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**The Roman Way**

With 14 Illustrations and Map

EDITH HAMILTON

**Ancient Rome Brought to Life**

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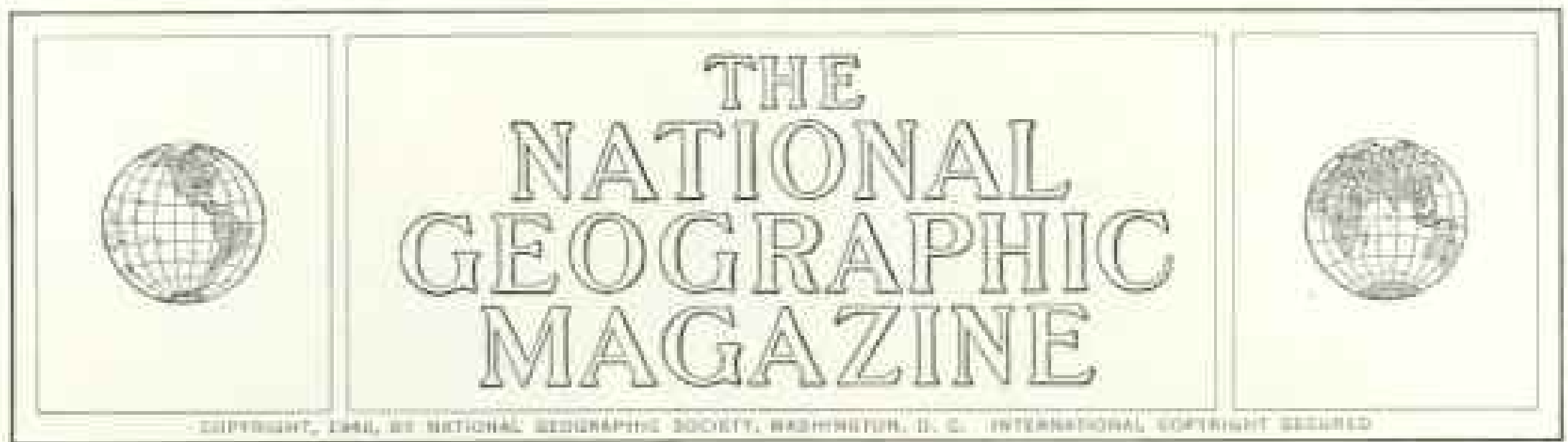
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## The Roman Way

BY EDITH HAMILTON\*

**W**HAT do the words Republican Rome call to mind?

Discipline, first and foremost; then frugality, hardihood; white-toga-ed figures of an incomparable dignity; ranks of fighting men drilled to the last degree of military precision; an aura of the simple life lived, not quite on heroic heights, but at any rate on perpetual battlefields; Cincinnatus at the plough; the death of a son decreed by a father for disobedience of orders even though a victory resulted.

That is the sort of thing we think of as early Rome.

This edifying picture is considerably enlarged and diversified by Roman comedy.

In Plautus we get the reverse of the shield, the senator not in his toga but in the Roman equivalent of dressing gown and slippers; the soldier dispensing alike with armor and discipline; dignity, iron resolution, the stern compulsion of duty, the entire arsenal of the antique Roman virtues, completely in the discard.

Thus, when the curtain rings up for the stupendous drama which we know as Ancient Rome, it is raised surprisingly on two comic writers (Plautus and Terence). The oldest substantial piece of Roman literature we have is a collection of comedies.

Our notion of the proper beginning for the literature of the mistress of the world would be something martial and stirring, old ballads of valiant men and warlike deeds with spirited bards to sing them, culminating in a great epic, a Latin *Iliad*.

But it actually begins as far away from that as the wide realm of letters allows, in a series of comedies which are avowedly founded upon the popular Greek comedy of the day.\*\*

No other great national literature goes back to an origin borrowed in all respects.

That brief flowering of genius, the golden age, not of Greece alone but of all our western world, had been brought about by a lofty and exultant spirit, conscious of heroic deeds done and full of joyous courage for great enterprises to come.†

It had lived in the audiences who shouted at Aristophanes' riotous nonsense, who delighted in every brilliant bit of his satire, appreciated each delicate parody, with minds keen to follow his master mind.

Aristophanes founded no school. He had no followers, ancient or modern. Menander has lived only as a shadow in Roman plays. Plautus and Terence were the founders of the drama as we know it today.

### Peoples Are Known by the Plays They See

We may perhaps account ourselves fortunate that comedy was the survivor. There is no better indication of what the people of any period are like than the plays they go to see (page 627). Popular drama shows the public quality as nothing else can.

But comedy does more. It must present the audience, as tragedy need not, with a picture of life lived as they know it.

The domestic drama, which is essentially

\* This article contains excerpts from the author's book, *The Roman Way*, published by W. W. Norton and Company, Inc. Copyright 1932.

\*\* Latin plays taken from the Greek were called *contaminations*. Often they were combinations of two or more Greek plays. The scenes, names, and costumes were Greek, but the ideas, the action, the real meaning of the plays were definitely Roman.

† See, in the NATIONAL GEOGRAPHIC MAGAZINE, "The Greek Way," by Edith Hamilton, and "Greece—the Birthplace of Science and Free Speech," by Richard Stillwell, both for March, 1944.



Staff Photographer B. Anthony Stewart

### One Name Links Two Majestic Symbols of the Wealth and Power That Were Rome

The Arch of Titus was built in A. D. 81 to commemorate that Emperor's capture of Jerusalem (page 586). Its realistic reliefs form a picture story of the epic siege. The famous Colosseum was completed by Titus in A. D. 80 and inaugurated by 100 days of gladiatorial combats (page 629). Lightning, earthquake, war, and use as a quarry have reduced the amphitheater by two-thirds.



© P. A.—Hemmer

### A Teutonic Blitz Uncovered These Roman Mosaics in Exeter, England

Big aerial bombs of modern warfare sometimes penetrated to the physical level of Roman civilization. Bomb-shattered Exeter divulged the plan and extent of its Roman precursor. Battered St. Catherine's Almshouses, near busy High Street, produced these provincial mosaics. An Italian expert sifted thousands of pieces from the rubble and patiently put together the work of his forefathers (page 562).

the drama as we know it today, has its direct origin in these Latin plays. The intimate domesticity of family life in one of its most impressive manifestations, the Roman family, is the pivot they all turn on, and character after character is shown which the theater has never let go of since.

