese, now officially called Villa Umberto Primo. This gateway pierces the high brick wall that enclosed Imperial Rome.

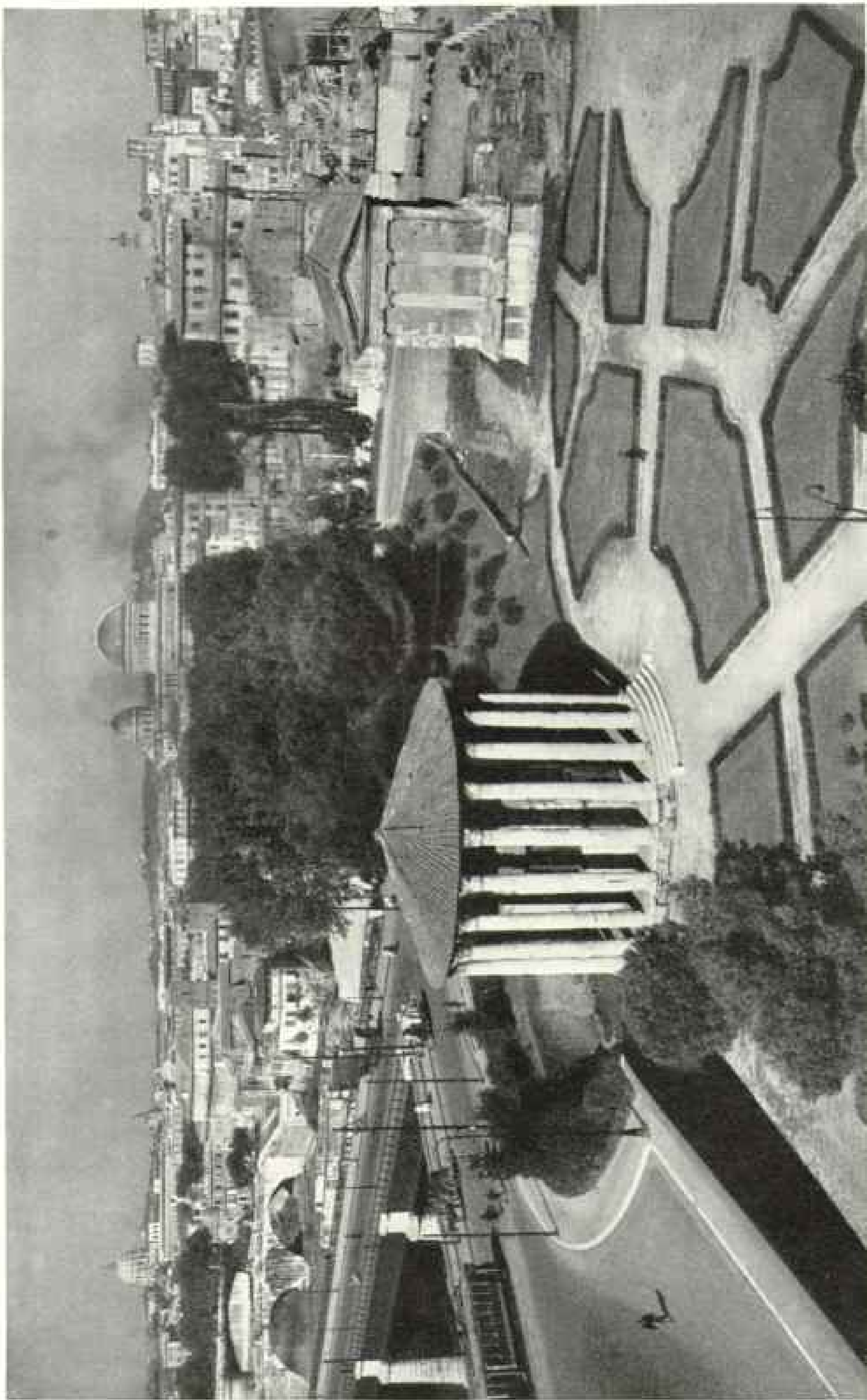




Photograph from Pictures, Inc.

WEARING SUN HELMETS, COLONIAL TROOPS RAISE THE BUTTS OF THEIR RIFLES IN SALUTE TO IL DUCE AT A MILITARY MUSTER

On "Intervention Day" all Italy celebrates the anniversary of its entrance into the World War on the side of the Allies, May 23, 1915.



Photograph by Bernard F. Rogers, Jr.

BEYOND THESE SHRINES OF ANCIENT ROME LIES A MODERN CITY OF MANY DOMES AND SPIRES

About 400 public churches are now found in the capital. Archaeologists are uncertain of the deity to whom the so-called "Temple of Vesta" was dedicated. Except for a tile roof, the graceful Corinthian edifice probably looks much as it did in Roman times. The small Temple of Fortuna Virilis (right), perhaps dedicated originally to the Goddess of Dawn, is the best-preserved monument of the early Republic. The larger dome seen above the trees caps the Synagogue. St. Peter's appears in the left background beyond a succession of new and old bridges over the Tiber.

Next day I saw another phase of Italy's penal system, an establishment where prisoners' families, deprived of support, could obtain food. Here the convicts themselves might work, when released, at hunger-preventing wages until other jobs were found for them.

In 1933, Italy tried 209,959 people for crimes. That is a surprisingly large number in a country so heavily policed, so thoroughly locked and barred. Everyone's whereabouts is always known. Not all those tried were convicted. I talked with some who had been.

One was carpentering. I asked him what he'd done. "I stole some railroad iron," he replied, a bit shamefacedly.

"When I was a kid I did that," I told him. He brightened, said he could live and eat on what he earned here, and explained that, like the Wolf of Gubbio, he was bad only when hungry.

#### RISING COASTS STRAND ROMAN SEAPORT

When some of the Pontine Marshes were sea, when navies were galleys and triremes, Ostia, at the Tiber's mouth 14 miles southwest, was Rome's seaport. It was built on the site of an ancient settlement where the Tiber forks to form Sacred Island.

Pliny the Younger, who survived the eruption of Vesuvius that destroyed Pompeii, and wrote a graphic account of it often quoted today, once lived near Ostia, down the shore road in a seaside villa. Worn paving stones, uncovered, pointed my way to the ruin as I walked where Pliny rode. It is a shore road no longer.

Ostia's ruins are being dug from the sand, three miles inland! (Page 305.)

Rising shores and river silt have often blocked the harbor. Mussolini has not yet followed Claudius, Trajan, and Pope Paul V in building a seaport adequate for Romans and their times.

Romans today play on the beach where Lido di Roma, a new town, stretches two miles along the present shore. Crowds come by electric car or new auto speedway, and only glimpse the Tiber (page 320).

Fiumicino, where the north fork flows between stone banks, is a seaport they seldom visit. Little shallow draft boats furl their sails and lie along the quay at a salty town lightly touched by time.

I invited a captain to eat fried eels in a trattoria that smelled, tasted, and sounded of the sea.

"I'm freighting marble," he said. "We had a fine wind—left Marina di Carrara yesterday. I wish we could sail to Rome. Then we really could compete with the railroad!"

"Why not?" I asked. "Didn't ancient galleys go to Rome?"

"Perhaps, but I can't," he replied, and pointed through the window at machinery growling and rattling on a scow. "That little dredge runs most of the time to keep even this narrow harbor channel deep enough."

#### FLYING BOATS TAKE OFF FROM TIBER

The south fork of the Tiber, though it enters the Tyrrhenian Sea some distance from Lido di Roma, is a different sight. Where the river widens, protected by stone jetties from stormy waves, are two airports, one military, the other a seaplane base of Ala Littoria, subsidized company monopolizing Italy's air transport.

Here a dozen flying boats sometimes ride at anchor, or take off for Tunis (page 345), for east Africa—wherever airmail and hurrying passengers would be flown. Here, too, are shops where I saw ships themselves repaired and built. The ground crew lives in a fair-sized town.

I walked inland over the dunes where stunted Scotch broom and blackberry vines fought bravely for life and often failed. In swamps between grew yellow iris. There were purple flowers, miniatures of the lilac-hued wisteria that grows so profusely and decoratively over Roman balconies and garden walls in spring.

Farther inland on pitiful little farms, women in white kerchiefs struggled mightily, fertilizing every plant, to make the risen sandy seashore provide a living. There were fields of giant beans. Italians often eat them green and raw, like peas. Scrubby cows browsed in marsh grass, contrasting with the handsome animals on reclamation projects farther up the Tiber Valley.

It was a bitter coast—not water enough in some places, and frog-filled swamps in others. Everywhere were thin-shelled land snails—I counted 34 on a single little weed—contesting ownership of every leaf and blade.

At last I reached a road and then a cross-road. A number of farmers had gathered in the bowling yard beside a trattoria. Children piled walnuts in pyramids of four, and tried to hit them from a distance by



Photograph by John Patrick

A GOOD SHEPHERD TENDS HIS FLOCK BESIDE ULTRAMODERN CITY APARTMENTS

"He picked up his canine pal," says the author, "so I would be sure to get it in the picture" (page 308). Wearing a tattered military tunic, the man pastures his sheep near the Tiber, where one of Rome's new buildings contrasts with an older apartment house (right). Pastoral scenes are common near the capital, for in Italy all available land is utilized. Steel shutters of the new structure roll up like old-fashioned desk tops.

rolling other walnuts, like marbles from a tawline.

I watched awhile, asked about the game in my simple Italian.

"You speak not Italian—English?" asked a man who sat near by.

"I am American," I said.

"Ah!" he exclaimed, hurrying toward me with outstretched arms. "An American! Americans are the finest people in the world!"

He had taught Latin, "as a young fellow," in Calumet, Michigan, in Pittsburgh, and in Catskill, New York.

He was, he said, Professor Virgilio Scimmi, tutor at Lido di Roma. What a country America was! Had it changed much? He talked in English, or to his com-

panions in rapid Italian, recalling happy memories of a friendly land far across the seas, whose people had been kind.

"This game? It's *castelletto*. Roman children played it two thousand years ago. Whoever wrecks a 'tower' gets the four nuts, and if no one succeeds on the first shot, the boy whose taw rolled farthest shoots first next time."

The old teacher motioned toward the trattoria.

"Come inside and eat," he said. "What do you like?"

"What is there," I countered, "characteristic of Ostia?"

"Frogs are good," he replied.

I hadn't eaten frog legs since a happy day in Hawaii two years before.





Photograph by Bernard F. Rogers, Jr.

MICHELANGELO'S GENIUS IS REFLECTED IN THESE FINE BUILDINGS ASTRIDE CAPITOLINE HILL

The old master designed the Capitoline Museum (left), containing a splendid collection of classical sculpture; the staircase in front of the Palazzo del Senatore (background); and the Palazzo dei Conservatori (right), where is preserved the famous Etruscan she-wolf (Plate V). Romulus is supposed to have founded Rome on this smallest, but important, of the Eternal City's seven hills.



Photograph by Bernard F. Rogers, Jr.

PERHAPS A BEAST FROM THE COLISEUM SERVED AS MODEL FOR THIS RICH MOSAIC

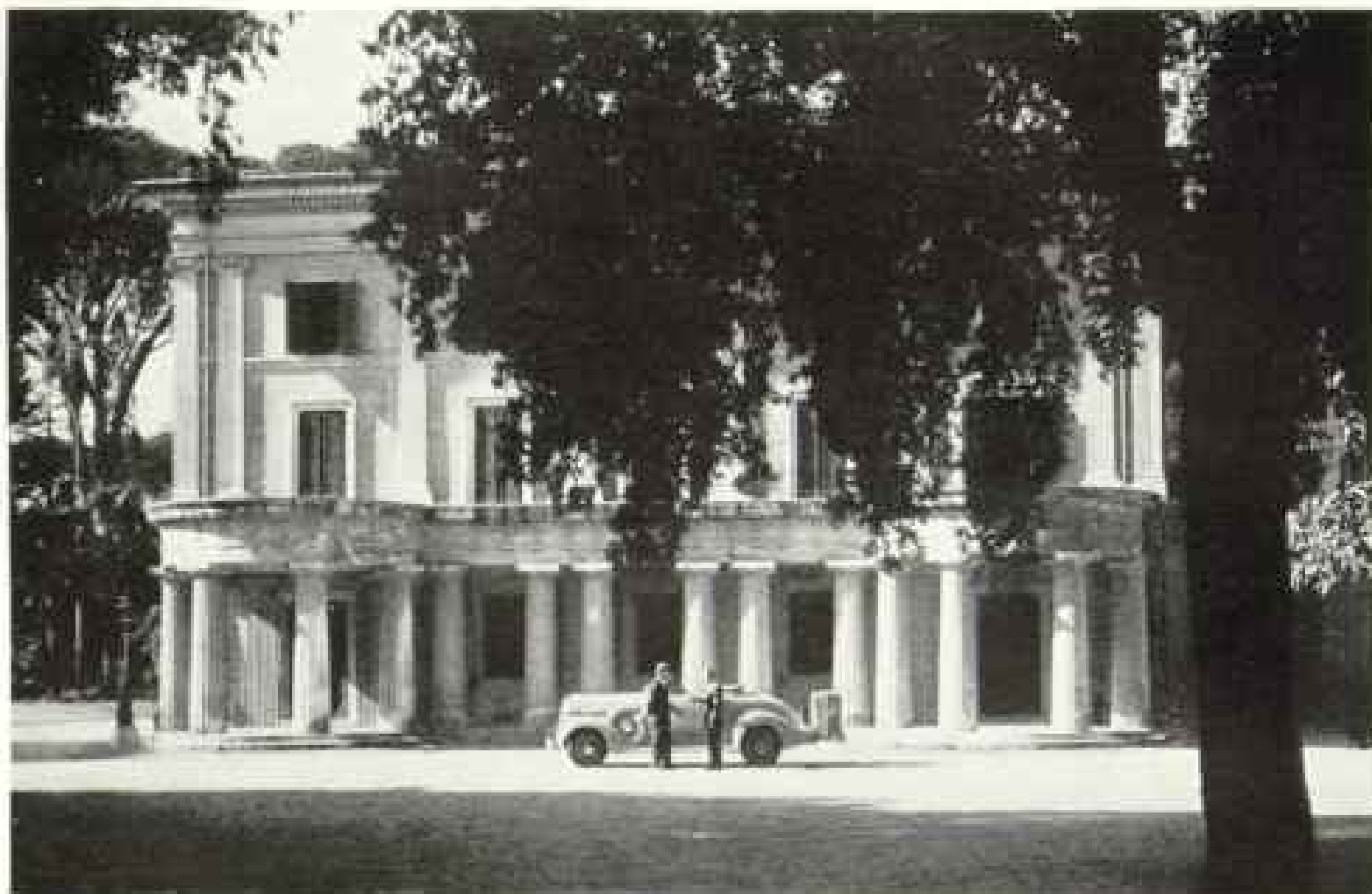
Once the busy seaport of ancient Rome, Ostia now is isolated from the sea by silt brought down by the Tiber. Its uncovered houses, temples, theater, statues, fountains, and shops vie with those of Pompeii in re-creating the life of an ancient Roman city (page 302).



Photograph by LUCE from ENIT

PATRONS OF SIDEWALK CAFES MUST PAY A "COVER CHARGE"

Because the restaurateur is taxed by the city for using this outdoor space, customers must pay a premium for the privilege of sitting on the sidewalk of fashionable Via Vittorio Veneto. Flowers (lower right) are "planted" in pots, and, when they wilt, new ones take their place.



HERE AT VILLA TORLONIA LIVES ITALY'S FORCEFUL PREMIER

Il Duce's offices at the Palazzo Venezia are about two miles from this quiet retreat (page 269). Spacious grounds extend back for several acres from the ancient Via Nomentana. Born in 1883 at Predappio, not far from the Republic of San Marino, Benito Mussolini, son of a blacksmith, used teaching and journalism as steppingstones to his present position as head of the State. Leader of Fascism in Italy from its start, he still writes novels and plays in his spare time.



Photographs by Bernard F. Rogers, Jr.

BEAUTY LEADS THE BEAST TO THE FLOWER MARKET

Daisies, violets, and chrysanthemums stacked on the donkey's back have been brought in from fields to Nemi, near Rome, for transshipment to the capital. Blossoms are so plentiful that vendors sometimes give faded ones to children, who beat them on pavements to see the petals fly.

"If this were the feast of St. John the Baptist, we'd have snails such as you saw in the fields. All Rome eats them then. We'd try them now, but they are not ready. To clean them we keep them unfed a day or two."

Neither of two dishes was frog legs. The first contained little cleaned frogs, whole, fried in olive oil. Then came "soup of frogs," made with tomato broth and bread like my old favorite, *zuppa di pesce* (page 284).

I ate all they gave me. Delicate little frogs, fried, are to bullfrogs' legs what fried spring chicken is to an old rooster's drumstick! They have wishbones, too. But to eat them, eyebrow tweezers would be handy.

Scimmi and I walked back to Lido di Roma.

"Ostia has about 6,000 people," he said, "and as many as 60,000 in summer. Where you see Lungomare Cristoforo Colombo, that wide seashore avenue, duck hunters tramped dunes and marshes twelve years ago. Within the century Turkish and Algerian pirates landed here. That old watchtower was part of Rome's defenses.

"There's still game along this coast—ducks, deer, and wild pigs. Laws are modified temporarily because of sanctions. Thursday and Friday are meatless days, but shops then have game, bought from hunters who may exceed former bag limits



Photograph by Bernard F. Rogers, Jr.

#### "ROAD CLOSED TO COMMERCIAL VEHICLES"

Showing a truck and a horse and cart, this circular sign, posted at an entrance to the Villa Borghese Gardens, is an international symbol used in many European countries. Prizes decorate the hat of this member of the Fascist University Groups.

but must sell their surplus at fixed prices. The season on quail—they fly from Africa—had been closed for two years. It is open now."

Four milk-white horses drew an ornate white hearse. "It's for a child," Scimmi explained, saluting it, as all good Romans do. "If the deceased is over 12, hearse and horses are black."

Laboriously, as I awaited my train, I translated from a Roman paper. Legally limited to six pages, it reminded me of American small-town dailies. Its comic strip was "Bringing Up Father."



Jiggs attended a highbrow party with Maggie. To the lorgnette-equipped guest of honor, he said in Italian: "I like your dress. My cook bought one just like it at Campo dei Fiori." There, on Wednesday mornings, is Rome's rag market.

#### BRIDGE LASTS 20 CENTURIES

North of Rome, in the crook of a sharp Tiber bend, where the Ponte Milvio stands, is the Flaminia district. Rows of new apartments rise in fields. Occupants, to visit Mussolini's Forum (page 278), cross the river on the old bridge, part of which has served Romans for 2,045 years.

For days came an influx of pilgrims, from far provinces, from all the Roman Catholic world. Hotels and boardinghouses were filled as lesser celebrations heralded Easter.

A priest and boy in lace-fringed white aprons flicked holy water about houses and stores with rapid blessings of the risen Christ. Even the irreligious say it is good, for householders, knowing when the priest will come, use the week before Easter for spring house cleaning.

I photographed and listened to a barrel-organ, commonplace relic of an Italy the new regime deploras. I saw sheep grazing before one of Flaminia's new buildings, their herder ragged as shepherds can be. I gave him some tobacco. He was the friendliest, kindest, simplest fellow imaginable, and wanted me to take his picture holding his little dog (page 303).

Because I did, two policemen took me to the station. While I was waiting there the priest came, blessed it, and passed on.

I was subjected to a searching inquiry lest I be an enemy of Italy who would "go away and say bad things, illustrated with photographs of bad people."

"There are well-dressed people in the Flaminia, and new apartment houses with beautiful entrances. There are automobiles. There is even a park with statues in it. Why not photograph these?" they asked.

At last a note arrived from the Ministry of Newspapers and Propaganda, "Well and favorably known." I was released.

Plain-clothes men have halted me on Rome's busiest streets to "see my papers." I was awakened in a hotel early one morning in a town unfrequented by tourists. Officers asked what I was doing there. Sometimes I was questioned on the street, sometimes in the police station. Four offi-

cial papers explained who and what I was, and I soon learned not to fear consequences of being a well-documented foreigner with a pocket camera. The custom of "controlling the population" became, to me, merely a time-consuming annoyance.

Mrs. Olivia Rossetti Agresti invited me to her home. I should have gone had she been just granddaughter of Gabriele Rossetti, Italian poet and liberal, who fled to England in a uniform lent by a British admiral.

It would have been interesting had she been only the daughter of William Michael Rossetti, biographer of Shelley, Blake, and Walt Whitman, or only Dante Gabriel Rossetti's niece.

Mrs. Agresti, born in England, has lived in Italy 25 years. She is now a delightful Roman of fame almost legendary, a writer with a sense of humor, two alert grandchildren, walls of mystically beautiful Rossetti water colors.

I should have gone anyway. The invitation was for Easter dinner.

#### ROME DINES WELL ON EASTER

"This, to us," she said, "is what Thanksgiving is to you. You may feel honored!"

"I do," I said. I knew her from many deck-chair days at sea.

"This dark-brown cake, it isn't bread, it's *pizza*. We always have it with salami and hard-boiled eggs at Easter. Unless we are terribly poor the meat is *capretto*, or roast kid. Those bits you are picking from it so slyly, thinking them fir needles that fell in by mistake, are rosemary leaves. They give that warm, slightly bitter pungency."

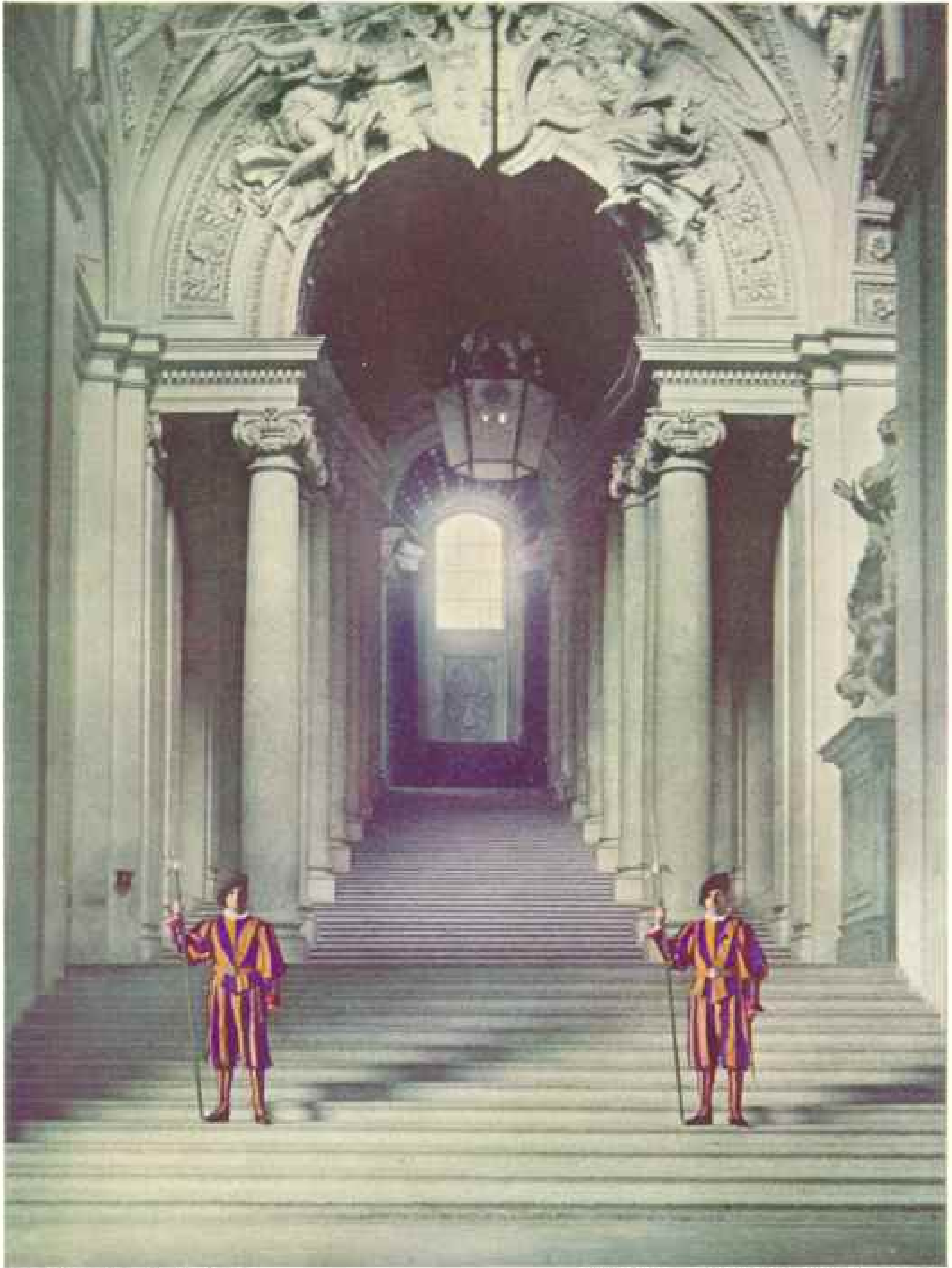
Pure-white melted cheese called *mozzarella* stretched indefinitely in filmy strings, like chewing gum, while hot, and became rubbery as it cooled.

"That's made from milk of water buffalo," my hostess explained, "a draft animal common on farms where it may wallow in marshes or rivers.

"I don't blame your people for thinking Mussolini ruthless," she said. "Those stern bronze busts and unsmiling pictures Americans see make him look Julius Caesar at his worst. I often tell the Government so, but the idea seems to make him appear an 'iron dictator.' Personally unselfish, really most human, he probably works hardest of all Italians. I know about *that*—I went with him recently to the Stresa Conference."

I said I had been that morning at St. Peter's in the Vatican.

## CAESAR'S CITY TODAY



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Finley Photograph by Bernard F. Rogers, Jr.

AS IN THE DAYS OF MICHELANGELO, SWISS GUARDS OF THE POPE  
STAND SENTRY IN THE VATICAN

The famous artist is supposed to have designed this uniform of the halberdiers, who have guarded the papal residence since 1505. When a Pontiff dies, the College of Cardinals elects one of its members to be his successor. Pius XI was elected in 1922, the 261st Pope to head the Roman Catholic Church. Down this Royal Staircase (Scala Regia) the Holy Father, in solemn procession, walks to the adjoining Church of St. Peter. The wall telephone (left) is typical of the Vatican State's modern equipment, which includes radio, printing office, electric plant, railroad station, and special papal train.

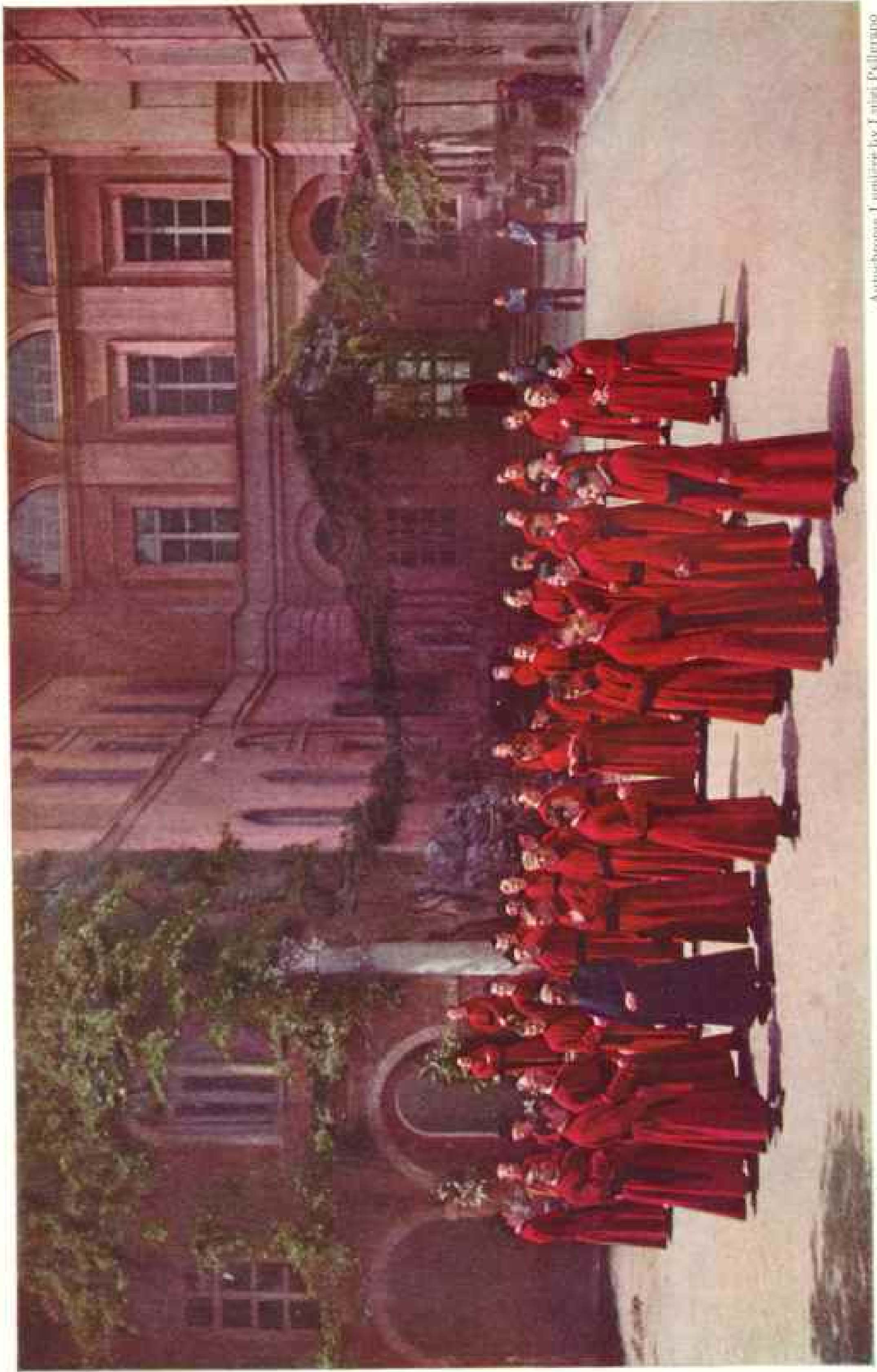


Autochrome Lumiere by Luigi Pellegrini

© National Geographic Society

**TRANQUIL AMID ROME'S TURMOIL IS THIS FLOWER-DECKED COURTYARD, WHERE YOUNG CLERICS STROLL AND MEDITATE**

Only the bells, hung one above the other, occasionally break the quiet of study hours at the old Palazzo Borromeo. From many countries, including Germany, Hungary, Spain, and Scotland, come the students who live here and attend the Gregorian University. Founded by Ignatius de Loyola in 1552, the University is headed now by an American priest, Father Vincent McCormick.



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"BRILLIANT" STUDENTS ALL, ARE THESE BOYS OF THE GERMAN-HUNGARIAN COLLEGE

Autochrome Lumière by Lajzi Pellurano

Because of their scarlet cassocks, Romans call them "boiled lobsters." Here they gather after Mass in the courtyard of the College, second oldest in Rome. The Holy City has many institutions in which Catholic students from all over the world are trained for the priesthood. One can tell by a youth's dress whether he belongs to the American College, the Belgian, the Irish, or some other.





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TOGGED ROMANS ONCE CROWDED THE FORUM, WHERE THESE STUDENTS IN BRIGHT CASSOCKS STAND

Here, in the ancient city's heart, Cicero harangued the citizens, priests and vestal virgins in pagan rites, and Caesar ruled the world. Eight columns of the Temple of Saturn (left) and the Arch of Septimius Severus (right) contrast with the modern National Monument (upper right).

Illustrator: Lamière by Luigi Pallierotto



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Fidley Photograph by Edmund F. Rogers, Jr.  
FROM A PALM-SHADED TERRACE, TRAVELLERS MARVEL AT THE VAST ETERNAL CITY, SPRAWLED ON HER SEVEN HILLS

Today, Pön's famous line should read: "The grandeur that is Rome," for new buildings have been erected and old ones restored. On the Capitoline, smallest of the historic hills, the campanile of the Palazzo del Senatore towers above the horizon to the right of the gleaming National Monument (opposite page). Near these flower beds on Monte Gianicolo, the redshirts of Garibaldi defended Rome against the French in 1849. From the walled promenade strollers overlook the Tiber, flowing near the base of this steep elevation which Romans named Jaticulum in honor of Janus, god of gateways.



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Finlay Photograph by Bernard F. Rogers, Jr.

TO CHARLES DICKENS, THE CRUMBLING COLISEUM WAS "THE GHOST OF OLD ROME, WICKED WONDERFUL, OLD CITY"

He pictured the amphitheater "as it used to be, with thousands of eager faces staring down into the arena, and such a whirl of strife, and blood, and dust going on there, as no language can describe." At its inauguration A. D. 80, about 5,000 wild beasts were killed in "games" lasting 100 days, and the arena was flooded for mock naval battles. Here 50,000 spectators saw gladiators fight and Christians die as martyrs. The ancient triumphal arch on the recently paved Via dei Trionfi (left) commemorates a victory of Constantine the Great, who in 313 gave Christians their religious freedom.





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**ROSES FOR THE GRAPE FESTA**

Italian girls have their own Fascist organizations, corresponding to those of the boys. They don black shirts at six, and at 17 join the Young Fascist Girls group, in which courses in domestic economy, stenography, farming, and other practical subjects are combined with sports and drill.

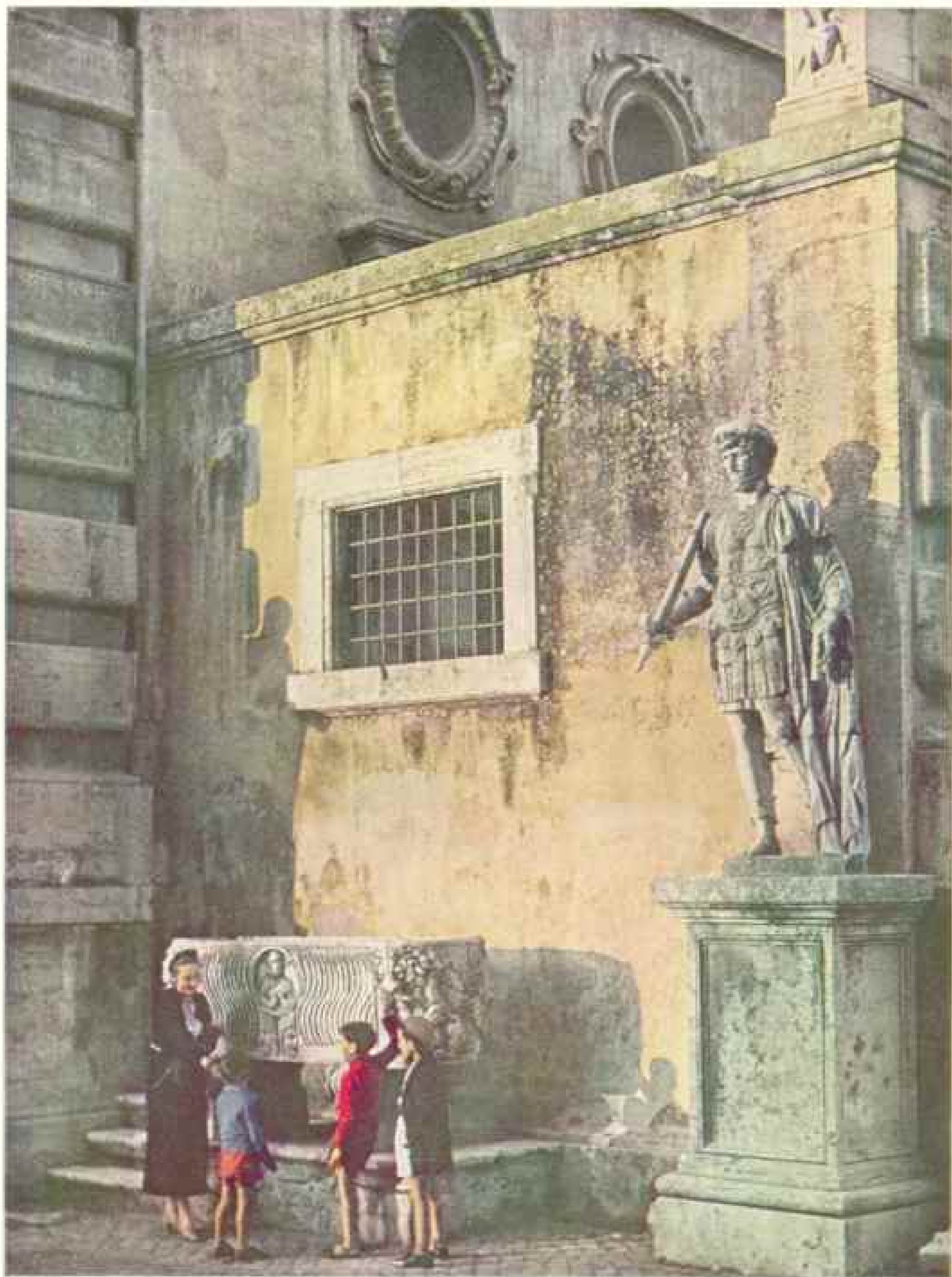


Fielday Photographs by Bernard F. Rogers, Jr.

**ALL DRESSED UP FOR A ROMAN HOLIDAY**

This jolly salesgirl keeps her choicest grapes in paper packages (left). Celebrations like the annual Grape Festival are often staged by the *Dopo-lavoro* ("after work") organization, which supervises sporting events, dramatics, courses of study, and other activities for the worker's leisure.





© National Geographic Society

Finley Photograph by Bernard F. Rogers, Jr.

"BOYS, ONE OF YOUR ROMAN ANCESTORS MAY HAVE CARVED THIS SARCOPTIAGUS"

The pretty mentor might add: "And perhaps the model for the sculptured general, behind you, led legions to fight the Parthians." These relics stand outside the Casino of the Villa Borghese (Villa Umberto I), built about 300 years ago by Cardinal Scipio Borghese, whose lavish hospitality gained him the nickname "Rome's Delight." The Casino, housing one of the capital's finest art collections, became public property when the vast estate was bought by the Italian Government in 1902.

"Sixty thousand is not unusual Easter attendance," she said, "and didn't you understand more fully why we call ourselves 'catholic,' implying 'universality'?"

"Yes," I replied. "Fine gowns rubbed elbows with old peasant clothes. I saw representatives of the races of mankind, and no inequality in worship of a common ideal."

"Cardinals once met in a church at Viterbo to elect a pope," my hostess related. "When proceedings had dragged fruitlessly for months, peasants removed the roof, knowing rain would hasten election. It did."

I told her of my experience with the police.

"I've heard of others," she said, laughing. "Italians, supersensitive, often think foreigners are criticizing."

#### JOB HUNTERS NEED CERTIFICATES

"You aren't as patient as Italians. Applying for a job here, a man must have a certificate of good conduct, military papers, birth record, and even a penal certificate recording all his trouble with the law. Blank ones are best."

There came a genial old woman in humble dress, bearing a letter. Mrs. Agresti read it aloud, rapidly, in Italian.

"Can't she read?" I asked.

"Some. But this is in English from her little American grandson. I translated as I read. We've been friends 20 years. Her husband is a retired corset maker who still makes mine as a favor. They live in a modest \$10-a-month apartment."

"That's the life I want to see," I said. "Can you get me a dinner invitation?"

"We'll both go. I'll ask her when."

On the evening we agreed upon I called for Mrs. Agresti at her office, across Piazza Venezia from Mussolini's. "We've gone back to the long midday siesta," she said, "so I worked till eight. They abolished it this winter to save lights and coal. We'll probably return to it only in summer. Sanctions taught us much."

Pictures of the corset-maker's family hung in ornate frames. Abundant furniture was more generously proportioned than rooms that held it. Everywhere were cherished knickknacks, gifts of Uncle Eduardo or Aunt Elisabetta. Dusting the dining room must have been a long job, but it had been done.

The dish-of-the-dinner was *pasticcio di*

*maccheroni*, baked round and big and brown. In it must have been two dozen eggs and several pounds of cheese. Our hostess proudly removed a generous helping and vanished out the door, leaving fragrant wisps of steam behind her.

"She's taking it to a neighbor, an expectant mother," explained Mrs. Agresti. "If she didn't share such a dish, the child might be ill."

"Buon appetito!" said everybody, when all was ready.

Mrs. Agresti's wine accidentally spilled.

"Allegria! It brings good luck."

We had "artichokes Judea," boiled in olive oil, and *nespole* (medlars), a sour-sweet fruit the size and color of a yellow plum with three free, smooth, chestnut-shaped seeds. Small trees, common near Rome, bear early and heavily.

"We've just celebrated our golden wedding," said the old corset maker. "You never do in America."

I contradicted him.

"I don't believe it!" replied his wife, firmly. "Americans are divorced long before fifty years."

"Do men in America," asked her nephew, "wheel baby carriages?"

Some American husbands, I said, were so considerate.

"Everybody would laugh if I were," he replied, shaking his head at so queer a custom.

"Is it true that many Americans, all strangers, all undress and sleep together in one room on a train?"

I described night life in a Pullman.

"What a strange country, America!" he exclaimed in awed wonder.

Another friend, Arrigo Usigli, who made American films speak Italian, had a little Lancia car, and promised to meet me one afternoon on Via Appia Antica.

#### "LORD, WHITHER GOEST THOU?"

I started afoot, in the morning. Where anciently was one Appian Way, today there are two. The narrow old one near Rome could not be widened for modern transport without destruction of relics such as the Church of Domine Quo Vadis.

It is built where Saint Peter, fleeing Nero's persecution, met Jesus face to face.

I saw a print of a bare foot in the stone where Christ had stood; they said it was a reproduction of His original footprint now in the Church of St. Sebastian.



Photograph by Bernard F. Rogers, Jr.

PLOW OXEN EMERGE FROM THEIR SIDE OF THIS "TWO-FAMILY" HOME.

Ninety-five per cent of the population of the Pontine area was infected with malaria. Wild boars roamed where cattle graze today. Now several thriving towns stud the drained plain (page 250). Farmhouse 121 near Littoria was built "ANNO X E F"—"tenth year of Fascism."



© Donald McLeish

KERNELS OF MAIZE, NOT COFFEE BEANS, DRY HERE IN THE SUN

Laborers live comfortably in the up-to-date building (background) in the Maccarese, a vast area of reclaimed swamp-land. In 1936 the Nation harvested three and a third million tons of corn.

This church is built over ancient catacombs cut in tufa—volcanic rock—under the villa of some old Roman sympathetic with early Christians. What a task to carve that maze of passages, those crypts in living rock where bones still crumble!

In little chapels worshipers, fired by a zeal that only persecution gives, said prayers by torchlight, and then emerged into the night, carrying bits of excavated rock to throw away covertly, lest unbelievers discover their subterranean rendezvous.

Into gloomy tunnels, through an air vent—an iron grill in the church floor—filtered faint and far-away organ music and chants.

When I came to the surface, where sunlight streamed into the chapel through stained-glass windows, I saw a dozen girls of ten or twelve learning to sing. Their clothes were simple and somewhat tattered—people who live on Via Appia Antica are not as rich today as of old. Many wore castoff, high-heeled ladies' shoes.

Automobiles, their speed unlimited by law, roar along Via Appia Nuova, but the old road is used for slower traffic reminiscent of days when it was new. Oxen pull big carts, peasant women carry bundles on their heads. Brightly decorated, big-wheeled wine carts return empty to high Frascati, far away, their drivers soundly sleeping as horses jolt along the road they know so well. Instinct, I thought. How many generations of the same horses and the same wine sellers have taken that weary road to Rome! (Plate VII.)

Stone walls, red poppies in their crevices, hide much of the rolling Campagna on either side, until at last the road emerges into open fields and meadows where occasional heaps of stone and brick are remains of huge buildings.

In the distance are aqueducts. To William Dean Howells they "seemed to stalk down from the ages across the melancholy expanse like files of giants, with now and then a ruinous gap in the line, as if one had fallen out weary by the way."

A boy of five trudged along; I fell into step. He tenderly carried a tin toy army tank, battered and broken. Its rubber treads were gone. Yet you could see it was a tank—a gun still poked from its turret, and the camouflage had not all worn off. Presently he deposited it on a pile of scrap iron in a yard near the road.

"Befana brought it," he said, "a long time ago."

Befana is an old lady who, in the manner of Santa Claus, comes on a January night bringing toys to good boys and girls. She pinches bad ones.

Children, during economic sanctions, brought bits of metal to school to be collected and fabricated for national defense. One mother missed pot covers, another her flatiron. Householders often rummaged piles of patriotic salvage for kitchenware.

There are certain streetcar pins resting loosely in sockets. These disappeared, with fishplates and spikes that lay handily beside operations of construction crews gone to lunch. Traction company men retrieved its equipment after Roman contributions were collected.

#### "SONS OF THE WOLF"

"Sons of the Wolf" at six, young Italians are never thereafter outside Fascist organization. Schools increase, instilling childhood beliefs that individual freedom and private rights are always subordinate to duty and sacrifice to the State. The younger generation is devoted to Fascism with all the passion of its Latin blood (Plates III, IV, VI and pages 270, 280, 281).

I watched men playing *barottello*. Graphically this game solved a mystery—why copper ten-centesimal pieces in Rome are so often battered and bent. Scarcely one in a dozen would fit a slot machine.

Six or eight players stacked coins on a stone, retreated ten paces or so, and pitched a rock apiece at the heap. Advancing, each recognized his own missile and took what money, if any, lay nearest it. Straws, broken off in bits to become almost caliper-like in accuracy, measured disputed distances.

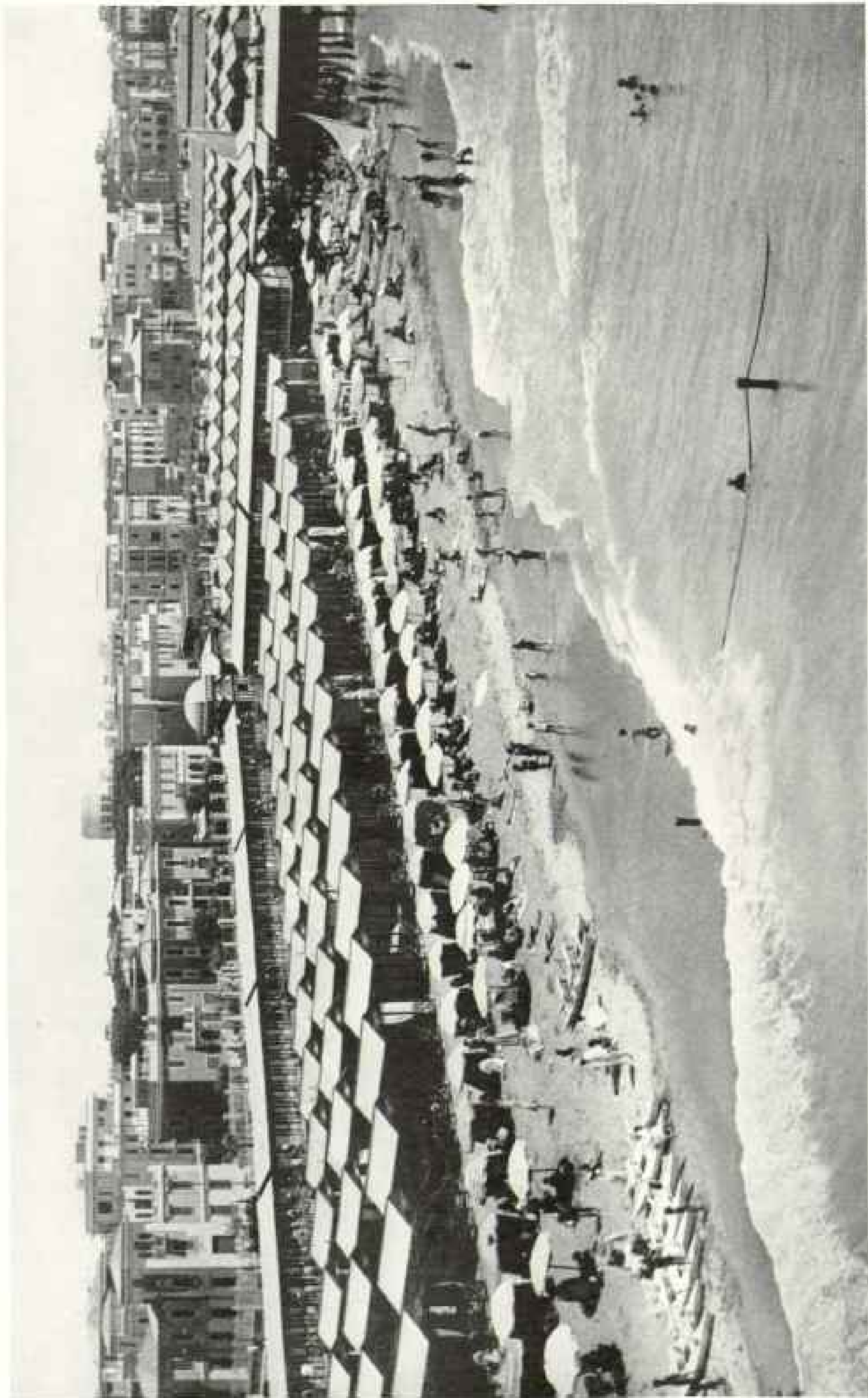
I rested on a fallen stone below a tomb erected in Augustan days by Crassus, "millionaire" of his time, for his wife Metella. Usigli arrived in his Lancia car, bringing Tucci with him.

We followed the ancient Appian Way to its junction with the new. Glimpsing a ragged old wanderer cooking in a tin can by the road, I persuaded beauty-loving Usigli, patriotically reluctant to assist, to halt for a photograph.

The tramp greeted me in English. "I'm American, too," he said. The Italians laughed uproariously.

My countryman talked familiarly of freight trains in the American West. "Eyetalians always give a guy a handout, an'

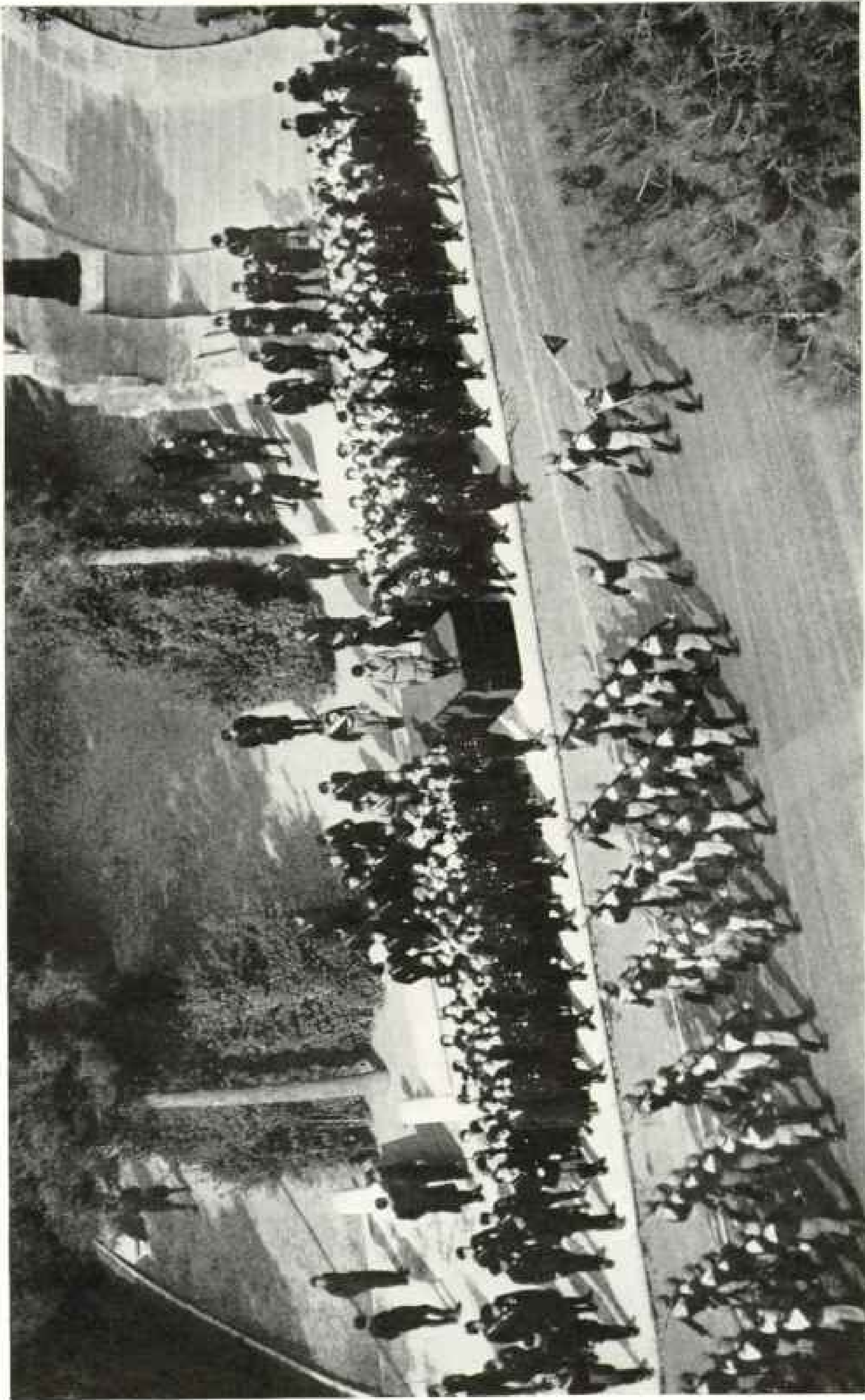




Photograph by LUCE from ENIT

SUN, SEA, AND SAND TEMPT TOWN-WEARY THOUSANDS TO LIDO DI ROMA, ATLANTIC CITY OF CENTRAL ITALY

By auto speedway or fast electric cars, Romans reach this new resort in half an hour from the capital (page 302). Long, low buildings in the background are public bathhouses. In front of these are cabins and umbrellas-tents used for dressing. Drawn up on the beach at the left are small surf skiffs. Not far from here is the scapiano base from which flying boats "sail" for Tripoli, Tunis, Athens, Egypt, and (by connection) for Ethiopia and the Far East.



Photograph by Bernard F. Rogers, Jr.

ARMED STUDENTS DIP THEIR COLORS TO IL DUCE

From the data, Banked by a guard of helmeted militiamen, Mussolini reviews members of the Fascist University Groups on the Via del Mare below the National Monument (Plate I and page 271). Students up to 26 years may join this huge Government-sponsored "fraternity." Their activities include social services, sports training, and study of the aims of Fascism.

you don't hafta chop no wood," he said. "Course, you can't ride no freights."

As we left, I shut the Lancia door with a bang and a crackle of breaking shatter-proof glass. Usigli, laughing again, showed me how, pushed shut with finger pressure, this door touched a hair trigger, releasing a heavy bolt that clicked dully into place from above.

I *would* come to Italy, would I, looking for "local color" and boasting of America's mechanical progress? Usigli was reluctant to accept five dollars for new glass. "My fun is worth more!" he said.

We drove to high Albano (page 275), and to a lake-rim road above it, sunken by use and erosion a yard or two below roots of gnarled and knobby old trees beside it.

As we stood surveying the deep-blue Lake of Albano far below—a miniature of Crater Lake, in Oregon (page 327)—an old peasant addressed us in timid friendliness.

"Over there," he said, pointing, "the Pope lives." At the word *Papa* he took off his hat, replaced it as he continued. "It is Castel Gandolfo, and cool in summertime. *Papa*"—off came the hat again—"is an old man."

We encouraged him. Invariably he doffed his hat at mention of the Holy Father. "Over there," he went on, pointing to the precipitous opposite shore, "was a city once, Rome's enemy. An earthquake threw it into the lake."

#### GHOSTS ROAM LAKE SHORE

There were ghosts, he averred.

"I've seen a man with a white dog, rising out of the water on foggy days. He walks in the woods; when I go near he vanishes. I think he lives in that old city in the lake."

We went to Frascati, perched on a hill-top. Auto rides of Romans often take them there. The Campagna seems a purple sea on days like that, when Rome itself is nearly hidden by the haze.

Interested in the community laundry, I found it by following a young woman with the week's wash on her head. Children tagged behind her. They liked the laundry; somebody was always there to play.

Forty women worked and gossiped in a large, roofed-over enclosure. Using rough yellow soap, they rubbed and pounded clothes on the inwardly slanting top of a wide wall circling a concrete wash tank. Water poured in from a smaller rinse tank on a slightly higher level, where it had come directly from the town supply.

That night I went to the opera house in Rome. My seat in the topmost gallery cost about a dollar. Only there could I sit without full dress. Prices for that performance went to 400 lire (\$32) for boxes.

On the ceiling swans, mermaids, peacocks, cherubs, leopards, Egyptian slave girls, and Roman warriors cavorted around a glittering, ornate crystal chandelier as big as the dome of the county courthouse back home. Sixteen others might have been squeezed into as many moving vans. Around gilded tiers of boxes were perhaps 200 still smaller chandeliers.

Directly below me, projecting from the others, was the royal box, surmounted by an enormous golden crown. Eighty musicians sat in the pit. I had never before seen such awful magnificence and gave scant attention to the far-off opera.

There were gorgeous gowns and flashing jewels, snowy shirts and feather fans. Everyone went out between acts for a promenade. Yet not even where I sat did I see one workman's face.

Peasants I had seen on the Appian Way would here have been as out of place as a soldier in the Officers' Club of Rome, where ballrooms, cinema, sumptuous leather easy chairs, books, lights, velvet hangings, fine paintings, champagne, and splendor fill what once was Barberini Palace.

Then I recalled the up-to-the-minute tuberculosis sanitarium I had visited on the Roman Campagna. In the Carlo Forlanini Hospital Italy supplied humblest citizens with up-to-date treatment for a disease long weakening a nation fighting to be strong.

I recalled, too, a day of rambling about the modernistic plant of the University of Rome (page 276). I saw Marconi there. Not even he is too great to lecture to University classes.

Yet Enrico Fermi, physicist who discovered Element 93, could name for me few scientists in Italy who were sons of artisans. It was difficult for peasants' sons to go to the University.

"I know they can in America. That's a fine thing about your country," he said. "Many work their way here, but the State cannot yet afford to educate everyone. Italy is still too poor."

"We must have a strong leader," said a Fascist to me, "for Latins are not Anglo-Saxons. Before Mussolini we had 50 political parties! In America, when many want theater tickets or postage stamps or



Photograph by Fritz Henle from *European*

VAST ST. PETER'S PLAZA COULD HOLD THE POPULATION OF A GOOD-SIZED CITY

Huge colonnades, surmounted by 162 colossal statues of saints, embrace the broad, elliptical court, masterpiece of the architect Bernini, who directed its construction in the middle of the 17th century. Wind-blown spray has made a dark, wet shadow to one side of the fountain (upper left). Points of the compass marked on the pavement around the soaring obelisk help confused strangers to orient themselves. Behind the camera was St. Peter's, largest church in the world.





Photograph by Bernard F. Rogers, Jr.

#### CURIOSITY DRAWS A CROWD AROUND THE CAMERAMAN

The photographer relates: "When I lifted the focusing cloth from my head in the Piazza Vittorio Emanuele, where I had been trying to take a color photograph from the rumble seat of my car, I found these young Romans had unwittingly composed a far more interesting picture."

change at the bank, you form in line by habit. Here it's every man for himself." Ambitious and forward-looking are the works of Fascism, dated like its controlled newspapers, with the year—this is the 15th—of its rise to power.

#### PEOPLE PAY FOR PROGRESS

Interesting to me was the cost. How did this Government finance itself? For anyone to have talked "taxes" in one good lecture might have been construed as destructive criticism, and that is frowned upon. So I learned of only some of them.

Much revenue comes from Government-operated railways, post office, and communication systems, and from tobacco, match, and salt monopolies. Railway fare is reduced on many occasions, but the regular first-class rate from Rome to Naples, 141 miles, is \$8.80 first class, \$5.81 second class, and \$3.52 on the hard wooden seats of third-class cars. In the United States, coach fare for 141 miles is now \$2.82.

Letters sent abroad cost ten cents; post-cards six. Domestic letters are four cents.

An American tobacco buyer told me the

content of the best Italian cigarettes, costing forty cents for twenty, was less expensive than in American ten-cent brands. Other kinds are packed in containers for ten, die-cut from rough wrapping paper often imprinted with advertising.

A can of unstemmed smoking tobacco, somewhat more than an ounce, costs 44 cents. "Penny boxes" of matches sell at two cents, and book matches about the same.

"We get five percent commission on cigarettes, but must handle postage stamps," said a tobacconist. "Business license and tax take much of our profit." I was buying a two-cent refill for my automatic lighter. Tax on the lighter itself would have been \$1.60 had I lived in Italy.

A revenue stamp, costing almost two cents and called a *marca di bollo*, must be used on written documents like hotel bills, statements, and even restaurant checks. It is required on every handbill, for rent sign, even on tiny window show cards.

"This hotel register cost \$40 for taxes," explained the operator of a boardinghouse, "based on the number of its names."



Photograph from Fotoll

THESE STACKS OF IRON BANDS WILL SOON REPLACE WEDDING RINGS

To bolster gold reserves during the Ethiopian War, thousands of ounces of gold—wedding rings and other jewelry, even false teeth—were contributed in response to the Government's plea. Fascist officers here direct the exchange of new rings for old.

Gasoline, before the Ethiopian war, sold at about sixty cents a gallon. When I was in Rome the price was \$1.24 and cylinder oil was in proportion. Horse and buggy days were returning. Horse-drawn cabs were as common in Rome as motorized taxis.

"I pay a fifth of my wages in income tax," a ship's engineer told me, "but of course the rich pay much more. What used to go for my bachelor's tax helps buy clothes for my wife."

Balconies jutting so commonly from building and apartment fronts, and driveways crossing sidewalks into private property, are taxed. At the limits of Italian cities are highway offices, called "Consumer Impost," where revenue from farm products is collected. Wine pays about one hundred per cent. Pork, for example, is taxed, too.

Coffee prices ranged near \$1.25 a pound, and sugar about 25 cents. All Italy likes coffee, and shops use live steam, under pressure, to extract every bit of flavor from finely powdered, long-roasted berries (Plate VI). In Rome, about five cents is the price of a cup containing seven teaspoon-

fuls of sweetened black fluid. I measured it.

I bought my Italian lire for a shade under eight cents, and this bank rate I have used in these figures. Letters of credit sold abroad at a reduced price to obtain foreign funds were not yet available.

I told a Florentine, as we sat in a sidewalk cafe, that I still did not understand where all the money came from. "The works of Fascism are so many, and most people are peasants who do with few taxable luxuries."

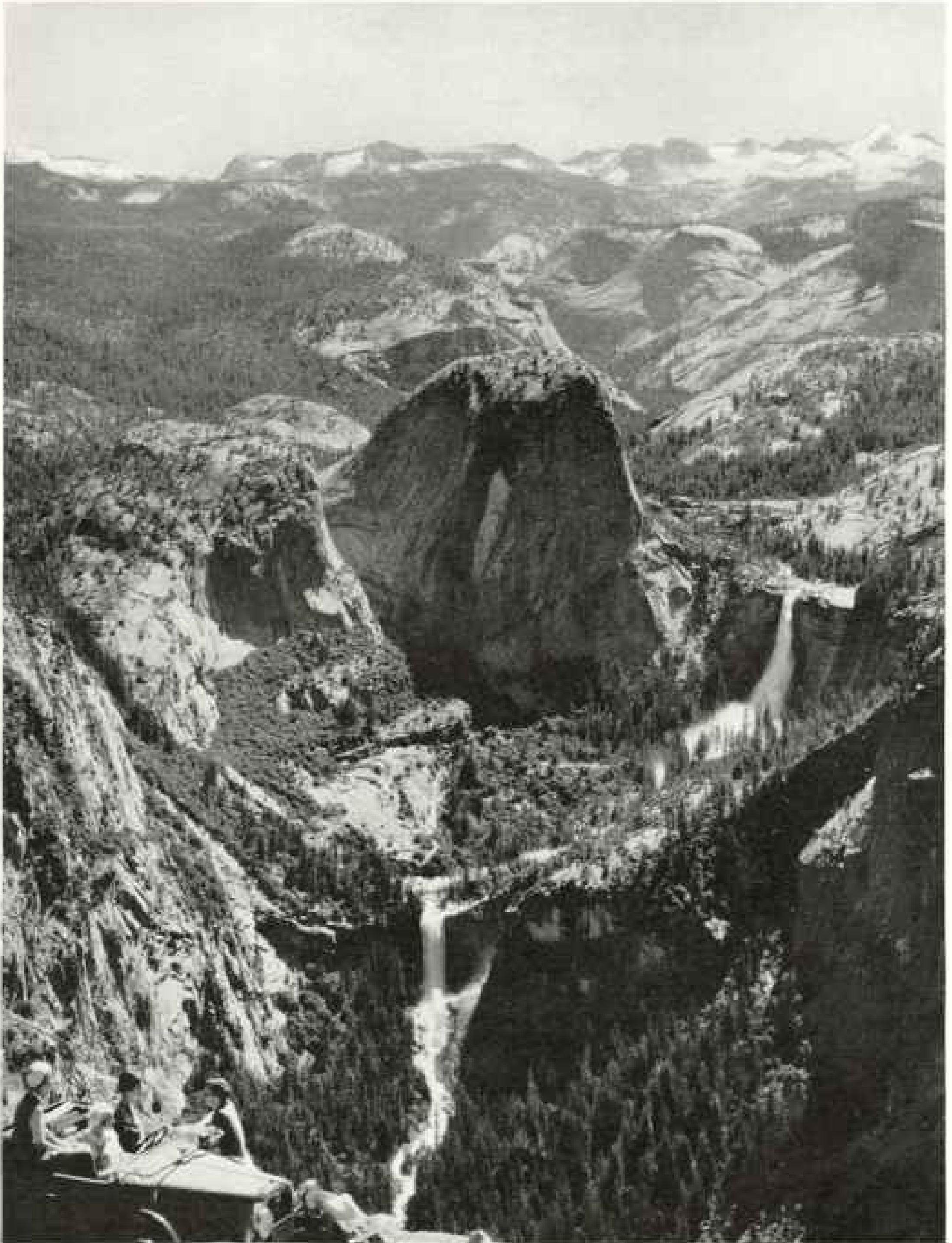
"They pay all they can. We all do," replied this patriotic Italian. "Our family was ten times richer 15 years ago—but those were troubled days. Italy is becoming great again. My *bambino* will see!

"If, having paid small income tax, we have servants and automobiles and go in summer to the mountains, the assessor knows we must pay more.

"Everyone pays justly. Dog taxes are an example. Watchdogs cost only a little; hunting dogs are more."

A tiny Pekingese went by at the end of a fine lady's leash.

"Such dogs pay most of all!"



MERCED RIVER, BORN OF MELTING SNOWS, PLUNGES INTO YOSEMITE VALLEY IN A STAIRWAY OF GRACEFUL FALLS

One of the giant "steps" in the river's canyon is Vernal Fall, over which water cascades 317 feet (foreground). Upstream the river pours over Nevada Fall, at the right of Liberty Cap (center), in a tumble greater than that from the top of the Washington Monument. Visitors are halted at a turn on the road to Glacier Point. Beyond, in the distance, rises the high Sierra.

# CRATER LAKE AND YOSEMITE THROUGH THE AGES

BY WALLACE W. ATWOOD, JR.

*With 13 paintings by Eugene Kingman*

TO THE Klamath Indians, who lived long ago in the Cascade Range of southern Oregon, jewel-like Crater Lake in its massive rock setting was a weird and ghostly amphitheater where the gods were forever embroiled in conflict, sporting in the blue waters and dwelling on the highly colored crags of the crater rim. Rarely did these early inhabitants visit the lake, for they believed it to be the home of the gods, not to be molested.

Rumors of the existence of a deep-blue lake early reached the ears of Oregon miners, but its location remained unknown until June 12, 1853, when John Wesley Hillman, leader of a party of prospectors, found the hidden waters.

News of the discovery of Crater Lake spread rapidly throughout the West, but only a handful of travelers made the arduous climb to the crater's rim before the close of the century. In 1902 the area was set aside as Crater Lake National Park; good roads were constructed up the mountain, and now each summer thousands of visitors from near and far view its pastel waters.

## A DRAMA OF THE ICE AGE

Like other visitors to Crater Lake, I was impressed with its deep-blue color and the rare beauty of the precipitous crater walls. But more than that, I wondered how the unique setting had come into existence. What story of earth history was hidden away in the massive rocks which formed the crater rim?

I recalled that Joseph S. Diller, of the United States Geological Survey, had studied the area many years before. After many weeks he had reached the opinion that a large volcano had collapsed to produce the basin now occupied by the lake. Was he right? Could a mountain top disappear and leave a huge caldera more than 4,000 feet in depth?

As a member of the scientific staff of the National Park Service, it was my duty to unravel further the geologic story buried in the rocks surrounding Crater Lake. From my tent tucked away beneath the branches of a mountain hemlock close to the rim,

I could see the lake far below me. Each shift of the winds that ruffled the water produced new shades of blue, and drifting clouds floating high overhead sent shadows racing across the ever-changing picture. When darkness shut off the view, a night-hawk's call alone broke the silence.

The morning sunlight just touched the water as I worked my way along the rim to the Ranger Station. A welcome surprise awaited me there. "Hello, Doc, what brings you here?" came the familiar voice of my old friend and associate, George Grant, the chief photographer for the National Park Service.

I promptly asked him to join me for the day. "Sure will," was his hearty reply. "Maybe I can take some pictures for you."

Nothing could be better. Not venturing to ask outright for his services as a photographer, I had been secretly hoping he would bring his camera.

Within a few steps George saw his chance for a first picture. While he set up the tripod, I clambered down the steep slope of the crater rim. Suddenly I stopped. Before me was a grayish clay containing rounded boulders of many sizes.

Had I seen this in New England, or in some high mountain valley of the West, I might have given it a casual glance, but here on the steep lava walls surrounding Crater Lake it brought me to a sudden halt.

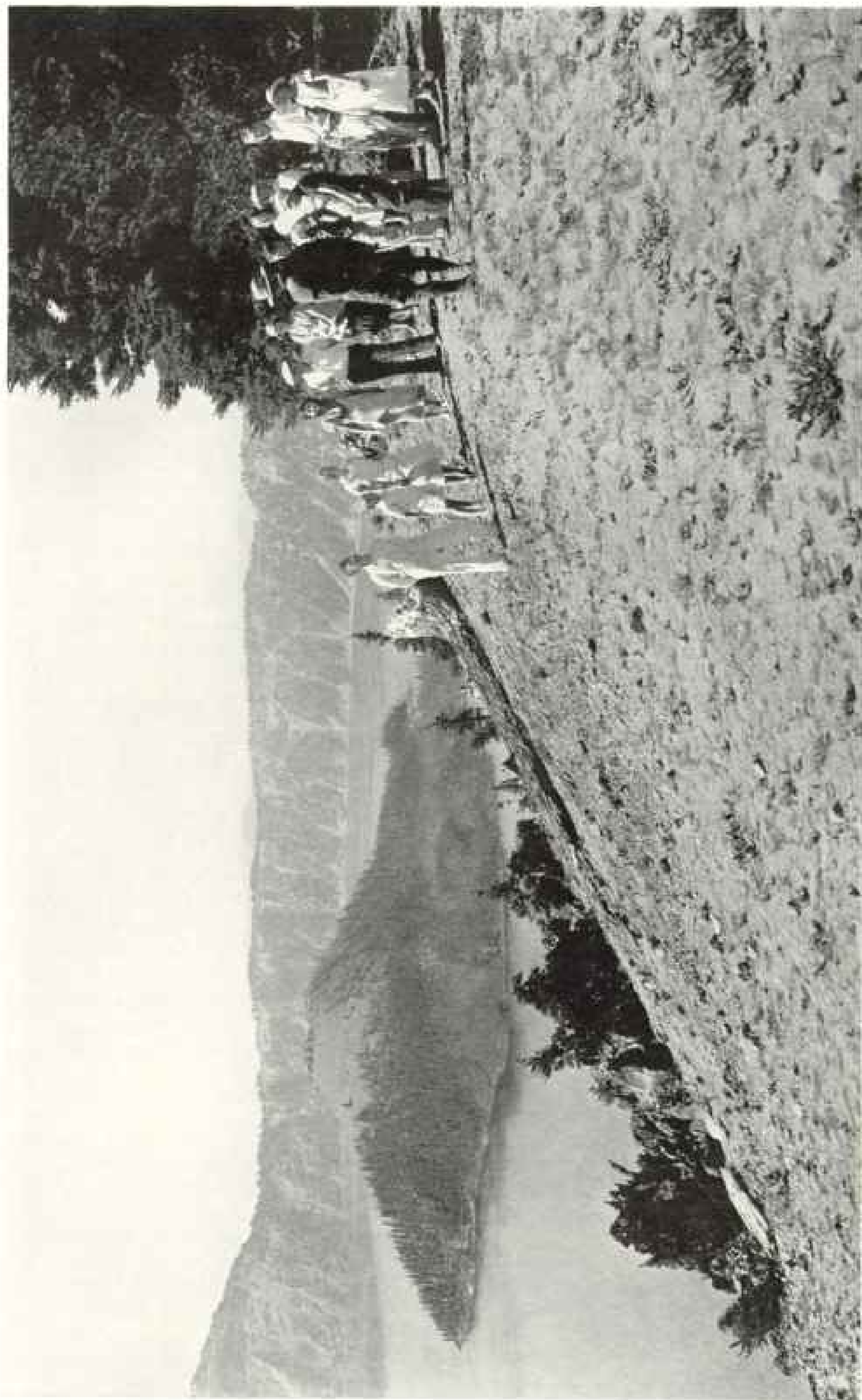
## FINDING GLACIER FINGERPRINTS

Immediately I was on my hands and knees examining the material. The boulders were covered with scratches called "striae," and many of the smaller stones were highly polished.

These and the glacial till\* before me were sure indications of former glaciation, and yet I was inside an ancient volcanic crater from which hot molten rock had once issued. How was I to explain this circumstance? A mystery story was unfolding. To the geographer these scratched stones were clues akin to those that Sherlock Holmes would seize upon.

\* Glacial till is a mixture of stones, sand, and clay deposited by a glacier.





Photograph by Grant, courtesy National Park Service

#### A PARK NATURALIST TELLS THE STORY OF CLATER LAKE

To many visitors the morning hikes along the rim are highlights of the trip. Rangers who have studied the geology of the area explain rock formations and answer questions. Wizard Island, with its barren top above the trees, looks like a young volcano growing up in the caldera left when Mount Mazama disappeared (page 332, and Color Plate 111).



Photograph by Charles Martin

VERTICAL CLIFFS OF YOSEMITE WERE PRODUCED BY STORMS AND ICE SHEETS OF THE AGES.

El Capitan (left) and Cathedral Rocks, opposite, tower far above the parklike lowland where the Merced now wanders peacefully through rich meadowland (Plate VII). Lofty, swaying waterfalls, such as the Bridalveil (right), enliven the steep walls of the canyon. Unknown to the white man in the early part of the 19th century, it was the stronghold of Tenaya, leader of the Yosemite (grizzly bear) Indians. Captain Boling of the Mariposa Battalion discovered it on March 21, 1851, when he pursued the chief and his warriors to their lair. Congress made it a national park in 1890.



Photograph by Albert W. Stevens

#### AN AIRPLANE VIEW REVEALS THE SECRET OF HALF DOME

From aloft the observer can readily understand how Yosemite has been carved out of the high Sierra by rivers of ice and water (page 343). Cliff faces of this bald giant, towering nearly a mile above the valley, show clearly the marks of the glacier which carved them.

Just then I remembered my friend on the rim and shouted for him to come down. With some difficulty George and the camera reached the level where I was working. We photographed the "evidence" and continued the search for more.

#### A ROCK SANDWICH TELLS A STORY

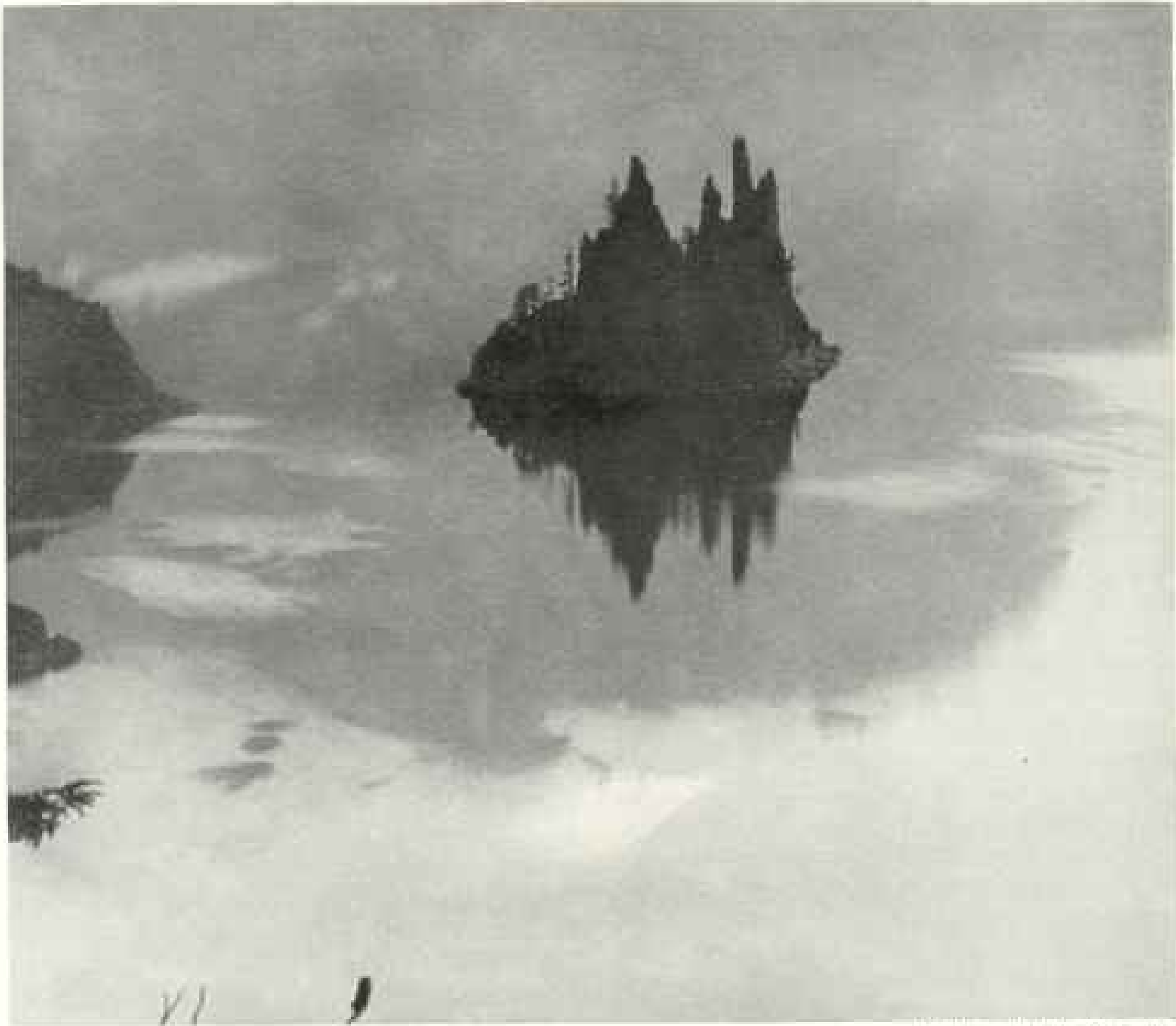
Our glacial till appeared as sandwich filling spread between two layers of lava rock. On the layer beneath the till we found deep scratches produced by a rock-shod glacier as it moved slowly across the lava surface. Where did this glacier come from, and why was material once carried by the ice now sandwiched in between layers of lava? If we could answer these questions, perhaps we could unravel the story of Crater Lake.

During the next few weeks we searched the crater walls from top to bottom. It

was not easy to negotiate jagged lava cliffs, but thanks to a strong rope and well-hobbed shoes we completed the work without serious mishap. Our adventures were not in vain, for we found not one but several exposures of glacial material, some of them buried beneath a thousand feet of volcanics.

Like leaves in a book, these geologic formations told a story of periods of vulcanism separated by periods of glaciation.

In a few localities charred remains of trees are interbedded in the volcanic rocks. At one place we saw the trunk of a tree preserved in its original upright position. These records indicate long time intervals during which soils formed, flowers bloomed, and trees flourished, later to be destroyed when molten rock and volcanic ash buried the landscape. Some day, when the carbonized remains are accurately identified by the paleobotanist, we may know much



Photograph by R. H. Cook

PHANTOM SHIP APPEARS SUDDENLY LIKE A FIGMENT OF A DREAM

Cruising around the southern shore of Crater Lake, one does not see this craggy island, camouflaged against lava cliffs, until suddenly the rocks seem to leap from the shore to rest upon the quiet surface of the lake.

more of the early forests of this region.

We also discovered that the layers of lava sloped gently away from the rim—another clue. Surely, we said, this indicates that the vent of an ancient volcano, the volcano that belched forth this lava, once existed above the present lake. Here was tinder to fire the imagination.

Diller's mystic mountain, Mazama, had then really existed. What had happened to this mountain? Where had it gone? What was its appearance in the days when those charred bits of wood were living tissue in mighty tree trunks? How did it look when glaciers moved down its slopes?

Gradually, as the evidence accumulated, it became possible to reconstruct the story of the past. Each piece of evidence served as a magic clue to a marvelous story of earth history. This epic is illustrated in a series of paintings by Eugene Kingman. With

his aid it has been possible to go beyond the realms of photography and reproduce the ancient landscapes interpreted from the geologic records.

In the first painting of the series Mount Mazama is pictured as a youthful, active volcano (Plate I, upper). Frequent eruptions caused layer after layer of lava to pour out on its slopes.

During this period most of the volcanoes of the Cascade Range were active and building up their cones. Lava flows spread over the regions to the north and east, forming extensive plateaus. Forces deep within the earth prepared tremendous amounts of molten rock with which to mold the landscape of our Pacific Northwest.

In time Mount Mazama rose high enough to force moisture-laden westerly winds to rise, chill, and give up the water they had gathered over the Pacific. Heavy rains



and snows fell upon the mountain slopes. While the volcano remained inactive, snows persisted throughout winter and summer.

A visitor to the mountain in that day would have had as few reminders that he was climbing a volcano as he might experience today in ascending Mount Hood or Mount Rainier. The young volcano was then the abode of living glaciers which were to leave their imprint on the rocks of the region (Plate I, lower).

#### A MONARCH OF THE CASCADE RANGE

Some may ask, "Why is Mazama pictured as a high mountain?" The glacial story supplies the answer. By careful observations geologists have estimated that glaciers did not form in this part of North America much below 8,000 feet. If this be true, Mount Mazama should have attained at least that height before its first glaciers formed. At its final stage, climax of a long period of volcano building, the mountain probably reached an elevation of at least 10,000 feet (Plate II, upper).

When at last lavas ceased to flow from the crater of Mount Mazama, ice and snow again enveloped the mountain. The increased height of the volcano caused heavier snowfall, and glaciers larger than those of the earlier period spread far down the mountain side to points five miles from the present rim. The broad valleys sculptured by the ice remain to the present day as reminders of the final stage in the glacial history of the mountain (Plate II, lower).

In placing a small cone on the western slope of Mount Mazama in the third and fourth paintings, the artist was guided by an interesting record visible on the rocks of the present rim. This consists of glacial scratches so oriented as to prove that ice must have radiated from two separate cones, the larger over the center of the present lake, the smaller approximately two miles to the west.

The smaller cone, called Little Mazama, was directly over the site of Wizard Island, a volcanic cone of more recent origin which now rises above the surface of the lake. The relative position of Little Mazama and the present island is certainly no mere coincidence. Renewed eruptions from the vent, which earlier supplied the material for the secondary cone, in later times undoubtedly built Wizard Island.

In the centuries which followed its final glacial stage, Mount Mazama underwent a profound change. The whole top of the

mountain disappeared. Approximately 13 cubic miles of material were removed. Could an explosion have caused this great destruction, or did the volcano collapse and swallow its head?

In seeking an answer to this important question we turn to Alaska, where a terrific explosion in the early summer of 1912 destroyed Mount Katmai.\* Here the remains of the former volcano are scattered over the surrounding country. If this history occurred at Crater Lake, we should find fragmental material near the present depression. The absence of such debris throws doubt on the "grand explosion" theory.

It may be that Mount Mazama, like Kilauea in Hawaii, had a broad crater which gradually enlarged, through a caving-in process, to form the present deep depression. Possibly a combination of explosion and collapse produced the caldera. Although several theories have been proposed, the disappearance of Mount Mazama is still shrouded in mystery.

The early history of Mount Mazama suggests that possibly Mount Rainier, Mount Hood, Mount Shasta, and other volcanoes of the Cascade Range are in the midst of similar careers. Suppose Mount Rainier, today a dormant mountain, should eventually resume eruption and destroy the glaciers which now radiate from its peak; possibly this has already happened several times in the early growth of the mountain.

If the summit of that volcano should suddenly disappear, leaving a giant caldera in the base of the mountain, a landscape history similar to that of Mount Mazama might be revealed.

From the summit of Union Peak, a few miles southwest of the crater rim, it is possible to reconstruct in imagination the mighty mountain of Mazama which for many centuries dominated the landscape. In spite of the many changes during the disappearance of the volcano, the broad, ice-formed valleys may be easily recognized where they notch the rim of the caldera (Plate III, upper).

\* See "Valley of Ten Thousand Smokes: National Geographic Society's Explorations in the Katmai District of Alaska"; "Valley of Ten Thousand Smokes: An Account of the Discovery and Exploration of the Most Wonderful Volcanic Region in the World"; "Ten Thousand Smokes Now a National Monument," and "Our Greatest National Monument" by Robert F. Griggs, in THE NATIONAL GEOGRAPHIC MAGAZINE for January, 1917, February, 1918, April, 1919, and September, 1921, respectively.

## CRATER LAKE AND YOSEMITE THROUGH THE AGES



A MIGHTY VOLCANO ONCE SEETHED WITH FIRE WHERE MYSTERIOUS CRATER LAKE GLISTENS TODAY

Many thousands of years ago molten rock from deep within the earth poured forth to build in the Cascade Range of southern Oregon lusty Mount Mazama, which the artist has re-created from geologic records. Its frequent explosions buried the surrounding landscape beneath pumice and ash, to be turned by the alchemy of millenniums into soil of remarkable fertility.



© National Geographic Society

Paintings by Eugene Kingman

### GLACIERS WERE BORN ON THE SLOPES OF THE VOLCANO

Continued outpourings of lava raised the mountain to at least 10,000 feet. Snows fell, massive layers of ice formed during periods when the subterranean fires were banked. But the record of these glacial caps is now buried under a thousand feet of rock, later poured in molten state from the crater.



FIRE-BREATHING MAZAMA GREW TO MAGNIFICENT STATURE

Slow but persistent volcano building gradually lifted the mountain higher and higher. A secondary cone developed on its western slope. Whenever the giant was dormant, glaciers cooled its head, and forests mantled its slopes, only to be destroyed at the next eruption.



© National Geographic Society

Paintings by Eugene Kingman

THE VOLCANO SMOLDERS BENEATH ITS ICY COVER

When the lava cooled, vast rivers of ice formed on top and moved in resistless majesty down the slopes. Broad valleys that remain today are verdure-clad reminders of the last glacial stage in the history of Mount Mazama.

## CRATER LAKE AND YOSEMITE THROUGH THE AGES



### ALL THAT NOW REMAINS OF THE MAJESTIC MOUNTAIN.

Relentless forces leveled the towering peak. The top of Mount Mazama disappeared by explosion or gradual sinking, leaving a giant caldera six miles across and four thousand feet deep. Rains and snows have filled this huge depression with the waters of Crater Lake.



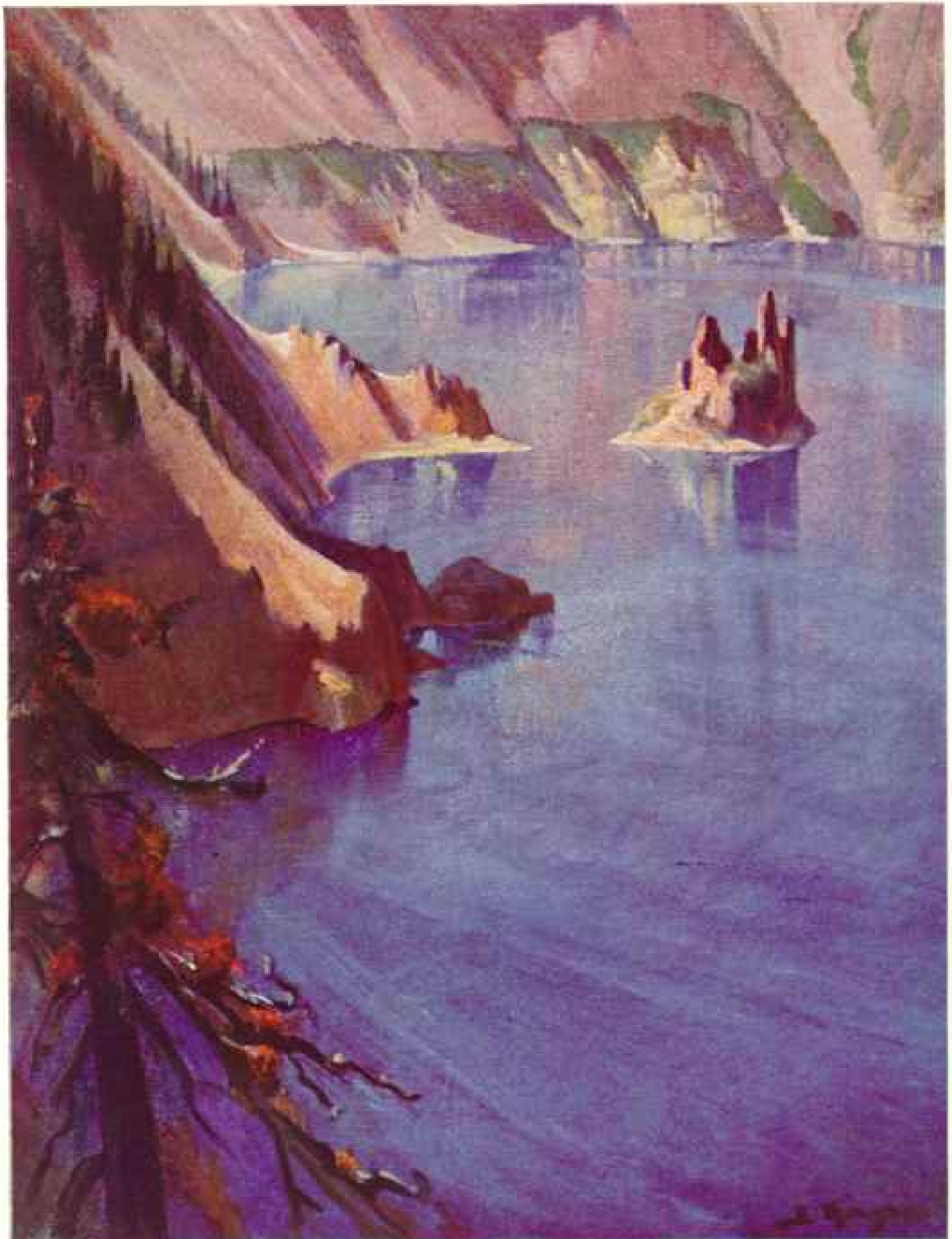
© National Geographic Society

Paintings by Eugene Kingman.

### INCREDIBLY BLUE, CRATER LAKE SPARKLES IN ITS ROCKY SETTING

Sheer walls rise in some places 2,000 feet above the water. Graceful hemlocks, clinging to the rim, soften its sharpness with leathery foliage. Clouds that drift above the water send shadows racing across the mirrorlike surface.





© National Geographic Society

Painting by Eugene Kingman

WIND AND LIGHT ARE FOREVER ALTERING THE COLOR OF CRATER LAKE

Like rival artists seeking an impossible shade, they change their palettes with whimsical suddenness. One moment the gold of the sun may lie unbroken on the still water, the next a brush of breeze erases it and leaves a patch of dancing blue ripples. The small, rocky island close to the shore is Phantom Ship.



THE ARTIST ILLUSTRATES THE FIRST CHAPTER IN THE TEN-MILLION-YEAR-OLD  
ROCK STORY OF YOSEMITE

Originally the Sierra Nevada were low mountains, and the Merced River wound sluggishly through a wide valley flanked by rolling hills. The ancestor of Half Dome, in center of the horizon, rose only 1,500 feet above the stream, and none of the picturesque features that now attract thousands of visitors to Yosemite Park had come into existence.



© National Geographic Society

Paintings by Eugene Kingman

SEVERAL MILLION YEARS LATER THE ENTIRE REGION WAS RAISED AND TILTED. In response to this increased elevation the Merced River cut a broad V-shaped valley below its former plain. Such landmarks as El Capitan and Half Dome then became prominent features.