#### Stern Mothers and Henpecked Husbands

Here is the very first appearance upon the world's stage of the figure so dear to audiences everywhere, the Mother, essentially what she is to be through all the centuries down to our own with the white carnation and Mother's Day. Greece never knew her. The Mother, capitalized, was foreign to Greek ideas.

The father has a place even more prominent. What they called in Rome the *Patria Potestas*, the Father's Authority, was clearly an awful matter. There was no rebelling against it.

But the authority of the master of the house had its limits. Plautus' Rome was the Rome of the Mother of the Gracchi and it is not difficult to understand that the Roman *Pater Familias*, though weightily endowed by law and edict and tradition, might meet his match in the determined virtues of the Roman matron.

Indeed that resolute lady seems to be responsible for the creation of one of the most popular characters in literature, the henpecked husband.\* He makes his very first bow upon the stage in these plays.

Perhaps the most familiar passage in Virgil† is the one in which he bids the men of Rome remember that to them belongs the rule of the earth (page 587). They are to "spare the submissive and war down the proud." It would seem that this high charge was subject to modifications within the home.

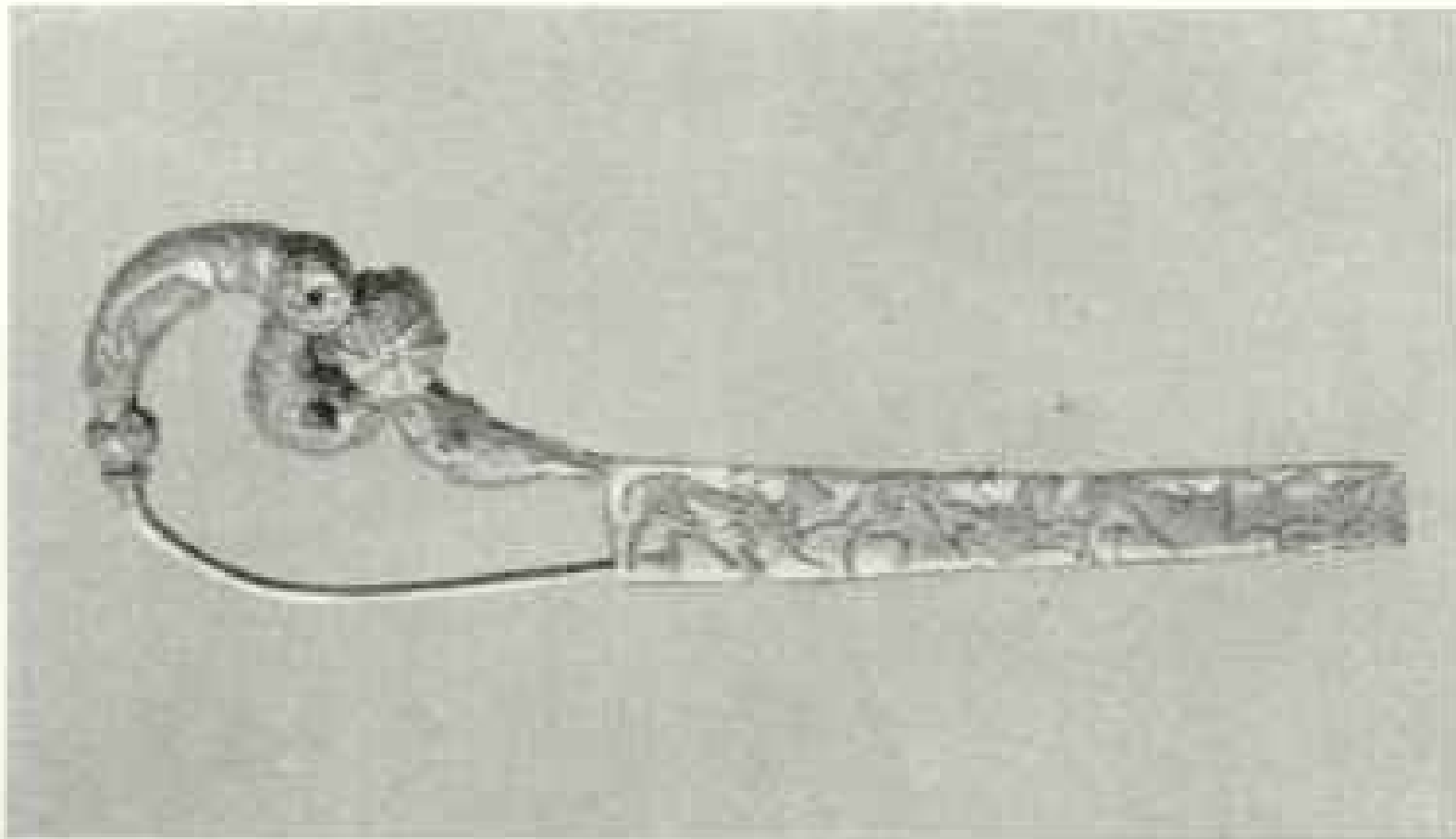
But there is one notable difference between what an audience would accept from women in Plautus' day and in later times.

The deceived husband, so familiar for so many centuries to the European stage, never appears in Roman comedy. There is no indication of any other bar to the activity of the Roman wife, but she could not put horns upon her husband's head. No Puritan morality could be more unyielding on this point.

\* The luckless old man with the "unlovely dow-ered wife" was a stock figure to deride.

† See "Perennial Geographer (Virgil)," NATIONAL GEOGRAPHIC MAGAZINE, October, 1930, by Dr. W. Coleman Nevils, S. J.





Metropolitan Museum of Art

### Gold Safety Pins Were Used by the Etruscans in the 7th Century B. C.

Although much of the treasure unearthed from the burial chambers of these early overlords of Rome was of Greek workmanship (page 575), motifs such as the decoration on this were definitely Etruscan.

The fact is thrown into high relief by the complete absence of any sex morality in other directions. The courtesans are important characters in nearly every play and Terence's most estimable youths have affairs with them which their mothers on occasion hotly defend.

The Romans were franker than our grandfathers were, but their basic notions of what could and could not be done were the same. Strict virtue within the house for everyone. Outside, all the pleasant vices for the men.\*

A hard and fast division of ethics into male and female received its final consummation in Rome. The double standard, which has been the world's standard for all these centuries since, is formulated, complete to the last detail, in Roman comedy.

In this respect the men of Greece were dull of wit compared with the men of Rome. Their astuteness did not rise beyond the four walls of the house for their womenfolk, with occasional assistance from bolts and bars, most futile of defenses, as storytellers the world over have shown.

#### Woman's Supreme Asset—Chastity

Aristophanes has many a joke about the way Athenian women eluded them and the husbands they deceived. Nothing of the kind passed with a Roman audience of the Republic.