THE FINAL UPLIFT CAUSED THE MERCED TO CUT STILL DEEPER

Thus more than a million years ago, just before the Great Ice Age, was produced the canyon shown in this painting. The higher peaks of the Sierra Nevada became snow-capped, and the lower slopes covered with dense stands of evergreens.



© National Geographic Society

Paintings by Eugene Kingman

THEN A FROZEN SEA HID THE MERCED RIVER AND YOSEMITE VALLEY

Cold, snowy winters and cool summers favored accumulation of snow and ice in the high mountain valleys. Glaciers formed and gradually pushed into Yosemite, burying the canyon. Half Dome, Sentinel Dome, and El Capitan rose only slightly above the frigid mantle.



THE YOSEMITE GLACIERS MADE A LAST ADVANCE

When the frozen sea (Plate VI) had melted away, a smooth-walled U-shaped valley remained. Many centuries later ice came again, further deepened the valley, and polished the steep cliffs. Half Dome and El Capitan stood up boldly.



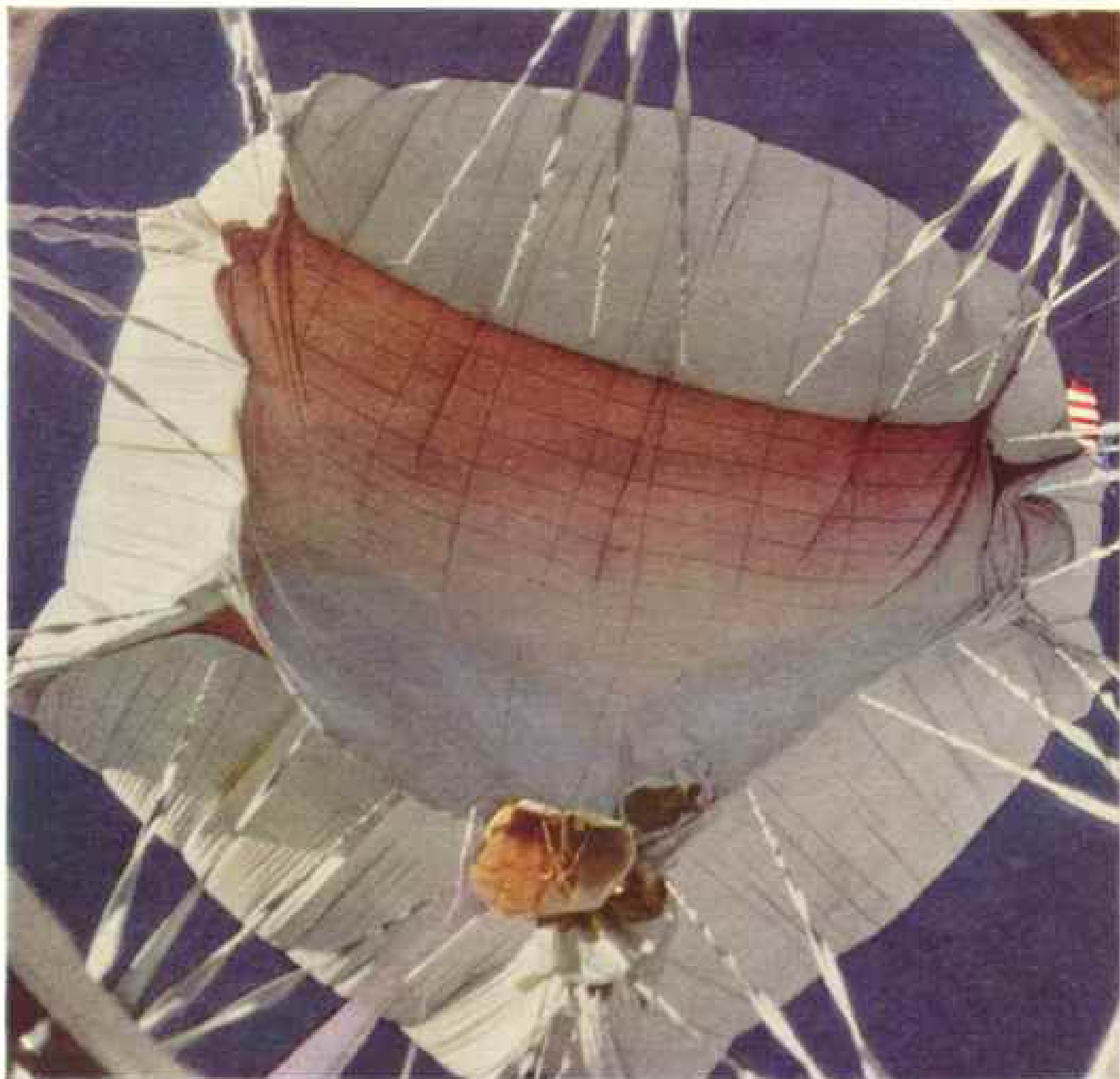
© National Geographic Society

Paintings by Eugene Kingman

LAKE YOSEMITE REFLECTED THE GRANDEUR OF ITS WALLS

The debris left by the glacier impounded a large lake which remained for several centuries to grace the valley. But silt gradually filled the shallow basin and produced a broad lowland, now the site of National Park headquarters and of hundreds of tents and cabins that visitors enjoy.





© National Geographic Society

Photograph by Major Albert W. Stevens

#### THE COLOR CAMERA CONQUERS THE STRATOSPHERE

**T**O its string of "firsts" the National Geographic Society now adds the first and only natural-color photograph to be taken in the stratosphere.

In the past The Society's widely traveled photographers made the first natural-color photographs in the Arctic, taken by Jacob Gayer and Maynard Owen Williams, and reproduced in *THE GEOGRAPHIC* March, 1926; the first autochromes undersea, by Charles Martin, in January, 1927, and the first aerial color pictures, by Melville Bell Grosvenor, in September, 1930.

On November 11, 1935, at an altitude of approximately 8 miles above sea level, Major Albert W. Stevens pointed his National Graflex camera straight up through the glass porthole in the top of the gondola and made this Duifaycolor film of the balloon *Explorer II*. Here the great bag looms pinkish in the bright sun, not fully extended to its spherical shape. The bag hides the heavens directly overhead and only patches of sky, 51 degrees from the vertical, may be seen in the picture.

To the balloonists the sky appeared normal

blue at the horizon, but higher it became steadily darker and darker.

Dangling from the balloon (lower center) are the appendages, fabric tubes through which gas can escape when the bag becomes fully extended. The radiating lines—from one of them the American flag flies—are heavy canvas tapes by which the gondola was suspended from the balloon.

The National Geographic Society has just published a series of Technical Papers giving a detailed report of the scientific findings of this National Geographic Society-U. S. Army Air Corps Stratosphere Flight over South Dakota, when the world's altitude record of 72,395 feet above the sea was reached. The 278-page volume contains 32 papers recording the flight's scientific results and describes the equipment, instruments, and all the apparatus carried by *Explorer II*.

Illustrated with 211 photographs and diagrams, this book contains in addition a photographic supplement 17 by 24 inches showing the lateral curvature of the earth. Copies may be purchased by members from The Society's headquarters, Washington, D. C., for \$1.50 a copy, postpaid.

Far away in the Alaska Peninsula two volcanoes await careful study by the geologist. One of these, Aniakchak,\* has a caldera nearly seven miles in diameter on the floor of which is a small cone closely resembling Wizard Island. Veniaminof has a crater rim more than 6 miles in diameter. Within its huge depression lies a large ice field whence tongues of ice radiate outward and across the rim.

The similarity between these Alaskan volcanoes and Mount Mazama commands the attention of the scientist. Did these mountains pass through the same sequence of events as that recorded at Crater Lake? Were they once higher than they are today?

When Mount Mazama's stormy history ended, a lake formed in the bottom of the caldera. Today this body of water maintains a relatively constant level, although no streams enter or leave the depression (Plates III, lower, and IV).

All visitors marvel at the lake's vivid blue color. Some believe that minerals in the water account for this, but analysis indicates that the water is remarkably pure. Some believe the blue is the sky's reflection, but the water is blue, rain or shine. Others think the color may be due to a diffusion of light and intensification of the blue portion of the color spectrum. As yet, the blue of Crater Lake, like the disappearance of Mount Mazama, remains a mystery.

#### YOSEMITE HAS A DIFFERENT STORY

Many miles to the south of Crater Lake, in the high country of the Sierra Nevada, California, a very different story of earth history has been recorded. Instead of a mighty volcano built up by repeated outbursts of molten rock, we see the valley of Yosemite carved by streams and glaciers.

Today this land is one of our national parks. Each year more than half a million visitors revel in its glory. Many come to enjoy the scenery of the valley, some seek its gracious climate, and others find enjoyment in understanding its geologic past.

I entered Yosemite by the John Muir Trail after traveling several weeks by pack train in the high mountain country south of the park. My first glimpse of the canyon was from one of the high granite cliffs east of Half Dome. As I looked at this majestic form, I had a desire to scale its steep walls

and see more of the huge canyon cut so deeply into solid granite (page 330).

Seated on the brink of a cliff overlooking the valley, I attempted to unravel Nature's handiwork, which I knew was recorded in the landscape. I saw waterfalls leaping from valleys which seemed to end in mid-air; I could see the tiny Merced River more than 3,000 feet below me (page 326). Could this stream have cut the canyon which lay before me?

I recalled the story told by François E. Matthes, eminent scientist of the United States Geological Survey, of a great ice age when Yosemite Valley was filled with a giant glacier which moved slowly toward the lowlands to the west. Was it, then, the work of this ice which produced Yosemite? No, not entirely, for streams had played their part long before the ice came.

Most visitors to the park enter from the west, passing between El Capitan and Cathedral Rocks (page 329). These granite forms tower 3,000 and 2,600 feet, respectively, above the valley bottom. Once through this gateway, the visitor finds himself in a magnificent canyon cut in the granite rocks of the Sierra. At his left are Yosemite Falls, ribbons of white descending the sheer granite cliffs.

After a brief visit to Mirror Lake, where Half Dome casts its reflection in the quiet waters, he proceeds to Inspiration Point high on the side of the canyon at the other end of the valley. Across the valley are the snow-capped peaks of the Sierra.

Yosemite seems no longer the isolated canyon held in by giant walls, but instead a part of a glorious landscape, an interesting bit of the grand Sierra Nevada panorama. The mighty El Capitan, which rose so abruptly from the valley floor, blends into the upland country as if it belonged to the mountain landscape rather than to the valley. Half Dome appears as a low mountain rising above the gently rolling upland.

I overheard one visitor say as he stood at Inspiration Point, "It looks as if Yosemite Valley was cut right out of a mountain."

He probably did not realize how truly he had spoken.

Frequently I have heard the question, "Where is the other half of Half Dome?"

For many years the origin of Yosemite Valley remained unknown even to the geologists who visited the region. All attempts to shape its history were incomplete and based upon meager information. It was

\* See "World Inside a Mountain," by Bernard R. Hubbard, in *THE NATIONAL GEOGRAPHIC MAGAZINE*, September, 1931.



Photograph by Ralph Hopewell Anderson

#### HOW HAVE THE MIGHTY FALLEN!

Far from the wild state when it foraged for food, the black bear has become a beggar, posing in the hope of getting a taste of sweets and raiding garbage cans. In Yosemite National Park visitors are cautioned not to feed these animals. A bear is quick and strong, and even a scratch from its sharp claws is serious.

Mr. Matthes who finally solved the mystery. He visited every valley and mountain fastness. He examined every bit of ground in his search for the pages of Yosemite's history.

On the uplands above the present valley he found remnants of earlier valleys once occupied by ancestral streams. On the granite walls that rise almost vertically from the valley floor he detected scratches produced by glacier ice. All around him were the tools of mighty glaciers which once filled the valleys of the Yosemite region. High on the mountains were the broad valleys down which the ice had moved.

Let us close our eyes on the landscape of today and go back to a time ten million years ago.

The ancestor of the Merced River meandered through a broad valley in a region of low hills (Plate V, upper). Instead of the present invigorating climate, an enervating subtropical type with high temperatures and heavy rainfall prevailed. The entire area was densely covered with rain-loving vegetation. Evergreens had probably not yet developed in that early period of Yosemite's history.

In response to an uplift of the entire region, the Merced received a new lease on life and the climate became cooler. Instead of the subtropical growth of the earlier period, a forest of hardwoods and evergreens, including the first sequoias, covered

the landscape (Plate V, lower).

Several million years later the Sierra Nevada attained approximately its present height and the Merced River cut a deep canyon in the granite rocks of the range. The lower slopes were covered with dense stands of evergreens. Tall sequoias graced the forest landscape (Plate VI, upper).

The narrow, rugged canyon of the Merced was to undergo still further transformation. High in the mountains to the east heavy snows fell during the winter months, so deep that the summer sun could not melt them. Continued snowfall produced glaciers, one of which completely filled the valley of the Merced (Plate VI, lower).

This icy mantle which enwrapped the Yosemite region for several thousand years

accomplished remarkable results. It obliterated the sharp turns of the Merced River. The jagged edges of the narrow canyon were worn off.

Scouring its path, the rock-shod ice carved the steep northern face of Half Dome (page 330), and created hanging valleys from which today beautiful waterfalls pour forth and leap into the master stream far below.

Twice again glaciers visited Yosemite Valley. During the last stage the terminal margin of the ice lay just west of El Capitan (Plate VII, upper). The valley was deepened and the steep walls were resmoothed and repolished.

The vegetation at this time, approximately 20,000 years ago, consisted in the main of types now growing there. Pine, fir, and the giant sequoia flourished.

With the disappearance of the last Yosemite glacier a beautiful lake came into existence. Had the ice left a higher barrier, this ancient Lake Yosemite might have remained to grace the valley today (Plate VII, lower).

#### THUS NATURE FASHIONED A SCENE OF IMPRESSIVE GRANDEUR

No major change has since affected the landscape. A scene of impressive grandeur awaits the visitor.

Early belief that Yosemite Valley was the result of some catastrophic dislocation of the earth's crust is no longer accepted.



Photograph from M. Hall McAllister

#### EVEN WITH HANDRAILS IT'S A HARD CLIMB

To reach the top of Half Dome, 8,857 feet, hikers in rubber-soled shoes toil up a trail of zigzag steps cut in the smooth granite, then pull themselves up the last 300 yards by cables strung on firmly anchored posts. If the scaling equipment were not removed each autumn, it would be swept away by snow avalanches.

Instead, Yosemite's long record, when rightly read, shows that changes in elevation, and the slow but persistent work of running water and moving ice have wrought the marvel.

A visit to Yosemite National Park compels at least an hour of meditation and reverence at Inspiration Point. Here the artist set his easel and translated to canvas the geologic story of Yosemite.

From this point of vantage, it is not hard for the imaginative visitor to transcend the barrier of time and to slip eons back into geologic history.

By so doing he may visualize the landscapes of Yosemite's past and comprehend the wonders of earth history that Nature has recorded.





Photograph from A. Ferris

IN "TUNIS THE WHITE," SKYSCRAPERS OVERLOOK AN ARABIAN NIGHTS PANORAMA

The old native quarter (below) joins the modern European city along a curving street. Ruled since 1705 by a long line of Beys, Tunisia became a French Protectorate in 1881, with a Resident General whose official home, with its green garden, faces the two-towered Cathedral (right center). Main boulevard of the new city is the tree-filled Avenue Jules-Ferry. At its upper end is the shallow Lake of Tunis, across which a ship canal runs to the sea, about six miles away. A streetcar line to Carthage parallels it. Steamers lie at docks to the right of the domed Customhouse.

# TIME'S FOOTPRINTS IN TUNISIAN SANDS

BY MAYNARD OWEN WILLIAMS

*With Illustrations from Photographs by the Author*

TUNISIA, its fertile vineyards and olive groves clustered between the Sahara and the sea, is an African suburb of Europe. Lying across a strait from Sicily, it almost divides the Mediterranean into two great lakes.

Overnight steamers run from Trapani, Sicily, to Tunisia's capital, which has more Italian residents than all Libya (map, page 349).

No mere group of palm-draped oases is this warm, sunny land. Its wine and oil challenge the growers of France, Italy, and Spain. Another Punic war, this time economic, is on.

After an absence of 13 years I returned to Tunis, which brings the Oriental life, the Moslem veil, shady souks, and peaceful mosques within honeymoon distance of European capitals.

But Tunis, no mere curiosity shop, lives in the present. At the corner of the Avenue Jules-Ferry and the Avenue de Carthage—tree-shaded Times Square of the Tunisian metropolis—part of the city's 46,000 Italians watched red, white, and green flaglets mass closer on a map of Ethiopia. Representatives of the 33,000 Frenchmen of Tunis saw, behind bulletin board news flashes, German feet goose-stepping back into the Rhineland.

Down in southern Tunisia, motor trucks were rushing oil and grain to Ben Gardane, whence silent-footed camels, forgetful of "sanctions," carried provisions across the Libyan frontier toward Tripoli (map, page 350).

## THE CATHEDRAL AND THE MOSQUE

Neither the Casino, nor the electric cars to Carthage, the Viennese lady orchestra in a café, nor the animated promenade along the tree-lined avenue held me for long. I wanted to mingle again with the lean and slippered Moslem: Berber, Bedouin, and Zass.

Strolling through the Porte de France at Tunis, from the European quarter of hats and shoes into the native precincts of fezzes and slippers, I entered another world. Outside is the Cathedral; inside is the Mosque. Outside, tables of machine-made merchandise, soliciting trade on the sidewalks;

inside, tiny shops which entice possible patrons of handicrafts with the insidious hospitality of the coffee cup.

A Christian statue dominates the Place Cardinal Lavigerie where the Moslem dominates the life of Frenchman and Italian, Maltese, Berber, and Jew. Yet, in this land of Cross and Crescent, Christians bled for their faith centuries before Islam passed here on its march toward Spain.

In the heart of the souks, where concentrated perfumes and hand-carved candles, bright slippers and brighter silks, mellow carpets and lustrous copperware hide the nakedness of mere holes in the wall, I sought out a little square with red and green columns, falling arches, and an optimistic array of coffee tables—the slave market.

For every beautiful slave, her blond hair spread wide on brown fingers whose real delight was in firmer gold, there were hordes of pitiful creatures, so shrouded in misery that it is a wonder they could be sold.

In the former slave market of Tunis, I watched American visitors buying jewelry.

## TRIPOLI—AND THE U. S. MARINES

The United States was the first Christian nation to win immunity from the depredations of Barbary corsairs. The *Philadelphia* ran aground on the Tripolitan coast, and William Eaton made his spectacular march of 600 miles across the Libyan Desert, trying to re-establish a friendly Bey in Tripoli.

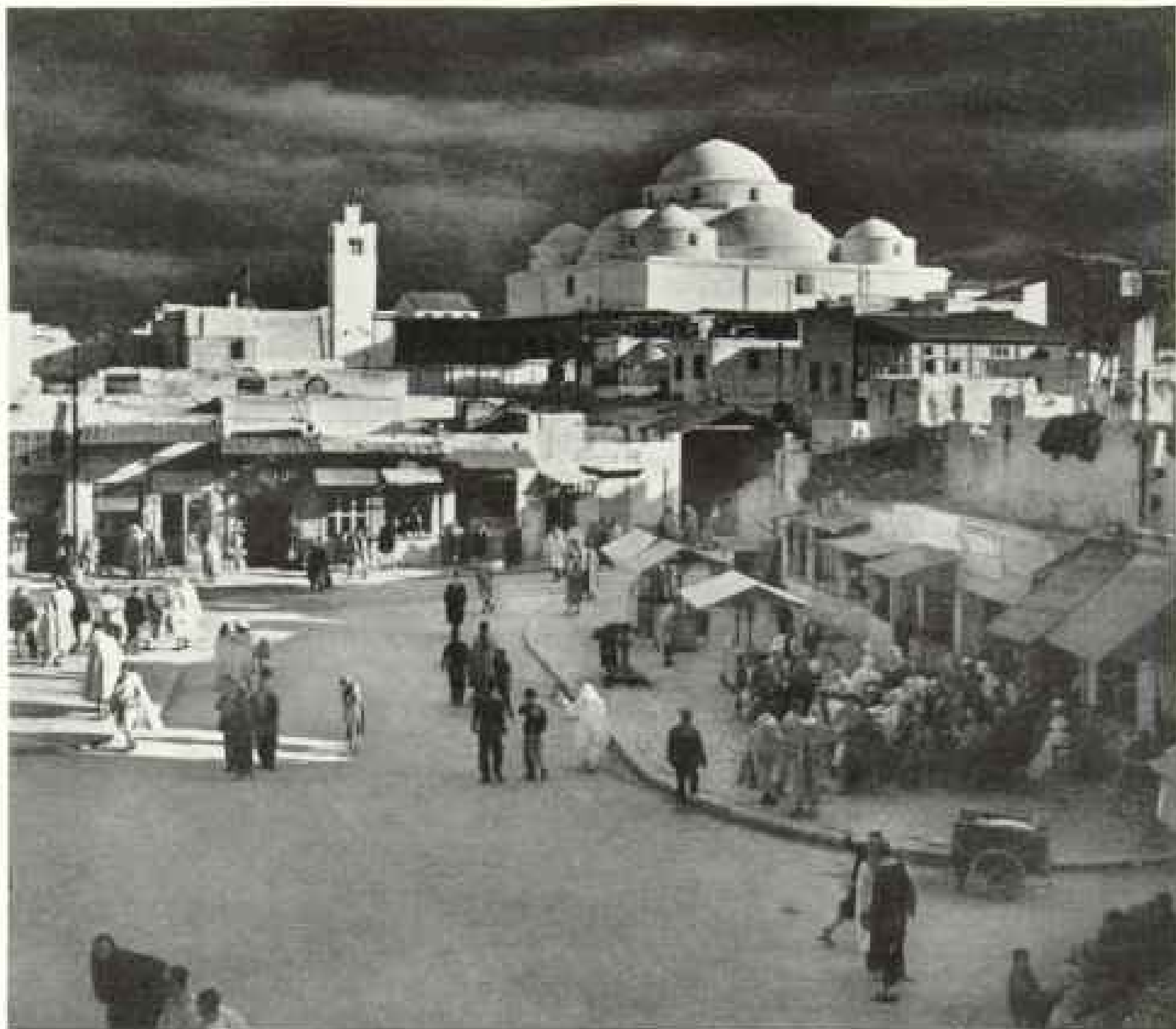
Tripoli's name formerly appeared in the legend on the colors of the United States Marines,\* and still is familiar in the song, "From the Halls of Montezuma to the Shores of Tripoli."

"Old Ironsides" also played a part in curbing the Barbary corsairs.

## "HOME, SWEET HOME"

Another point of pilgrimage is the burial place of John Howard Payne. Three of us rode by in a carriage drawn by two willing little horses scarcely bigger than St. Bernards.

\* See "Flags of the World," by Gilbert Grosvenor and William J. Showalter, NATIONAL GEOGRAPHIC MAGAZINE, September, 1934.



THROUGH STORM CLOUDS, SUNSHINE SPOTLIGHTS THE MOSQUE OF SIDI MAHREZ

Below, as twilight darkens the Place Bab Souïka, cafes are crowded with Moslems who sip coffee over games of dominoes, while bread vendors cry their wares in the street. Not far away is the place where John Howard Payne, American consul at Tunis, and author of "Home, Sweet Home," was buried in 1852 before his body was transferred to Oak Hill Cemetery in Washington, D. C.

"Home, Sweet Home" doesn't stand translation, for the French don't write songs about their homes. They stay there.

Payne's body at last came home. On the simple monument in the cemetery of the little English church at Tunis are these words:

"In the tomb beneath this stone, the poet's remains lay buried for thirty years. On January 5, 1883, they were disinterred and taken away to his native land where they received honored and final burial in the city of Washington, June 9, 1883."

We went on to sun-slashed souk and shadowy shop. Here a bearded Moslem gazes at a chromo of a fair-skinned girl. There a veiled woman fingers a sequined gown, draped from a hanger shaped like the head and shoulders of a bobbed-haired blonde.

Machine-made silks hang side by side with a tapestry, hand-woven by some Zliss tribeswoman generations ago, and passed down from mother to daughter until hunger turned an heirloom into a curio.

#### THE RADIO AND PHONOGRAPH ARRIVE IN THE CITY OF DOMES

Cafe habitués, formerly entertained by lively hips and shrill voices, now solemnly listen to the metallic falsettos of a loud-speaker like a flytrap, or a "phono" horn shaped like a morning-glory.

Above the screeching of orange-sellers, Klaxons, and streetcar wheels in the Place Bab Souïka, camellia-white domes rise like bubbles.

Through a mere alley cluttered by the barrows of vegetable merchants and baskets of those who sell spinach, ground henna, or



A STREAMLINED "SHIP OF THE DESERT" PULLS UP AT BIZERTE'S STATION

Diesel-driven cars called "Michelines" run from Tunis to this ancient Phoenician seaport, now a French naval station and garrison town. On the next track stands an old-fashioned third-class carriage with steps leading to the brakeman's lookout post.

red pimiento dust, I returned to the Place Halfaouine. There, during Ramadan, Moslems fast and sleep by day and gorge themselves by night, glimpsing naughty puppet shows or playing dominoes.

#### A JUMBLE OF ART TREASURES

Such pleasures palling, I rode out to the Bardo Museum, once the secluded women's quarters of the palace of the Beys (355).

Where the Bey's womenfolk lived "like birds in a gilded cage," visitors marvel at the unique treasures of this collection of Punic, Roman, Christian, and Arab art.

This priceless hoard of historic loot would disconcert a modern archeologist, for scant records were made of the exact places and conditions where the relics of long-gone centuries were brought to light. But there they are, in breath-taking quantity and excellence.

Crops and thistles now grow on sites whence these ancient stones came and companion pieces of these matchless mosaics, here polished and protected, now crumble under careless feet at Dougga (page 381), Thuburbo Majus, Bulla Regia, and Sbeitla.

Petrified footprints made by Rome's seven-league boots in Tunisian sands have here been marshaled in a setting of rare charm. Surely not even the chosen ladies of the Bey ever graced these halls as do the gods and goddesses in marble and bronze.

Thirty years ago a sponge diver off Mahdia came gasping to the surface, his eyes dilated with fear. In the shadowy depths he had suddenly met face to face with a mysterious monster. His sceptical comrades, forewarned, dove down. Ignorant though they were, they came up swearing secrecy. For the "monster" was part of





Photograph by Branson De Cou

MEN MASK, VEILED WOMEN SHOW THEIR EYES

In the bright sun, Tunisia men wear dark glasses. At twilight, white-gowned women seem to lack faces entirely because of their black masks. The red tarboosh worn by the passenger, right, is less common here than the motorman's soft round skullcap with its long silk tassel on the far side.



A BERBER VERSION OF "MARY HAD A LITTLE LAMB"

The woolly pet sticks by its mistress in Gabès as faithfully as the lamb in the nursery rhyme. Twilight drives through the oasis, in antique victorias drawn by bony nags, put visitors in the proper mood to appreciate waving palms against the sunset sky.



TUNISIA, AFRICA'S NORTHERNMOST TIP, NEARLY DIVIDES THE MEDITERRANEAN INTO TWO GREAT LAKES

At Cape Bon the continent is only 90 miles from Sicily. Thus strategically located, Tunisia might become a potent factor in a war in the Mediterranean. This former Moslem domain is now one of France's vast North African possessions, which include Algeria and French Morocco. Opposite Gibraltar is Spanish Morocco, where the revolt against the Madrid Government began.

the ancient booty which Sulla shipped home from the sack of Athens. Wrecked off Mahdia, this hand-picked art collection never reached pre-Christian Rome.

LOVE AMONG SEA-SCARRED RUINS

One bronze figure at Le Bardo is a replica of Praxiteles' Eros, and this love is truly blind, for the eye pits lack pupils (page 351). The original, known and described by Callistratus, is lost. And this glorious figure, rescued from the sea twenty centuries after its shipwreck, dominates a series of halls in which Sulla's shipload of loot is now displayed.

Sharp sand proved kinder to the Pentelic marble than the surging sea. A smooth hip, which rested for 2,000 years on a bed of sand, still has a glasslike polish. But where the water, like an acid, pitted the smooth skin, no semblance of the original lines remains. The chaste curve from shoulder to breast, over which some Greek sculptor labored with love, gave way to pock-marked decomposition.

The bronzes suffered less. Dancing

dwarfs still are grotesquely amusing, and a virile figure with stormy hair reaches out to grapple an adversary with the lifelikeness of a slow-motion movie.

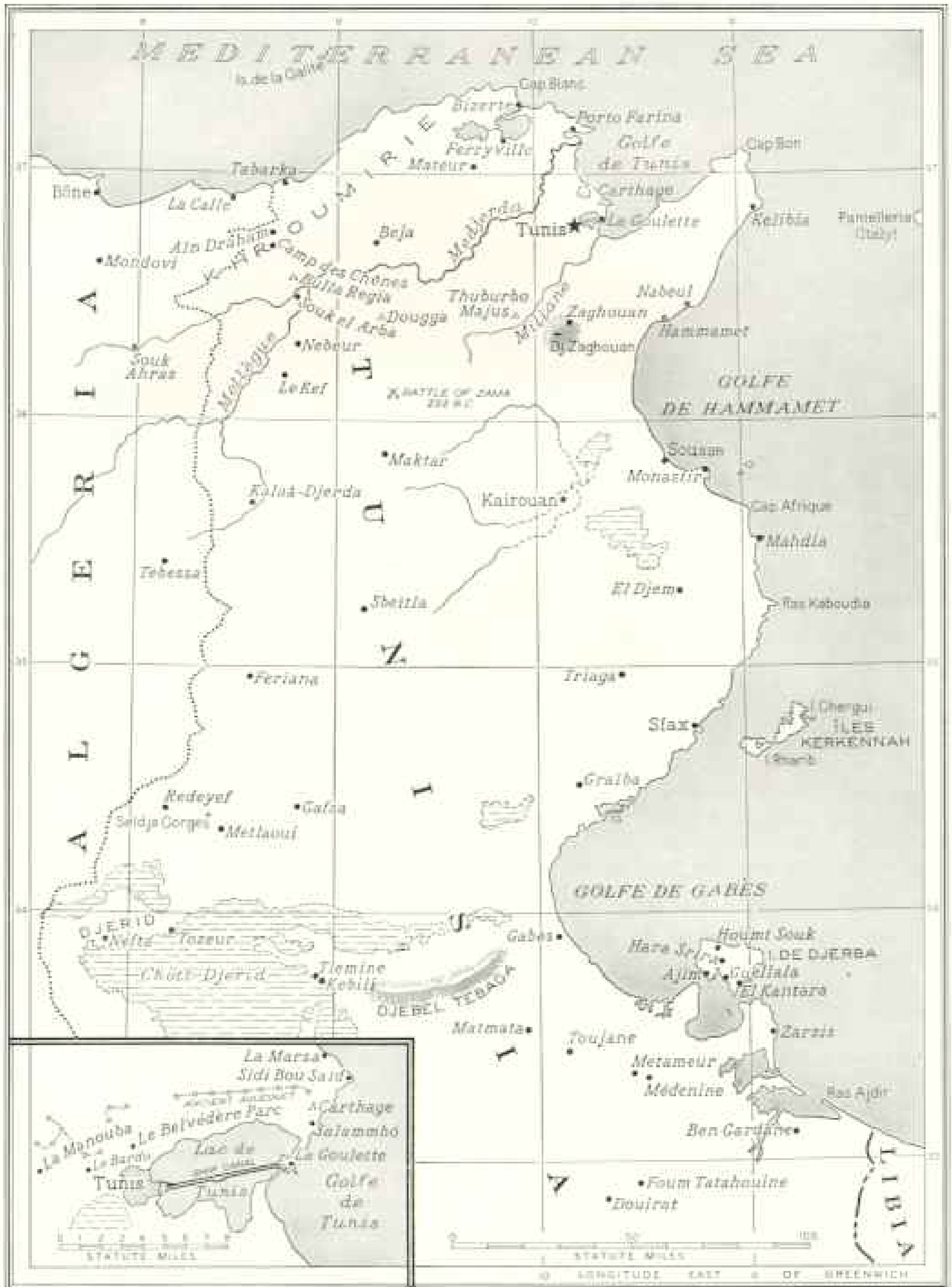
In what was the Bey's banquet hall, a colossal head of Jupiter, itself as tall as a woman, looks down on Neptune's cortège, pictured in a mosaic large as a tennis court.

A mosaic showing the Cyclops working under the direction of Vulcan makes Polyphemus seem like a modern, pictured on a poster twice life size.

Le Bardo's Arab treasures occupy a little palace surrounding a patio which gives the proper note to Moslem tiles, tooled leather, carved plaster and damascened swords. But to bring Arabic art to life one leaves the museums and climbs the hill in Belvédère Park, and there, sitting in a dream of structure, watches the play of sunlight and cloudscape on "Tunis the White."

TO CARTHAGE BY ELECTRIC TRAIN

One goes to Carthage by automobile or electric train. Shades of Dido, Hannibal, and Hamilcar!



SQUEEZED BETWEEN SAHARA AND THE SEA, TUNISIA IS LARGER THAN PENNSYLVANIA

No mere romantic desert land, this rich French Protectorate ships wines, dates, olive oil, phosphates, and other products, some in competition with those of the mother country. Many Tunisian exports to France must pay duty; others, like native rugs, may enter duty free. Tunis, the capital (inset), was a small town when ancient Carthage ruled northern Africa. Sheltered from the sea by a shallow lake, this city of the Beys once derived its main revenue from piracies (page 344).

But for Virgil \* and Gustave Flaubert, Carthage would be deader than ancient Philadelphia, which now is Amman, Trans-Jordan.

Just above the station, in a little garden massed with daisies and geraniums, is a monument to Flaubert. The head, representing the "immortal author of *Salammbô*" (his "*Madame Bovary*" isn't even mentioned in Carthage) is less than life size. But Flaubert's romantic description clothes the city site with an aura of lasting glory.

When I first visited Carthage, in 1923, I wondered how Flaubert, without the advantage of Père Delattre's lifetime of excavations, had brought that historic countryside to life.†

Today, it seems a blessing that the author wrote some 75 years ago, for Carthage is less Carthage now. Stucco villas are crowding closer and closer about the ancient ports and their gardens climb higher and higher on the Byrsa, where the Carthaginians had their fort and temple and around which 700,000 of them had their homes (354).

The site which Dido chose is too blessed by beauty and climate to remain a mere sepulcher for a vanished race which left its most notable monuments on the maps of

\* See "The Perennial Geographer," by W. Coleman Nevils, in *THE NATIONAL GEOGRAPHIC MAGAZINE*, October, 1930.

† See "Ancient Carthage in the Light of Modern Excavation," in *THE NATIONAL GEOGRAPHIC MAGAZINE*, April, 1924.



Photograph from Lehuert

"BLIND LOVE," SHIPWRECKED 2,000 YEARS AGO, STILL SURVIVES

This copy of Praxiteles' statue of Eros, with other art treasures now in the museum at Le Bardo, is supposed to be part of the loot which Sulla, Roman dictator, sent home after he sacked Athens in 86 B.C. The vessel carrying the booty sank en route to Rome, and the bronze God of Love reposed in Davy Jones's locker until a surprised sponge diver discovered the wreck 30 years ago at Mahdia (page 347).

primitive seamanship and ancient world commerce.

Carthage isn't Carthage, and possibly never was. What remains is Punic, Roman, Christian, Moslem, and *art moderne*. Here heavy-footed elephants shuffled down long ramps to their stables and armed men stood watch on walls that seemed impregnable. But the site is a grab bag of history, and unless one is careful he stumbles over anachronisms.



The guardian spirit of Carthage is a novelist's creation, whose name has been appropriated by a seaside suburb. As one rides from La Goulette (the "gullet" of the Lake of Tunis) toward Carthage, the streetcar conductor shouts: "Salammbô." Strangers start at the magic word.

The only Punic relic worthy of Flaubert's heroine is a young priestess with a dove in her hand and her soft robe ending in wings which cross over her limbs. Among the stone ammunition, crude steles, and cinerary caskets of the Punic period, this life-size coffin top stands out like a pretty girl in a morgue.

Revengeful ancients who vowed not to leave one stone of Carthage on another kept their promise, but this lone figure slept on in her hillside tomb and so survived to prove that the Punic traders, who took their art where they found it, were not entirely lacking in taste.

#### ANCIENT CARTHAGE PORTS AGAIN LINKED TO GULF OF TUNIS

The ancient ports of Carthage, long isolated from the sea by the building of a shore road, are again connected with the Gulf of Tunis. In the interests of health, small channels have been dug. The naval and commercial harbors are now connected with the Mediterranean whose Levantine shores bathe the piles of murex shells from which Tyre and Sidon extracted a purple whose memory still colors history.

From the rough stones of the amphitheater rises a white cross.

"Why this modern emblem in this pagan arena?" one wonders. Then he remembers Cardinal Lavignerie, who never lost his historic sense amid his numerous good works, erected this seemingly incongruous cross over a spot where Christian martyrs, to whom that symbol was more than life, were put to death some 400 years before Mohammed was born.

"Carthage must be destroyed" was a grandiose slogan. But Caesar and Augustus had more sense than Scipio. They deliberately restored a ruined enemy to more than its former beauty and Hadrian gave it an aqueduct whose remains still rank among Tunisia's most impressive ancient monuments (page 357).

For miles his high-arched aqueduct stretches above grainfields and grazing flocks, coming from Mount Zaghuan, which provides Tunis, as it did Carthage,

with water. We paralleled it on our way to Kairouan the Sainly.

How describe this holy place created by Moslems, some of whom had seen the Prophet in the flesh? Nothing I had read prepared me for the silence of the Great Mosque, the polychrome tiles of the mosque of Sidi Sahab, the grotesque swords and giant pipe of the Mosque of Sabers, the teeming marketplace of the Rue Saussier, or the relentless irritation of street Arabs begging, "Good day, mister, give me a cigarette."

Once a year the word evidently goes around that the little pests shall cease to pester. And since that luxury comes at a time when Kairouan is at its best, a visit on the last day of the annual Rug Fair is pleasantly memorable (page 372).

Soon after dawn, to receive powder for their salutes, the famous Zlass horsemen assemble beside the circular pool of the Aghlabites. Clad in their best robes and wearing sombreros whose broad brims are held up by ostrich feathers, they seem a docile lot. But when the Resident General's car arrives the tempo quickens.

By afternoon these somnolent horses will be racing at breakneck speed while their riders stand in their saddles, sweep the earth with their heads, do a shoulder stand on a galloping charger, and juggle gun and saber in mimic warfare (page 358 and 360).

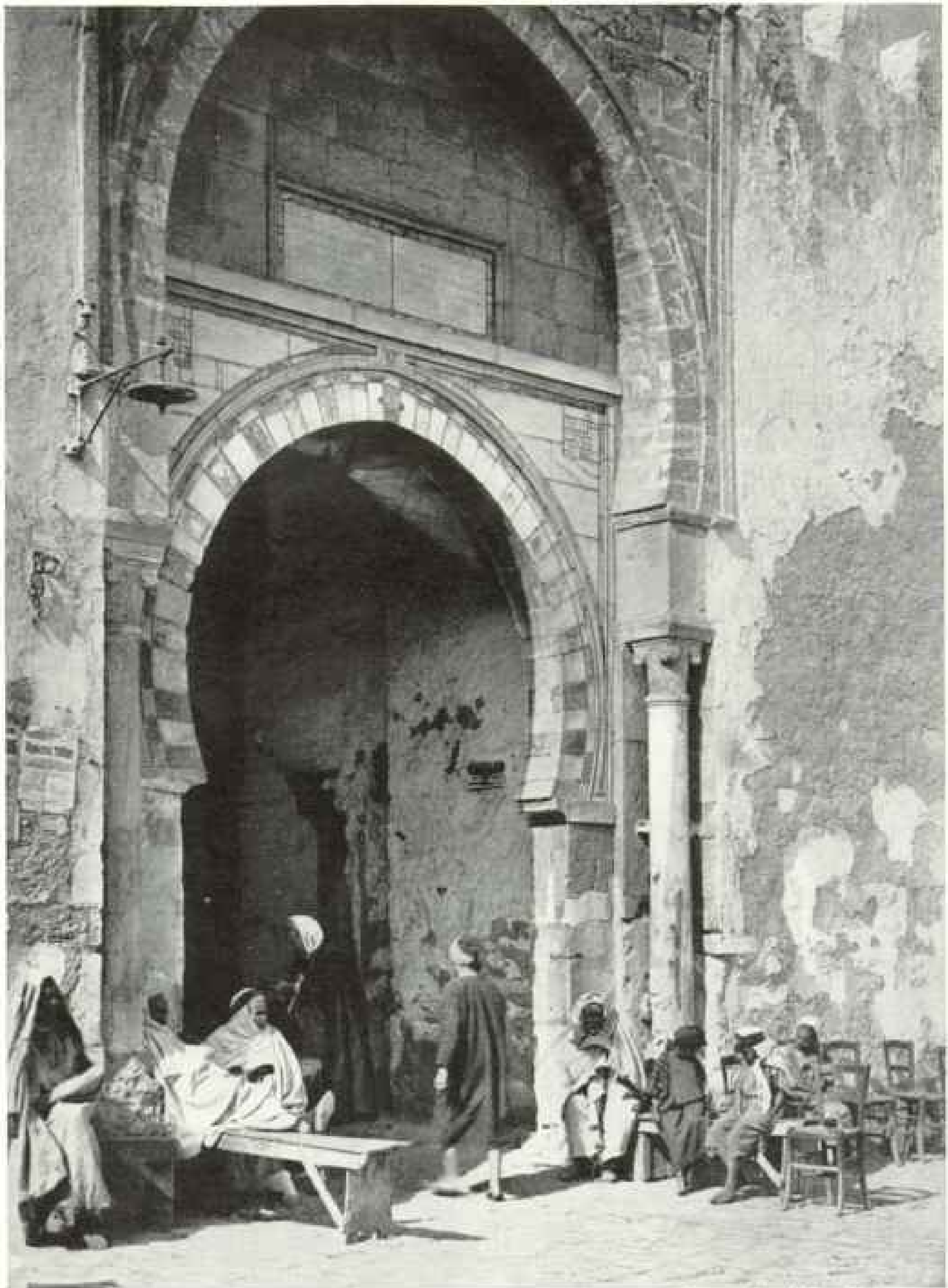
Among the whitewashed graves where the dead huddle as close as possible to the Great Mosque, veiled women stand and cheer.

Eve has not lost her delight in weddings. When the rider sweeps down on a cortège grouped about the silken saddle-tent of the bride-to-be, and an Arab Lochinvar abducts the angel of his dreams from half-hearted defenders, who are probably glad to have it over with, the veiled women ululate their delight. The fact that the silken canopy is empty doesn't spoil the fun.

#### OLIVE OIL FOR BEAUTY PARLORS

Between Kairouan and the southern oases stretches the eastern plain, in which the French protectors take just pride, for they have restored fertility to a region long barren. In neat rows, miles long and 80 feet apart, stand olive trees whose only fault is their fruitfulness.

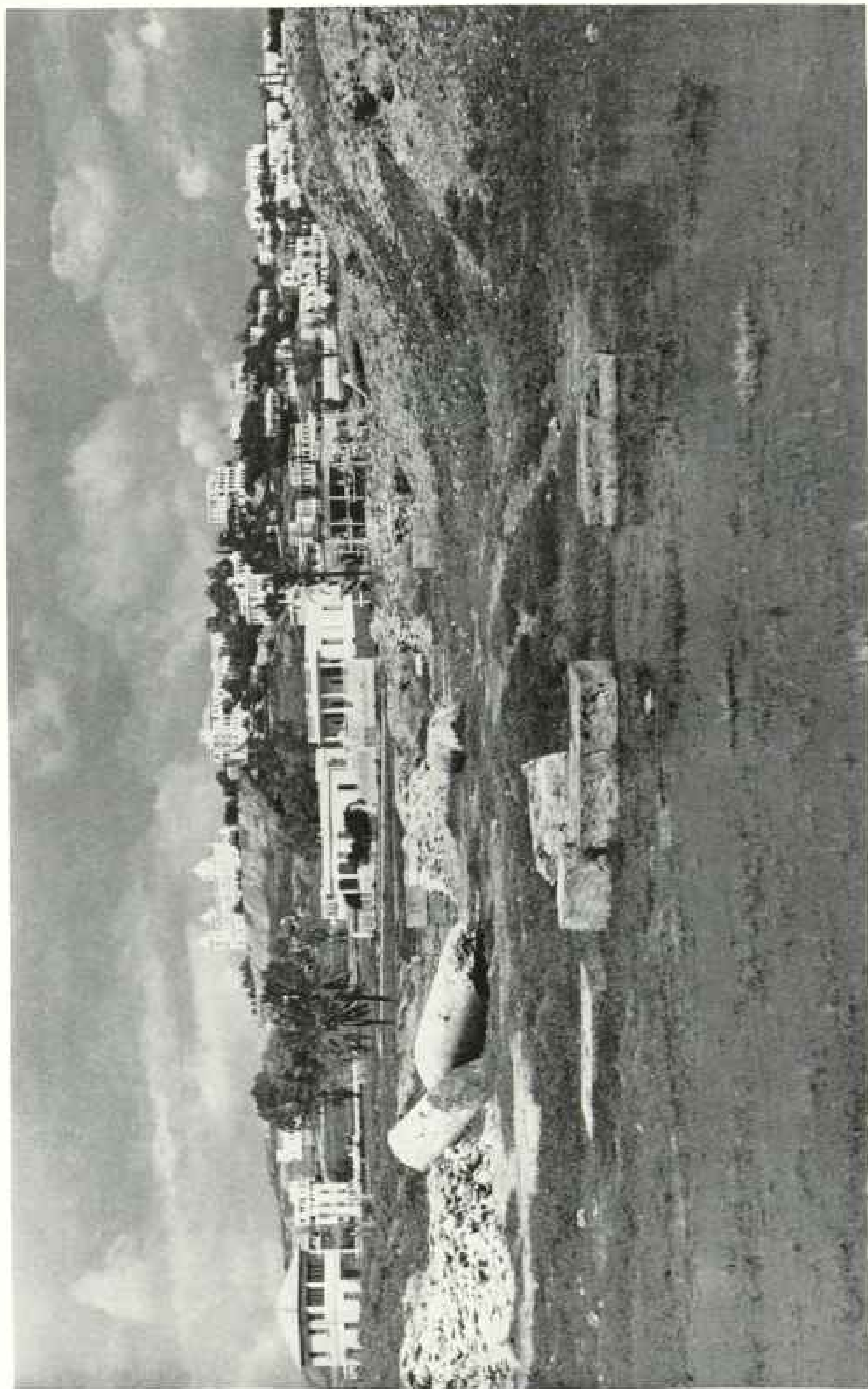
When Paul Bourde, a journalist, convinced of ancient olive production here by the ruins of Roman millstones, brought



Photograph by Martin Hurlmann

STILL HOLY, BUT OPEN TO ALL SINCE 1881, IS KAIBOUAN

Until the French occupation, entrance to this saintliest city of Moslem Africa was by special permission of the Bey. Today, although Unbelievers cannot enter the mosques of Tunis and lesser Tunisian towns, they can visit the principal temples of Kaibouan. To the right of the old city gate, where Arabs drink coffee in the sun, is a column like those that form an antique forest of pillars in the Hall of Prayer in the Great Mosque. Sousse and Carthage and many another ancient town furnished the marble and porphyry of this Holy City.