The men saw to it that they were not deceived, and the way they did it was a triumph of Roman intelligence as well as of Roman determination.

One of Rome's greatest achievements, which has passed almost unnoticed, was the success-

ful education of their women in the idea that their supreme duty was to be chaste.

The popular story of Lucretia who killed herself when she was violated by force, completely innocent though she was in reality, and the story, even more popular of the father acclaimed a hero because he killed his daughter with his own hand rather than have her live as the tyrant's mistress, testify eloquently to the thoroughness of the women's training.

Thus disciplined they were safe to go abroad and enjoyed a degree of freedom civilized women had never known before.

Another point new to the student of Greek literature is the exaltation of woman and her purity. That, too, began in Rome.

Greek tragedy, indeed, shows women of a greatness unsurpassed anywhere. The greatest figures are women, but the fact that it is so is never directly brought to mind. We are never made to feel how wonderful that a woman should be like that, any more than how wonderful that a man should be.

In Roman literature, as in our own, a woman is always a woman. Her sex is never in the background of the picture.

That audience of more than two thousand one hundred years ago looks oddly familiar. The reflection shown in the mirror of Plautus and Terence has "nothing alien" to us as we watch it. The close family life and the masterful lady of the house and the elderly-man-in-search-of-a-mistress and the nice young lovers—we know them all only too well and we cannot feel ourselves strangers to the theater crowd that flocked to see them in Rome of the Republic.

But an enormous change has taken place when next we have a contemporary's account of the city; the government is corrupt through and through and the people completely indifferent.

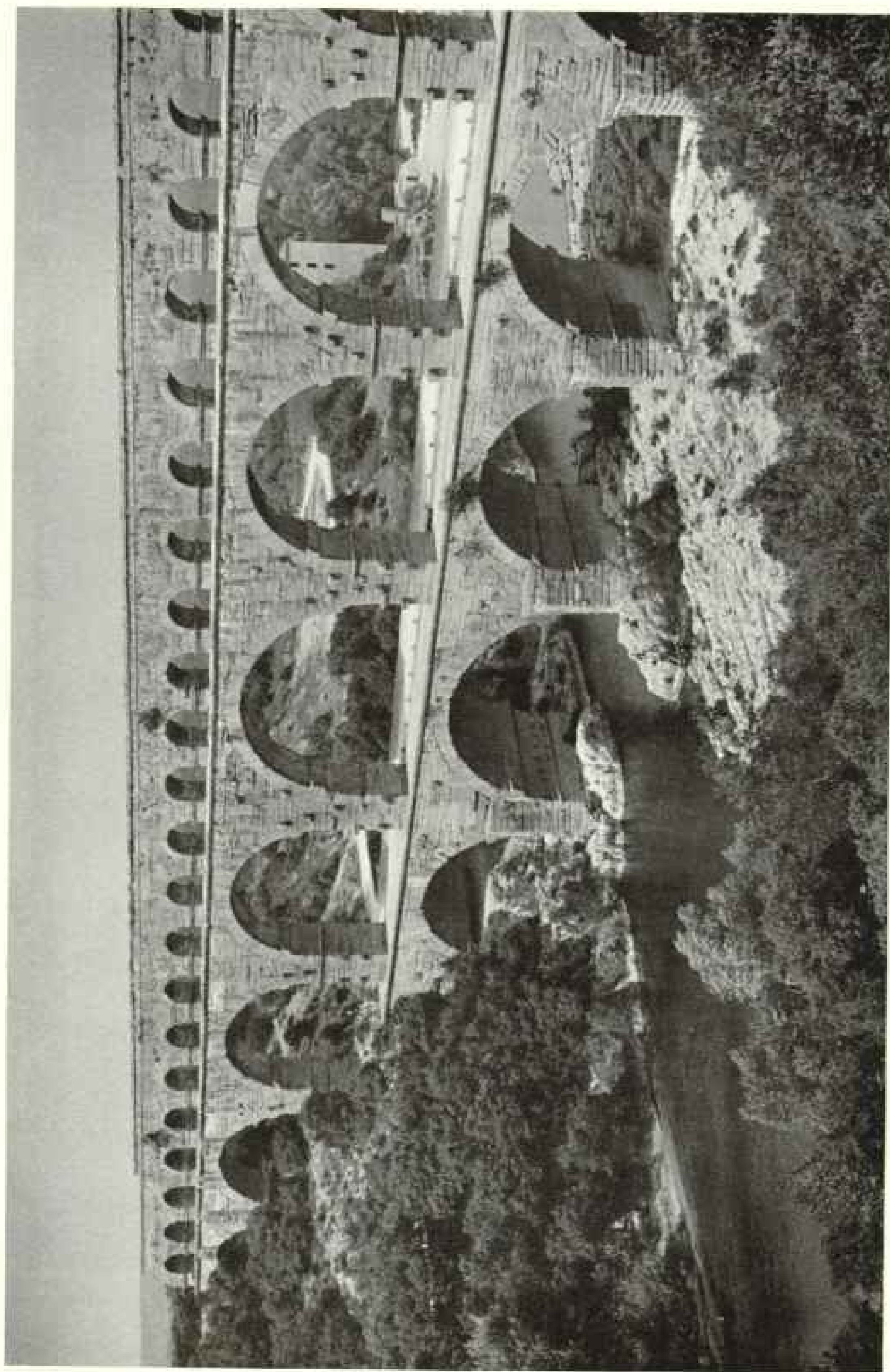
Only a hundred years—less than that—changed Polybius' great Republic into one of

\* Plautus in the *Mostellaria* makes the country slave say, "Out-Greek the Greeks; be drunk both day and night; buy mistresses and set young slave girls free."



Peace Removes Wartime Protection of a Column Commemorating Roman Triumphs

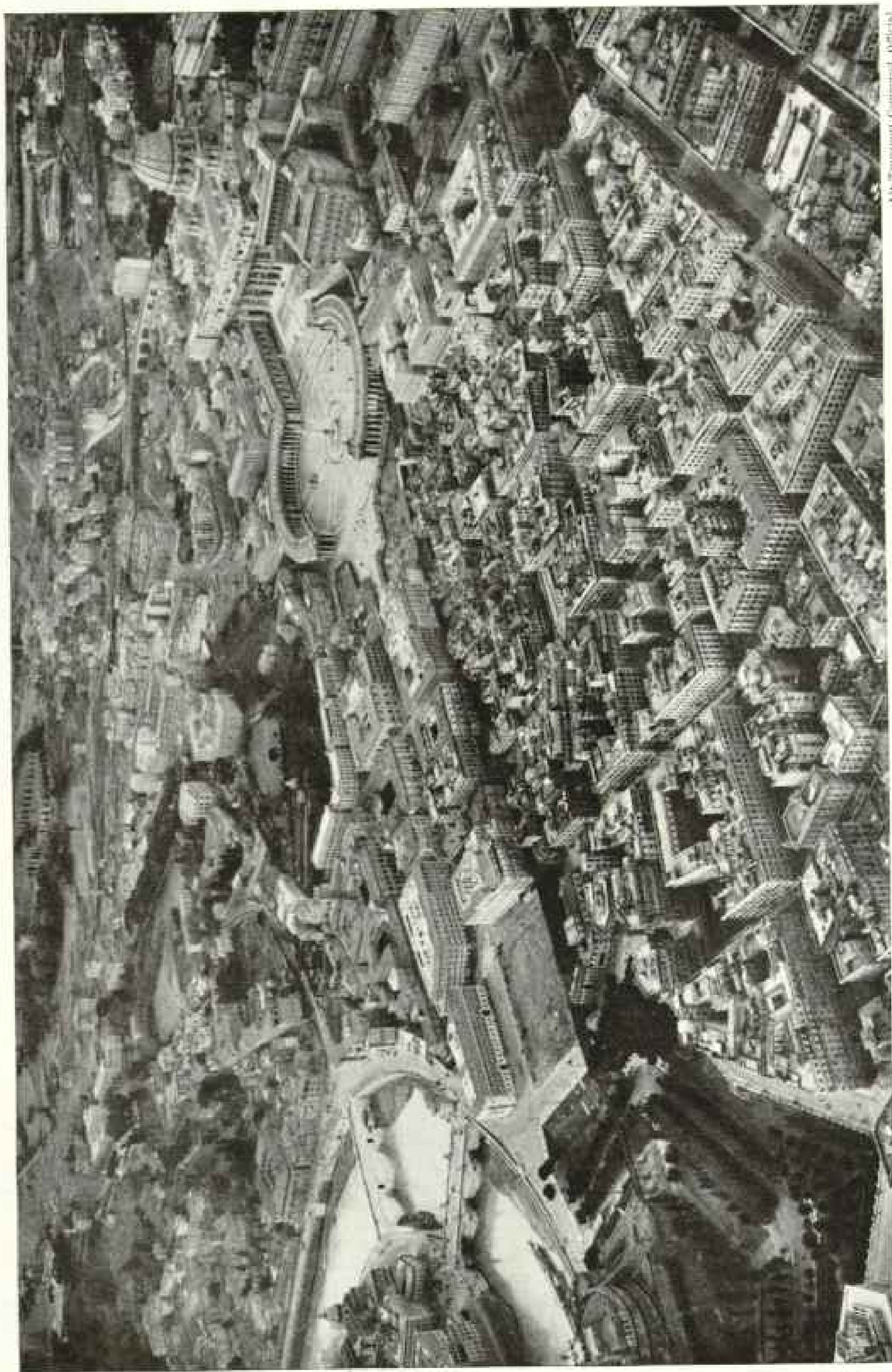
The Column of Marcus Aurelius, in Rome, is patterned after that of Emperor Trajan. Spiral relief bands show the pictorial history of the philosopher-emperor's vital Danubian campaigns against the Germans (page 588). While fighting barbarians, Aurelius wrote his famous *Meditations*, by which chiefly he is remembered.



© Donald McFarish

**Stately, Tri-tiered Pont du Gard, Queen of Roman Aqueducts, Spans the Gard in Southern France**

The sun-tanned blocks of all the arches have stood uncracked since 19 B. C., but the canal on top was waterproofed with cement. Fifty-two golden arches support the water channel, still mostly covered, which served ancient Nemausus (Nîmes). A modern road crosses the "bridge" on the main tier.



Art Transport Company, Berlin

**To Ancient Romans. Their Great Capital Was "First Among Cities, Home of the Gods, Golden Rome"**

As mistress of the European West, Rome ruled from Irish Sea to Persian Gulf, from the Atlantic to the Caspian. Spiritual authority replaced temporal power as "the Eternal City" lived on as capital of Christendom. Here is the more modern section of the city, with St. Peter's and part of Vatican City at the upper right.





**1** Tin from Cornwall was floated on rude barges to Brittany and southern France

**2** Poor-class timber dwellings, now uncovered by aerial bombings, were the slums of Roman London

**3** Flocks of geese were driven from Belgium to provide livers for Roman tables—page 596

**4** Amber from East Prussia was imported and prized by the Romans

**5** Crossing the Pyrenees and Alps in his march on Rome from Spain, Hannibal's elephant-borne Carthaginian army lost 50,000 men

**6** Vienna was the home port of the Roman Danube fleet

**7** More than 1,800 years old, the Roman bridge at Alcántara is still used—page 583

**8** Roman conquerors of Spain found it curious that "the women dance promiscuously with men, taking hold of their hands"

**9** From the Balearic Islands were recruited the best professional soldiers of antiquity. For pay they fought for Greeks, Carthaginians, or Romans

**10** Price and wage ceilings to check inflation were tried by Emperor Diocletian. His palace at Spalato still stands

**11** No present-day road in Albania surpasses the old Roman one

**12** Because Morocco was unmanageable, Diocletian withdrew Roman forces from all but a narrow strip commanding the Strait of Gibraltar

**13** The Roman library at Timgad contained 23,000 volumes

**14** Irrigation by the Romans made Tunisia's soil fertile

**15** Ancient Romans and modern Fascists exiled political offenders to Pantelleria



- 16** Rome never made an organized effort to invade and conquer Russia
- 17** Trajan's 20-arch Danube River bridge was three-quarters of a mile long. Its ruins are visible at low water—page 577
- 18** Under Roman rule Athens became a university town, the Oxford of antiquity
- 19** The Romans tried four times to build a Corinth Canal; the project was not accomplished until 1,800 years later
- 20** Wars stocked the slave auctions at Delos—page 581
- 21** Under Roman rule the interior of Turkey was studded with prosperous cities having a population greatly exceeding that of modern times
- 22** Copper from Cyprus was combined with tin from the Atlantic coast to make the bronze of antiquity. The word "copper" is a corruption of "Cyprus"
- 23** Cleopatra lived in Alexandria, center of the eastern Mediterranean
- 24** Roman ships brought gems and spices from Ceylon via the Red Sea-Nile canal—page 578
- 25** Silt of the Nile floods made Egypt Rome's richest grainland
- 26** Animals from the Sudan and the Sahara were imported for the wild-beast fights in the Colosseum of Rome
- 27** Torches used in Roman siegecraft were sometimes soaked in petroleum from the Near East—page 585
- 28** Caravans supplied Rome with rugs from Persia and silk from China. Silk was thought by the Romans to be produced by trees and was worth its weight in gold—page 578