COMPASSED BY AN OX HIDE, TRAMPED ON BY WAR ELEPHANTS, THE BYRSA OF CARTHAGE NOW BEARS THE NAME OF ST. LOUIS

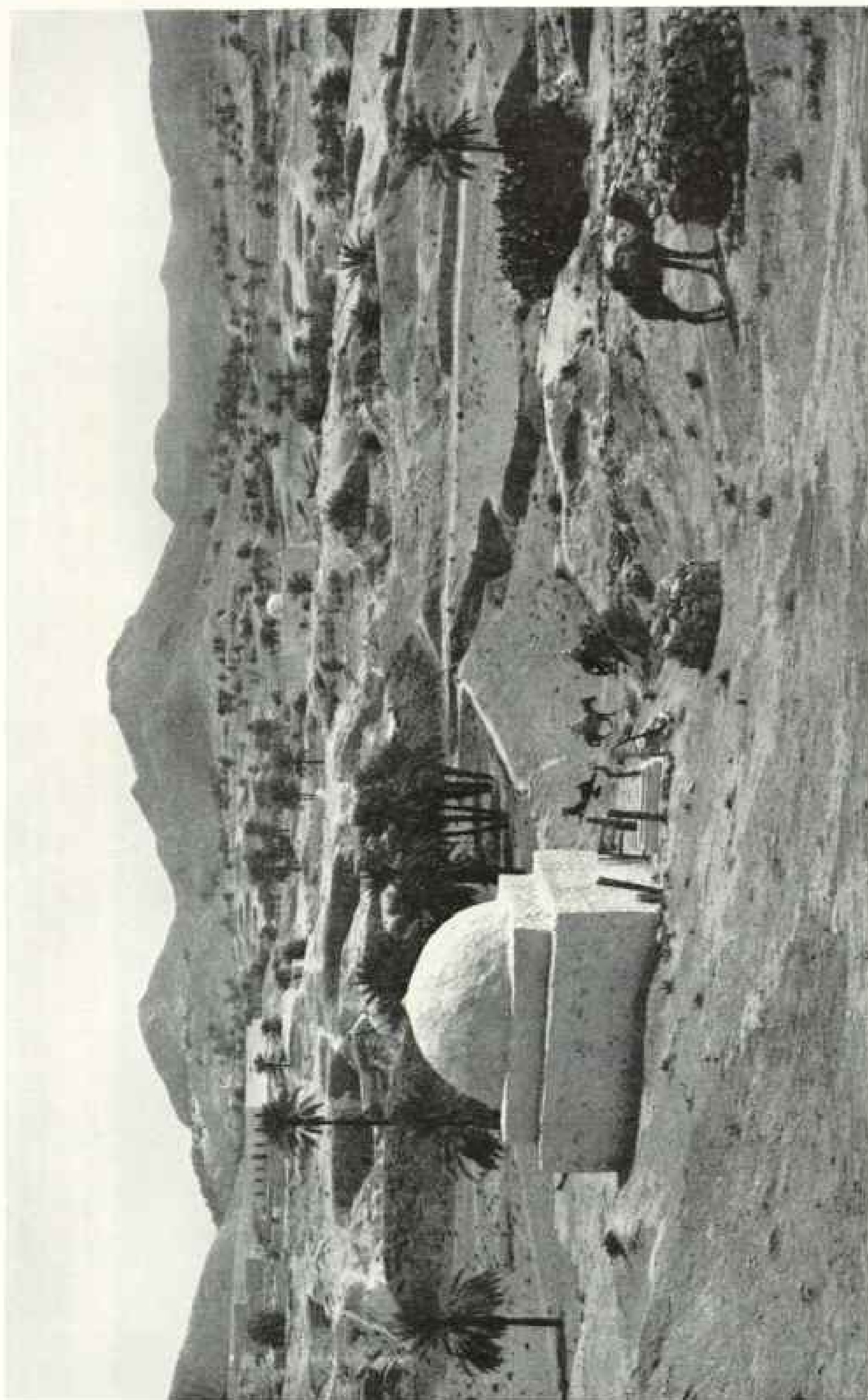
Carthage was traditionally founded about 850 B.C. by Queen Dido, who bought from the Libyo-Phoenician natives "as much land as could be contained by the skin of an ox."<sup>10</sup> She cut up the hide into narrow strips which girdled the entire hill, the Byrsa, which was later renamed in honor of the French King and Crusader, Saint Louis, who died here in 1270. Beyond the ruins of the Admiralty (foreground), modern villas rise on the hill, for Carthage is now a suburb of Tunis. Virgil and Flaubert gave a lasting glory to this site whose elephant ramps and once-impenetrable walls are now dust (page 349).



BETWEEN MARBLE LIONS, DISTINGUISHED TUNISIANS AND FRENCH OFFICIALS GO UP TO PAY RESPECTS TO THE BEY

Sidi Ahmed, hereditary native ruler of the Protectorate, holds audience at Le Bardo during the Moslem celebration of the Lamb Sacrifice, related to Abraham's sacrifice of the ram (Genesis 22:1-13). The tricolor of France hangs side by side with Tunisia's star and crescent on the pillars of the former women's quarters, which now house the Aliouf Museum as well as special apartments for the Bey's receptions (page 347). In the throne room are portraits of native and European sovereigns, together with unwound clocks and other objects received as presents.





SOME 5,000 PEOPLE LIVE IN THIS POCK-MARKED VALLEY—BUT ONLY AN AVIATOR CAN SEE THEIR 700 HOMES

Cave dwellers of Matmata dig enormous square holes in the earth. Each serves as the courtyard of a home; living quarters, storehouse, and stable are hollowed out of the side walls (page 359). A ramp leads down to each residence. Surface buildings include small whitewashed mosques (foreground and center) and offices of the French Administration (upper left). Strolling visitors are not welcomed on this lunar landscape, for they might catch forbidden glimpses of unveiled women sitting in their sunken courtyards (page 362).



WITH THIS AQUEDUCT, ROME SAVED CONQUERED CARTHAGE FROM DEATH BY THIRST

Restored time and again to carry pure water from Zaachouan to Carthage and Tunis, this structure dating from about the time of Hadrian has now been replaced by an underground pipe line which follows approximately the same route. Where 70-foot arches bridged the valley of the Miliane, a hidden siphon now does the trick. Of the 60 miles or more of the original aqueduct, only a few miles still stand. The thrilling account of how Spendius and Mâtho entered Carthage through this conduit is one of the bright spots in Flaubert's novel "Salammbô" (Chapter IV).



FIERCE YELLS AND FLYING HOOFS RING OUT AS ZLASS HORSEMEN STAGE A CHARGE

Buffalo Bill brought riders like these to America for his Wild West shows. Racing past crowds of French soldiers, civilians, and robed natives, the tribesmen stand in their saddles, lean from their horses and sweep the earth with their heads, fire double-barreled guns, and flourish glittering sabers. This fantasia is the grand finale to Kairouan's annual Rug Fair in April (pages 360 and 372).

back groves to regions the Arab invader had laid desolate, he failed to bring back the little Roman lamp.

Even beauty parlors can't use as much olive oil as did the Roman athletes who rubbed it on thick and then scraped it off in rivulets with the curved *strigil*. Lands of corn and cotton offer substitutes, and the Philippine palm seeks its share of the oil trade. Bourde succeeded all too well. Tunisian olive oil, the equal of any, begs for buyers at a fourth its former price.

Later my old friend Gauffreteau welcomed me to his charming home, formerly a Turkish bath. And in his entrance hall is a significant curio, an old bronze lamp, designed, none knows when, to burn olive oil.

Someone adapted it to gas, then electric light. Gauffreteau, isolated in his oasis at

Zarzis and able to get by-products of olive oil for nothing, restored this antique lamp to its original job. Its light is as soft and flattering as that of candles.

The museums are full of little terra cotta lamps; some of their decorations are as fine as cameos. Selling for a song and as common in antiquity as matchboxes today, they reflect the life of their time.

#### SEAX SHIPS SPONGE FOOD

Sousse and Sfax are the "big cities" of Tunisia's eastern plain. Each has its neat European quarters, each its interesting native town.

Sousse, then Hadrumetum, helped Hannibal fight Scipio and later was carpeted with Roman mosaics. Le Bardo's little gem, found at Sousse, shows Virgil writing the "Aeneid" between the Muses.



IT'S EASY TO SWEEP UNDER A TROGLODYTE'S BED!

Built into place, away from drafts and heat, this custerless bed of a Matnatani cave dweller is a feature of the underground home. Baskets and cooking utensils are kept at hand, but there are other rooms for tools, animals, and grain. Even in summer such a bedroom is cool and relatively free from flies or vermin, for it fronts on a well-like excavation open to the sky (page 356).

Sfax, second only to Tunis, ships phosphates and fishes for sponges, octopuses, and a variety of funny fodder. Its neat European quarter seems like an exposition city. Native life centers in the mosque. On raised benches covered with matting, dealers sell frippery gewgaws and a fortune-teller divines from field beans.

Between Sousse and Sfax a Roman ruin dwarfs the modern town for which it was the quarry. It is the Amphitheater of El Djem. One sees it from miles away and its memory follows one for years.

In the eighth century, when Kahena, Berber queen, sought to repel the Arab invaders, this coliseum served as her fortress. Except for this and a few other martial interludes the towering structure stood there, empty as the Yale Bowl or the Ann Arbor Stadium between games, wait-

ing only for 60,000 spectators to swarm toward the clouds and look down on the barbaric spectacles in the arena.

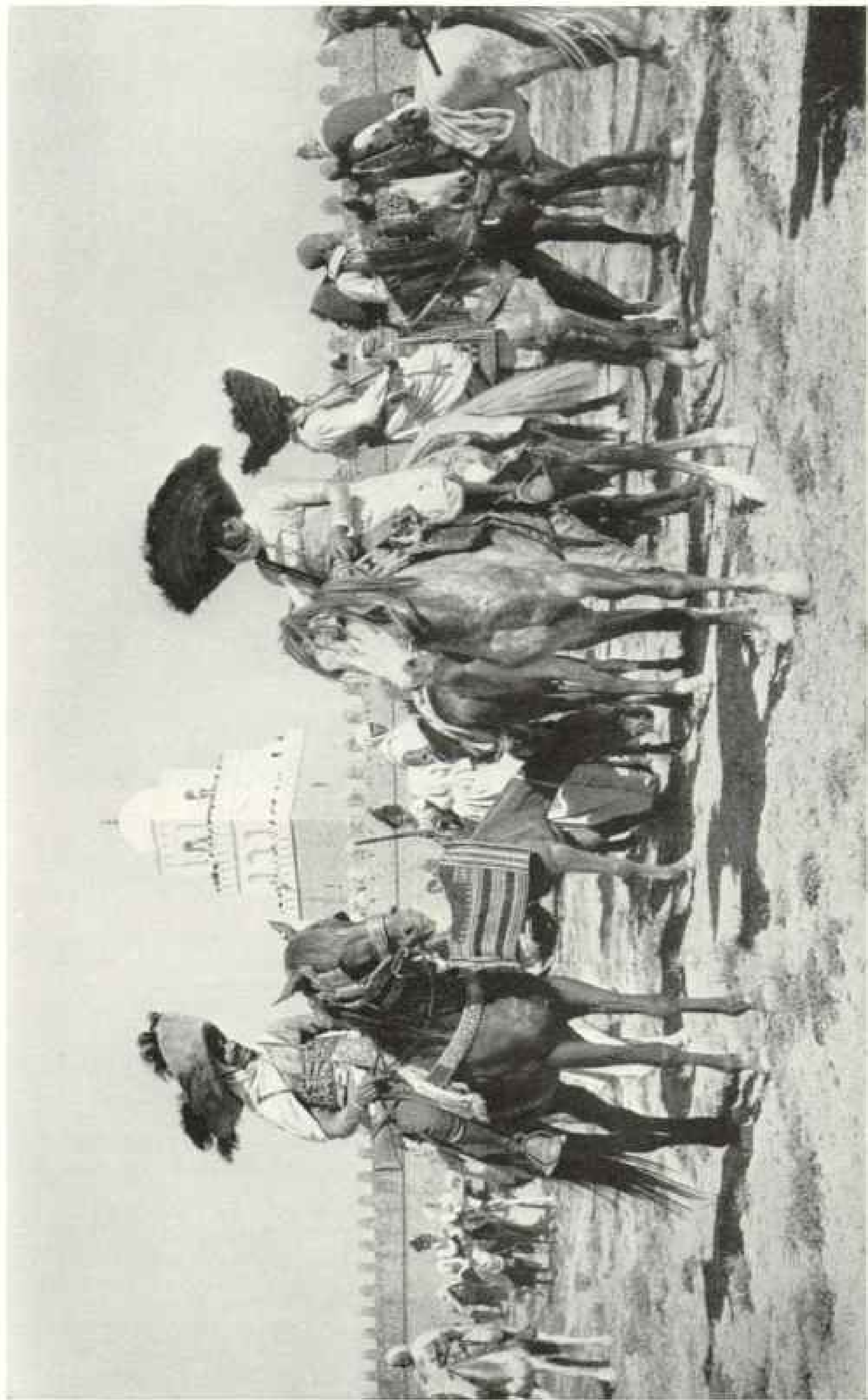
Then, at the end of the 17th century, rebels hid here, a Bey broke through the wall to reach them, and El Djem, each of whose stones had been painfully quarried and shaped, became a source of ready-made building blocks for puny huts.

Still towering like a noble patriarch above its ignoble offspring, this stately ruin dominates the plain.

At Gabès, where palm fronds mass between sea and sand, a little stream marks the sharp-cut boundary line between town and oasis.

All day, beside that stream and in it, native women with ornate jewelry about their ears pound laundry with paddles made from the spine of palm fronds, or wring the





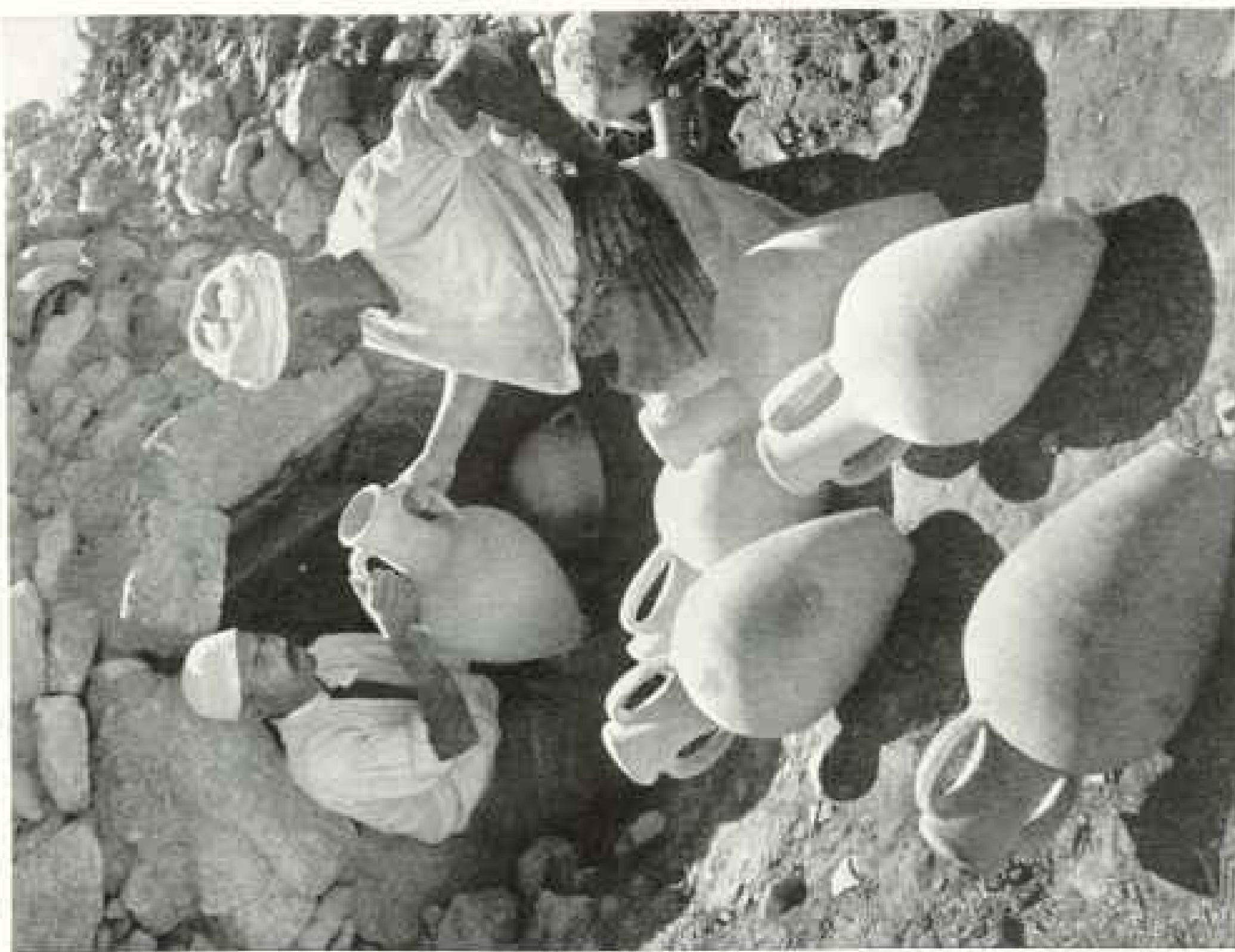
CLASS RIDERS WEAR RICH SILK GOWNS AND 10-GALLON HATS WITH OSTRICH PLUMES

Mounted on spirited desert horses, they are ready for the fantasia (page 358). Moslem women use the minaret of Kairouan's Great Mosque as a grandstand for the show, ranging themselves in black lines around the high balconies (page 157).



CHURNING MOVES TO SWING TIME IN TUNISIA

To make butter from sheep's milk, the nomad girl jerks the suspended goatskin bag back and forth as vigorously as if it were a cocktail shaker. Drought in northern Tunisia drove this family to the more fertile north. Here they camp beside the Tunis-Kizerte road.



TUNISIAN JARS ARE SHAPED LIKE THE AMPHORA OF OLD

Removing graceful jars from the primitive kiln is Mess'ud el Ghul (left), who was sent by his fellow townsmen to study ceramics at Sèvres, in the suburbs of Paris. In a land of wine and olive oil, such pots are widely used. Much of our knowledge of the ancients comes from their decorated jars.



CAMELS BRING GRAIN TO BE STORED IN BEAMLESS SKYSCRAPERS

Lacking timber and desiring a safe place to hide their goods from bandits, people of Médénine piled these arched, windowless chambers one on top of the other. Today flat-roofed houses of steel and cement are supplanting the *ghorfou* in this important French Army post near the frontier of Italian Libya (pages 364, 367).

necks of writhing bedcovers colored like Joseph's coat.

One look at their bright robes, bordering a blue stream under waving palms, and I rushed back for my color camera.

But I had only to spread my tall tripod and hide my face in a focusing cloth to make the army of women retreat behind mud walls.

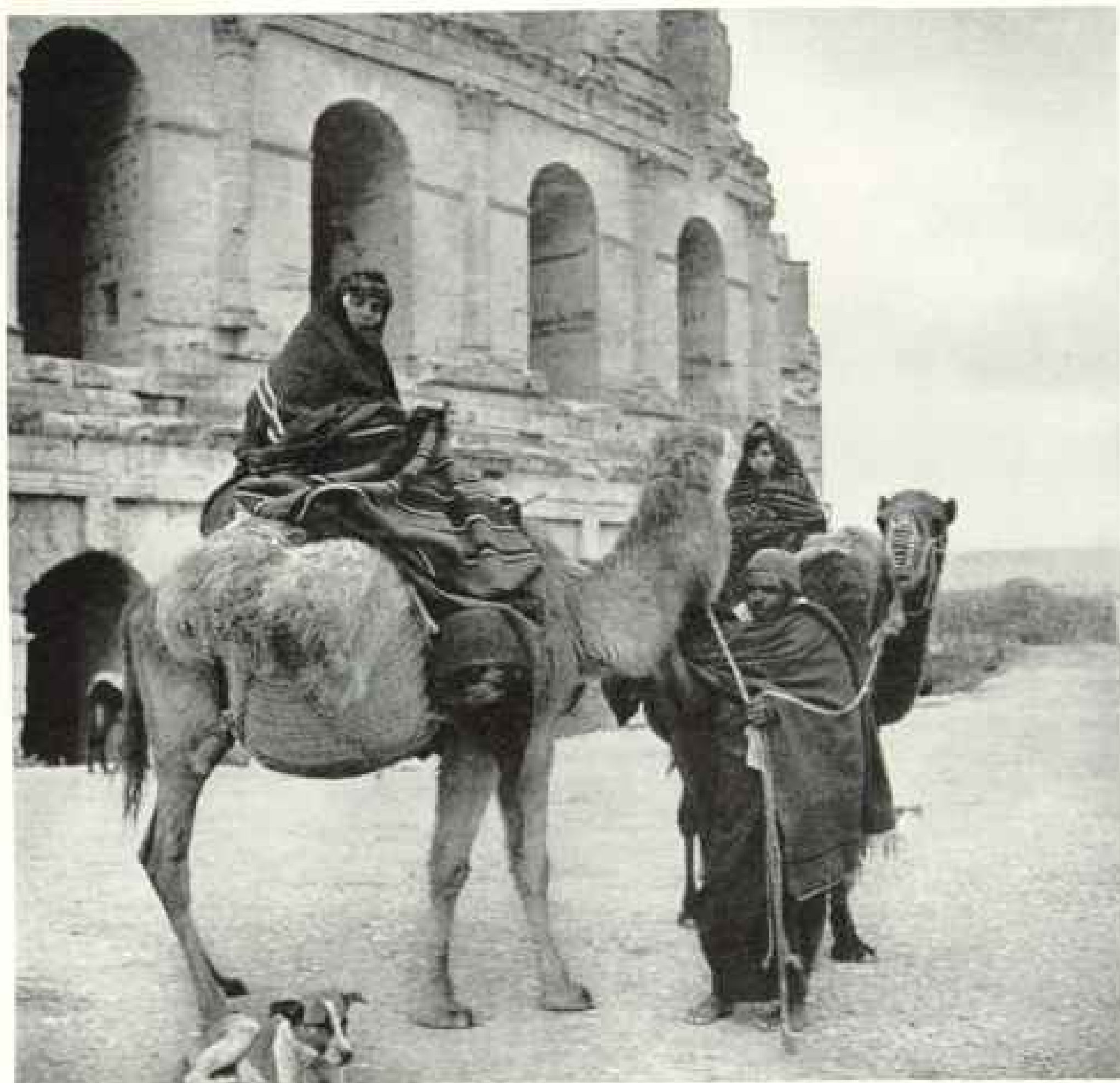
For hours, under the burning sun, I tramped up and down that little valley. Women and their disrespectful daughters laughed at my floundering on the slippery bank. No one minded how much I looked. But they thought my camera had an evil and immodest eye.

Lugging the hateful machine, I retreated in full defeat from this human rainbow.

At twilight I rode in a carriage under the palms because my heart echoed the declaration of an eager coachman that "an auto isn't the same thing." The palm fronds played badminton with waves of coolness, and little children, herding round-bellied lambs, gave smiles without money and without price.

#### DESERT LIKE A LUNAR LANDSCAPE

The next day we entered the desert—it was like going through a door—rolled south amid barrenness, and climbed the Matmata hills. From a stratosphere balloon Mat-



GIRLS ON CAMELS HALT BESIDE A HUGE ROMAN AMPHITHEATER

Muzzled, the beast at the right is prevented from nipping passers-by or stealing grain while on the march. The Amphitheater, scene of many a pory drama, dates from the days when El Djem's olive groves made it one of the richest Roman cities in Africa (page 359).

mata would resemble a lunar landscape. But approach it by car and you wonder where the thousands of troglodytes have their homes (pages 356, 359).

In Moslem lands the roofs belong to the womenfolk and in Matmata the whole countryside is a roof. If you stroll too near, you look down into the privacy of sunken courtyards circled with living rooms and storehouses.

When the Arab invaders came, the Berbers dug in, hiding their wives and treasures in caves.

Although the war has been over for centuries, the Matmatans still keep to their trenches. They are not so much cave dwellers as sun evaders. For every sum-

mer brings back an enemy heat as formidable as were the Arab arms.

Even in March it was pleasant to seek shelter from the sun in Matmatan caves. The fields are miles away, where folds in the hills retain a bit of moisture, but at night the miserable Matmatans trudge back to their holes in the ground because those holes in the ground are home.

In woven baskets like Ali Baba jars their grain is stored. Their goats run down the cave fronts into subterranean stables. Camels cork up the narrow tunnels as they come down to their holes like ungainly rats. On tiny clay stoves the women cook their food. Firmly built in place, their nuptial couches, draped with hand-woven bedcov-





THROUGH THIS ARCHED DOOR A MOTOR CONQUEROR OF ASIA GOES TO BATHE IN THE SEA ODYSSEUS KNEW

Near the olive-growing oasis of Zarzis, on the eastern coast of Tunisia, lives Louis Audouin-Dubreuil, joint leader of the Citroën-Haardt Trans-Asiatic Expedition, which the author accompanied in 1931-32 (page 369). Negro servants gossip at the entrance to the garden fronting on the explorer's private beach.

ers, are beyond the reach of heat or cold. As for rain—if it would only come!

Sitting in a similar shelter in Douirat, whose caves are not in wells but in sky-scraping cliffs, the Caid said, "We have nothing to fear."

Through the mountains we rolled to Toujane, which desert men, unaccustomed to declivities, praise for its beauty, then pressed on to Metameur and Médenine.

Both Metameur and Médenine are distinguished by arch-roofed *ghorjas*, often superimposed and in places reaching to five

stories. Only a fly-man would think of living on the top floor, for the ladders are projecting bits of stone which zigzag from door to door on their way up (page 367).

The fibrous trunks of palm trees do not make good timber, so the arch and dome are substitutes. Iron beams and reinforced cement may finish the *ghorfa*. These beehive shelters are still used for storing grain and field tools, and in the lower stories poor folk, glad of any roof, still hang on as do the cave dwellers of Matmata.

A camel standing in front of a *ghorfa* row makes one think, "I must photograph this combination now, for it will soon be gone."

#### GAS TANKS ARE MODERN OASES

Airplanes and motorcars now cross the Sahara from end to end. Water Hole Such-and-such has become Bidon This-and-that—a gas tank instead of a well (opposite page).

Lotus-land was calling and we crossed the narrow channel to

Ajim, on the island of Djerba, which has spread anticipation and disappointment far and wide (pages 370 and 373).

#### THE LURE OF DJERBA

Lotus-eating has become rarer than taking snuff and forgetfulness is the one thing Djerba lacks. Its people emigrate in large numbers. But when their fortune is made, back they come, to buy a white-domed farm house, tie a camel in front of its door for decoration, and end their existence under their own palm and fig tree.



HOME, SWEET HOME, IN LOTUS LAND:

Djerbans are great travelers, "but when their fortune is made, back they come to buy a white-domed farmhouse, tie a camel in front of its door for decoration, and end their existence under their own palm and fig tree." Here Odysseus' sailors, forgetting their homeland, had to be shanghaied back to their own ships.



WHERE HAMILCAR FED ELEPHANTS THE MODERN TRAVELER BUYS GAS AND OIL

Colored tiles embellish the filling station and the domed rest room (right), which contains a public telephone. In front of the trim garden runs the highway from Tunis to La Marsa, seaside bathing place. The author paid 54 cents a gallon for American gasoline.



BATHITUB AND LAUNDRY, THIS STREAM ALSO SUPPLIES DRINKING WATER

A source of water is more potent than governments in establishing an oasis like that of Tozeur. Rome left a footprint in this watercourse when she occupied the land of palms which the Berbers call the Djerid, and this antique bar or obstruction in the stream is still called the Roman Barrage. Rain is almost unknown here; the size of the oasis is determined by the quantity of spring water available. Each palm grower's allowance for irrigation is carefully measured, and woe be to the man who diverts water illegally (page 373).

At nightfall I went out to the port of Hount Souk, for Djerba is famous for its fisheries and smuggling, and all unexpectedly came upon a prosaic little pyramid marking the site of the "tower of skulls."

Here's the tale. In the sixteenth century, when Moslems, Sicilians, and Spaniards were warring, a young brute named Torgud, or Dragut, rose to such power that Barbarossa gave him a squadron. Dragut, dedicating his ships to piracy and the slave trade, soon made a name for himself.

His hated enemies, the Spaniards, had built a fort on Djerba as an advance base against Tripoli. In 1560, under its very walls, Dragut and Piali Pasha dashed in on the anchored armada, burned and sank

the Christian fleet, massacred sailors and garrison, and, like Timur the Lame, erected a pile of skulls which stood there for 300 years.

Less than a hundred years ago, a French consul got the Bey's permission to bury the time-bleached relics of Dragut's cruelty, erecting in its gruesome place this prosaic little pyramid.

Christian vengeance overtook Dragut, for the Knights of Saint John killed him in open battle at Malta, and there his bloodthirsty sword still remains.

#### DESCENDANTS OF JERUSALEM REFUGEES IN TIME OF TITUS

When Titus captured Jerusalem—which goes still farther back into history, but is



IT TAKES A HUMAN FLY TO REACH THE TOP FLOOR

The only way to get into these four- or five-story apartment houses in Médenine is to climb up the outside on rude stairways, or stones projecting from the adobe walls. The dark, vaulted cells inside are now used mostly for storing grain and tools, but poor folk still occupy the lower floors (page 363). European homes in this military post are built amid palm trees. Sportsmen sometimes journey here to hunt moufflans, wild sheep, which are exceedingly wary and difficult to stalk.





A CAMERA-SHY "CAVE MAN"

His home is cut in a high rock cliff overlooking the stony desert. The troglodyte headman of Douirat promised him a present if he would "look at the birdie," but the youngster bashfully sucks his thumb.

worth it—a company of Jews escaped into Egypt and ultimately arrived on Djerba. Two communities of them still live there in a purity of blood and traditions which is unequalled in Jerusalem itself. Near Hara Srira is a synagogue, famous throughout Jewry, in which I spent a memorable hour during the weekly worship of the Law.

Only with reverence and the consent of the worshipers do I use a camera in church, mosque, or synagogue. When I entered the Ghriba, I capped my lens.

Imagine my gratitude when a handsome Jew with large sad eyes and a flowing beard made signs that I might take pic-

tures! Making every effort not to disturb the spirit of the service, I moved freely among the congregation.

Before the Holy of Holies I held back, for I did not want to take undue advantage of such tolerant hospitality. But another rabbi urged me on (page 379).

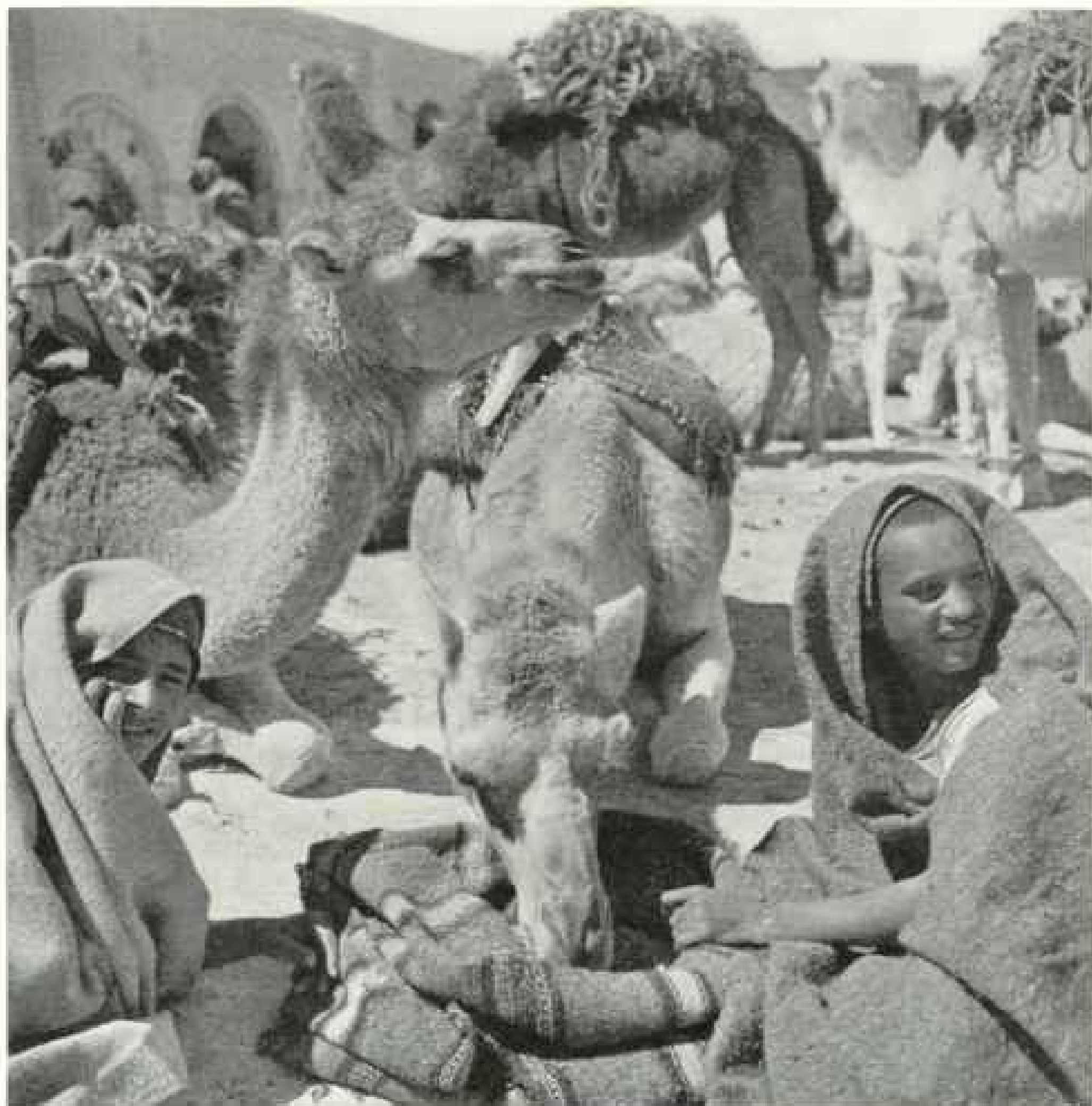
Near the doorway to the inner shrine two men, in a seemingly accidental manner, blocked my path, and when the Scroll of the Law was brought forth before the people I made no effort to photograph it.

Perhaps unusual tolerance exists there because no one knows the race or religion of the woman in whose memory the first Ghriba was erected.

Saved from famine by the Jews, this mysterious one lived among them in prayer and meditation. One morning they found her lying dead, but with a look of ineffable peace on her face as with open eyes she gazed up into the Beyond. On that spot "the Marvelous" synagogue was built and thither every year come Jewish pilgrims from far away.

#### VISITING AN ISLAND POTTERY

Djerba provided me with one more thrill, for I visited the potteries of Guellala under the guidance of Messa'ud el Ghul, who, showing talent, was sent by the Djerbans to Sèvres, France. The soft clay shaped



NO CAFETERIA—THIS IS MÉDENINE!

Crouching on the ground, the camel munches grain in a coarse sack into which some of his own hair may be woven. Ugly as he is, the camel is a pampered beast. At the end of a day's march, Arabs often spread their cloaks as tablecloths for their mounts.

by the hands of this island potter takes the honest form and finish which peasants enjoy and artists copy (page 361).

In the Place de Tunis at Kairouan, beside the port at Mahdia, and outside the battlements of Sfax the play of light and shadow on piles of unpretentious pottery has unusual appeal. Much of it must have been shaped by the knowing fingers of a Djerban potter who studied at Sèvres but kept his head.

The Romans connected Djerba with the mainland by a causeway, now a series of steppingstones for telegraph poles. Rome's seven-league boots wore out, but her high-

ways remain. From El Kantara we ferried our motor across in two tightly lashed sailboats toward Zarzis, where Audouin-Dubreuil, away on a motor foray into the Sahara, invited me to occupy his beautiful home (page 364).

I missed this old friend, whose tent I shared between Beirut and Peiping, but fortune favored me, for I was greeted by Gauffreteau, whose cooking I savored along Marco Polo's trail.\* I still remember burning my upper lip on one of his stews

\* See "From the Mediterranean to the Yellow Sea by Motor," by Maynard Owen Williams, NATIONAL GEOGRAPHIC MAGAZINE, November, 1932.



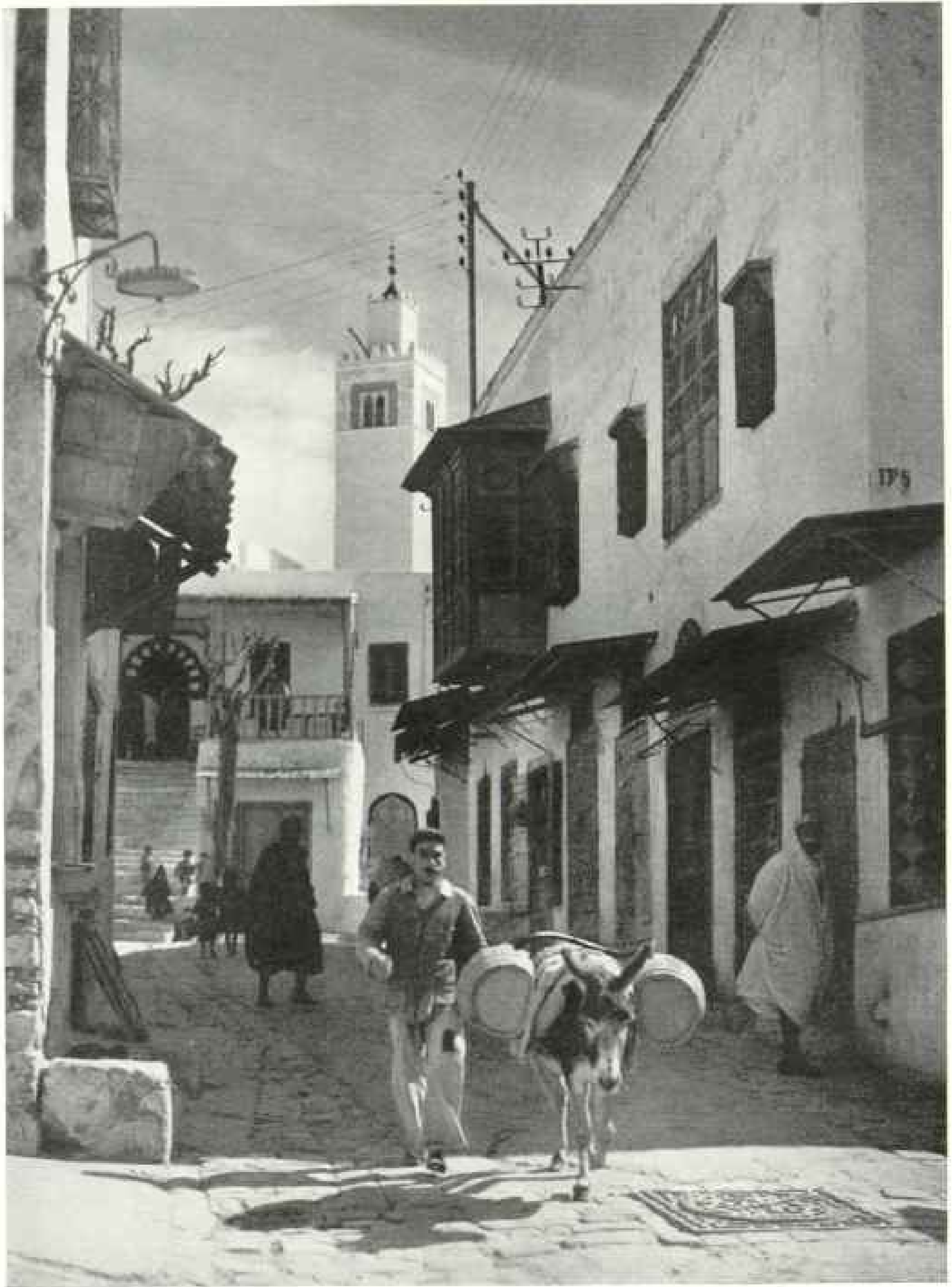
A SHIP OF THE DESERT RESISTS LAUNCHING

Persuasion fore and aft is needed to get the stubborn camel aboard the ferry which will take him from this mainland pier to the island of Djerba (page 364). Its golden sands stretching low on the horizon, this "Isle of the Lotus-Eaters" is reputedly the place where Homer's hero, Odysseus, visited the dreamy, indolent folk who subsisted on the fruit of lotus trees (pages 365, 373).



MALE BLOSSOMS MAKE PALMS PRODUCE DATES ABUNDANTLY

To pollinate fruit-bearing trees, these clusters in the market at Sfax are tied into the crowns of female trees. Thus man from time immemorial has supplemented the wind and insects in carrying pollen from palm to palm (page 374).



A FOUR-FOOTED WATER CARRIER CLATTERS INTO HIDI DOU SAÏD

Its glistening white houses and square minaret perched on a cliff above the Gulf of Tunis, this town is a favorite with visitors summer and winter. From the barred window projecting over the street (right), unseen women watch life go by. Around the corner, the terraces of a restaurant command a wide view beyond Carthage to the modern city of Tunis. Hamilcar's gardens occupied a site farther up this hill. A lighthouse stands to-day where, in Virgil's "Aeneid," Dido's funeral pyre blazed while Aeneas, unknowing, "held on his course, and cleft the watery ways."





MARKET STALLS LINE MAIN STREET BENEATH A LOFTY MINARET

Until the French occupation, neither Christian nor Jew was welcome within the walls of "Kairouan the Holy." Now, during the annual Rug Fair in April, the city teems with visitors who come to inspect the year's output of bright Zerbias, thick Allouchas, and embroidered Mergoums—Kairouan rugs whose production is fostered by the French Government. Annual prizes go to the best weavers, and rugs bearing the official seal enter France free of duty.

while my lower lip froze to the thick metal bowl one subzero night in the Gobi.

He and his charming wife not only welcomed me to their home, but also conducted me to Foug Tatahouine and Douirat.

#### THE ROAD TO FOREIGN LEGION NOVELS

Foug Tatahouine used to be the terminus of the trail leading toward dunes, death, and Foreign Legion novels. But big trucks now roll merrily along toward Bordj Le Boeuf and that web of desert tracks where Georges-Marie Haardt and Louis Audouin-Dubreuil blazed the way. †

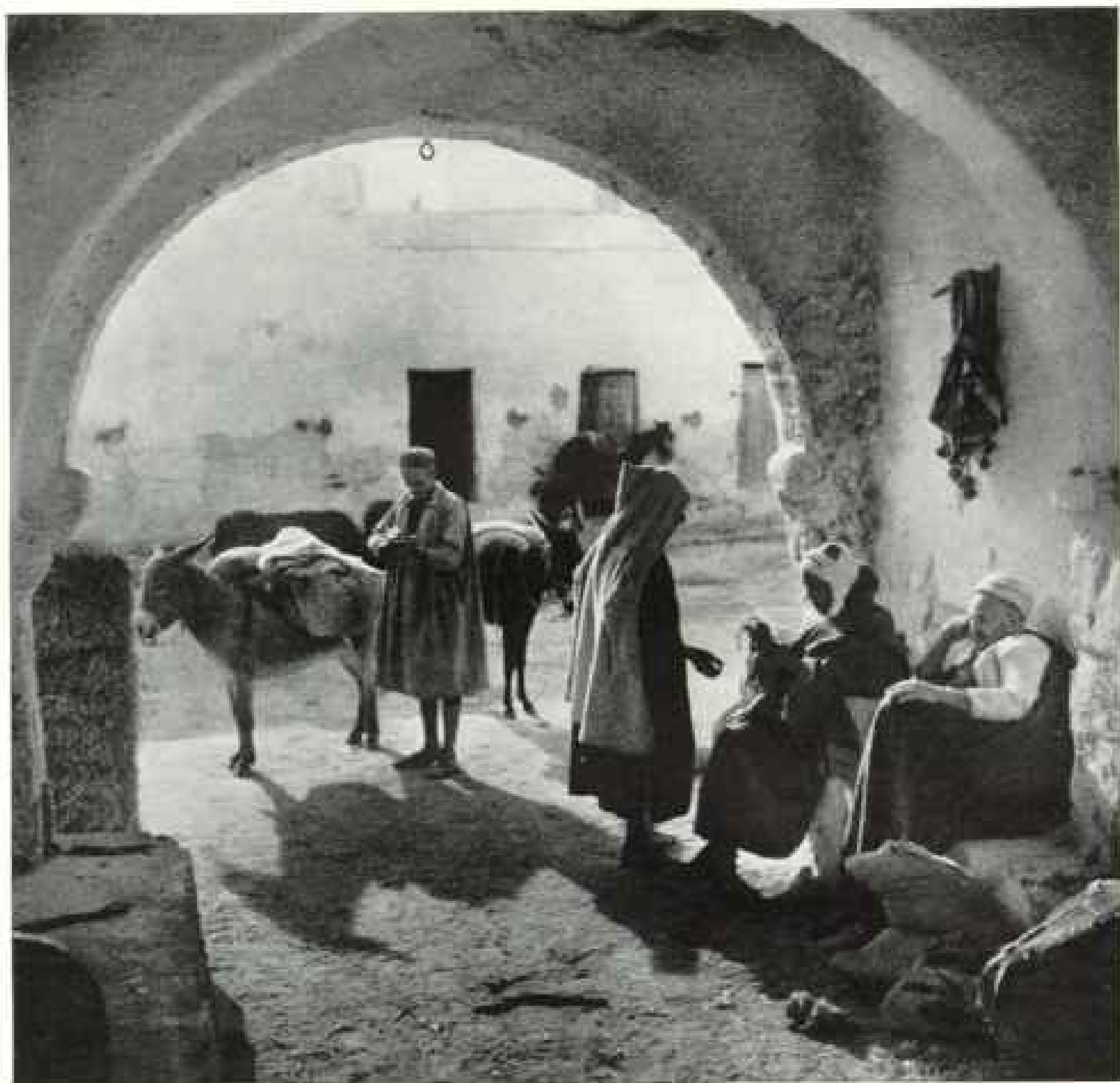
Neither Nigeria nor the Congo appealed

at the moment, so I went to Ben Gardane, near the Libian frontier.