Erno Vichas

### Barbarian Torches Transformed a Roman Emperor's Seaside Palace into a Town

In A. D. 305 Diocletian, wearied by imperial cares, retired to his magnificent seven-acre palace at Split (Spalato) on the Dalmatian coast (pages 603, 650). When invading Avars fired near-by Salona in the year 670, refugees built a town within its massive, fortlike walls. Parts of the ancient structure, which once housed some 3,000 people, still form the heart of this busy Yugoslav port.

which we have as black a picture as could well be painted. The historian Sallust tells of a foreign prince who came to Rome at the beginning of the first century to engineer a deal. He was rich and he succeeded, and as he left the town he said, "City in which everything is for sale."

#### A Man of Many Letters

During the strange and exciting days when the great Republic was coming to an end and the Empire was looming just ahead, there lived the most distinguished letter writer the world has ever known, one of Rome's very great men, Cicero the orator.

Hundreds of his letters have been preserved, along with many letters from his friends. They are of all sorts: letters of condolence, letters of affection, letters of apology, literary criticism, philosophical discussion, town gossip, business letters, and, outnumbering all the rest a hundred to one, political letters.

Such a ratio would be a matter of course to a Roman. The thing of paramount importance, away beyond everything else, was politics.\*

Goodness apart from patriotism did not exist to the Roman.

Officials, party chiefs, "bosses" big and little, must face an ever-present possibility of having to die for their country. Ex-officials were allowed no more comfortable prospects.

Consulars, as they called them, men who had been consuls—Rome's ex-presidents—became oftenest commanders in the wars Rome was always waging in one or another part of the world.

Cicero, pre-eminently a man of peace, must yet put himself at the head of an army and live for months at a time as a fighting general. It was the price he paid for once having been placed at the head of the state.

And yet when Cicero was carrying on his Cilician campaign in strict accordance with Rome's great tradition, the Republic was dying and all but dead. That was in 51 B. C.

Nine years before, three powerful party leaders had come together; they agreed to pool their resources and take the government into their own hands. But it was all completely unofficial. The senate met; the consuls presided; the old respected political forms were strictly adhered to.

The fact that Caesar, Pompey, and Crassus held the reins did not seem to matter much, if they kept, as they did, in the background.

People got used to the idea of them and when four years later their powerful organization was completed and they began to act openly, honored and honorable patriots could

find excellent reasons for acquiescing in their running the city.

Something had happened to Roman morale. The people were safe and at ease. Rome's enemies were outside Italy now (page 588), far away, shut off by mountains or sea, and although civilian commanders were the rule, fighting in other respects had become a matter for professionals.

Wealth was pouring into the city from conquered countries; easy money had become possible for a great many and the ideal for most.

Politics have become a money-making business; votes are bought and sold, so are judges. Everyone knows that there is one sure way to being elected or being acquitted, and nobody cares.

One day, Cicero writes, there was read out in the senate an agreement a candidate for the consulship had made with the two consuls to pay each of them a large sum of money in case he was elected, but failed to get for them the offices they wanted when their term was over. The compact called for false oaths not only from the principals but from two ex-consuls as well.

"It was regularly drawn up," Cicero continues, "with the suras promised, and drafts on the bank added, and so on. It does throw a lurid light on the consuls, but it was all the same to Appius Claudius [one of them]—he had nothing to lose by it."

Once the Claudii had been citizens Rome was proud of. The Appian Way was the achievement of an ancestor; so was the first water system, and the splendid aqueduct.

The present representatives, however, were not of the antique stamp. Appius, his brother Publius, and their three sisters, all noted for brilliancy and personal beauty, were talked of throughout the city for their reckless ways, their extravagance, dissipation, and worse.

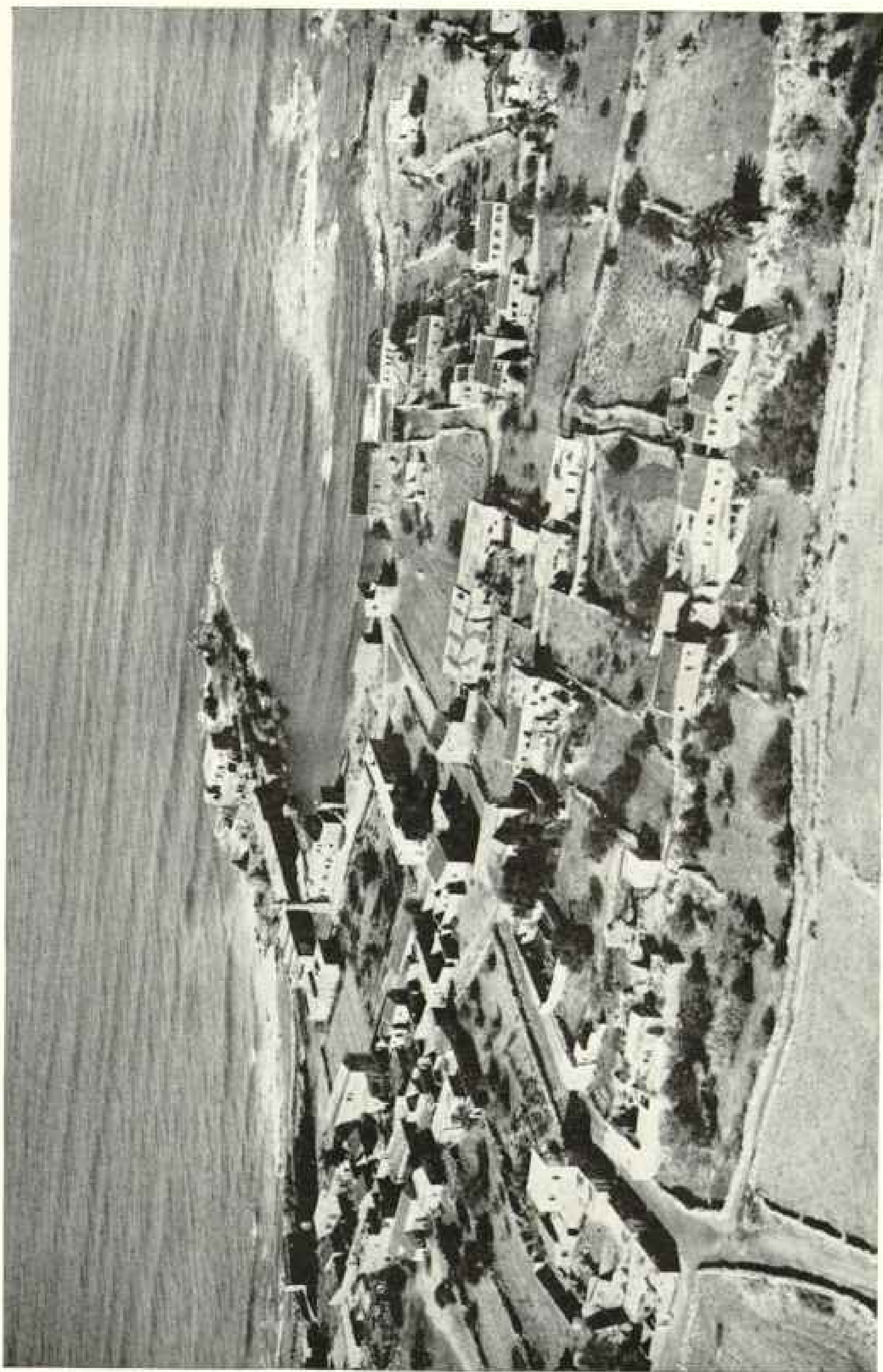
#### Caesar's Wife Must Be Above Reproach