In normal times, Ben Gardane is a small town around an empty market place. But when sanctions against Italy were imposed, Ben Gardane was just the spot for silent-footed camels. When people need olive oil, grain, or soap, a smuggler may be one's best friend.

Big trucks, heavily loaded and decorated with horseshoes, fishes, and hands of Fatima for all sorts of good luck. (page 374),

† See "Conquest of the Sahara by the Automobile," NATIONAL GEOGRAPHIC MAGAZINE, January, 1924.



FARMERS PACK THEIR DONKEYS TO GO HOME IN THE EVENING

Market day is over in Houmt Souk. The simple produce of the isolated domed farmhouse has been sold in the Djerban capital. Now the humble folk and their patient little beasts prepare to return home. Greek geographers identified this island with Homer's Lotus Land, and something of the sense of quiet content lingers on.

rolled down, charged the fleeting mirages above the chotts, and dumped their bags and barrels at Ben Gardane. The market place swallowed them up, and padded feet, treading quiet trails toward Tripoli, vanished silently into the night.

Backtracking to Gabès, we started for Kebili, the Chott Djerid, and the oases at Tozeur and Nefta. Once Kebili was the back of the beyond, for from its sound footing near the west end of Djebel Tebaga it looked off over a deadly expanse—now salt-heavy water, now blinding mineral deposits—which is kin to Death Valley and the Dead Sea.

The Djerid takes its name from the

palms, but many of them are mirages. Even the phosphate-bearing mountains behind Metlaoui float in the hell-hot air.

#### WATER THEFT IS A HIGH CRIME IN A DESERT OASIS

A heavy wind had tossed some small dunes across the first part of our trail, delaying our progress. At the oasis of Tlémine, where a metal pipe, shooting forth a crystal stream, seemed poetic in its beauty, we stopped awhile. But the chott itself was, as a French captain had promised, a "billiard table."

Even a slight shower turns this "billiard table" to "butter" in which wheels spin



GOOD LUCK EMBLEMS ADORN THIS FRENCH TRUCK'S RADIATOR

The native driver relies not only on the horseshoe and the protective hand of Fatima, but also on a velvet fish which he carries in the cab as an added safeguard against flooded roads or sand storms (page 372). Here at Ben Gardane he unloads drums of olive oil to be forwarded by camel to neighboring Italian Libya.

until the cars are engulfed. The desert nomad's dream of heaven must be, not pearly gates or streets of gold, but shady palms and the voice of water.

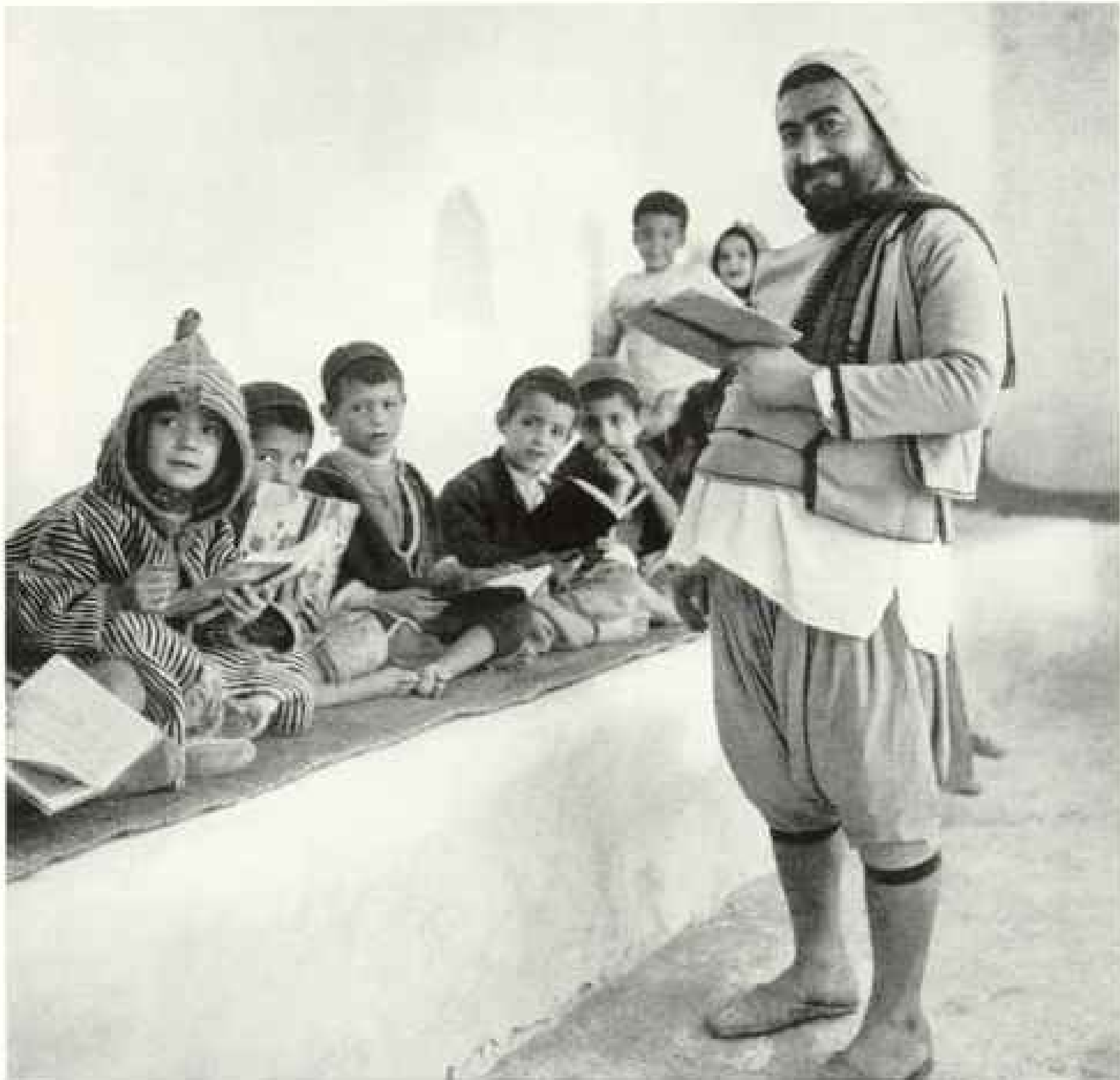
Swelling dunes curve down to a clump of palms where camels rest and a long-gowned Moslem kneels in prayer.

And well he may, for an oasis, however welcome to one from the desert, is no paradise for one who lives there. The supply of water, strictly limited, is divided by time or the width of a water notch cut in a cross-stream palm trunk. If the flow decreases, one longs to put his foot in his neighbor's channel and direct the precious water to his own thirsty fields, but a water

thief in an oasis is like a cattle rustler in the cow country (page 366).

Law and custom confuse the issue, for land is sold without water, and water without land. Inheritance divisions present problems in vulgar fractions which would break the back of a slide rule and sometimes do break heads. The Government, taxing each tree, claims ownership of all the water. A palm grove is suspended, like a mirage, between death from thirst or taxes.

The actual physical work is not light. Trees must be trimmed, and male flowers tied in the crowns of female trees (page 370). Rains affect the quantity and qual-



A JOLLY JEWISH SCHOOLMASTER LAUGHS AND JOKES WHILE TEACHING  
THE  $\aleph \beth$  — HEBREW A B C

He obligingly led his pupils out of the dark synagogue so the author could photograph them. These are descendants of the Jews who came by thousands to the island of Djerba after the destruction of Jerusalem in the first century A.D. (pages 366 and 379).

ity of a crop, rotting its fruit or causing it to drop to the earth, useless for sale. Locusts sometimes leave a palm grove looking like massed chimneys, and hangdog bootleggers of sour palm wine, defying the laws of the Prophet and the Beys to get a kick out of fermented sap, cut deep into the hearts of the tree tops.

The dream is irresistible, the facts less lyric. To cross burning sands and then find the shade of the palms, to hear the voice of still waters, to wander at will among happy folk singing at their work—all that is possible. But how attain it?

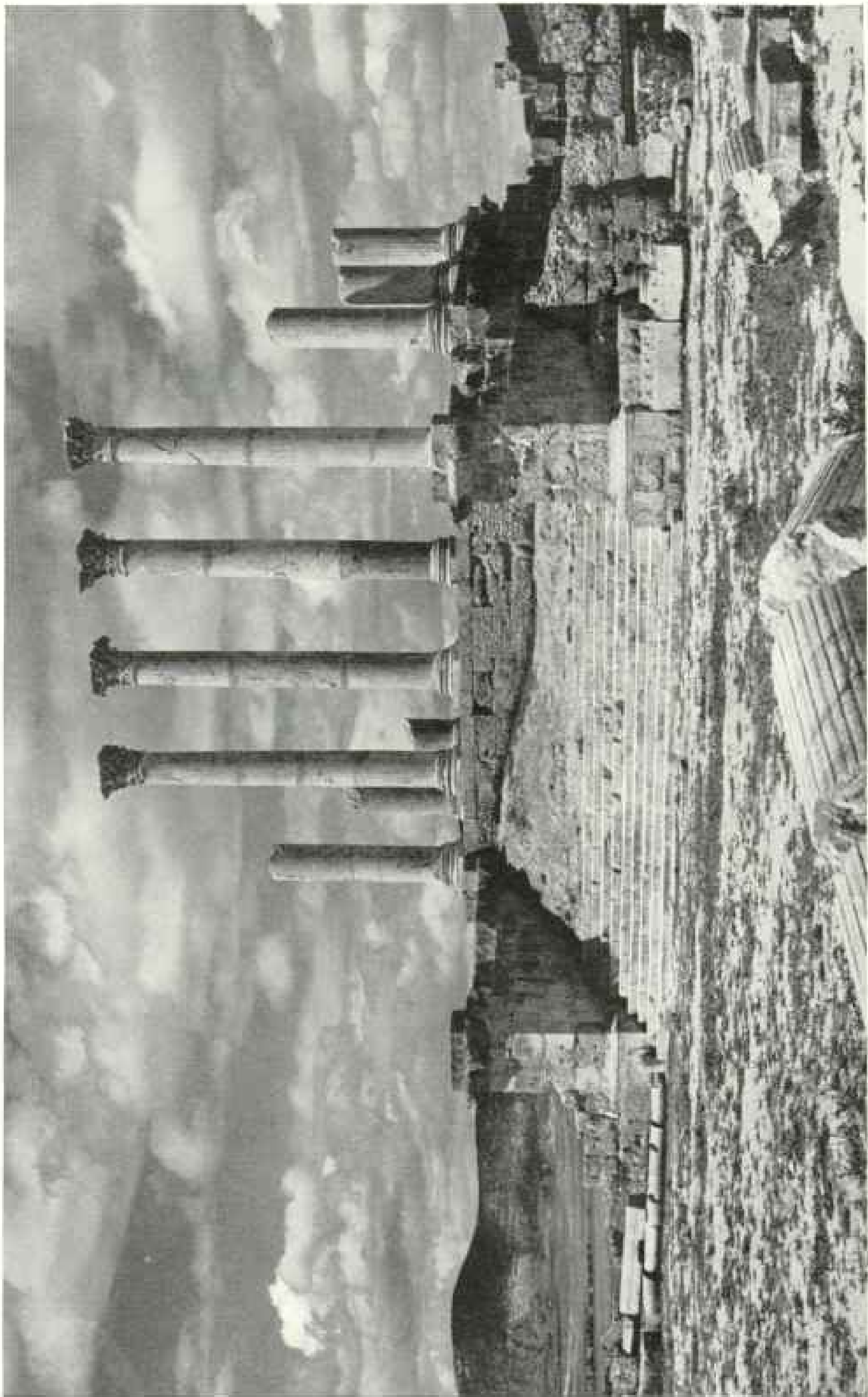
"Pay me and I'll keep the others off," promises one twelve-year-old gangster with

laughing eyes. Even in an oasis, peace is a problem.

For all that, a visit to Tozeur and Nefta is delightful. Where so many *khammes*\*—so named because for their labor they are entitled to a fifth of the crop—are singing as they trim their trees, erect palm-frond fences about their gardens, or drag dusty peacock tails of palm leaf along the shady paths, a sense of contentment quickly grows. And night brings benediction in its blue-gray veil.

The oasis of Tozeur should have 250 gallons of water a second, but its 194 sources actually furnish only three-fourths

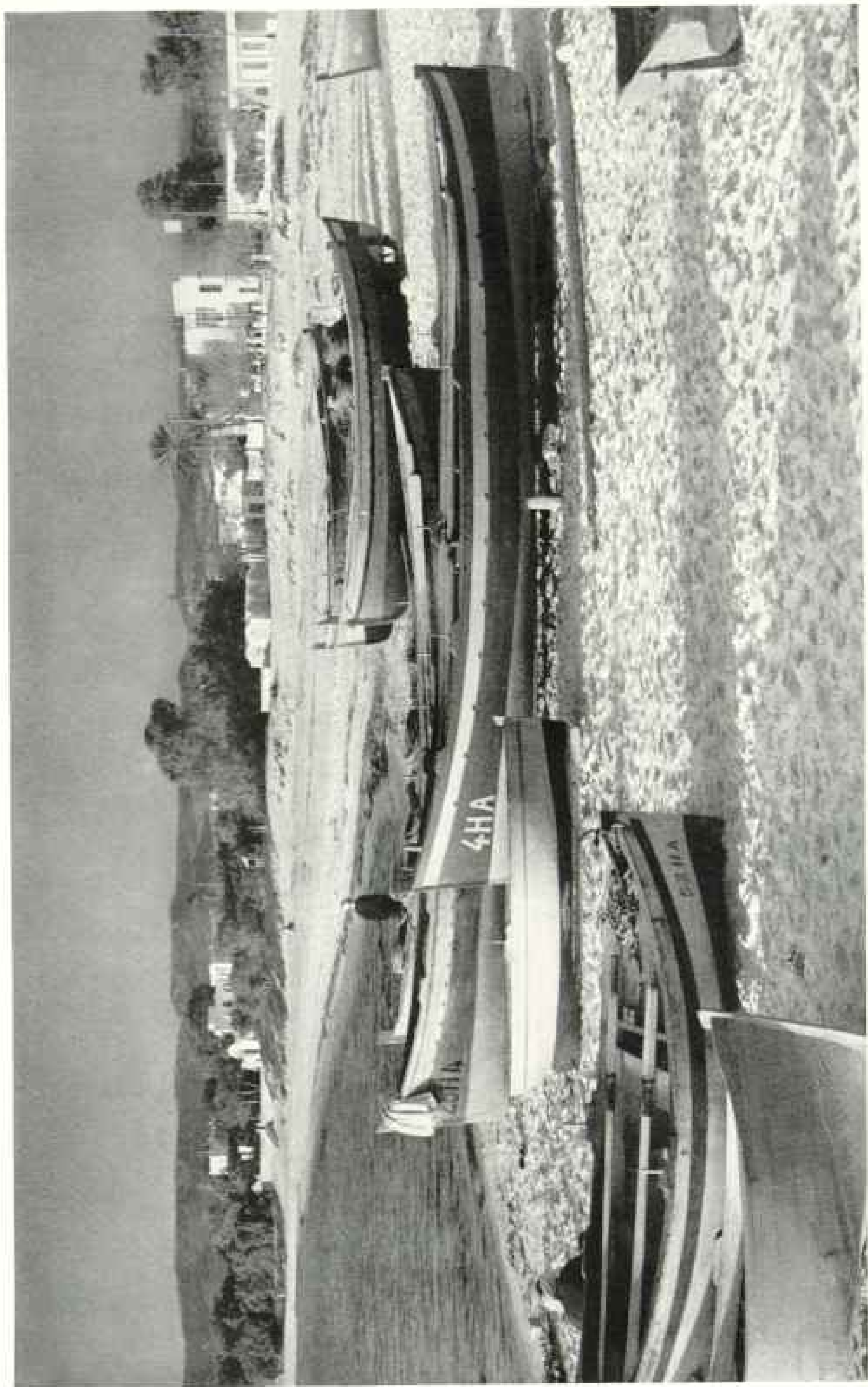
\* *Khamis*: five in Arabic.



WITH FOUR LOFTY COLUMNS RESTORED, ARCHEOLOGISTS STILL HAVE MANY FALLEN ONES TO PIECE TOGETHER

Excavated during the World War by French scientists with the aid of German prisoners, Thuburbo Majus deserves to be better known. Founded by Augustus and reaching its full glory under the Antonian Emperors, this Roman colony erected a statue of Jupiter, now at Le Bardo, whose head alone is nearly as tall as a woman. Soaring aloft toward a stormy sky, the four 27-foot columns of the Capitol, erected A.D. 168, dominate the ancient forum (foreground).





FISHING BOATS CAST LONG EVENING SHADOWS ON THE VILLA-BORDERED BEACH AT HAMMAMMET

Gleaming amid orange groves and fragrant jasmines, between highway and blue Mediterranean, stand the spacious winter homes and gardens of cosmopolites who have made this one of the world's most peaceful and romantic retreats. Within the time-browned walls of the old native town, behind the camera, live fishermen who supply the local market and add spots of color to the curve of shining sand.



THE FLEEING IRISH "INFORMER" REACHES SFAX.

Victor McLaglen, in his famous rôle, gazes down on a crossroads not far from the Great Mosque. French dialogue was "dubbed in" at Paris, but the Irish songs were left intact. Center of olive-oil pressing, soapmaking, fishing, and phosphates, Sfax has a modern "European" town and this old quarter where men wear robes and bread is flat as a pancake.

that amount and only a few of its 200,000 palm trees, "with their heads in the sun and their feet in the water," produce the sun-drenched and transparent *degla* date which is the pride of the Saharan oases.

Nefta from its plateau enjoys two views which more than make up for its own ugliness. Above a green sea of tossing palms there is a distant, and hence pleasing, scene of the deadly chott whose sole crop is mirages. And in an amphitheater as remarkable in its way as the Cirque de Gavarnie, or that mountain-clasped clump of Lebanon cedars above Bcharreh, there is a

cluster of palms without equal. This is Nefta's famous *corbeille*, or basket.

On sure-footed donkeys one rides down shady lanes to crystal sources and placid pools where palm trees, leaning over to play Narcissus, seem liable to suffer the same death. Then we descend to the bed of the brook and, riding this liquid low-way flanked by gardens, come upon bronze boys happily splashing about and groups of women turning an alfresco laundry into a women's club.

Donkeys bearing water jars slung in panniers slide down slippery paths on dainty feet or toil philosophically upward to the dusty town, paddling along with the help of waving ears.

To get a view I invaded the garden of a master of politeness whose first-born helped me find my way. Seated in a rude shelter on soft carpets, the older men, with well-groomed beards and spotless robes, solemnly drank

scalding coffee and seemed to savor the beauty of this retreat I had come so far to see. But the son would have none of it.

"Where is your home?" he asked.

"America," I replied, and was about to add "New York" lest he picture "Rio" or "B. A."

But there was no need.

"That's what I want to see! The skyscrapers, the crowds in the streets, the electric signs, the big hotels. New York must be wonderful."

"And your oasis?"

"For old men who dream."

I retreated toward Tozeur, with its giant jujube, its Byzantine tower, and its "Good morning, sir, give me silver."

#### A VETERINARY DISCOVERS PHOSPHATE DEPOSITS

Our route to Gafsa and Sbeitla lay past the Seldja Gorges (page 383) and Met-laoui, whose hero is Philippe Thomas, an army veterinary, who discovered phosphate deposits which yield upward of 2,000,000 tons of concentrated fertility a year.

But when low prices and Government restrictions force farmers to reduce their crops, why spend one's last few dollars on fertilizer? Cursed is he who makes two blades of grass grow where one grew before, for wine, olive oil (page 352), and phosphates are drugs on the market.

At Gafsa little boys plunge for coppers into well-kept mineral pools which date back beyond Jugurtha's day, and women crowd into covered bathhouses at a corner of the restored *kasbah* from which I retreated as soon as my wholly innocent entry stirred up the lions.

Sbeitla, as the dark-eyed wife of the Caid pointed out at a society tea near Tunis, is hard to reach. But to me it seemed well worth the effort.

#### AND THE GUARDIAN SLEPT ON

Diocletian's arch of triumph has been restored to something like its olden, golden glory. Three temples stand side by side behind a huge capitol, atop which, like Venus in her shell, the guardian sleeps.



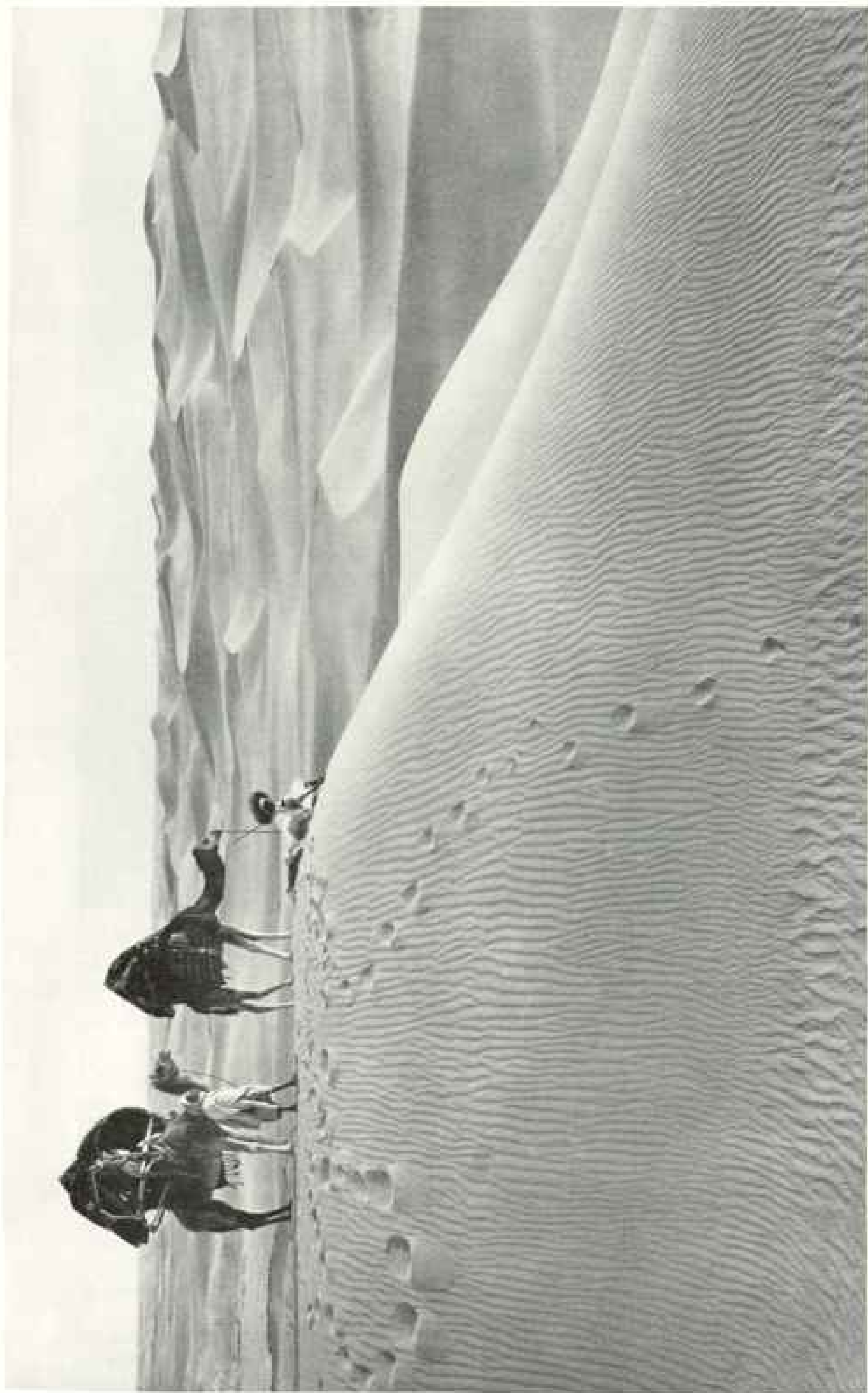
AROUND THE SACRED TORAH MASS THE JEWS OF HARA SRIRA

Children sit while their elders stand facing the altar during Saturday morning service at the synagogue, which Djerbans call "the Marvelous." When the author entered the dark room, he capped the lens of his camera, but rabbis courteously told him by signs that he might take photographs (page 366). Many pilgrims from afar visit this holy place.

I spent a wholly delightful afternoon at Sbeitla, the message of whose monuments was not interrupted by garbled French and in whose stony valley native women not only washed clothes but welcomed me to their ideal laundry site.

After a brief foray to Tebessa and Timgad in Algeria, we re-entered Tunisia through the forest of cork oaks of Khroumirie, with its delightful summer resorts of Ain Draham and Camp des Chênes.

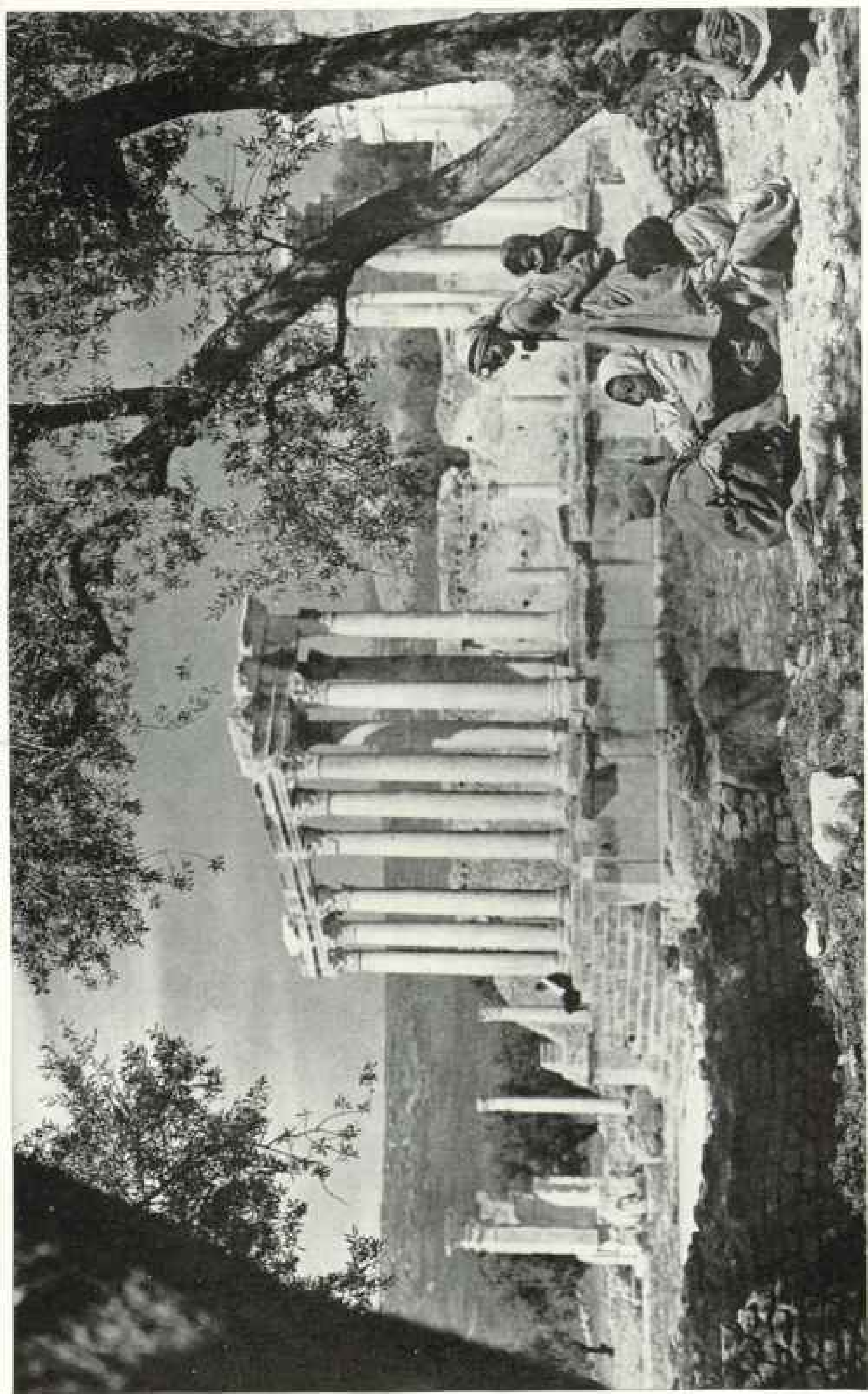
From the little port of Tabarka cargoes of yellow and red Numidian marble floated out toward Rome and romance, but except



Photograph from Lehouet

SAHARA'S SWELLING DUNES HOLLOW ON THE SOUTHERN FRONTIER OF TUNISIA

Camels and tanned Moslems perch on the ocean of sand amid long shadows at dusk. Rippled by the wind and stamped with men's and camels' footprints, dunes prevent the extension of good roads to the south. In the north of Tunisia are fertile valleys planted to wheat and barley, hills thickly wooded with cork oaks, and groves of oranges and lemons. Olive trees turn the east coast silver gray. Palms fringe the southern marches, pastures cover the high tablelands, and nomads move back and forth to the dictates of drought and plenty.



OLIVE BRANCHES FRAME THIS TEMPLE TO CAELESTIS, THE "HEAVENLY GODDESS"

Only the foundation and a few columns remain of this shrine, erected by a local patriot in the time of Emperor Alexander Severus. Since 1899, French archaeologists have laid bare the central portion of Dougga's municipal center, but this modest temple hides in an olive grove. Other Roman monuments in the ancient colony, called Thugga, include a theater, forum, marble colonnades, and several shrines honoring Latin deities. Built mainly in the second and third centuries A.D., their ruins are among the most important in northern Africa (page 382).





ONLY A BLIND MAN COULD LOSE HIS WAY FROM GAFSA

Good roads radiate in every direction from this town in the mountainous heart of Tunisia. Above the slumbering citizen, a sign proclaims the municipal speed limit of 40 kilometers (about 25 miles) per hour. Surviving from Roman days are mineral water baths or swimming tanks, where young natives dive for coins tossed in by visitors.

for the splendid descent through the forest, where men strip bottle stoppers and cork bath mats off trees, the trip to Taharka was a disappointment.

#### DOUGGA'S UNWRITTEN FAME

Not so Dougga, Tunisia's outdoor Bardo.

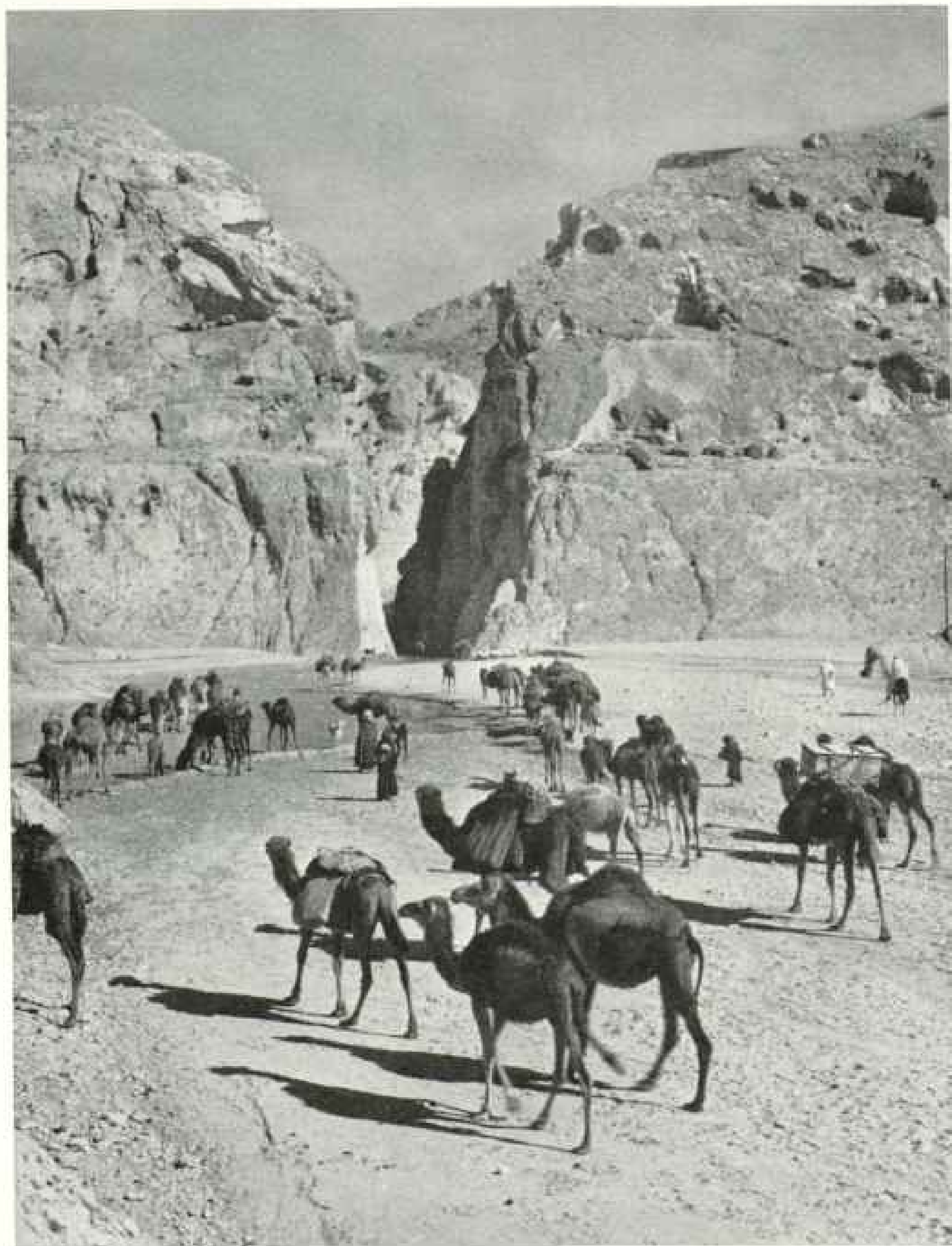
Dougga rises above any written record describing its prime. From the Libyo-Punic mausoleum up through olive groves past baths and latrines (more modern than anything the countryside now affords) to the maze of walls and mosaics below the Forum and Capitol, Dougga's stones suggest an importance and dignity which recorded history fails to confirm (p. 381).

Across the fertile valley a line of hills hides Zama, which may be the site of Hannibal's defeat by Scipio. One stands amid the majestic ruins of a city without a his-

tory, and thinks of an epoch-making event whose site is unknown.

Closer to Tunis and reached by a road which enjoys wonderful views of Hadrian's aqueduct—attacked by Vandals, Arabs, and Spanish, but finally defeated by an underground pipe line—is the site of *Thurburbo Majus* (page 376). Jupiter's statue alone must have been as tall as a bungalow, since its head is five times life size.

Rome's petrified footprints are slowly crumbling away, but even in a dry and thirsty year Tunisia's gardens are worthy of note. Not cultivated corners of an equally colorful countryside are these products of sweat and persistence. Set between sand and sea—private oases rescued from salt as well as sun—they begin at a dusty gate outside which lies barrenness and thirst. Inside lies enchantment.



NOMADS AND THEIR CAMELS MEET THE IRON HORSE AT SELDJA GORGES

Rich in phosphates, this defile is served by a narrow-gauge railway running from Sfax to Metnoui. A stretch of track crosses the rock slope behind the gap. Camels may drink from this stream, which disappears in the sun-baked desert farther south. Some two million tons of phosphates a year have been extracted here for use as fertilizer, but the demand has fallen off since low prices for farm products have made production less profitable.



ON TWO BOATS LASHED SIDE BY SIDE THE CAR IS FERRIED AWAY FROM LOTUS LAND

The front of the author's machine rests on one boat, the rear wheels on the other. There is room for only one sail, so the barefoot deck hand helps by poling through the shallow water. On the horizon is the old Roman causeway linking Djerba (right) with the mainland. Half submerged, this now serves as a foundation for a telegraph line.

For the thirteen years since I first saw it, I have had in my heart the picture of a Tunisian paradise hanging between sky and sea. Where the snowy whiteness of Sidi Bou Saïd climbs a ruddy cliff from the sparkling gulf to a single minaret, one isolated palace, with white peacocks hiding under purple cascades of bougainvillea, stands out alone.

If Hamilcar's garden stood here, the genius of Flaubert has done full credit to such glories as the Carthaginians knew. But could this hillside paradise ever have been more regally enchanting than it is today?

Along a golden sickle of beach whose

time-browned handle is the fortress-town of Hammamet (page 377) are other delightful oases whose palms are orange and lemon trees, whose inhabitants here find beauty after busy and adventurous careers.

Within one garden, beside this blue sea stretching toward Malta, there lives the leader of an expedition up the distant slopes of Everest.

What could be a greater contrast? There, life stripped to its mere essentials, death holding the face cards and a jealous mountain spirit defending one of its last strongholds from dauntless man.

Here soft breezes, clear waters on clean sand, slippered servants and a lingering



POTTER'S CLAY, LIKE VINEYARD GRAPES, IS "HANDLED" WITH THE FEET

After mixing, the clay will be kneaded on a stone beside the potter's wheel inside the white building. One craftsman living here at Nabeul is famed around the Mediterranean for his glazed and polychrome tile.

sense of deathless romance dating back to Dido's funeral pyre and Odysseus' loyal resistance to sirens.

Phoenician galleys passed this way. The glory of Greece and the grandeur of Rome touched these shores, whose soft climate and quiet have caused a colony of villa owners to choose this spot, not far from the highway, but facing the sea and sky.

#### RAIN IN A SUN-PARCHED LAND

My happiest ride through all this land of the sun was through a rain which olive, vine, and palm tree had been craving for months.

Confined in a comradeship we had shared on distant Asiatic trails, I accompanied

Audouin-Dubreuil on his return toward Zarzis. My travel through Tunisia was over. This ride together was a friendly leave-taking from a land to so many of whose beauties he had provided the key.

Long caravans plodded past, the camels still disdainful of a fate which had turned the sheep to quilted skeletons and the horses to hang-head creatures almost too weak to stand.

Nomad women, trudging along with children on their backs or riding the rolling bridges of their ships of the desert, welcomed the driving rain which molded their dark gowns to their forms and added glitter to barbaric earrings, bracelets spiked like dog collars, and those antique, circular



STUCK IN A DUNE: THE AUTHOR'S MISFORTUNE IS THE ARABS' GOOD LUCK

Waiting for motorists to come to grief in the sand, these Berbers make pocket money by running to the rescue. The dune here is scarcely visible, but it stopped the car despite oversize tires. Tunisia has an extensive modern highway system, with bus services in many regions.

safety pins which serve as beauty straps to coarse blue gowns.

The travel-weary Bedouins gloried in the storm, for under its heavy barrage the famine that drove them north was in full retreat.

Camped in the plains near Tunis, like the army of mercenaries about the walls of ancient Carthage, were thousands of desert folk, fled thither from the Sahara's edge. During my travels, from the ruins of Carthage to the regions of sand and palms, we had honked our way through hundreds of north-bound caravans.

Now, on my last ride over the splendid Tunisian roads, the northward migration was slowing down in welcome mud. Life-giving rain had come again to push the dread Sahara back upon itself. The nomads, mankind's outposts, would soon re-occupy what long-continued drought had turned to No Man's Land.

Audouin-Dubreuil, who knows and loves the desert, was sympathetic to this epic battle of the rain, but our hosts, the Sebastiens, regretted the storm.

Their house is low and white, its small windows set in bulging little iron-barred

balconies such as Moslem women use as lookouts upon a world where they walk veiled.

Inside was almost unbroken whiteness, where the very pictures—one a Iacovleff\*—do not break the lines of wall and vaulted ceiling, but stand on foot-high tables above rugs of zebra skins.

Outside the living room, rain spattered softly in the white-tiled swimming pool and oranges shone on dripping trees. Between the branches were views of lazy waves and out toward Malta blue sea and gray sky merged in mist.

All Nature shut us in. At table we conjured up scenes of desert and city, trans-Atlantic liner and tractor-type car defying the Gobi. Boulevard and Broadway entered our conversation, but they made no sound. Travelers all, here we met in that peace and quiet that bless the journey's end.

I wonder if Ithaca seemed as delightful to travel-worn Odysseus, home at last from Lotus Land.

\* See "Faces and Fashions of Asia's Changeless Tribes," 26 paintings by Alexandre Iacovleff, NATIONAL GEOGRAPHIC MAGAZINE, January, 1936.



# THE MEXICAN INDIAN FLYING POLE DANCE

BY HELGA LARSEN

**O**F THOSE age-old rites which still survive among the Indians of remote villages in Mexico, one of the most interesting and spectacular is the strange dance of the flying pole.

Although my sister and I had spent many years in the Mexican mountains studying Indian traditions and customs, we never had seen this ceremony. In a symbolism centuries old, the performers dance at the top of a tree trunk as tall as a ship's mast, then "fly" to earth on long, unwinding ropes (page 389).

Therefore, when we heard that the Otomí Indians were going to fly from their pole in Pahuatlán, we immediately packed our knapsacks and set out.

Pahuatlán is hidden away in the mountains of northwestern Puebla where a wedge of that State penetrates into the State of Hidalgo.

## YAWNING RAVINES END RAILROAD AT HONEY

The train from Mexico City took us as far as Honey, so called because that was the name of the Englishman who built the railway which ends there. All railways running northeast through the Valley of Mexico toward the Sierra stop abruptly where the first deep ravines plunge to a yawning depth and the sweep of the horizon is suddenly bruised by the contour of majestic ranges.

At Honey, which looks for all the world like a deserted western mining camp, we were met by Antonio, our Indian guide. After the usual fuss and flurry of loading the baggage on the pack mule, of saddling the horses, and adjusting the ever-too-long stirrups, which in this part of the country look like enormous wooden shoes, we left the straggling streets and soon were passing through a dense forest of pine and cedar.

Presently, however, the country became more open and the horses patiently climbed the shoulder of a ridge that divided two beautiful valleys with sheer walls dropping to the rivers below. From here the trail pitched steeply downward for about ten miles, making a drop of more than 3,000 feet.

The pine trees became small and stunted and finally surrendered to trees and plants of a more tropical climate. Small gray huts

with thatched roofs nearly touching the ground clung to the steep hillside and the green patchwork of cornfields climbed up and down almost perpendicular slopes. In front of us blue ranges lost themselves in the deeper blue of a vaulted sky; behind us the world was hemmed in by dark wooded peaks.

## BROWN FACES FLASH SMILES

The Sierra was teeming with life. Far above us, on the opposite side of the ravine, moving flecks of white showed where men were at work in their fields. Women were pounding clothes on large flat stones or filling brown clay jars with ice-cold water from the waterfalls that shimmered against the green hills.

Indians with large crates on their backs were toiling over the steep grade. Their enormous loads, supported by a leather strap or a woven palm-leaf band across the forehead, forced their bodies forward to counteract the heavy pull. With eyes riveted on the trail, brown faces taut and strained, square jaws set, they labored ahead—but there was always a soft-spoken "adiós" for the passer-by and sometimes a flash of strong white teeth as a sweat-dripping face was lifted to ours.

Flocks of goats were driven uphill by shouting boys, and the echo of high-pitched voices of muleteers and the merry tinkle of their animals' bells floated on the air as large pack trains lumbered along carrying freight to and from Pahuatlán. The road is the pulsing artery through which flows the life of the Sierra.

A piece of green paper crushed in the hand gives a fair idea of the topography of the country surrounding Pahuatlán, which rests on a slope high above the point where two small rivers meet.

After almost three hours we sighted the town, coming upon it suddenly at a turn of the road. Below us the red-tiled roofs of the houses peeped out from orchards and gardens.

## ONE MODERN TOUCH: RADIO ANTENNA

Pahuatlán cannot have changed much during the last few hundred years. The houses may have had a fresh coat of paint now and then and of course the radio has set its mark on the town. But, on the whole,



Photograph by Rodney Gallop

CRESTED FLYERS PARADE TO THE TUNE OF THEIR ONE-MAN FIFE-AND-DRUM CORPS

One "daring young man," whom the author met, had "flown" for 35 of his 63 years. Not only is there danger of the pole breaking under the men's weight, but a dancer may make a fatal misstep atop the mast, particularly as some may drink heavily to buck up their courage. Most of the Indians have forgotten the symbolism of their "sky" dance, but the spectacle is a treat for the youngsters who crowd the side lines here at Papantla (opposite page).

life flows along in much the same way as when the Spaniards built the first houses on the mountain side.

In its outward aspect Pahuatlán is decidedly Spanish, with deep archways and large iron-studded doors that swing open to patios filled with flowers after the fashion of Seville. However, the conquerors have long ago gone to other realms and Pahuatlán has turned back upon itself and become Indian.

Our hotel, if one could call it that, opened onto a small patio behind a store. It smelled a bit sour, as strings of dried pigskins which the Indians use for carrying the fermented drink called "pulque" adorned its walls. But nothing mattered to us except sunshine the next day for the flying pole dance.

Darkness fell quickly and an ink-black night was ushered in by a tropical rain which in a few minutes turned the narrow cobbled streets into rushing rivers. The continuous drip-drip from the roof on the dried pigskins sounded like the deep, sinister beat of an Aztec war drum.