The celebrated case of that day and many a day to come centered in Publius, and Caesar's young wife, Pompeia, was correspondent.

As Cicero tells the story, it began at the festival of the Good Goddess, a highly important ceremony in which women alone took part. During the celebration no male could enter the house where it was held. Even pictures and statues of men were banished. Juvenal

\* In Rome was born the custom that gave rise to our modern term, *mudslinging*. All candidates for office wore the white toga—*toga candida*. If they were unpopular, people threw mud at them till their white raiment became the *toga maculosa*, the toga defiled with mud. Cicero referred to senators thus disgraced as *senatores maculosi* (polluted senators).

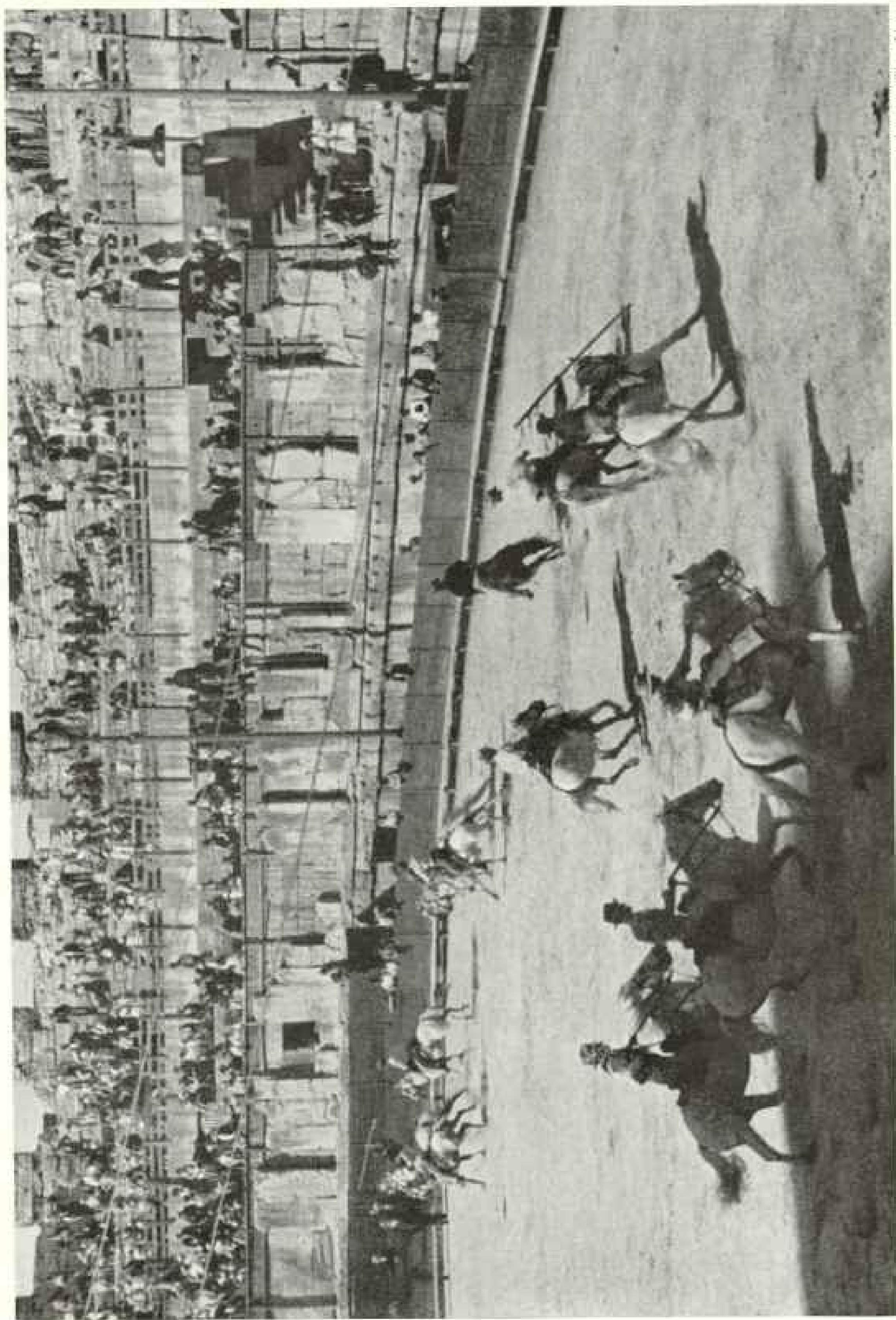




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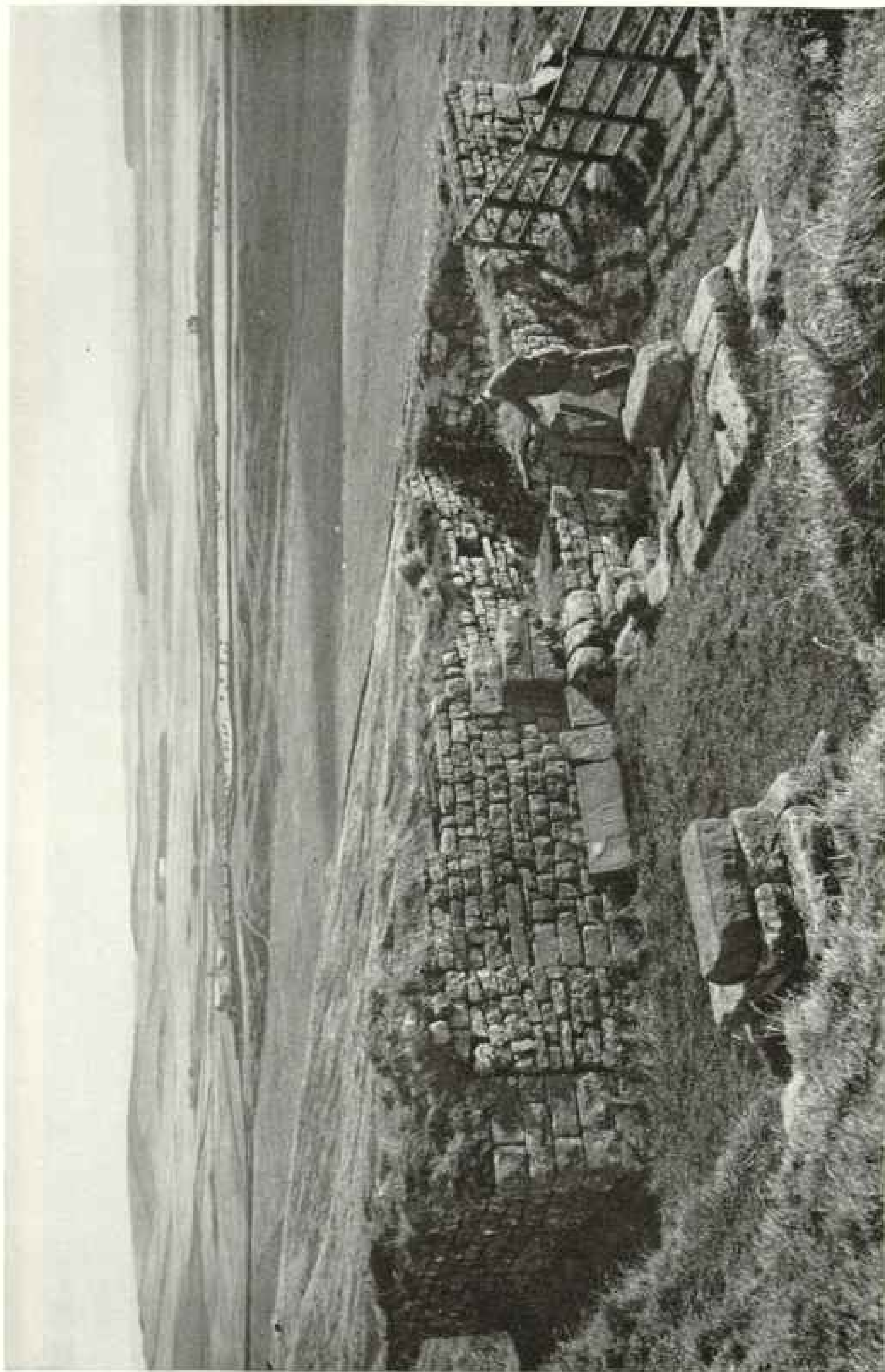
**Named by a King to Honor an Emperor, Palestine's Caesarea Figured Prominently in Ancient, Medieval, and Church History**

Built by King Herod, named for Caesar Augustus, this once-magnificent seaport was a Roman capital, Christian bishopric, and walled Crusader stronghold. St. Paul languished prisoner here, and Crusaders took from it as booty the famous "Holy Grail." Traces of Roman city and fortified Christian town are still discernible.



Reproduction from "The Arena"

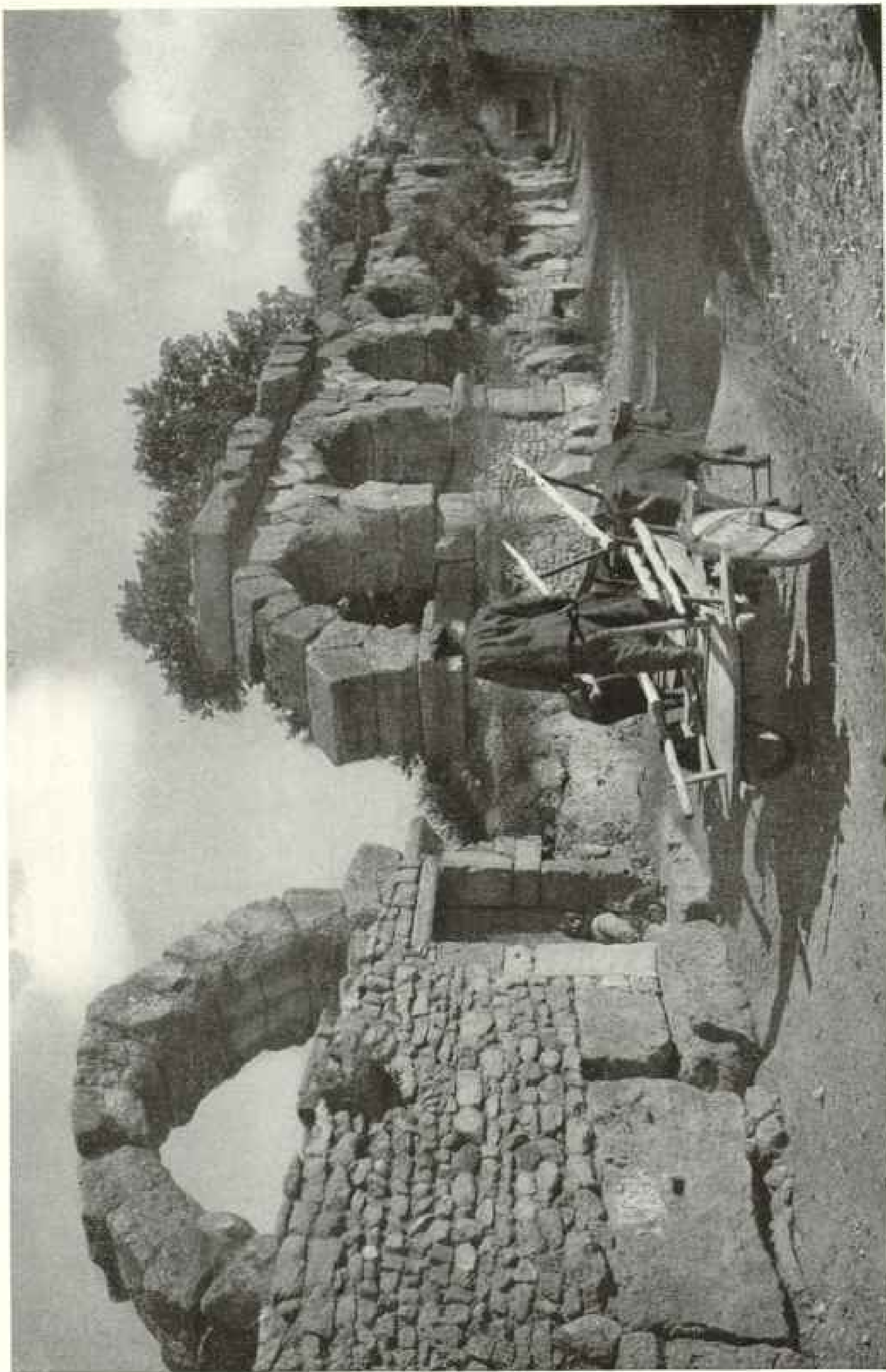
A French Version of the Bullfight Has Replaced Gladiatorial Combats in the Roman Arena at Arles