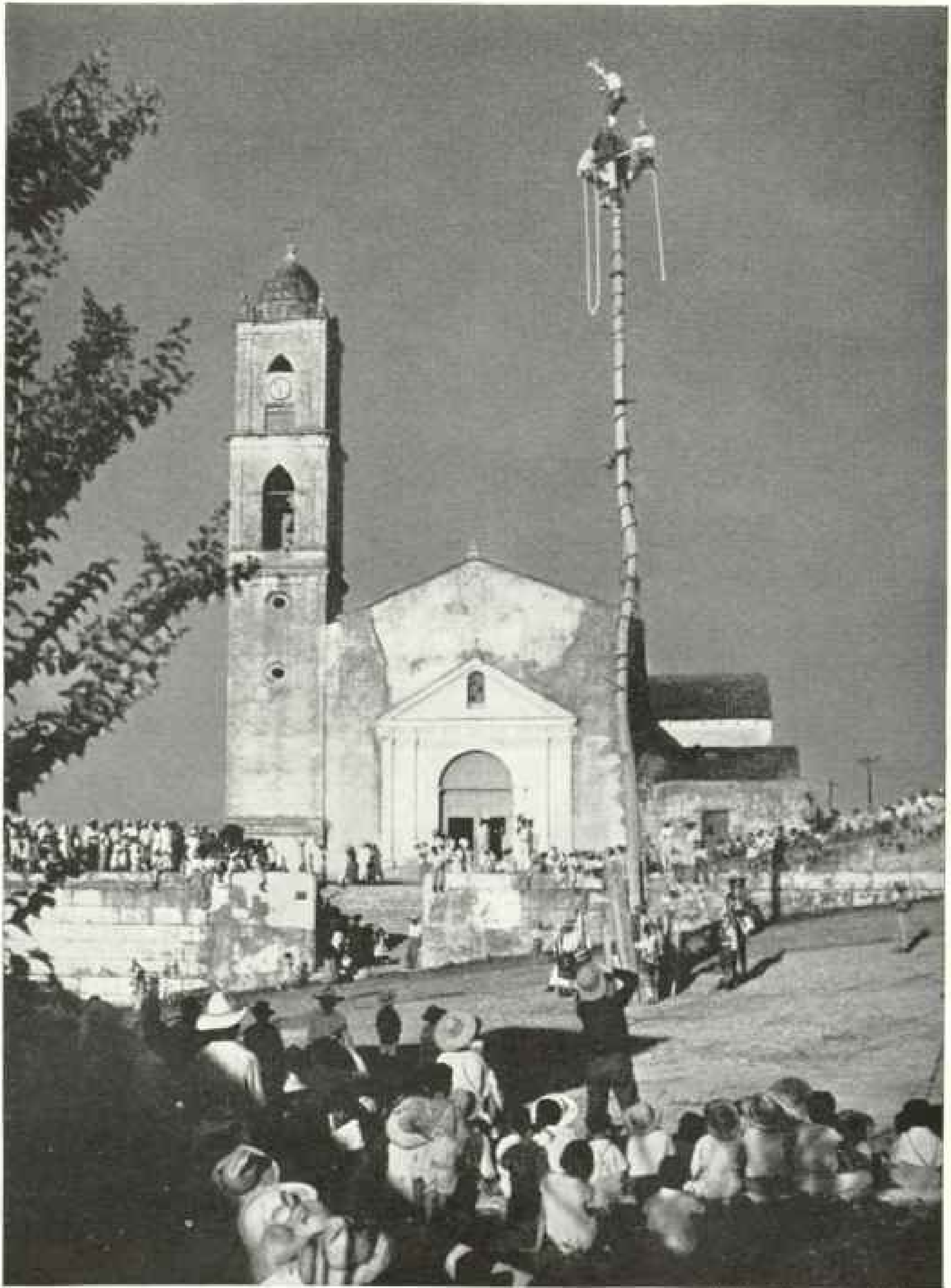
We woke at daybreak to the same disheartening patter of falling rain, but even before Pahuatlán had time to brace itself to meet a new day, one of those surprising changes of weather typical of the Sierra took place. Clouds scudded away and a brilliant Mexican sun lit up the scene.

MARKET A BABEL OF INDIAN TONGUES

It was Sunday and the market was in full swing when we picked our way through the wet streets to the plaza, which was crowded with Indians. All the tiny villages that hang like eagles' nests on the mountains around Pahuatlán empty themselves on Sunday and swarms of Indians in white starched clothes move up and down the narrow trails bound for the market.

The musical rhythm of several Indian languages flowed and ebbed through the archways around the sloping plaza, where natives bartered or haggled about prices, exchanged gossip, or sat in long silent rows with their wares piled up in front of them.

The women wore gorgeous hand-loomed



Photograph by Rodney Gallop

INDIAN "FLAGPOLE SITTERS" CAPER ATOP A 70-FOOT MAST

At this dizzy height, with feet stamping and headdress bobbing in time with a gourd rattle, one actor dances while his five mates perch on a flimsy wooden frame. Each entertains the gaping crowd for about ten minutes. Then all leap into space and "fly" groundward on ropes (page 392). This traditional Indian ceremony, seen here at the Corpus Christi festival at Papantla, Vera Cruz, survives in certain mountain villages northeast of Mexico City.



Photograph by Rodney Gallup

"HUMAN BIRDS" START UP THE POLE

Scarlet bandannas tied across their backs are supposed to be wings, for in olden times the dancers were dressed as birds. Originally there were only four performers, believed to represent the sacred birds which guarded the cardinal points of the compass. But now in Pahuatlán "six flyers are more elegant than four," Indians told the author.

shoulder capes embroidered in cross-stitch patterns varying in design and color. Almost every village had its distinctive dress.

By far the most numerous were Otomi women from a village high in the mountains north of Pahuatlán. Their capes were of wool embroidered in striking patterns of black, red, and yellow. Their long hair was braided with cords of wool ending in bright tassels of beads. The skirt, of wool or cotton, was drawn tightly around the hips, with the fullness gathered into deep pleats in front which gave a singularly graceful

rhythm to their walk.

In the center of the bustling plaza towered the flying pole, almost seventy feet high and as straight as a mast—a magnificent tree, related to the pine. On some mountain slope it had grown, waiting to give up its life for an age-old tradition. More than a hundred Indians had dragged it from its birth-place over the narrow path. How they had managed to get it around the sharp curves and across the ravines remains a mystery.

It must have been an arduous task to raise it on the small plaza. With levers and ropes the heavy trunk had little by little been lifted from the ground and slid into a deep, narrow hole in which the Indians had placed their offerings.

A live turkey, candles, chocolate, cigarettes,

and other things—varying in different parts of the Sierra—are put into the hole beforehand to nourish the pole and make it strong enough to hold the flyers.

LOFTY DANCE FLOOR TWO FEET IN DIAMETER

Three Indians were climbing to the top, carrying six long ropes and a short section of another tree hollowed out and smeared with pink soap. A thick vine had been twisted around the pole to afford a foothold.

With difficulty the hollowed section was

placed on top of the pole, like a thimble on a finger, but free to revolve, and the six ropes were very carefully wound around the pole below it.

The top of this "thimble" was the dance floor. It measured exactly 24 inches in diameter, as we were able to verify when it was taken down after the ceremony. This tiny platform, furthermore, was not level, as six other ropes supporting a hexagonal frame passed over it in grooves.

The frame, made of six sticks tied together with ropes, was hung just below the thimble. Then the six long ropes which we had seen the Indians wind around the top of the pole were passed over the frame and the ends left dangling in the air.

Thereupon the Indians climbed down and we waited, while clouds gathered on the mountains and rolled down toward the roofs of Pahuatlán. At one o'clock it rained and we were bitterly disappointed, as we knew the Indians could not fly if the ropes got too wet.

But again the gods were kind. The rain stopped, the sky became clear once more, and the gayly dressed *voladores* (flyers) finally entered the plaza.

Strangely enough, not many historians have mentioned this old ceremony; only in a few places is it recorded in ancient Indian manuscripts.



Photograph by Bodil Christensen

#### HEADDRESSES FLASH RAINBOW HUES AS DANCERS WHEEL

The stately Quetzal ceremony sometimes serves as a curtain raiser to the flying pole dance. Present-day Indians weave the huge crests with paper strips instead of the brilliant macaw feathers used by their ancestors.

The ceremony of the *volador* is supposed to be intimately connected with the Indian calendar. It is believed to represent the Indian "century," or cycle of 52 years, which was divided into four groups of 13 years each.

In the old Spanish chronicles there were always four *voladores*. They were dressed to represent birds—probably the four sacred birds guarding the cardinal points, as each flyer corresponded to one of the four chief points of the compass. The flyers made thirteen rounds each before reaching the ground; that is, four times 13, or 52, the number of years in the cycle.





Photograph by Bodil Christensen

#### INDIAN JACKS ON THE BEANSTALK

Their ladder is a fresh vine twisted about the pole. Reaching the top, each man swings up to a seat on the six-sided frame. Below the cap or hub are wound the ropes on which they fly down. All wear red breeches except the figure in billowing skirts, who represents the Man-Woman Malinche.

This symbolism has been almost entirely forgotten in the course of centuries, though the Indians still raise their poles in the Sierra and fly as they did in very early days.

In Pahuatlán the symbolic number of four flyers has been changed to six. "It is more elegant," the Indians explained. Therefore we had a hexagonal frame and six ropes instead of four. In other places, however, the natives still cling to the old number.

#### FLYERS WEAR BRIGHT RED

Our voladores wore bright-red costumes, and two bandannas crossed in the back gave a vague resemblance to wings. Five were dressed as men and the sixth as a woman. Malinche they called "her." Almost all Mexican Indian dances have a Malinche, or Man-Woman, but nobody seems to be able to explain the exact rôle played by this figure.

One by one they climbed to the lofty height, Malinche somewhat hindered by the long skirts fluttering in the wind. Once on top, they sat down in the frame and supported their bodies by thrusting their feet against the pole. They looked very small—like bright rag dolls high up in the air.

Then one stepped up on the platform and commenced to dance. Five of the flyers carried rattles and the sixth a small drum and a flute that he played at the same time. The frail music floated down to us and the tiny figure whirled and leaped in time with its rhythm.

#### DANCING ON THE BRINK OF DEATH

Faster and faster he danced until my heart was in my throat; the thud of his feet echoed in my own pulse beat. One step misplaced, one slight loss of balance, and nothing could have saved him from plunging to a sudden death.

Nothing happened, and the dance went on to the four cardinal points. Each volador danced for about ten minutes, except the one with the drum and flute.

The monotonous tune changed slightly for each new dancer, and Malinche, who was the last of all, had four different tunes. She seemed to be the most important person in the ceremony, and her dance was more intricate. Everyone gasped with fear when she stooped down and, leaning forward at a dangerous angle, enfolded each of the others with a large bandanna which she held in both hands.

After Malinche had slipped back to her



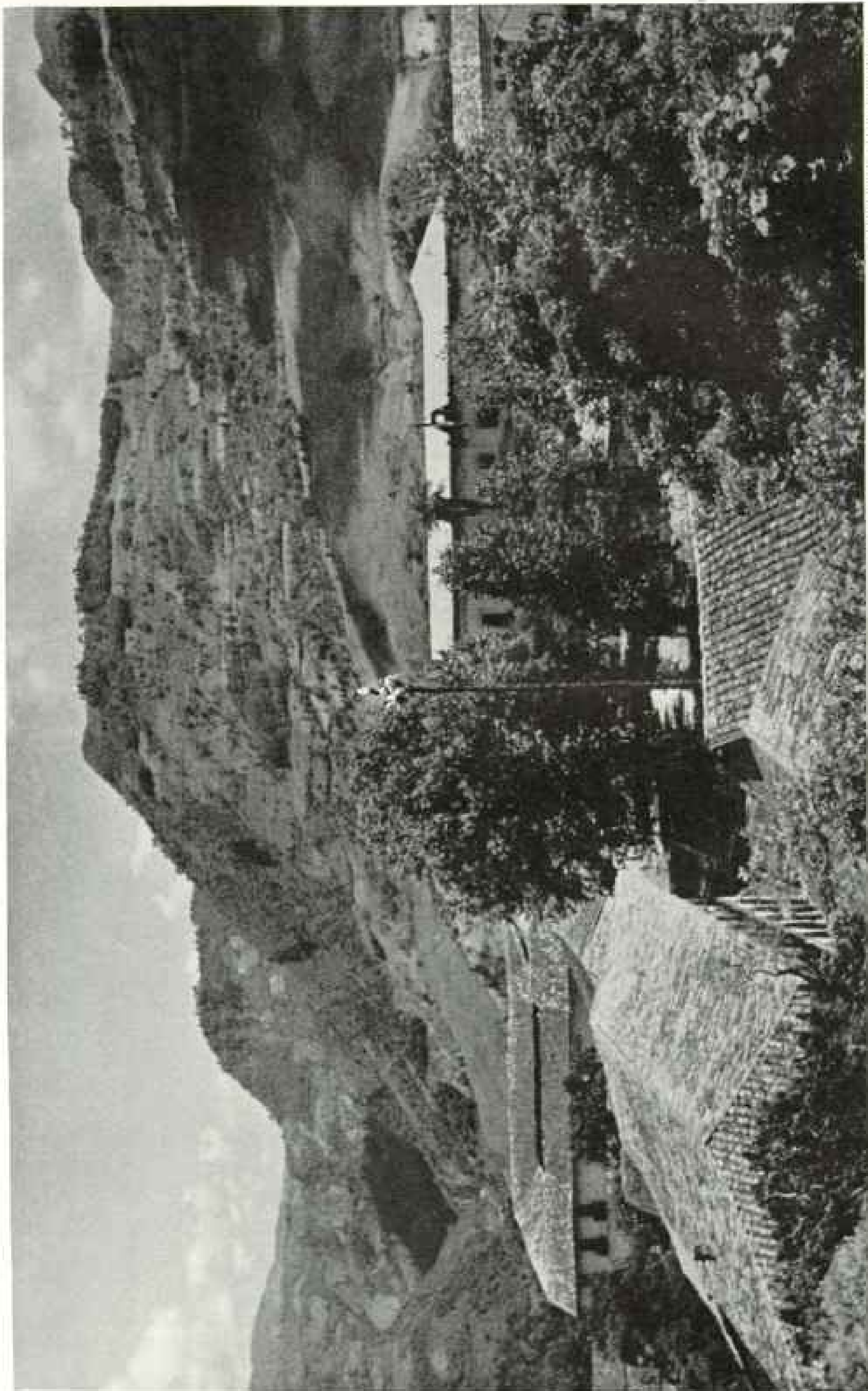
DRIED PIGSKINS ADORN THE PATIO OF PAHUATLÁN'S HOTEL.

Indians fill them with pulque, the popular fermented drink made from the juice of maguey plants. Arriving in town for the flying pole dance, men in pajamalike clothes park their mules in the courtyard.



Photographs by Bodil Christensen

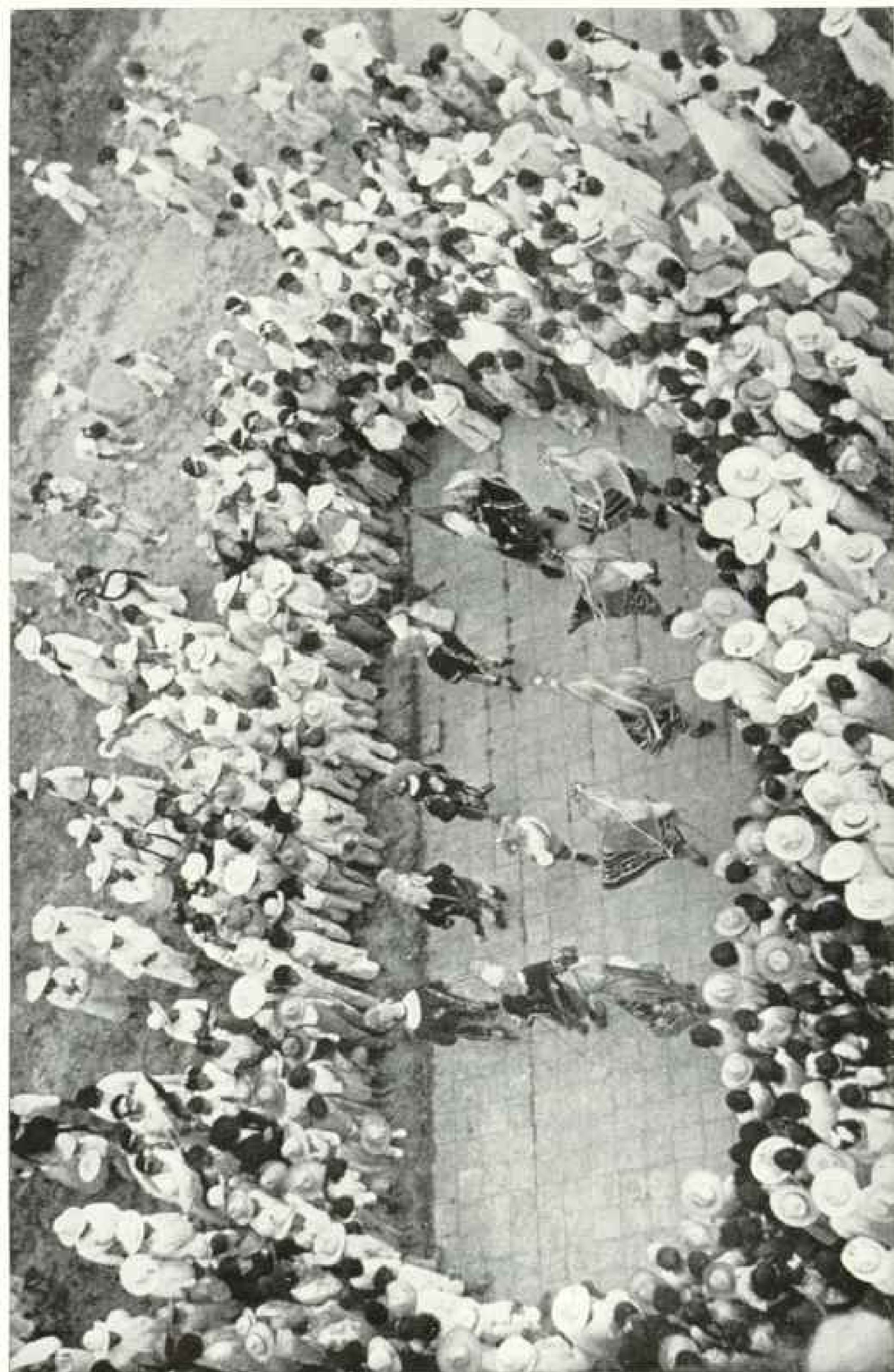
WORRIED BROWN FACES WATCH VILLAGE HEROES CLIMB THE POLE



Photograph by Bodil Christensen

LIKE AN ANIMATED STATUE ON A TOWERING PEDESTAL, A FLYER DANCES HIGH ABOVE PAHUATLÁN'S RED TILE ROOFS

His fellow performers cluster below on the frame. The pine must usually rot about three years of use. Then more than 100 Indians drag another down from the mountains over a narrow path. To make the new pole strong, a live turkey, chocolate, cigarettes, and other offerings are put in the deep hole where the butt is buried. The flying pole dance is performed at fiestas such as the Corpus Christi festival. Numerous accidents have caused it to be banned in some communities.



Photograph by Ralph E. Gray

WHITE-GARBED INDIANS WATCH MEN IN COLORFUL CLOAKS AND PLUMED HATS ENACT "THE BATTLE OF THE MOORS AND CHRISTIANS"

Past dance, past play, the ceremony symbolizes the struggle between good and evil. It was introduced into Mexico by the Roman Catholic Church to replace pagan dances. A character representing Santiago (St. James) leads the Christians; Pontius Pilate heads the Moors. Here the "battle" precedes the flying pole dance at Papantla.



Photograph by Bodil Christensen

"WILL THE POLE SNAP?"—THIS UNVOICED FEAR LIES BEHIND THE MEN'S UPTURNED EYES



Photograph by Rodney Gallop

THIS "VEILED WOMAN" IS REALLY A MAN

Wearing an enormous plumed hat with shining mirrors, he plays the rôle of the Man-Woman Malinche. Little is known about this traditional figure of the flying pole. Some believe "she" represents the Aztec girl who befriended Cortez, Spanish conqueror of Mexico.





Photograph by Rodney Gallop

DANGLING FROM A LOFTY MERRY-GO-ROUND, OTOMI INDIANS FLY THROUGH THE AIR

Dances over, the actors suddenly dive from their seats atop the pole. Here, ropes tied to their waists and wound about the masthead check their fall. As these life lines unwind, the men descend slowly and revolve about the mast in an ever-increasing circle until they touch the ground. Five of the men grab the rope with their feet and turn upside-down at the start of the two-minute descent; only the skirted Malinche (lower figure) remains upright.

place in the frame, all tied the ends of the ropes around their waists and with a piercing cry launched into space.

For one breathless moment they hung along the pole, five of them head down, for only Malinche flies with her head up. Then down they came in a steady crescendo of ever-widening circles.

As they gained momentum and the ropes slowly unwound, the effect of flying was perfect. Round and round the pole they flew, their slim bodies stretched along the ropes which they caught with their feet. The music had changed to a livelier rhythm, accentuated by the drum and gourd rattles.

On the crowded plaza all commercial activities had ceased, and silent Indians with upturned brown faces intently watched the six whirling figures.

Then the flyers reached the ground, swinging gracefully around and landing on their feet. A deep-throated cry arose from the plaza as the crowd broke like a surging wave and closed in around the voladores.

ACCIDENTS SOMETIMES MAR FIESTAS

Afterwards the flyers became our friends. They spoke Spanish haltingly, searching for words. They were men of different ages. The chief was 63 years old and had flown for 35 years. He had been the teacher of the others, who treated him with great respect. He told us about accidents and of voladores who had fallen to their death.

"We are helpless if anyone loses his balance," he said. "We can do nothing to help because we should all fall."

The whole structure is so frail and depends so entirely upon perfect balance that the least violent movement may be dangerous. In some villages the authorities have prohibited the dance because of accidents.

To have sufficient courage, many *voladores* often get quite drunk before climbing the pole. This of course makes them more reckless, and therefore a fiesta may end with the tragic death of a beloved flyer. *Voladores* enjoy much the same admiration and worship as that accorded a favorite bull-fighter in Mexico City or a Babe Ruth in the United States.

Our flying Otomi Indians were not given to talk, and we feared that they knew nothing of the ancient symbolism of the ceremony. It was therefore a thrilling surprise when, as they were dismantling the pole, one of them turned to us and said:

"In the old days there were always four *voladores*, because we are really the four sacred birds that fly with the four winds to the cardinal points."

So, after all, a few embers of the old rite are still glowing in the dead ashes of yesterday. But before long they may disappear and the ceremony become a legend lost forever.

#### INDIAN DANCES ARE LIKE PAGES FROM FAIRY TALES

On our extensive trips through the Sierra we have seen many other interesting dances, each one like a brilliant page of a fairy-tale book.

On the lower slopes of the mountains Totonac Indians with enormous rainbow-colored headdresses wheel around in their stately Quetzal Dance (page 391).

The *Acatlaxqui*, or the Dance of the One Who Throws the Reed, as the word literally means, has managed to survive in a few Aztec villages high in the Sierra. It is so little known that even the very best-informed authorities on Mexico to whom we went for information had never heard of it, much less seen it.

We saw it danced by Indians in costumes that reminded us of the *voladores*, but with tall peaked caps and flowing panaches of colored paper.

Each dancer held his *acatlaxqui*, which consisted of one long and a dozen or more short slender reeds adorned with brilliant feathers. The reeds were fastened so as to slide along one another to their full length, telescope-fashion, when the dancer,

who held the longer reed in his hand, threw them into the air.

A circle of dancers surrounded a demure and miniature Malinche—a boy of eight with a dimpled girlish face, dressed in flowing white garments and holding a gourd and a small wooden snake painted silver in his hands.

At the beginning of the dance, Malinche stepped up on a small board and was hoisted high above the other dancers. The simple, monotonous tune played on a flute accompanied by a drum was almost drowned in the hilarious ringing of church bells and the startling reports of rockets bursting with small white puffs in the air.

But when the tiny figure commenced to dance on the board, holding "her" gleaming serpent high above "her" head, a hush fell on the spectators and the bells were silent.

Suddenly each dancer, with a graceful movement and a sweeping upward curve of the arm, threw his *acatlaxqui* into the air, while his feet never once lost the rhythm of the dance. A crackling sound, like the burning of dry twigs, blurred the music as the reeds shot out like arrows speeding from the string of a bow, and, crossing, formed a plumed dome of drooping arches over Malinche.

Again and again the frail tune was broken by the dry crackle as the dancers in some mysterious way made the reeds slide back into their hands, only to let them fly out once more.

#### WITCHES WORK BLACK MAGIC WITH PAPER DOLLS

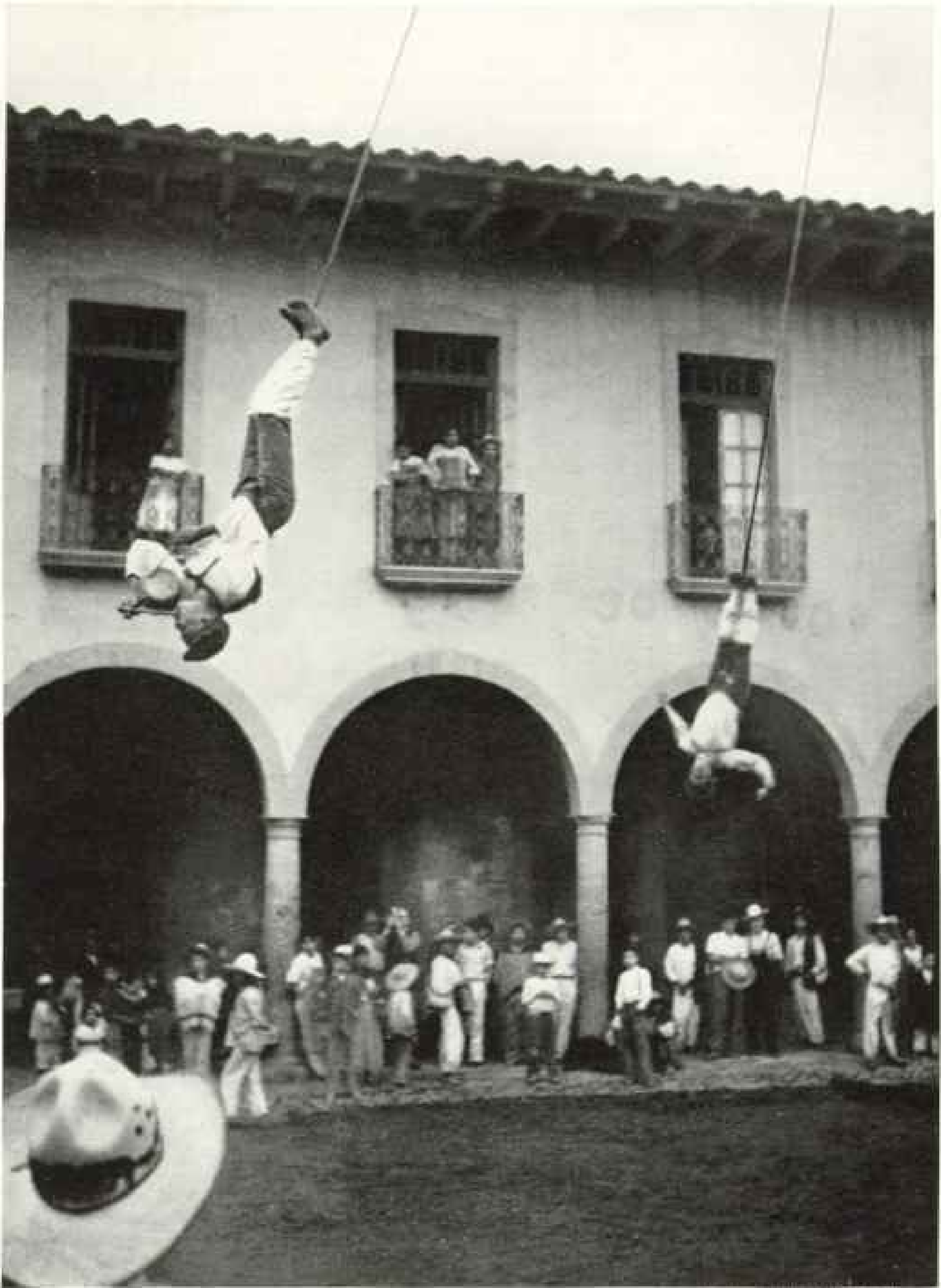
Once, almost by chance, we stumbled into a strange Indian world peopled by supernatural beings.

We had noticed a cluster of small huts on a mountain in the Sierra and had questioned several people about it. The answer was always the same: the village was so unimportant and the Indians so secretive that few people ever went near it.

That decided us, and we turned our horses down the steep trail that plunged into the river, then rose in sharp curves and looped up the mountain.

A strange sound greeted us upon entering the village—a hard-sounding clap-clap-clap, not the soft patting of hands making tortillas, but the impact of stone on wood.

We found women sitting in the shade in front of their doors, pounding away on



Photograph by Rosbey Gallop

THE MUSIC GOES ROUND AND ROUND, AS DAREDEVIL AERIALISTS SWING LOW

Still upside down and falling slowly, the musician plays his pipe and drum, while the others shake gourd rattles. Not until their blood-suffused faces are about to scrape the ground will they right themselves and land gracefully on their feet. Otomi Indians watch from arcades and balconies, ready to roar applause. As Mexico City worships a popular bullfighter, so do these villagers admire the plucky flyers.

small boards with stones. They were making paper!

The pages of history suddenly turned back several hundred years: ". . . And the paper on which they painted their hieroglyphs was fashioned from deer skin or pounded out of fiber extracted from the bark or roots of certain trees. . . ."

Today fiber paper is used for witchcraft only. The Indian uses two kinds of bark: one which gives a light and "good" paper and another which produces a dark purplish paper.

The latter is considered "bad" and is used for black magic ceremonies. It is cut into small dolls with which witches are supposed to be able to cast spells on people, as well as to cure all kinds of illness.

In the Indian world, which is much stranger than our own, everything—water, air, fire, earth, the house, the mountains—is represented by spirits which must be propitiated lest their wrath fall upon the defenseless village. The spirits demand offerings from the humble Indian, and weird ceremonies and rites are performed in their honor.

When an Indian is sick with fever, it means that the fire has entered his body and is demanding its offering. The sorcerer, or *brujo*, drives out the evil spirit by coaxing it into a dark paper doll which is hurriedly burned and replaced by a "good" doll of light paper.

Should the patient die, the sorcerer of course is not to blame, for is it not the fate of everyone to die? The unfortunate victim is buried with a couple of light paper dolls in his hand; these, being "good," will surely help him on his perilous journey to the land of shadows.

#### DROUGHT RELIEF, PRIMITIVE INDIAN STYLE

Whenever it happens that rain does not fall and the crops are threatened, the Indians flock to their sacred lagoon. An altar is raised on the shore of the deep, sinister-looking pool and smoke rises from many incense burners.

Drums throb and flutes wail while strong feet stamp the ground and a chorus of voices entreat the water spirit—supposed

to dwell on the bottom of the pool—to release the life-giving rain.\*

One by one frightened fowl are hurled into the water, followed by yards of muslin, food, flowers, paper dolls, and even money. The latter, we heard later on, is sometimes retrieved by unbelieving muleteers who loiter on the trail waiting for the Indians to depart.

#### DOLLS REPRESENT PLANTS

In early spring, when ruffled fields lie pregnant with seed, the witches are busy cutting seed dolls for their clients. These are made of common tissue paper, as they must correspond in color to the plants they are supposed to represent.

Like the fiber paper dolls, they are shaped like a human being with hands raised as if in prayer, but from the arms and legs sprouts the plant the Indian wishes to sow in his field.

In a cave high above the village, where the mountains seem to surge into the sky, the sorcerer chants his incantations over them and burns incense of copal gum. Then they are returned to their respective owners who reverently preserve them and take them out once in a while as an offering to the spirit that rules over the field and guards the crops.

These rites are faithfully carried out according to the different seasons and various needs of the villages, because an instinct, strong and primeval, deep down in the Indian's soul, still urges him to follow his ancient traditions.

But, some day in the future, engineers will probably blast a modern highway through these tiny unexplored corners, and the villages, some of which have not yet been put on the map, will be crushed under the grinding wheels of progress. The palm-thatched huts will cede their place to up-to-date filling stations; traditions will gradually disappear; the paper dolls will be forgotten, and the strange and mysterious world of the Sierra will be no more.

\* A custom somewhat similar, but involving human sacrifice, was practiced among the ancient inhabitants of Chichen Itzá in Yucatan. See "Yucatan, Home of the Gifted Maya," by Sylvanus Griswold Morley, in *THE NATIONAL GEOGRAPHIC MAGAZINE* for November, 1936, page 622.



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To carry out the purposes for which it was founded forty-nine years ago, the National Geographic Society publishes this Magazine monthly. All receipts are invested in The Magazine itself or expended directly to promote geographic knowledge.

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

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

The Society cooperated with Dr. William Beebe in a deep-sea exploration of undersea life off Bermuda, during which a world record depth of 3,038 feet was attained August 15, 1934, enabling observations of hitherto unknown submarine creatures.

The Society also had the honor of subscribing a substantial sum to the expedition of Admiral Peary, who discovered the North Pole, and contributed \$100,000 to Admiral Byrd's Antarctic Expeditions.

The Society granted \$18,000, and in addition \$75,000 was given by individual members, to the Government when the congressional appropriation for the purpose was insufficient, and the finest of the giant sequoia trees in the Giant Forest of Sequoia National Park of California were thereby saved for the American people.

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

On November 11, 1935, in a flight sponsored jointly by the National Geographic Society and the U. S. Army Air Corps, the world's largest balloon, *Explorer II*, ascended to an officially recognized altitude record of 72,395 feet. Capt. Albert W. Stevens and Capt. Cyril A. Anderson took aloft in the gondola nearly a ton of scientific instruments, and obtained results of extraordinary value.



# SEE HOW PLYMOUTH SAVINGS PILE UP!

**COSTS LESS!**

*Owners Report 18 to 24 Miles Per Gallon of Gas... You'll save on Oil Consumption... Tires... Run Far and Save Money... Plymouth Stands Up so well Repairs are Negligible... It Uses Regular Gas... and Plymouth Resale Value has always been Highest of "All Three"*



Front Seat is 3" Wider—2½" more in Rear! Body Pillowed on Rubber—New Airplane-Type Shock-Absorbers—Sound-Proofed Like a Radio Studio—And Priced with the Lowest!

**H**ERE'S the biggest and most beautiful of "All Three" low-priced cars . . . and the most economical full-size car in America!

And look at all this extra value: a new Safety Interior . . . All-Steel Body . . . double-action Hydraulic Brakes . . . Floating Power engine mountings . . . a new Hypoid rear axle, formerly in high-priced cars only.

See this new Plymouth at any Chrysler, De Soto or Dodge dealer. PLYMOUTH DIVISION OF CHRYSLER CORPORATION, Detroit, Mich.

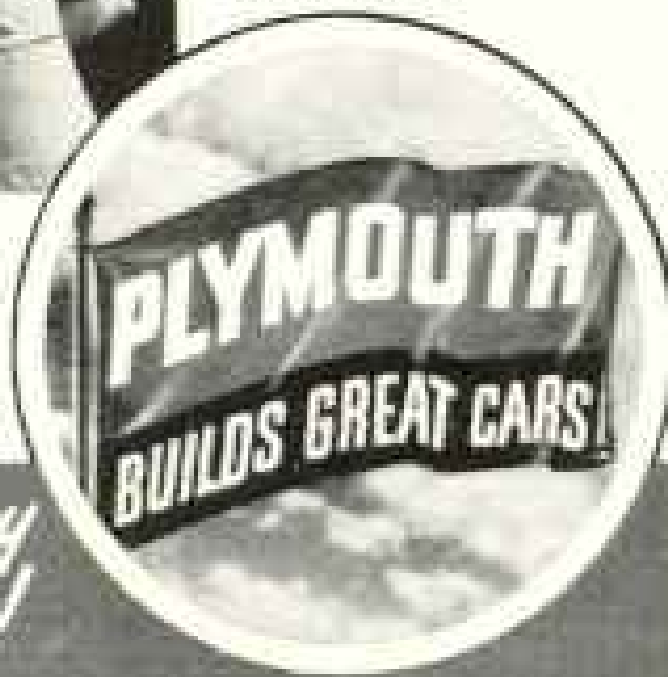
The new 1937 De Luxe Four-Door Touring Sedan



**PRICED WITH THE LOWEST**

The big, beautiful 1937 Plymouth is easy to buy. The Commercial Credit Company offers convenient terms, as low as \$25 a month, through all Chrysler, De Soto and Dodge dealers.

**ECONOMICAL!** Calibrated Ignition gets utmost power and mileage . . . on regular gas! Plymouth's directional cooling and full-length water-jackets give big oil savings!



**PLYMOUTH**

*The Best Buy of All Three!*



*"Aye, lad! It's a third less ocean!"*

SEASONED travellers are choosing the St. Lawrence Seaway to Europe. Sail for a thousand miles—over one-third of the entire distance—down the placid St. Lawrence through lovely French-Canada. Get your sea-legs before you reach the sea.

There's five-day speed on the great *Empress of Britain*. Or choose the *Empress of Australia*—from Québec to Cherbourg and Southampton. More leisurely crossings on the lower-cost *Duchesses* and *Mont* ships from Montreal and Québec to Glasgow, Belfast, Liverpool, Southampton and Havre.

Book now—it's Coronation-Paris Exposition Year. Get "39% Less Ocean" booklet and fares from

your travel agent or Canadian Pacific; New York, Boston, Buffalo, Chicago, Cleveland, Detroit, Philadelphia, St. Louis, San Francisco, Montreal or 31 other district offices in United States and Canada.

**39% LESS OCEAN  
TO EUROPE**  
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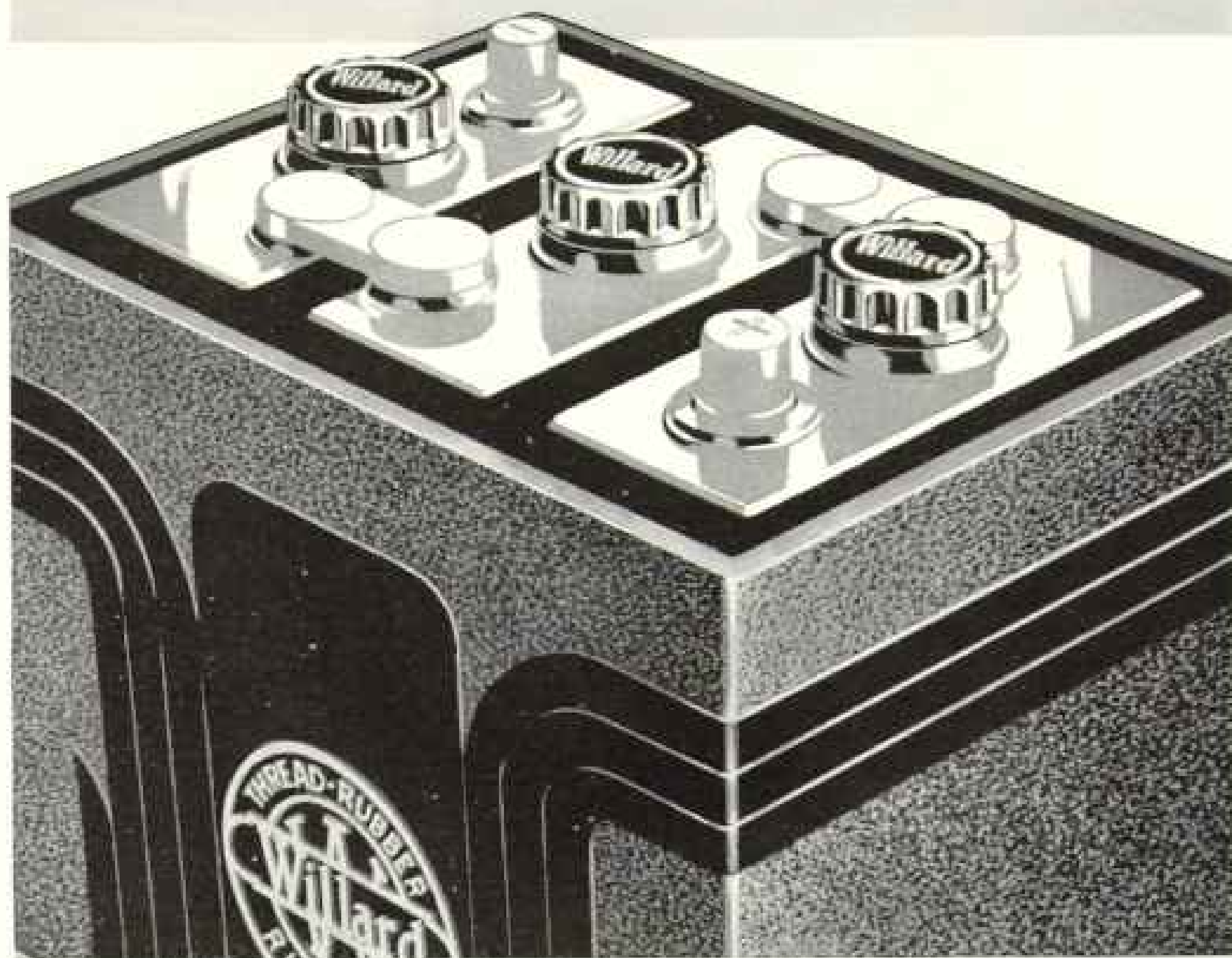
# Willards

**COST LESS TO OWN**



**-because they last longer...  
crank faster...don't let you down**

WILLARD STORAGE BATTERY COMPANY • CLEVELAND • LOS ANGELES • TORONTO, CANADA



# NATURE IS STINGY WITH TOOTH ENAMEL

*This Beautiful Enamel, Once Worn Away, Never Grows Back... NEVER!*



**be  
safe.**

**Protect precious enamel . . .  
win flashing new luster  
and Be Safe . . . change to  
Pepsodent Tooth Paste  
containing IRIUM!**

Nature is lavish in restoring skin, hair, nails. But She's terribly stingy with tooth enamel. Once you allow it to be injured, or you permit film to start its deadly decay, enamel can never grow back—never.

That is why the discovery of IRIUM has caused such a sensation in the dentifrice world. The flashing new luster it brings with *safety* is causing new thousands every day to change to Pepsodent, the *only* tooth paste containing IRIUM.

### *Acts on new principle*

Pepsodent containing IRIUM *softens* the tough film that forms on teeth. Then gently lifts and floats it away—polishes the enamel to a brilliant sparkle you have never even seen before—and imparts a new, firm, refreshed feeling to the gums.

You get a new taste-thrill out of eating, drinking, smoking! And bad breath—caused by film on teeth which ordinary tooth pastes fail to remove completely—is no longer a worry to you!

Be *safe* every day of your life! Get results always hoped for but never experienced with a dentifrice—and get them with *safety*! Change to Pepsodent Tooth Paste containing IRIUM.

Pepsodent alone among  
Tooth Pastes contains IRIUM

### **BECAUSE OF IRIUM . . .**

Pepsodent requires NO SOAP . . .  
NO CHALK . . . NO GRIT . . . NO PUMICE  
—*Safe!*

### **BECAUSE OF IRIUM . . .**

Pepsodent gently floats film away  
—instead of scrubbing it off.  
—*Thorough!*

### **BECAUSE OF IRIUM . . .**

Pepsodent, with massage, stimulates  
gums and promotes free-flowing saliva  
—*Refreshing!*

**be safe.**

*Change to* **PEPSODENT TOOTH PASTE**  
**IT ALONE CONTAINS IRIUM**



All Pepsodent now on sale contains IRIUM.

# Stop



## SAVING GARBAGE!



"Good Riddance to Bad Garbage!"

### Garbage Disposed of Instantly Right at the Sink!

SWITCH to better living! End the messy accumulation of garbage in your home. Banish forever unsanitary, unsightly garbage receptacles. Install the amazing new General Electric Disposall in your present kitchen sink.

#### No Odors—No Clogged Pipes

Kitchen waste—everything from peelings to bones—goes down the sink drain where it is quickly and quietly reduced to a pulp by the General Electric Disposall, and flushed away like water. The Disposall cleans itself. There is no odor. Pipes will not clog. And the operating cost is less than a penny a day. Easily installed in any sink.

Convenient terms are available. See a demonstration at your General Electric appliance dealer's showroom, or send coupon for details. General Electric Co., Sec. DR-3, Nela Park, Cleveland, O.

New complete  
G-E Electric  
Sink with both  
Disposall and  
G-E Dishwasher



Disposall is completely concealed. Can be readily installed in any sink.

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*disposall*

General Electric Co., Sec. DR-3,  
Nela Park, Cleveland, Ohio  
Please send full information regarding  
G-E Disposall  Dishwasher   
Complete Electric Sink

Name \_\_\_\_\_

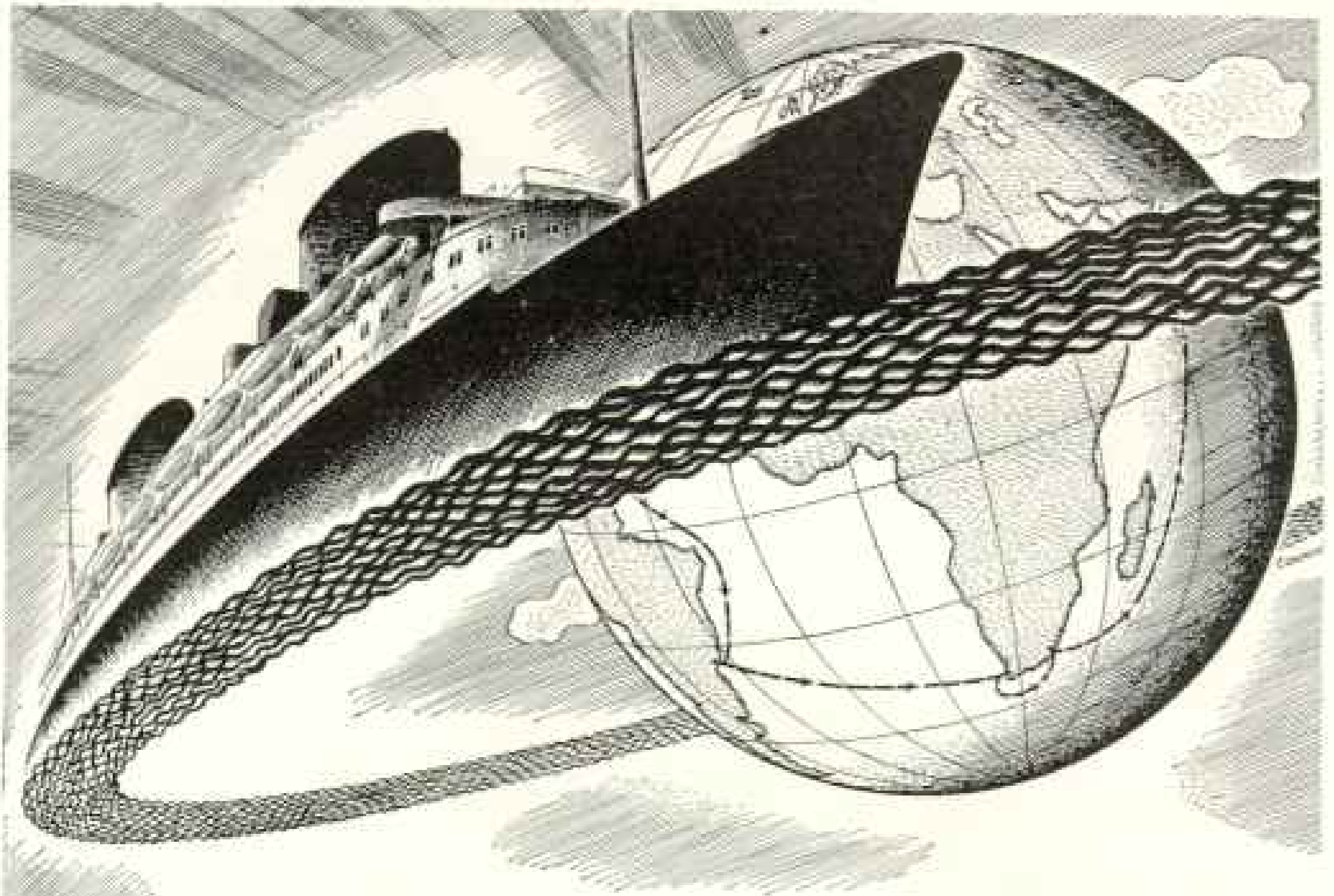
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# Around the World in Ninety Days



## A Raymond-Whitcomb Cruise in the North German Lloyd express liner "BREMEN"

To sail from New York, February 2, 1938

Sailing in the largest and fastest liner ever to go around the world, this newest of Raymond-Whitcomb cruises sets new standards. The great speed of the "Bremen" will enable it not only to encircle the world in record time, visiting great cities in South America and South Africa as well as the fascinating Far East, but also to make generous stops in the principal countries. And the great size of the "Bremen" — 51,656 tons — means exceptional comfort at sea.

THE ROUTE — NEW YORK BARRADOS RIO DE JANEIRO (2 days) SOUTH  
AFRICA (4 days) INDIA (9 days) CEYLON (2 days) SINGAPORE JAVA (2½ days)  
BALI (2 days) MANILA HONG KONG (2 days) NORTH CHINA JAPAN (8 days)  
HONOLULU SAN FRANCISCO PANAMA CANAL NEW YORK

### ANOTHER ATTRACTIVE ROUND THE WORLD CRUISE

On the renowned Hamburg-American cruising liner "Reliance," 136 days . . . January 9 to May 24, 1938  
With calls at historic ports in the Mediterranean and the most interesting countries of the Orient

#### NORTH CAPE CRUISE

The annual Raymond-Whitcomb summer cruise to Iceland, Norway, Sweden, Denmark, Finland, Danzig and Russia. To sail June 26, 1937, in the Cunard White Star liner "Franconia." \$525 up.

#### WESTERN EUROPE CRUISE

A summer cruise along the shores of Western Europe from Portugal to Norway, including Brittany, Ireland and Scotland. To sail June 26, 1937, in the French Line S. S. "Paris." \$565 up.

*For particulars see your local travel agent . . . or*

**RAYMOND-WHITCOMB**

New York: 670 Fifth Ave. (at 53rd Street)

Boston: 145 Tremont St. & 122 Newbury St.

Philadelphia: 1517 Walnut St. Cleveland: 841 Union Trust Bldg. Chicago: 320 No. Michigan Ave.



THE OUTDOOR, TILED SWIMMING POOL ON A NEW GRACE "SANTA" LINER, PHOTOGRAPHED AT NIGHT

## This Year **GRACE LINE to SOUTH AMERICA !**

Modern Grace Line "Santa" ships sail to South America from New York every week—from California every other week. A wide variety of cruises includes 25 and 32 day trips to Lima, Peru; 39 day tours to Iquitos and the interior of Peru; and 39 day cruises to Chile. En route Panama Canal, Havana and 12 to 15 other places, depending on cruise selected, are visited. Minimum all-expense fares range from \$350 to \$1000, including sightseeing, hotel accommodations and all necessary expenses afloat and ashore.

## Between New York and **CALIFORNIA** or *Mexico City*

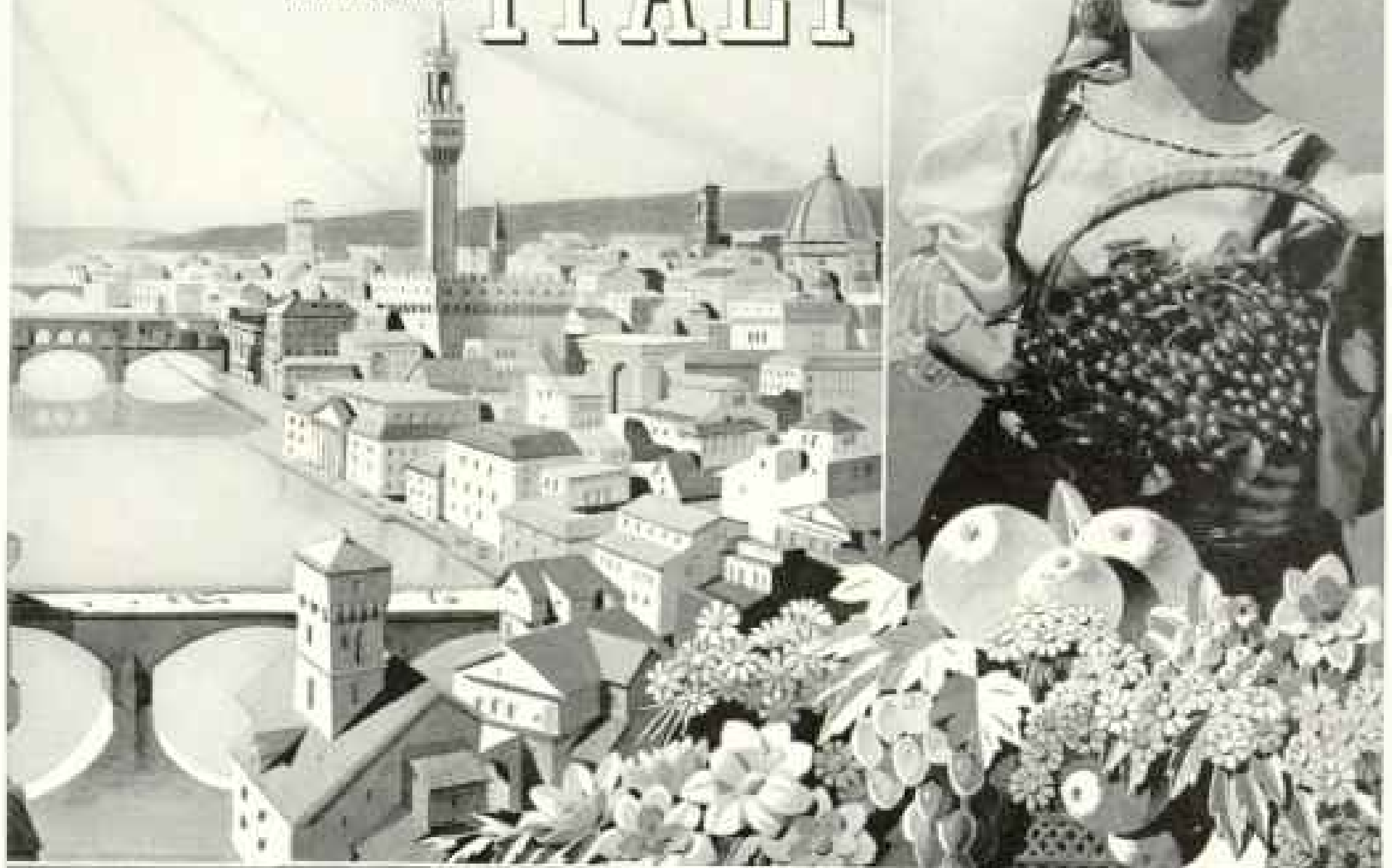
Grace Line cruises and rail-water trips between New York and California (or Mexico City) visit en route Colombia, Panama, El Salvador, Guatemala and Mexico, with an additional stop at Havana eastbound. Grace "Santa" ships offer all outside staterooms with private baths; outdoor built-in, tiled swimming pools; dining rooms with roll-back domes open to the sky; Dorothy Gray Beauty Salons; pre-release talking motion pictures. One of these luxurious Grace "Santas" sails every two weeks from New York and from San Francisco and Los Angeles.



*Sunny Skies and Sunny Smiles*

WELCOME YOU TO  
SPRINGTIME

**ITALY**



*and AMERICAN EXPRESS TRAVEL SERVICE . . . . . shows the way*

**S**PRING enters Europe through South-  
ern Italy . . . and lingers long before  
penetrating North of the Alps. Therefore  
to enjoy both Springtime and Italy at  
their best . . . visit the golden peninsula  
in March, April or May.

More and more travelers are doing this  
each year . . . enjoying the Bay of Naples  
in its early Springtime radiance! . . .  
pushing on to Rome through green  
wheatfields . . . motoring from hill town  
to hill town "with the top down" . . .  
exploring Florence's treasures . . . feed-  
ing the pigeons and threading the canals  
of Venice . . . viewing Milan's goss-  
amino cathedral by soft Spring moonlight  
. . . sailing the Lakes . . . or sunbathing  
on one of Italy's delightful Riviera's!  
This Spring, Italy is more than ever

ready to welcome you—with railway  
fares reduced amazingly (as much as  
20%)—with de luxe hotels providing  
choice rooms-with-bath and three meals  
a day at unprecedented low rates—and  
with the lira recently reduced to about 19  
for the dollar (40% more for your money  
than last season) and new Tourist Lira  
Letters-of-Credit and Tourist Checks  
available at a further saving. You are  
urged to write to our nearest office for  
the amazing story of Italy's beauty in  
Spring and full details concerning  
economical European itineraries.

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WHEREVER you wish to go in Italy, no  
matter HOW you wish to travel, the  
American Express will make your trip  
comfortable, convenient and most

economical. We maintain complete  
offices and travel staffs in the principal  
Italian cities to reduce the cares and de-  
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"economizing" on personal comforts or  
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Complete Spring Tours visiting Naples,  
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Lake Lugano, Lake Maggiore . . . can be  
made in as short a time as 25 days. Itin-  
eraries may be arranged to suit your in-  
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including other European countries if  
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cities throughout the world. American Express Travel Service also available through your own TRAVEL AGENT.



It's always  
good going on  
**GOODYEARS**

**—AND HERE ARE THE REASONS WHY**

**B**AD roads and bad weather hold no worries when you ride on Goodyear Tires. For out of Goodyear's experience in building millions more tires than any other manufacturer have come *three* great safety developments—safeguards that give you matchless security under the most adverse driving conditions:

**CENTER TRACTION**—deep-cut, road-gripping blocks where the tire meets the road—diamond-shaped to resist skidding in any direction.

**THE GOODYEAR MARGIN OF SAFETY**—the proven ability of this center-traction grip to stop your car quicker than other tires.

**SUPERTWIST CORD IN EVERY PLY**—more resilient than ordinary cord, insuring greater blowout protection and longer safety-life.

And because every Goodyear is built to protect our good name, you get this triple protection in any Goodyear Tire regardless of price. Remember, experience proves that the *cheapest thing on your car is the best tires you can buy*—and that means Goodyears, for twenty-one consecutive years the world's first choice.

**MORE PEOPLE RIDE ON GOODYEAR TIRES  
THAN ON ANY OTHER KIND**





# In Praise of France

"The morning comes—I don't know a pleasanter feeling than that of waking with the sun shining on objects quite new, and (although you have made the voyage a dozen times), quite strange . . . all seems as gay and as comfortable as may be—the sun shines brighter than you have seen it for a year, the sky is a thousand times bluer, and what a cheery clatter of shrill quick French voices comes up from the court-yard under the windows!"  
—William Makepeace Thackeray.



★★ A country beloved by men like Sterne and Thackeray, Charles Dickens and Henry James . . . Stevenson went through its inland waterways in a canoe and over its mountain passes on foot, to produce two little masterpieces, "An Inland Voyage" and "Travels with a Donkey."

★★ A country whose written history runs back to Julius Caesar and his imperial legions . . . whose first literature was written in the suave Latin of

the Silver Age . . . whose territory is alive with deep-rooted memories of the past . . . Gothic cathedrals, medieval walled towns, Renaissance chateaux, the ordered elegance of 18th-century architecture.

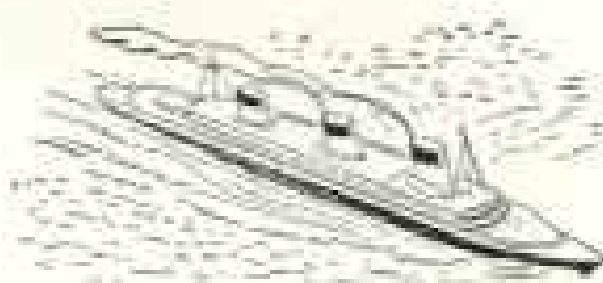
★★ A country of many countries . . . level Picardy, bathed in pearly light . . . opulent Nor-



mandy . . . wild and wooded Auvergne . . . tranquil, sunlit Provence . . . the austere Pyrenees . . . each with its special gifts of hospitality . . . the wines of Bordeaux, of Burgundy, of Champagne . . . a hundred cheeses . . . two hundred sauces . . . an epicure's Eden.



★★ A country whose coastline spaces smart bathing beaches and ancient fishing ports . . . Deauville and Harfleur . . . La



Baule and St.-Nazaire . . . Biarritz and Bordeaux . . . Toulon and Cannes . . . whose deep-water mariners have sailed the seven seas for centuries . . . whose maritime tradition finds its culmination in the streamlined *Normandie*, world's greatest ship, and her four companions in the French Line fleet.



## PARIS—1937

**Exposition Internationale**  
Once again the nations of the world send the finest products of their artists and engineers to a dazzling world's fair in Paris. Special reductions on railroads and air-lines, for exposition visitors. Ask your Travel Agent.

## French Line

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for Air-France  
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NORMANDIE, March 17 •

ILE DE FRANCE, March 12 •

PARIS, Feb. 27



# HE solved a problem *for the OIL REFINER*



**Y**OU might not expect the farmers of America to make your *motor oil* purer. Yet *they do*. Today their crops are being put to a new and amazing use in the oil industry.

Science has discovered a remarkable new oil purifier, *Furfural*, in oats, corn, wheat, cotton seed, sugar cane . . . In refining oil, it is a perfect cleanser. New Texaco Motor Oil, produced by the Furfural Process, is *free from impurities*. Your crankcase stays **FULL** longer.

Crude oils always contain heavy, foreign particles. If not removed, engine heat turns them to tar and gum. That in turn causes a worn and dirty engine, which sucks up oil, at every stroke, out of your crankcase.

Taking out all harmful, wasteful impurities from New Texaco Motor Oil means you get full lubrication, without buying so much oil.

Drive in at the next Texaco Dealer's you come to. Let him start you *today* getting finer, longer-lasting, *pure* lubrication for your car.

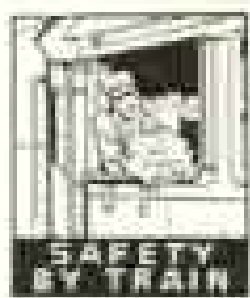
HEAR EDDIE CANTOR . . . EVERY SUNDAY NIGHT  
COLUMBIA NETWORK, 8:30 EST, 7:30 CST, 9:00 MST, 8:00 PST.



**25¢**  
A  
QUART

*Stays* **FULL** *longer*

# Summer Comes Early in **ALASKA**



GONE is the old story-book fallacy of "ice-box" Alaska, for travel-minded Americans have found the real Alaska to be an amazing land of two contrasting seasons. A winter—in most sections warmer than in many States—that turns like a changing wind, into an extended summer season. During this glorious Alaska vacationtime the magic of the Midnight Sun lures vacation-explorers to incredible trails of adventure... actually beginning as you step aboard a fast, safe, completely air-conditioned train and enjoy modern travel luxury speeding over scenic routes to the Evergreen Playground.

In Seattle, aboard your comfortable one-class steamer, you set sail on the world's longest sheltered sea lane, hemmed in by the noblest mountain grandeur of all the seven seas. And before you return you'll

have sailed up spectacular fjords—"knocked at the doors" of mighty glaciers, wandered among the continent's highest ranges, visited fishing villages and strange ports-of-romance... once gold stampede, totem, and Pacific crossroad cities. You'll have carried your vacation-expedition into Alaska's vast Interior to see Mt. McKinley, Matanuska Valley, gold mining and the Yukon. You'll have actually lived and breathed adventure that is so definitely the "spell of the North."

Budget-minded train fares and low all-inclusive All-American steamer fares enable you to fully enjoy these impelling days of discovery beneath the Midnight Sun. During Alaska's vacation time—from May first clear through September—cruises range from 9 to 35 days round trip from Seattle.



Of course you'll want the fascinating, free *Alaska Vacationland* literature describing this amazing land. Use handy coupon below.



NORTHERN PACIFIC  
UNION PACIFIC

THE MILWAUKEE ROAD  
NORTH WESTERN LINE

GREAT NORTHERN  
SOUTHERN PACIFIC

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For The Alaska Line's Good-Natured Map, check here and enclose 10c.

FOR ALASKA LITERATURE, just jot your name and address on the margin below and mail to **Alaska Steamship Company, Room 704, Pier Two, Seattle**—or see any of the companies listed above.

# "On Water"

# FOR NEARLY A CENTURY

Though there were only four ships when Cunard inaugurated regular transatlantic steamship service in 1840, the fleet grew to twice that number within the same decade... and before 1850 sailings were made weekly. So then, as now, there were ships of this Line standing out on the high seas *at all times*. In endless alternation, the officers of Cunard

White Star have kept their "watch" . . . for nearly a century. Through this rotation, ceaseless as the ocean tides, it was inevitable that Cunard White Star should have raised even higher the tradition of Britain on the seas . . . that it should have perfected every detail of service, while strengthening to a stern code that seamanship which was its heritage.

Senior First Officer J. G. Bushell and Junior Third Officer E. A. Dixon, on the bridge of the Aquitania. A senior and junior officer always keep the bridge "watch" together.



## Book early in this Coronation Year!

For pre-Coronation or summer sailings, early bookings are essential. See your local travel agent or Cunard White Star Line, 25 Broadway and 638 Fifth Avenue, New York.

- Express from New York to Cherbourg and Southampton**  
*Queen Mary* . . . . . Mar. 10, 20; Apr. 7, 21; May 8, 24  
*Berengaria* . . . . . Mar. 17; Apr. 14; May 4, 20; June 14  
*Aquitania* . . . . . Mar. 24; Apr. 20; May 12; June 2, 16
- To Plymouth and London (via Halifax)**  
 Mar. 11 and weekly to Apr. 8 in the *Aquitania*, *Blanchy*, *Aurania*, *Aurania*
- To Cobh and Liverpool (via Boston)**  
*Samaris*, Mar. 18 . . . . . Seattle, Mar. 22  
*Carinthia*, (Liverpool direct) Apr. 3
- To Cobh, Havre, Southampton**  
*Aurania*, Apr. 2 and (London last call) Apr. 9  
 May 1 . . . . . Georgia, Apr. 18
- To Glasgow via Greenock, Belfast and Liverpool (via Halifax)**  
*Aurania*, Mar. 5 . . . . . London, Mar. 19
- To Glasgow via Greenock, Dublin and Liverpool (via Boston)**  
*Samaris*, Apr. 16 . . . . . Cardiff, Apr. 27
- To Galway, Belfast, Liverpool**  
*Aurania* (via Halifax) . . . . . Apr. 9  
*Scythia* (via Boston) . . . . . Apr. 23

Weekly sailings from Montreal beginning Apr. 23 . . . . . Plymouth, Havre, London to Glasgow, Belfast, Liverpool.

- AQUITANIA
- BERENGARIA
- QUEEN MARY
- GEORGIC
- BRITANNIC
- CARINTHIA
- FRANCONIA
- SAMARIA
- SCYTHIA
- LACONIA
- LANCASTRIA
- LAURENTIC
- ANDANIA
- AUSONIA
- ANTONIA
- ASCANIA
- ALANIA
- AURANIA

# THE BRITISH TRADITION DISTINGUISHES CUNARD WHITE STAR

# 200 miles of ocean isn't enough!

It's enough ocean, of course, for sandy beaches and foaming surf, south-sea islands, deep-sea fishing, swimming, sailing, surf-boarding.

What we mean is that the ideal vacation, to be genuinely stimulating from start to finish, should include other contrasting kinds of fun.

Nature made such a vacation possible in Southern California by putting the nation's highest mountains near her largest, friendliest ocean. To those extremes are chiefly due the equable climate (69.4° summer average), cool nights, rainless days, and a unique variety of ways to have a good time:

Cosmopolitan Los Angeles and pleasure loving Hollywood; Pasadena, Long Beach, Glendale, Beverly Hills, Santa Monica, Pomona, others as charming; golf, tennis, racing, polo, swimming, riding, fishing, sailing and every sport; orange groves, dates, palm-lined boulevards; Los Angeles County's intriguing citrus, oil and movie industries; street markets, fiestas, ancient Missions, Old Mexico nearby.

All these and more await your pleasure this summer, just overnight, even from New York, by plane; 2½ to 3 days by train, 5 to 7 by auto or bus, two weeks by steamer via Panama. And costs here are 15% to 32% under the average of 20 leading U. S. resorts.

#### FREE: Automatic Trip Planner

This 80-page Official Guide Book — widely acclaimed by travel experts — plans your trip for you from start to finish; what to see and do, how to get here, time required, itemized cost schedules, plus over 100 photographs, maps, etc... authentic facts not available elsewhere. Coupon



brings it FREE; also new Official California Picture Map.

*Come to California for a glorious vacation. Advise anyone not to come seeking employment, lest he be disappointed; but for tourists the attractions are unlimited.*

ALL-YEAR CLUB OF SOUTHERN CALIFORNIA'S

**SOUTHERN  
CALIFORNIA**

#### ..... MAIL COUPON TODAY .....

All-Year Club of Southern California,  
Div. 1-7, 629 So. Hill St., Los Angeles, Cal.

Send me free book with complete details (including costs) of a Southern California vacation. Also send freeouting by  auto,  rail,  plane,  bus,  steamship. Also send free booklets about countries checked:  Los Angeles,  Orange,  Santa Barbara,  Riverside,  Inyo,  San Diego,  Ventura,  San Bernardino,  Kern,  Imperial.

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City \_\_\_\_\_ State \_\_\_\_\_

(Please Print Name and Address)



# How to see twice as much of the West on your trip to California

**GO ONE WAY**

It's as simple as A, B, C.

- A.** Read the description of Southern Pacific's Four Scenic Routes below.
- B.** Pick the two routes that interest you most.
- C.** Go to California on one of these routes and return on the other. Result: you see a different part of the United States each way. You see twice as much of the West as you would by going and returning on the same route . . . and from most eastern and mid-western points it doesn't cost you one cent more rail fare!

**RETURN ANOTHER**

The twelve fine trains on Southern Pacific's Four Scenic Routes are all completely air-conditioned, famous for their dining car service and their atmosphere of western hospitality.

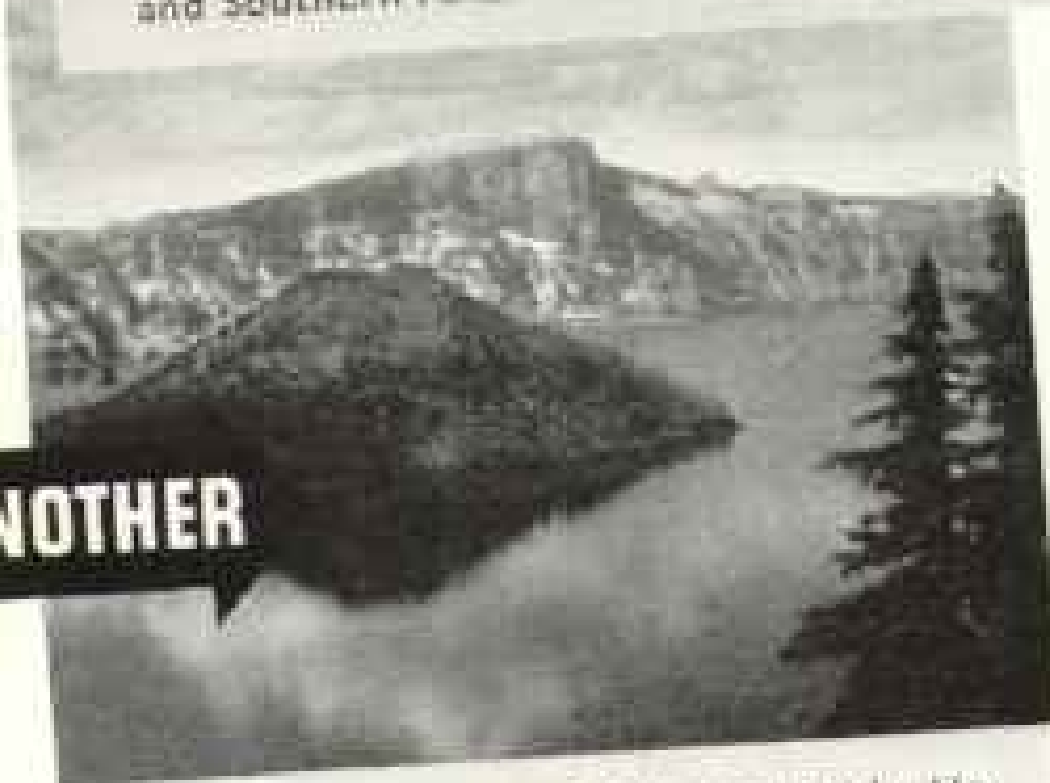
**SUNSET ROUTE** takes you from fascinating New Orleans through the romantic Old South, Texas and Southern Arizona to Los Angeles and San Francisco. Side trips in California: Yosemite National Park, Big Trees, Del Monte and the Monterey Peninsula.



**IF YOU** live in New York or New England, combine a sea voyage with your **SUNSET ROUTE** trip to California by sailing to New Orleans on Southern Pacific's gallant *S. S. Dixie*. No extra fare for this on first class or tourist tickets.



**SEE NEW ORLEANS**, the romantic Old South, Texas, the Mexican border country and Southern Arizona. **SUNSET ROUTE**.



**SEE CRATER LAKE** National Park, Mt. Shasta and the Evergreen Playground of Oregon and Washington. **SHASTA ROUTE**.

**SHASTA ROUTE** connects with northern U. S. and Canadian lines and takes you through the Pacific Northwest to California. See vast evergreen forests, sparkling lakes, Mt. Shasta. Side trips: Crater Lake National Park, Redwood Empire Tour.

**OVERLAND ROUTE** is the most direct line to San Francisco, over the Rockies and Sierra Nevada, across Great Salt Lake on the famous Lucin Causeway.

**GOLDEN STATE ROUTE** is the direct line to Los Angeles, San Diego and Santa Barbara. See El Paso (side trips to Juarez and Carlsbad Caverns National Park), Southern Arizona, Southern California orange groves.

**FREE TRAVEL GUIDE!** New booklet, *How to See the Whole Pacific Coast*, describes our Four Scenic Routes and the Pacific Coast. More than 80 big pictures. For your free copy, write O. P. Bartlett, Dept. NT-3, Southern Pacific, 310 So. Michigan Avenue, Chicago.

## Southern Pacific

FOUR SCENIC ROUTES TO CALIFORNIA



# Cars Wanted?

**T**HE major commerce of this continent requires, every day, more than a hundred thousand railroad cars of many types, available for loading wherever and whenever freight is ready to move.

And the railroads meet this vast and varied demand so smoothly that shippers take for granted that the cars will be on hand.

Thus, when the wheat crop is ripe, cars are moved from railroads that do not need them to the western roads that have wheat to load; similarly, coal cars are distributed to supply varying industrial demands; likewise, refrigerator cars are moved to the centers where perishable fruit and vegetable crops are ripe for shipment.

This involves not only a tremendous job of coordination but standardization to the point where *every one of two million freight cars must be interchangeable and usable in trains with every other car* — all parts must be standard replaceable parts so that repairs can be made in any railroad shop — or by emergency crews anywhere.

Typical examples of this standardization are these:

In the old days, there were 56 sizes and kinds of axles for

freight cars — now, all freight cars are equipped with axles of one standard design in five sizes for cars of varying capacities.

Then, there were 58 different kinds of journal boxes — now, all cars have one standard design in five sizes for the different size cars.

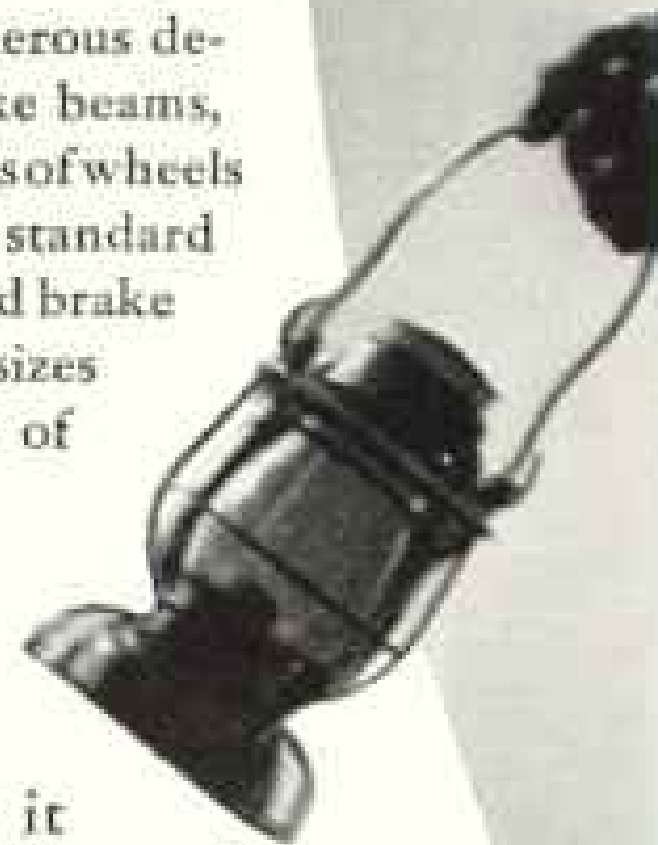
Then, there were 26 kinds of car couplers — now, there is one standard coupler, which will couple with and interchange with all previous designs which may still be in use.

Then, there were 20 different kinds of brake shoes — now, only one standard design is universally used.

Then, there were 27 different designs of brake heads — now, there is one standard design.

Then, there were numerous designs and kinds of brake beams, and many kinds and sizes of wheels — now, there is one standard wheel, and one standard brake beam design of three sizes for different weights of cars.

True, this is progress of a kind inconspicuous to the average eye, but it helps explain why the American Railroads are internationally recognized as the most reliable and progressive transportation system in the world!



**SAFETY FIRST—**  
*friendliness too!*

**ASSOCIATION OF**

# **AMERICAN RAILROADS**

# Coming Right Up!



## TRAIL of ONE PULLMAN CAR in ONE MONTH

In a single month a typical Pullman car visited Toronto, New York, Miami, Detroit, Chicago and Los Angeles — and encountered temperatures ranging from 6 to 86 degrees. Throughout that time air-conditioning kept this car at even spring-time temperature and always clean. Multiply this achievement by more than 8,000 Pullmans that cover over a billion miles each year, add the expert service of 21,000 Pullman employees, reckon the job of always having enough cars at the right places at the right times, and you get some idea of the enterprise required to maintain — on a nationwide, coordinated and uniform basis — this one phase of railroad service.



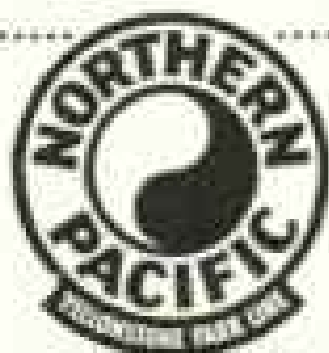
# Announcing A SPECTACULAR NEW GATEWAY to YELLOWSTONE PARK



## THRILLING NEW Red Lodge\* HIGHWAY IS OPENED TO NORTHERN PACIFIC TRAVELERS

*(For many miles right on top the Rockies, at elevation of over 10,000 feet)*

"It's America's most scenic route and I doubt if its awe-inspiring panoramas can be equalled in the far-famed Alps."... Thus is the new Red Lodge Highway to Yellowstone Park described by Mr. E. A. Demaray, Associate Director, National Park Service. • Be sure to experience this amazing journey over the rugged Beartooth range of the Rockies next summer! Air-conditioned Pullmans direct to Red Lodge. Write to us for free travel booklets or mail the coupon:



E. E. Nelson, 306 Northern Pacific Railway, St. Paul, Minn.

Send me information, please, on:  
*(Check data desired)*

- Yellowstone, via Red Lodge Gateway  
 Rainier Park  Alaska  Pacific N. W.  
 California  Rocky Mt. Dude Ranches

I am interested in  Escorted Tours  Independent trip

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Address \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_

ROUTE OF THE  
Air-Conditioned

# NORTH COAST LIMITED

# "There's Sure a Heap o' Livin' in a Pullman Car . . ."

Written by EDGAR A. GUEST, Beloved American Poet



Mr. Guest writes at his table

*Edgar A. Guest*

"I reckon that in the last five years alone my Pullman travel equals five trips around the world, with enough left over for a round trip to Honolulu. I like to travel by Pullman because it's the friendly way, the comfortable way, to travel. And, what's mighty important, there's that blissful sense of security. You bet, I prefer Pullman!"



**Easy to Travel with Children.** "The kindly service one receives, and the comfort and convenience of traveling with children in a Pullman car is a delight no mother should deny herself," says Mrs. C. W. Staufenberg, club woman and civic leader, Glen Ellyn, Ill. "The reasonable cost has a strong appeal, also. We always go by Pullman."



### PULLMAN FIRST AGAIN

Always alert and progressive in improving its service and equipment for the welfare of its passengers, Pullman installed the first air conditioning equipment in a railway car, the biggest single step forward in the history of travel comfort. Pullman was first to develop and build a light-weight, high-speed, streamline train. Many other improvements in Pullman travel comfort have been carried into every corner of the modern Pullman car.

Two nights a week, fifty-two weeks a year, Edgar A. Guest winds his watch, sets out his shoes to be shined, and rolls gratefully into bed with a "blissful sense of security" — in his air-conditioned "bedroom on wheels." He travels Pullman—Detroit to Chicago—for his weekly radio engagement. And he likes it!

The exhilarating, self-renewing comfort of Pullman travel is not an accidental thing. Pullman enlists every aid of science and engineering to bring it about, to re-construct, in railway travel, the comfort and convenience you enjoy at home . . . plus safety to passengers unequalled by any other form of scheduled transportation in the world. There was not one fatality among Pullman passengers or employes in the 17 billion Pullman passenger miles traveled in 1935 and 1936.

Pullman travel has been substantially reduced in cost. You will find yourself able to adopt it—as so many others have—as *your* way of traveling, your means of getting from place to place in air-conditioned comfort and absolute safety. On your next trip, go the safest way!



**European Travel Never Like This.** Isabelle Allen, singing star of the Opéra Comique, says: "My opera and concert work has taken me to many European countries, but I have never met the equal of Pullman standards in safety, comfort and efficient service."

Your ticket agent will be glad to supply you complete information and the reasonable cost of all types of Pullman accommodations, from the upper and lower berths to the spacious compartments and drawing rooms. Or write

THE PULLMAN COMPANY, CHICAGO



—THE SAFE WAY TO GO—AND THE SURE WAY TO GET THERE

The Chapter in Your Life  
entitled  
**SAN FRANCISCO**



*The Yosemite Valley from Glacier Point*

***It includes the great Yosemite!***

Six hours' ride from the storied hills that rise from San Francisco's Golden Gate you will climb into Yosemite.

Into a wonderland of polished peaks and shining waterfalls . . . where you will cast for rainbow trout and swim and follow pack-horse trails through sunny days, and gather at the campfires of famed resort hotels.

Alone, the great Yosemite would well be worth a trip to California. But one of the things that brings people again and again to San Francisco is the host of happy places that its outdoorland includes!

North a little from Yosemite you'll find mile-high Lake Tahoe, hard by the fabled Gold Towns of the days of Forty-Nine. Again, you'll ride into the giant-Redwood Empire. Visit Mt. Shasta and Mt. Lassen (America's only active volcano).

You'll follow the Russian River. And Feather River. And explore the Spanish Monterey Bay country . . . with

Del Monte, Santa Cruz and Carmel, lying warm on white Pacific beaches.

And as you come and go, finding new thrills every day, we know you will find San Francisco fascinating.

You'll love its blue Bay and the countless boats. Its Chinatown and the other foreign colonies. The Mission Dolores and the Presidio. Golden Gate Park and the ocean beach. And the gay life of the cosmopolitan hotels and restaurants and bright night places . . . and the spirit of adventure that is always in the air!

All that this city offers you for a vacation now is told in a new, free, illustrated book: *The Chapter in Your Life entitled San Francisco*. Use the coupon to get it today.

Start planning now to come this summer. Travel time is shorter than ever before. Costs for getting here are very little, by either train or plane or boat or motor car. And vacation costs here are far less than the U. S. average.




*8 mile San Francisco-Oakland Bay Bridge—longest in the world*

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Matson Line  
Hawaii

NEW ZEALAND - AUSTRALIA  
VIA SAMOA - FIJI

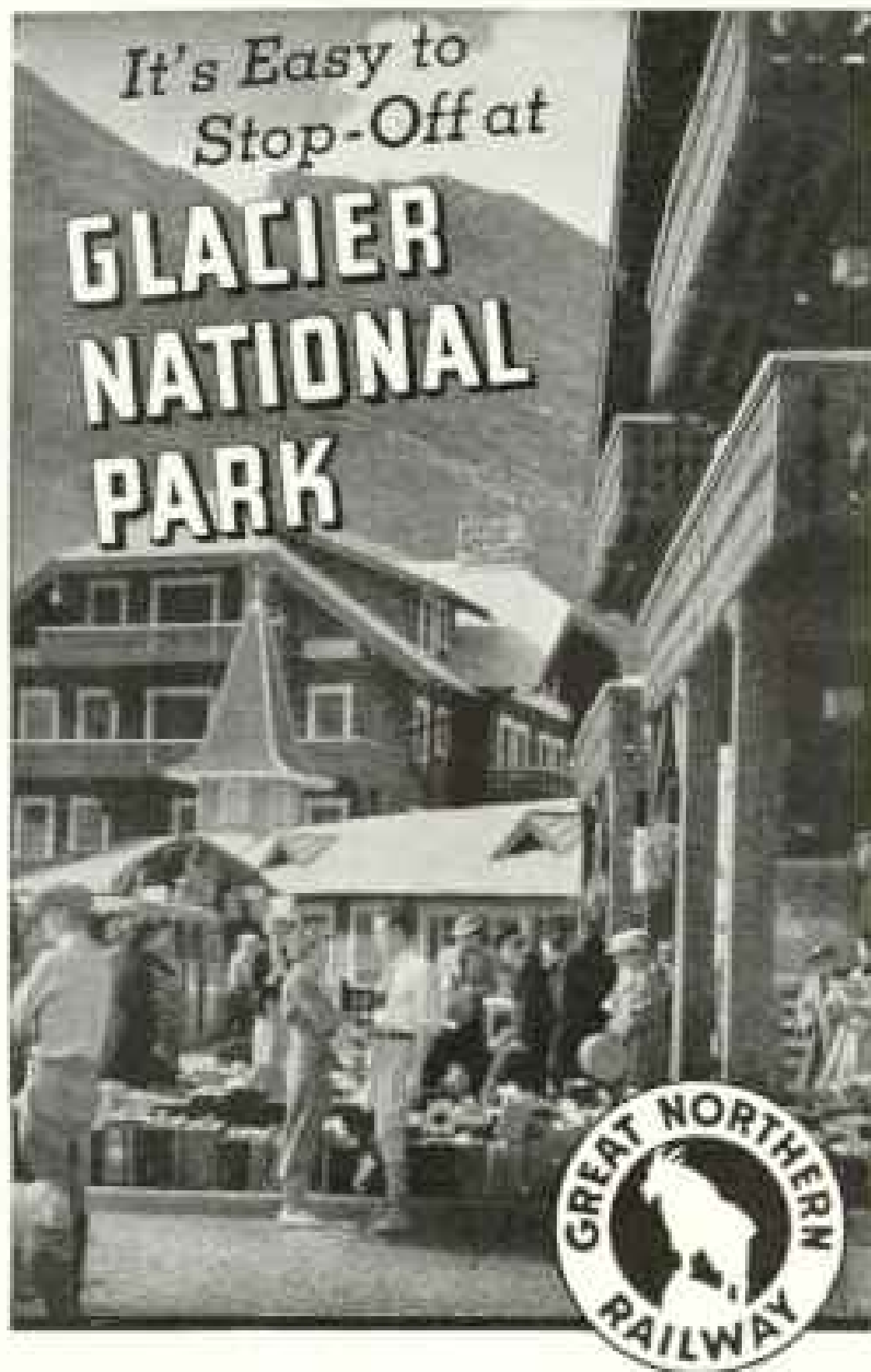
There are so many reasons to be happy in Hawaii

☆ Details of fascinating Matson Cruises through the South Pacific may be secured from Travel Agents or Matson Line-Oceanic Line, New York, Chicago, San Francisco, Los Angeles, San Diego, Seattle, Portland.

Hotel reservations, at the beautiful Royal Hawaiian and Moana on Waikiki Beach, can be made when you book steamer passage.

S.S. LURLINE • S.S. MARIPOSA • S.S. MONTEREY • S.S. MALOLO





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Stop-Off at

# GLACIER NATIONAL PARK



en route to or from the

## Pacific Northwest

Spokane • Seattle • Tacoma  
Portland • Vancouver • Victoria

on Great Northern Railway's

## Empire Builder

every luxury • every economy  
Low Summer Fares

● The EMPIRE BUILDER, Great Northern's top train to and from the Pacific Northwest allows you to de-train at Glacier Park for 1, 2 or 3 day Stop-Off Tours. See the Park from open-top buses and comfortable lake boats—America's most sublime wilderness with its 60 glaciers, 250 lakes, and countless waterfalls. Stop overnight and for meals at fine hotels. Then back aboard the EMPIRE BUILDER. Ask your local ticket agent to route your western trip via Great Northern Railway.



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Great Northern Railway, Dept. NG-2, St. Paul, Minn.  
Please send me information about your service to Glacier Park  Pacific Northwest  Alaska  California   
All-Expense Tours

Name \_\_\_\_\_ Address \_\_\_\_\_  
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# CAN ANY WASHABLE WALLPAPER STAND ABUSE LIKE THIS?

SMEAR WITH BUTTER

RUB WITH DIRT



Won't stain DURAY. See how it washes off without a blemish. Could any other wallpaper pass this test?



Dirt won't grind into DURAY. Washes off completely—leaving surface spotless as new. Could any other wallpaper fail to amaze?

SCRUB WITH BRUSH



DURAY won't get fuzzy, no water marks, rings or streaks. Could any other washable wallpaper equal this test?

... YET KEEP  
THIS FRESH  
NEW LOOK!



# YES NEW AMAZING DURAY

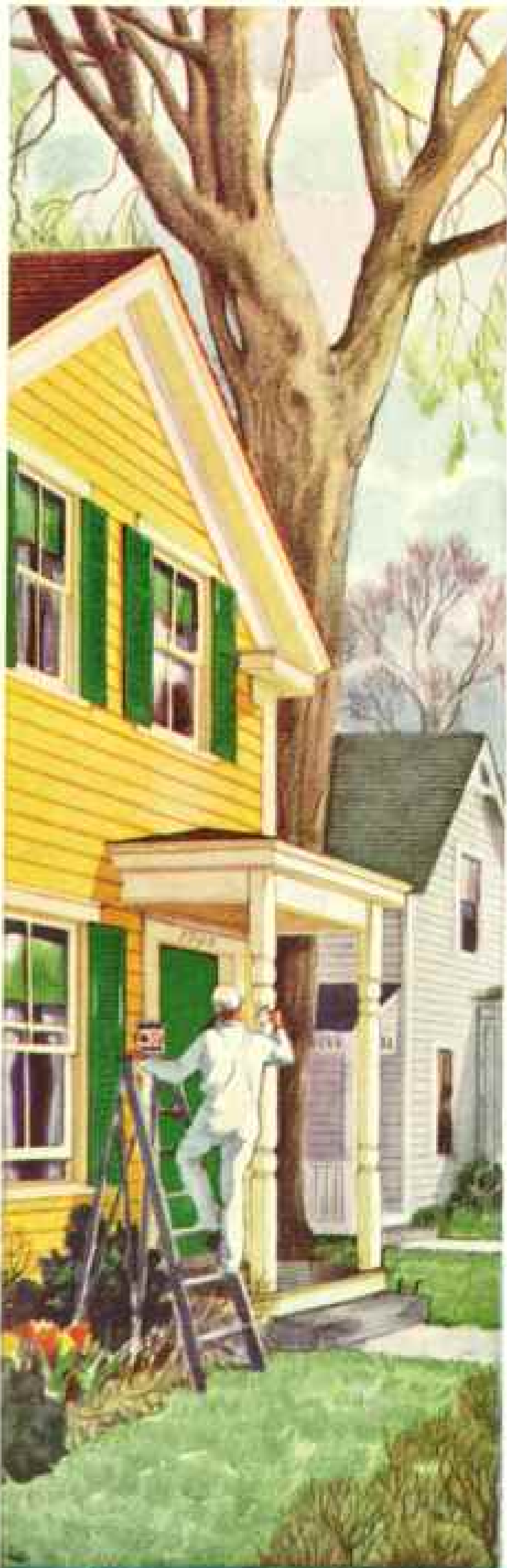
Puts an End to Grease Spots, Finger Stains, Ground-in-Dirt, Water Marks

IMAGINE the finest wallpaper you've ever seen—rich, soft finish, and smart patterns created by the foremost stylists. Would you dare wash it with soap and water—scrub it with a brush? Yes—but only if it's DURAY! Amazing DURAY resists stain, grease, dirt, soot and finger marks... washes freshly clean as easily as tile... No water marks, spots, rings or fuzziness even after scrubbing with a brush and soap and water. Users of wall oil cloth will find DURAY'S surface just as washable, better styled, at savings of 25% and up. You can get DURAY from any good wallpaper store or paper-hanger.

**GET FREE SAMPLE**

Smear with butter, rub with dirt, scrub with brush and soap and water. Watch DURAY'S fine wallpaper finish reappear... as fresh as new. Write to

**CLOPAY CORP.**  
1211 Dayton Street  
Cincinnati, Ohio



# PROUD HOMES PAINTED WITH *SWP*

No home is prouder than the clothes it wears. And no home can be as proud of any covering as it can be of colorful, durable *SWP*, America's best known and most widely used House Paint.

Ask your neighborhood Sherwin-Williams dealer for "The Truth About House Paint" booklet for further details.

"All you need to know about paint is Sherwin-Williams." And all you need to do is to place your confidence in the painter or dealer who recommends Sherwin-Williams products. That man wants you to be his best asset . . . a satisfied customer. Look for the Sherwin-Williams "Cover - the - Earth" symbol in your locality. It's "Paint Headquarters" eager to help and serve you.

A new edition of the famous Home Decorator. Exteriors, room plans and color schemes of leading model homes. For your free copy see your neighborhood S-W dealer . . . or write The Sherwin-Williams Co., Dept. B-18, Cleveland, O.



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"ALL YOU NEED TO KNOW ABOUT PAINT"





**NEW GREYHOUND  
SUPER-COACH**

*Approved by America*

**COMFORT GREATER THAN EVER  
—FARES LOWEST IN HISTORY!**



**RIDE HIGH  
FOR BETTER VIEW**



**SEATS RECLINE  
IN 4 POSITIONS**



**BAGGAGE  
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**MOTOR IN REAR**



Good news travels fast! The great new fleet of Greyhound Super-Coaches, now rolling along every principal American highway, has been welcomed and used with unprecedented enthusiasm by the traveling public. The millions of people already familiar with Greyhound's fine regular-type buses have discovered in these amazing new coaches even higher standards of luxurious comfort.

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New York City	245 West 50th St.
Boston, Mass.	222 Boylston Street
Washington, D. C.	1408 New York Ave., N. W.
Detroit, Michigan	Washington Blvd. at Grand River
San Francisco, Calif.	Pine and Battery Sts.
Ft. Worth, Tex.	916 Commerce Street
St. Louis, Mo.	Broadway & Delmar Blvd.
Charleston, W. Va.	1150 Kanawha Valley Building
Cincinnati, O.	450 Walnut St.
Memphis, Tenn.	110 Union Avenue
New Orleans, La.	400 N. Rampart St.
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Send this coupon to nearest information office, listed above, for fascinating pictorial booklet, "This Amazing America." If you want rates and route information on any trip, jot down place you wish to visit on margin below.

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NG-3



... then you can make  
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New York • Hollywood  
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Established 1907

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1804 Larchmont Ave., Chicago

W-10-27

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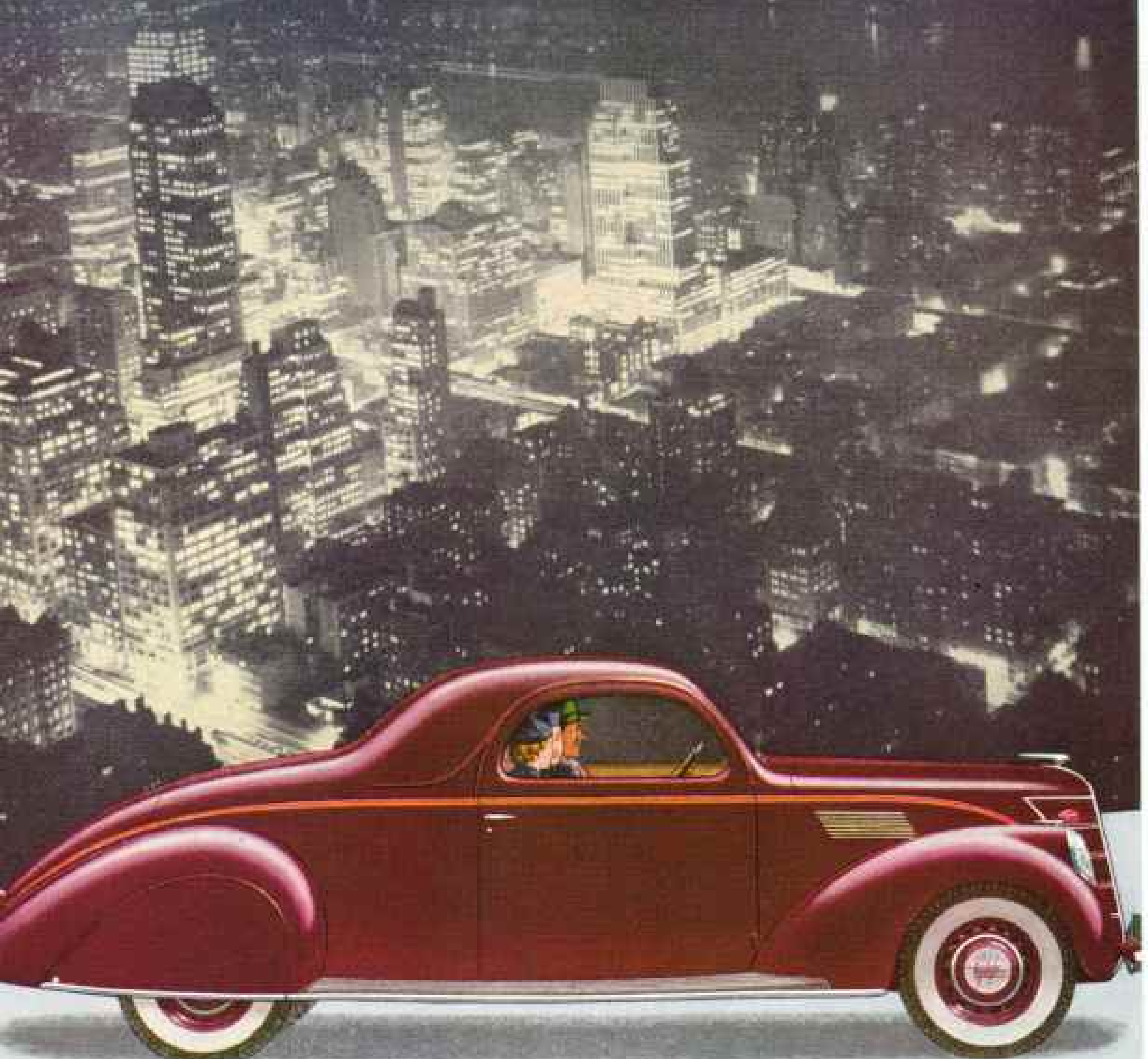
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City..... State.....



*"We arrived in New York at Midnight...and  
the Lincoln-Zephyr knows all about traffic"*



THIS new kind of car conquers all roads, all circumstances of travel. On roads good and bad, the LINCOLN-ZEPHYR rolls up new records of performance.

Ask, as you consider this car, what it offers that other cars in its price field do not. The LINCOLN-ZEPHYR has a 12-cylinder engine—the V-type. Twelve cylinders mean greater smoothness . . . greater flexibility. And twelve cylinders, here, mean 14 to 18 miles per gallon of gasoline!

The LINCOLN-ZEPHYR has a unique body structure. *This is the only car of its kind.* Body and frame are one, welded together. You ride surrounded by steel.

The LINCOLN-ZEPHYR has extra roominess. It is a big car. The wheelbase is 122 inches. There are no conventional running boards; seats, like divans, are wider. Three may sit comfort-

ably on the front seat or the back.

Prices now are lower. Ask, today, for a ride in this Lincoln-built car. Convenient terms can be arranged through Authorized Universal Credit Company Finance Plans. *Lincoln Motor Company, builders of Lincoln and Lincoln-Zephyr motor cars.*

THE CAR THAT IS PRICED BELOW ITS SPECIFICATIONS.

**LINCOLN-ZEPHYR V-12**





"I have had three Coronas. The first I more or less kept alive on during the two years I spent in the woods . . .



### 1937 SPEED MODEL CORONA

"In Bombay I got this one, the one on which I wrote the *TRANSGRESSOR*. I am writing a novel on it down here in Yugoslavia at the moment."



# NEGLEY FARSON

Author of "*The Way of a Transgressor*"

Not only Mr. Farson, but many other people of note can bear witness: "Many a career has started on a Corona." Whether it's literary or professional work, heavy correspondence, school work or business, Corona can save you time and labor. See the new 1937 models . . . amazingly complete, fast, and easy to operate. Free booklet on request.

**PAY FOR YOUR CORONA AS YOU USE IT . . . AS LITTLE AS \$1.00 A WEEK**

★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★

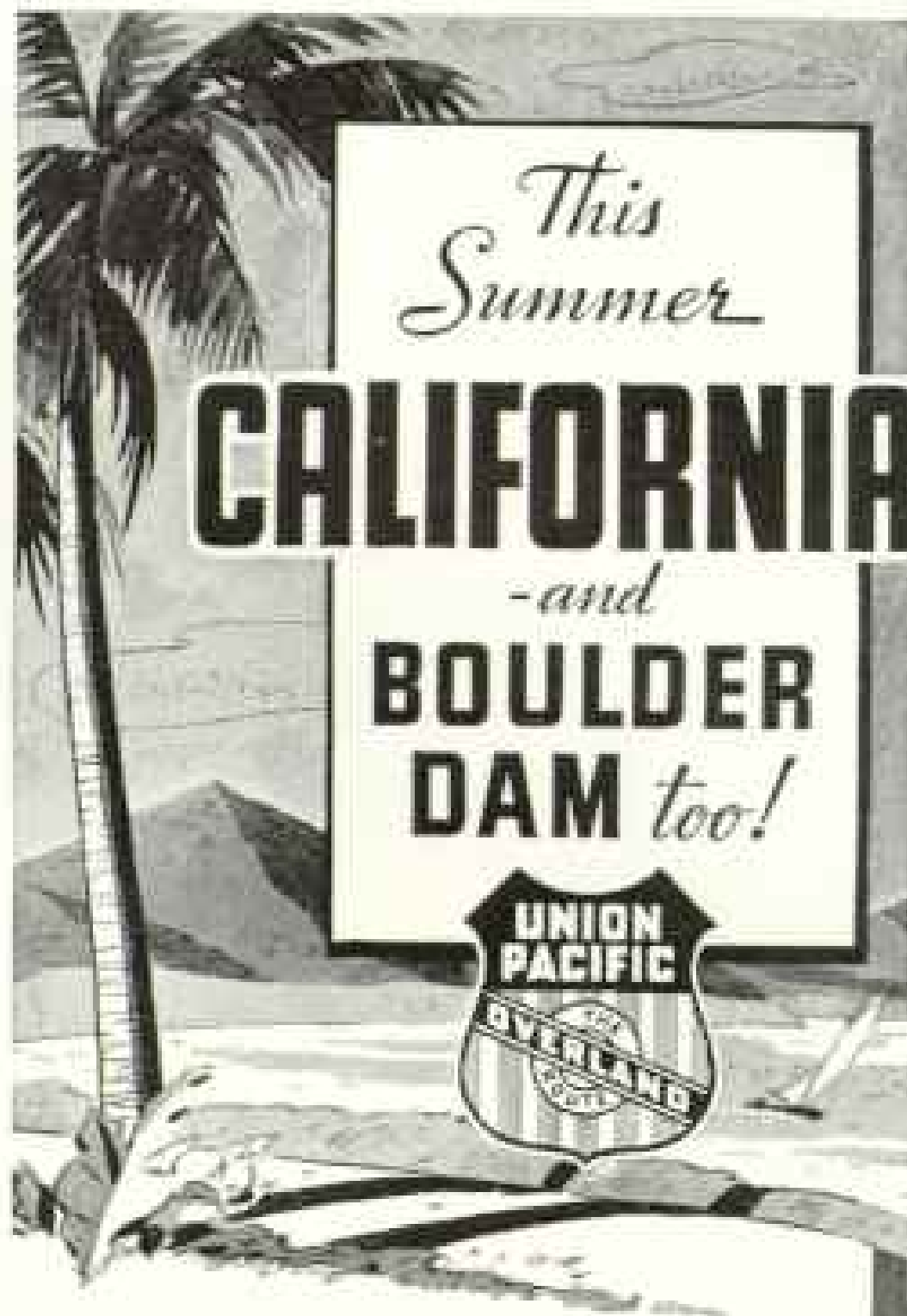
L. C. SMITH & CORONA TYPEWRITERS INC.  
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I'd like to know about your different Corona models and their prices. Please send free folder.

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TAKE a glorious vacation . . . visit century-old Spanish missions, exciting Hollywood and San Francisco's Chinatown. See the 8-mile Bay Bridge. Enjoy outdoor sport in mountains and valleys. En route, inspect mighty Boulder Dam and cruise on Lake Mead, reminiscent of Norway's fjords.

Living costs in California are as low as at home and rail fares to all the West are inexpensive.

Only **\$57<sup>35</sup>** round trip coach fare from Chicago with six months return limit.

In Pullman Tourist Sleeping Cars the round trip fare from Chicago is \$68.80—in Standard Pullmans \$86.00. Berth extra. And you may return by way of the Pacific Northwest at no extra fare. Mail coupon for full information.

W. S. Damiger, Passenger Traffic Manager  
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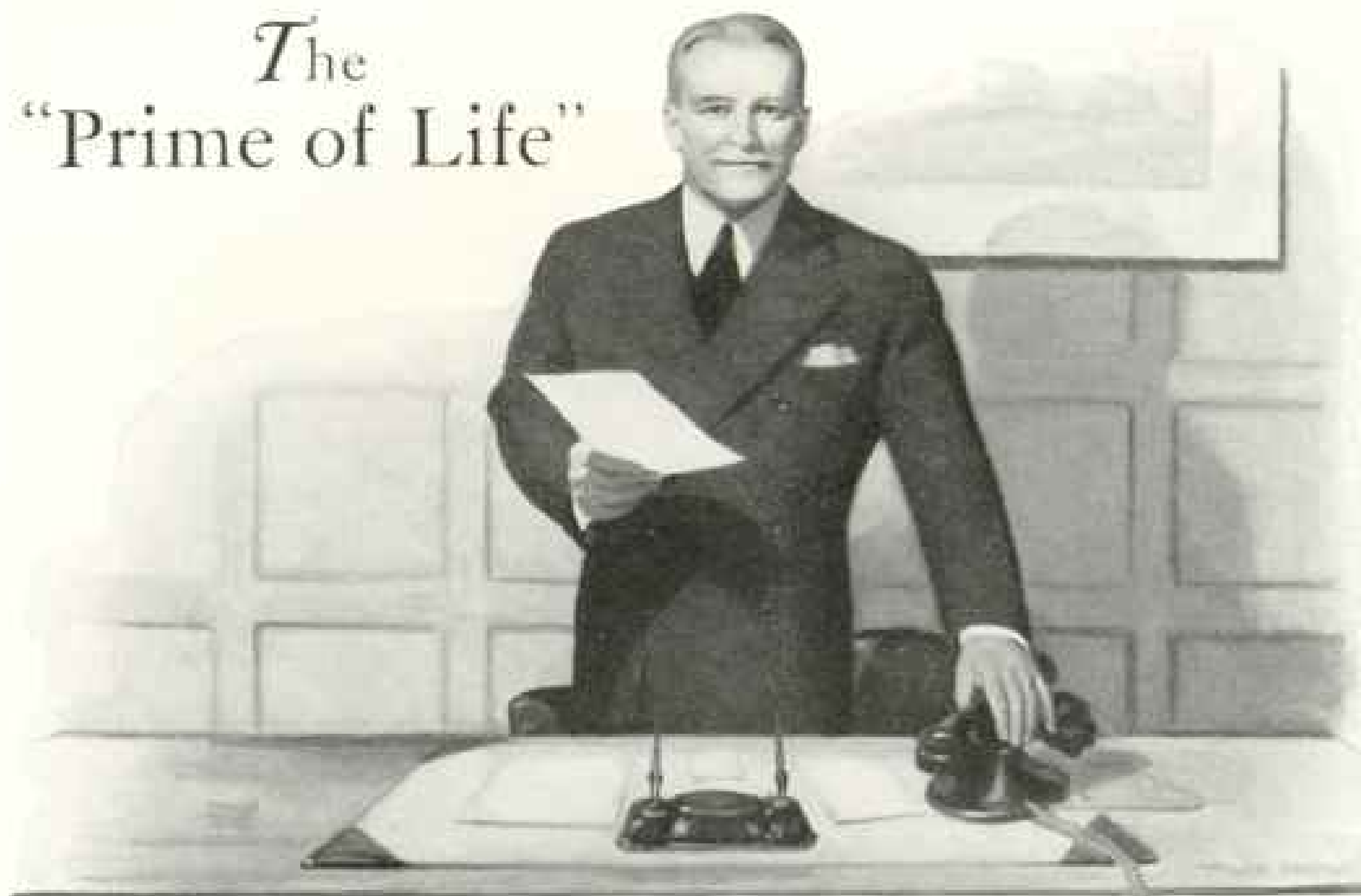
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Also tell me about Escorted, All-Expense Tours

**UNION PACIFIC RAILROAD**

# The "Prime of Life"



YOU may have read that the average length of life has risen from 49 to more than 60 years since the beginning of the century. You may not know that the greater part of this extension in the length of life from birth is due to gains in mortality at the younger ages. For those who have passed 40, conditions are much the same as they were.

The period from 40 to 60 years should be the "prime of life" when mental powers are high. The majority of the deaths which occur in this period are caused by chronic diseases of the heart and arteries, Bright's disease, cerebral hemorrhage, cancer or diabetes. Of these, heart disease is responsible for more deaths than any other cause.

While your doctor will not offer any medicine to soften arteries that are becoming brittle, or to rebuild your heart, he can do a great deal to help you to lengthen your own life. He can do what you can't—he can, almost literally, look inside your body,



With the fluoroscope and X-ray, with chemical and other function tests he can observe your vital organs in action and can tell you their strength or weakness.

Unselfish men and women who try to give all they can to their families or their work, and people who are ambitious to reach a certain goal often neglect their health. Chronic invalids are more likely to seek medical advice and to follow it faithfully than are vigorous men and women who scoff at being coddled, and who often race past physical danger signs.

A great scientist said recently, "We know how to lengthen the lives of our children. We must learn how to persuade people past 40 to get the benefit of what modern science can do for those of their age."

To everyone interested in prolonging life, the Metropolitan will gladly send its booklet, "Taking Your Bearings." Address Booklet Department 337-N.

Keep Healthy—Be Examined Regularly

## METROPOLITAN LIFE INSURANCE COMPANY

FREDERICK H. ECKER  
Chairman of the Board

ONE MADISON AVENUE, NEW YORK, N. Y.

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LEROY A. LINCOLN  
President

"Mention the Geographic—It identifies you."



### VIKING SHIP (CIRCA 1000 A. D.)

**I**N ships like this, Leif the Lucky and his Norse sea rovers risked their lives every time they set sail. Perhaps, Leif was called the Lucky simply because he managed to get back from his trips alive. The Norsemen's existence called for a bold and hardy spirit indeed.

Today most of us are willing to leave the Viking spirit to transatlantic fliers. The average man, if

he is wise, does not take chances—on his life, the lives of his family, or on the property he accumulates. He protects himself against such hazards—with insurance.

Moral: Insure in The Travelers. All forms of insurance. The Travelers Insurance Company, The Travelers Indemnity Company, The Travelers Fire Insurance Company, Hartford, Connecticut.

**the Finest  
tomato juice  
• • always uniform**

*Year after year the superb quality  
of Heinz Tomato Juice never varies*



You'll truly enjoy Heinz Tomato Juice at mealtime and in-between. It's a glorious drink, rich in flavor and vitamins too!

EVERY year is vintage year for Heinz Tomato Juice. The matchless flavor of this crimson beverage is always the same — always the finest in the land. And here's why:

We control the quality of the prize-winning tomatoes from which the ruddy juice is pressed. Pedigreed seedlings are raised in our own greenhouses. Then they are distributed to experienced farmers in regions where sun and soil combine to produce the world's finest tomatoes. Come drought in one section or storms in another, there's always a good crop of Heinz world-famous tomatoes ready for picking at harvest time.

We select only the choicest of the sun-ripened aristocrats. These are delivered to Heinz kitchens close-by the fields. They are sorted, washed, pressed, and the invigorating juice sealed in spotless tins, all between sunrise and sunset!

Serve Heinz Tomato Juice frequently. It's a grand natural beverage. Ask your grocer to supply you.



Time in *Heinz Magazine of the Air*. Full half hour — Monday, Wednesday and Friday mornings, 11 E.S.T.; 10 C.S.T.; 9 M.T.; 12 Noon Pacific Time —Columbia Network.

**Heinz TOMATO JUICE**

57

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# UNITED STATES SAVINGS BONDS

DIRECT OBLIGATIONS OF THE UNITED STATES GOVERNMENT



## Systematic Savings

The mail carriers of the nation are delivering United States Savings Bonds regularly to thousands of investors who are purchasing them to

- EDUCATE CHILDREN
- PROVIDE A RETIREMENT FUND
- TAKE CARE OF DEPENDENTS
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- ACCUMULATE FUNDS FOR TRAVEL AND RECREATION

Each month, each week these investors are using the convenient method of systematic saving offered through the Regular Purchase Plan for investment in these Government bonds.

Savings Bonds are sold on a discount basis. They mature in 10 years from issue date for  $\frac{1}{2}$  more than their purchase price. They may be redeemed, at the option of the owner, any time after 60 days from issue date.

During the first year the redemption value equals the purchase price. At the end of the first year and each six months thereafter, the redemption values increase in amounts as printed on the face of the bond.

**For Sale at Post Offices and Direct by Mail**

Systematic Savings through regular purchases of United States Savings Bonds provide funds for the future. Select the program best suited to your needs.

If you invest each month for 120 consecutive months any specific amount shown below | Beginning in 10 years you will receive each month for 10 years thereafter

\$18.75 . . . . .	\$25.00
\$37.50 . . . . .	\$50.00
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\$93.75 . . . . .	\$125.00
\$187.50 . . . . .	\$250.00
\$375.00 . . . . .	\$500.00

### TO ORDER BY MAIL

TREASURER OF THE UNITED STATES, N-33, Washington, D. C.

- Please send me without obligation your Regular Purchase Plan and forms for my consideration and optional use.
- Send me the following bonds for which I enclose check, draft, or money order.

NUMBER		
.....	\$25 U. S. Savings Bonds at	\$18.75 \$ .....
.....	\$50 U. S. Savings Bonds at	\$37.50 \$ .....
.....	\$100 U. S. Savings Bonds at	\$75.00 \$ .....
.....	\$500 U. S. Savings Bonds at	\$375.00 \$ .....
.....	\$1000 U. S. Savings Bonds at	\$750.00 \$ .....
		<b>Total \$ .....</b>

Register in the name of and send to { Name (Mr. Mrs. Ms.) \_\_\_\_\_  
Street address \_\_\_\_\_  
City \_\_\_\_\_ State \_\_\_\_\_

Make all remittances payable to the Treasurer of United States





"I like the honest  
sincere service..."

## ON THE ANCHOR LINE

"I told you we were in good hands! From the very moment you set foot aboard a sturdy Anchor liner, you're served as if you were royalty."

Yet the direct Anchor Line Route to Ireland and Scotland is amazingly economical. It gives you, not only the luxury of leisure on roomy, comfortable ships, but—most important of all—allows you to start your tour of Europe at the top of the map. Landing in Irish ports, or at the dock in Glasgow...the beauty spots of the British Isles are directly on your route. There's no expensive retracing of steps, because you travel in the logical direction...all the way! That's why so many seasoned travelers sail Anchor Line to Europe. Frequent sailings from New York and Boston to Londonderry, Dublin, Belfast, Glasgow.

**MINIMUM RATES:** Cabin Class, \$142.

Tourist Class, \$110. Third Class, \$82.

*Slightly higher during summer season. Reductions for Round Trips.*

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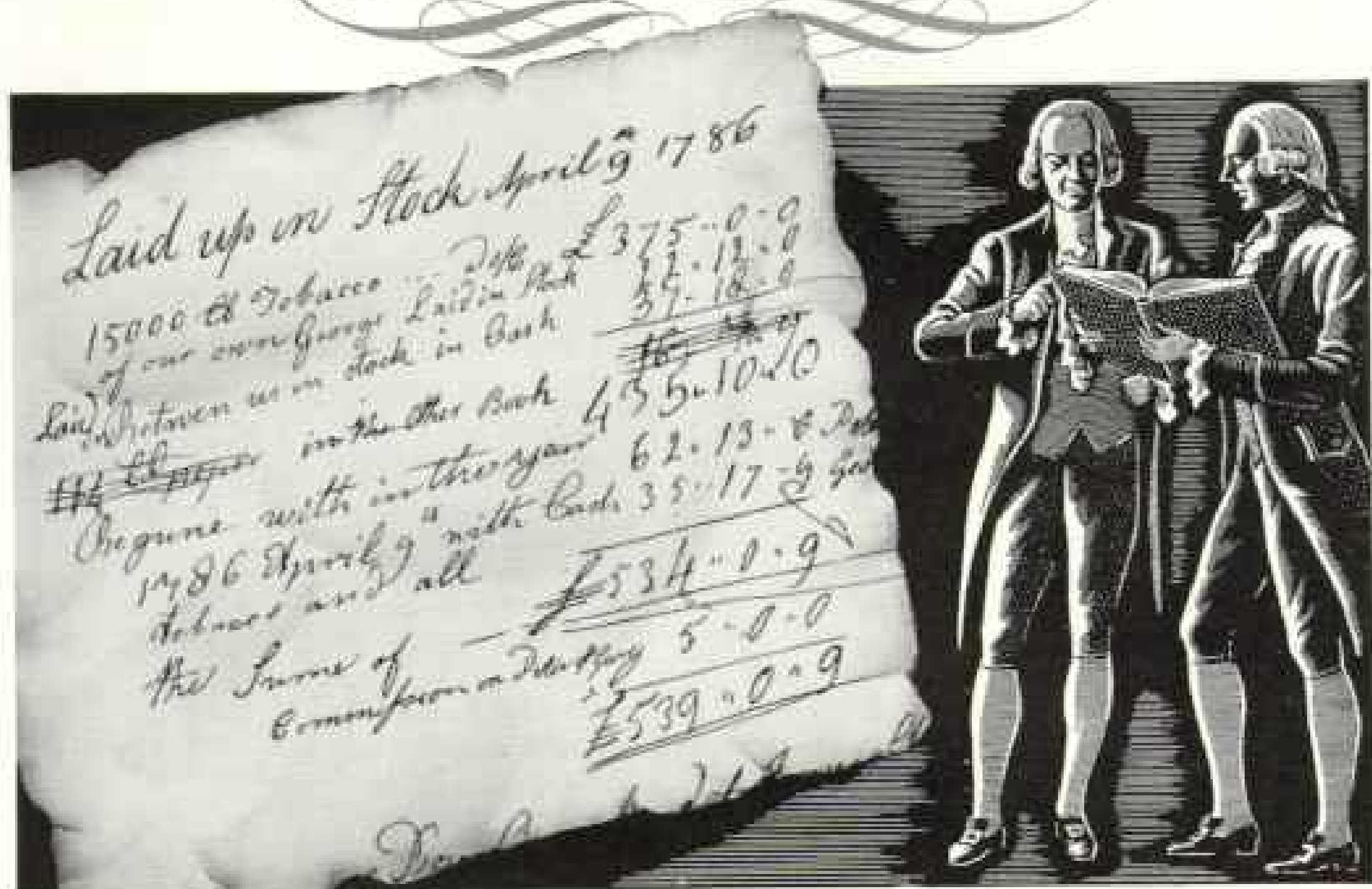
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# "Begune with in the year

# 1786



## ...the sume of £ 539.0.9"

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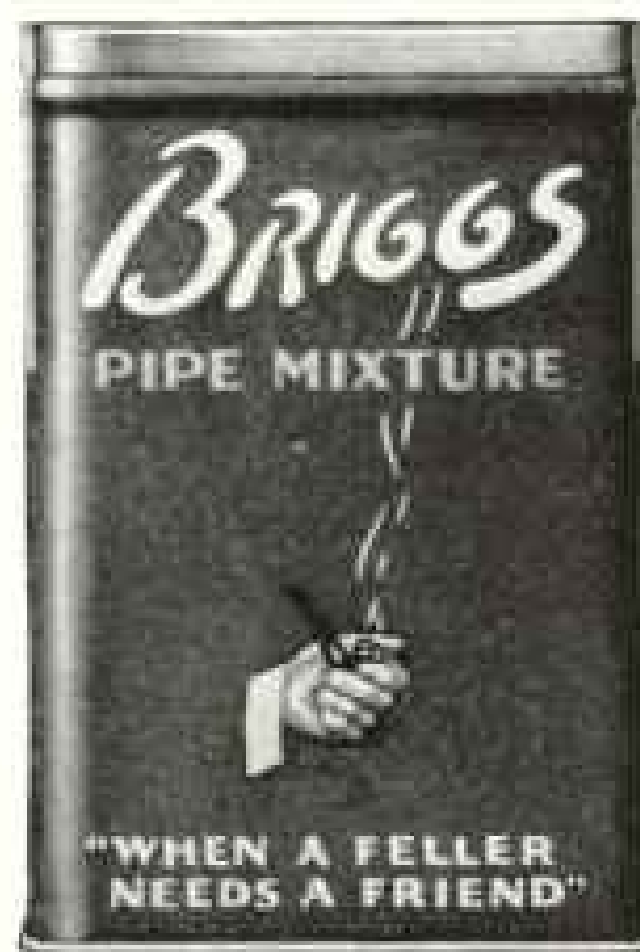
One yellowed page records the terms by which Peter's brother George was taken into partnership—April 9th, 1786. That year was in a "post-war depression." But the Lorillard brothers survived it, and many others to come, by a simple policy which their company has never forsaken. . . . "Give our customers more value for their money than the same price will purchase elsewhere."

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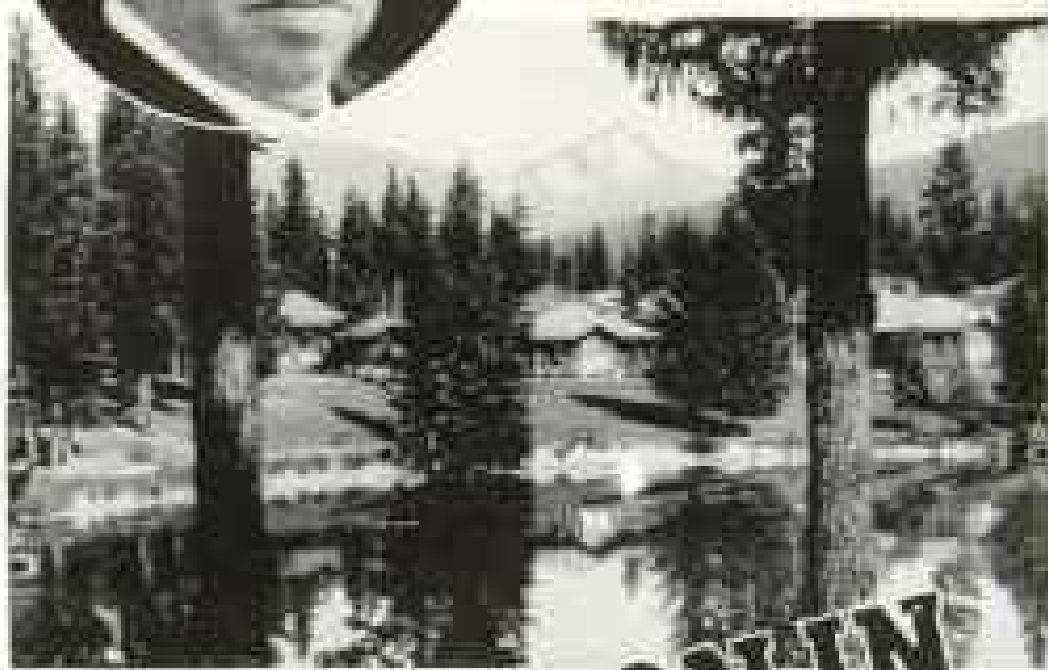
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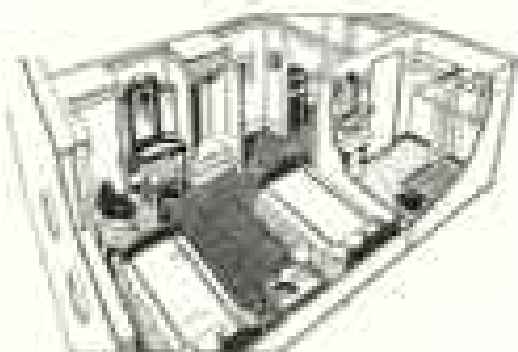
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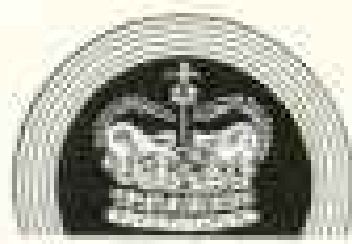


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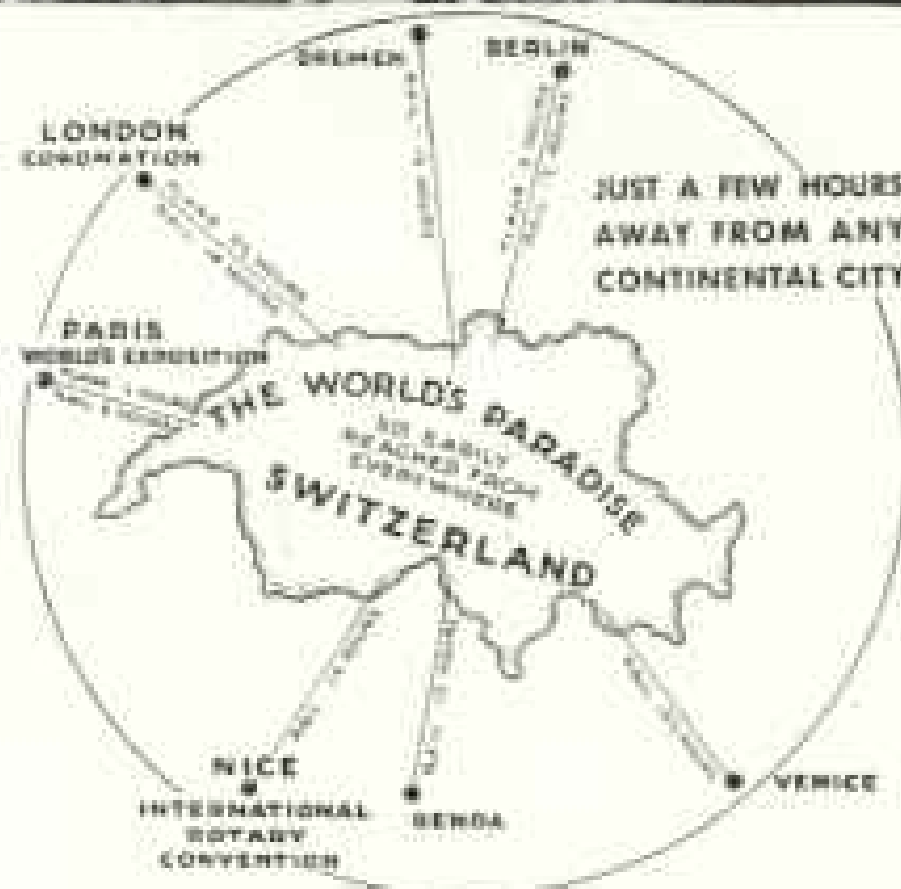
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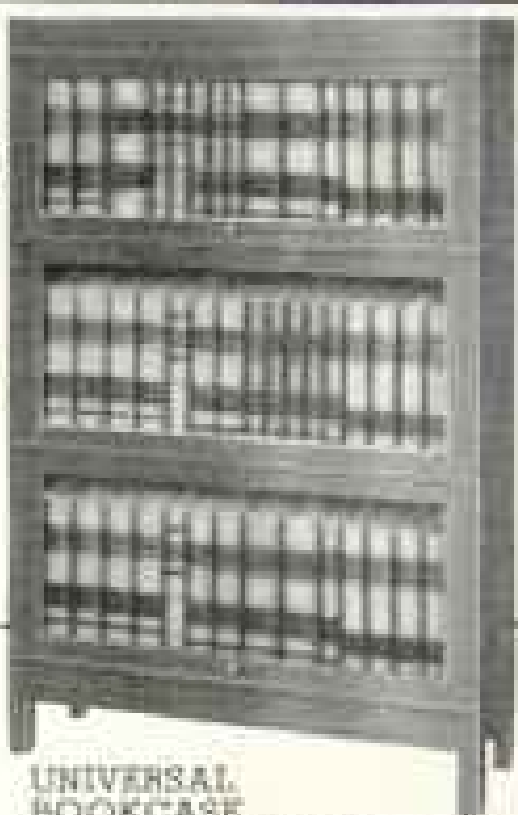
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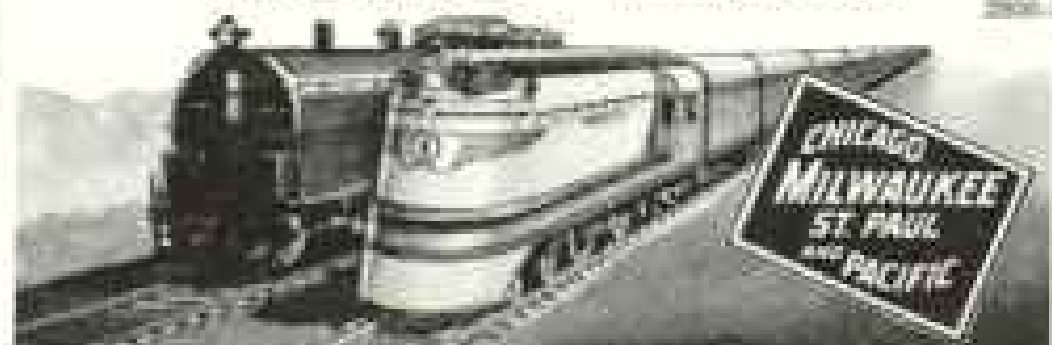
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### The Ahwahnee

No California trip is complete without a visit to Yosemite, overnight from San Francisco or Los Angeles. Your found accommodations at THE AHWAHNEE or CAMP CURRY. Write to Dr. Don Tressider, Yosemite National Park, Calif., for rate folders—or, for a real preview, send 50¢ and we'll mail the Four Seasons Book, a 50-page picture tour.

## DISTRICT OF COLUMBIA

### Washington

**May-Adams House.** Across from the White House at 15th and H. The best in accommodations and smart surroundings. European, \$1.00 up.

## FLORIDA

### Jacksonville

**Seminole Hotel.**—Jacksonville's leading hotel—rates \$2.50 up. Every room with bath. \$100.00 spent for improvements. In the heart of everything.

### Miami Beach



### The Whitman By-The-Sea

"Aristocrat of Miami Beach" . . . Occupying full block between Ocean and Indian Creek. Private bathing beach. Marine terrace for dining, dancing and deck sports. Convenient to all attractions. Unrivalled cuisine and service. European Plan. Selected clientele. Reservations in advance. Booklet on request to Fatio Dunham, Manager.

## GEORGIA

### Savannah

**De Soto Hotel.**—The South's outstanding hotel. Rooms with bath \$3 up. Outdoor swimming pool—dancing nightly except Sunday—13-piece orchestra.

## ILLINOIS

### Chicago

**La Salle Hotel.** Chicago's newest. Charming, convenient—La Salle at Madison. Ultra modern rooms, and suites. Service—foremost in friendliness.

## LOUISIANA

### New Orleans

**St. Charles.** the South's Most Modern Hotel, accommodating 1,000 guests. Spacious rooms, lofty ceilings. Center of New Orleans' historical points.

## MARYLAND

### Baltimore

**The Belvedere.** Outside the business district, yet convenient to all the city's activities. Every modern comfort and luxury. Rates begin at \$4.00.

**Lord Baltimore.** Every modern facility. 700 rooms with radio head-speaker, bath and shower. Fined Maryland cuisine. Rates from \$2-30 single.

## MASSACHUSETTS

### Boston

**The Copley-Plaza** faces beautiful Copley Square. Single rooms from \$4.00; double from \$4.00; suites from \$10.00. Arthur L. Bass, Managing Director.

## MINNESOTA

### Minneapolis

**Curtis Hotel.** Contiguous to Minnesota's 10,000 Lake Superior. Largest Hotel in the Northwest. Soft water baths throughout. Rates \$2 to \$6.

## MISSISSIPPI

### Biloxi

**The White House.** Finest resort hotel on beautiful Mississippi golf coast. Golf, boating, fishing, etc. Modern, fireproof, Amer. Plan. John T. White, Mgr.

## NEW JERSEY

### Atlantic City

**Chalfonts-Haddon Hall.** On the Atlantic City Boardwalk. 1000 rooms. Ocean Decks. Modern health baths. American and European plans.



### Hotel Dennis

Oceanic ocean, tempered by the sun and the nearby Gulf Stream, gives Atlantic City an earlier Spring. Hotel Dennis with sun-decks, solaria, health baths and a famous cuisine to make your Spring vacation ideal. Sports program, riding, golf and other amusements. American and European Plans. Walter J. Busby, Inc.

### Princeton

**The Princeton Inn.** Facing golf course and Graduate College. Amer. plan, 100 rms. Fireproof. "Hospitality as in days of old." J. Howard Stoenes, Mgr.

## NEW YORK

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**De Witt Clinton.** A Knott Hotel. New, well appointed. Faces Capitol Park. Splendid meals; attentive service. Come, we'll make you happy.

### New York City

**Barbicon-Plaza.** New skyscraper hotel overlooking Central Park at 6th Ave. Tower rooms from \$1 single, \$2 double. Continental breakfast included.

**The Plaza.** New York. Fifth Avenue, facing Central Park. Single Rooms from \$4; Double from \$8; Suites from \$12. Henry A. Ross, President.

**Hotel Seymour.** West 45th St. Within short walk of all theatres, smart shops and Radio City. Quiet, refined atmosphere. Single, \$1.50 up, double, \$4.50 up.

## NEW YORK

### New York City



### The Waldorf-Astoria

Modern as tomorrow . . . yet its tradition of hospitality goes back to a grand and spacious age. Park Avenue, 40th to 50th Streets, New York.

## NORTH CAROLINA

### Asheville

**Asheville-Biltmore.**—100 rooms, 100 baths. European Plan. Restaurant in building. Single from \$2.25. Double from \$4. Three golf courses.

**Battery Park.** Five excellent golf courses. Many scenic places to visit. Entrance Great Smoky National Park. A Knott Hotel. Request folder "D".

**The Manor and Cottages.**—in beautiful Albemarle Park. 2 famed golf courses, 5 minutes. Write for booklet. Albert Malone, Proprietor.

### Greensboro

**Sedgefield Inn.** Helpful. Modern. Adjoins Fountains Golf Course, Riding, Tennis, etc. Excellent Food. American Plan. Folker, Louis D. Miller, Mgr.

## OREGON

### Portland

**Mulholland.**—A nationally famous hotel. 200 rooms. From \$2.00. Three to four blocks leading stores and banks. Three cafes. Famous food.

## PENNSYLVANIA

### Pocono Mountains—Buck Hill Falls

**The Inn.** "Snow Sports Capital of the Future" 2 hrs. from N. Y. Winter rates, selected clientele. N. Y. Office, 200 Fifth Ave., L.A. 66. 4-3212.

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### The Great Smokies—Gatlinburg

**Mountain View Hotel.** Headquarters for your visit to The Great Smokies, described in Aug., 1936, Geographic. Modern. Always open. A. J. Huff, Prop.

### Knoxville

**Andrew Johnson.** Your headquarters when visiting the Great Smokies Park and Norris Dam. Knoxville's newest and largest. 350 rooms with bath.

## VIRGINIA

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**The Jefferson.** Richmond's most distinctive hotel, recently refurbished throughout. Only 30 miles from colonial Williamsburg. Wm. C. Boyer, Mgr.

## WEST VIRGINIA

### White Sulphur Springs

**The Greenbrier and Cottages.** America's world-famous spa and resort. Open all the year 'round. For rates and information apply to L. B. Johnston.

• • •

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**Fort Montagu Beach.** Nassau's Only Sea Beach Hotel. Thoroughly modern. Distinguished international clientele. All sports. Write for folder.

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**Belmont Manor and Golf Club.** Golf, tennis, swimming pool, surf bathing. See travel agent or Bermuda Hotels Inc., Dept. N, 500 Fifth Ave., N. Y. C.

**The Princess Hotel & Cottages.** Largest hotel. Every recreational facility. Established clientele. Consult your local travel agent or write direct.

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### Havana

**The National Hotel of Cuba.** Finest hotel in the tropics, offers rare vacation pleasures. Reservations—travel agents—hotel direct or Plaza Hotel, N. Y. C.




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National Geographic Society, Dept. QQ, Washington, D. C.

A black and white photograph showing a hand holding a magnifying glass over a small rectangular nameplate on a telephone component. The nameplate has the words "Western Electric" printed on it. The background is dark, and the lighting highlights the hand and the magnifying glass. The text "Did you ever see THIS before?" is written in a large, white, cursive font across the top of the image.

Did you ever  
see THIS before?

• Inconspicuous but important is the name "Western Electric" on your telephone.

You may never have noticed it, yet it has been there for years. And it has a great deal to do with the quality and low cost of telephone service.

Western Electric has been making Bell System equipment for over half a century. Its specialized production and purchasing have enabled the operating companies in the Bell System to buy equipment and supplies of the highest quality at reasonable prices. Western Electric serves fur-

ther by maintaining a nation-wide system for the rapid delivery of material and apparatus.

This is an important factor in providing good telephone service from day to day and speeding its restoration in time of fire, flood or other emergency.

Western Electric is an integral part of the Bell System and has the same objectives as the rest of the organization. It plays its part in making your telephone service dependable, efficient and inexpensive — the best in the world.

B E L L T E L E P H O N E S Y S T E M







## ★ OUR ROLE IN THE ALUMINUM INDUSTRY

Ours happens to be the only company in the United States engaged in the production of virgin aluminum.

Only in this respect does it differ from the many other companies in this country whose primary concern is aluminum.



Some of these manufacturers roll aluminum ingot into sheet. Others cast and shape aluminum into thousands of different products. Still others collect, remelt and resell aluminum

which has served its purpose as a part of some product, or which is scrap from the shops of thousands of manufacturers who use aluminum.

This widespread and diverse industry has grown up around the increased use of aluminum, which began in a very small way in 1888 with the efforts of a few young men who founded this business.

They started out to produce virgin metal at the lowest possible price. All through the years the major effort of all the men and women in this Company has been to increase the sale of aluminum by making it available as widely and as cheaply as possible. Every resource has been devoted to achieving that end.

We are still the only producer of virgin aluminum, but there is no bar to stay anyone who wishes to start making aluminum tomorrow.



Control of aluminum is out of the question when there is no possibility of anyone controlling all the factors involved—the raw materials, the electrical energy, the method of production, the free supply of remelted scrap, the imports from abroad.

Bauxite (the ore of aluminum) is found in many localities in this and other countries. We own only enough for our reasonable requirements. Other raw materials needed for making aluminum, and the necessary large amounts of power are available to anyone.



So long as we continue to be the only producer of virgin aluminum in this country, ours is the responsibility of taking the lead so far as

we are able, in research and development which will make aluminum more useful to every person in this country. Only to the degree in which that is accomplished will we and others in the industry prosper.