© Donald McFarlane

### Soldiers of Civilization Kept Barbarism at Bay along the Roman Empire's Far-flung Borders

Hadrian's Wall, linking sea to sea across north England, marked the limits of the Roman world in this region and held back marauding Picts and Scots for 150 years. These ruins of Borcovicium, one of 14 large forts along the 73-mile wall, have survived 18 centuries. The Antonine Wall, in Scotland, was held only briefly.

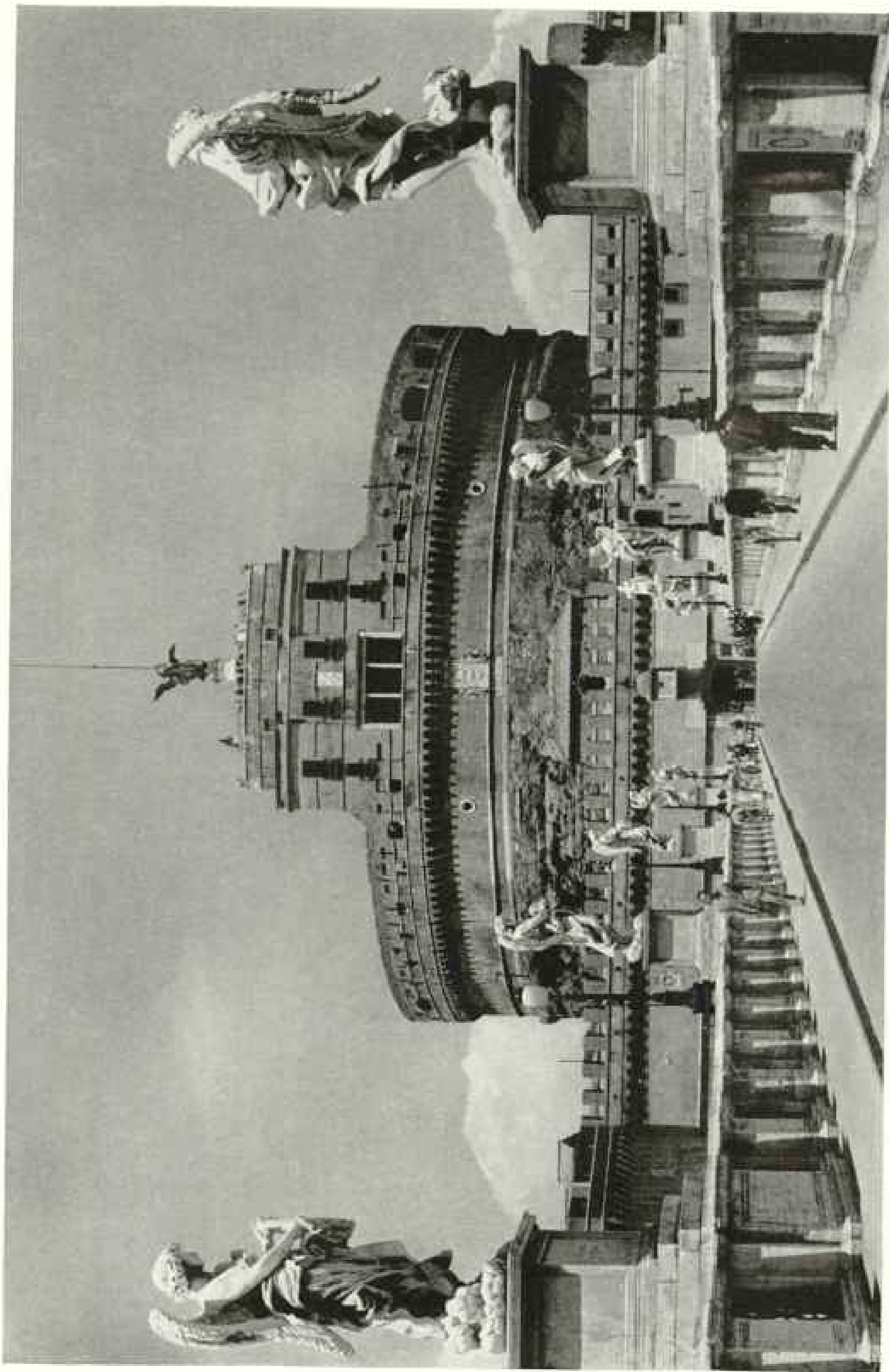


Staff Photographer Maynard Owen Williams

**A Trademark of Roman Civilization Was the Aqueduct, Which Here Brought Water to Quench the Thirsty Anatolian Plain**

An ancient way of travel rumbles beside ruins which once watered the Roman town of Tyana in southern Cappadocia, part of modern Turkey. Built on the Mound of Semiramis, legendary female founder of the Assyrian Empire, Tyana grew into a thriving city which became a Roman colony under the Emperor Caracalla.





Staff Photographer H. Arthur Hamant

**Grim and Battle-scarred, a Veteran of 1,800 Years Broods over Men and Angels on the Banks of Father Tiber**

Hadrian's Tomb (Castel Sant' Angelo) has been museum, fort, castle, barracks, and museum. It was once magnificently marble-encrusted. The bridge is Ponte Sant' Angelo, also built by Hadrian but frequently restored. The angels were designed by Bernini and executed by his pupils in 1669-70.

says no male mouse dared to stay in the forbidden premises.

Caesar was pontifex maximus at the time and his house was chosen for the sacred rite. This suited Claudius exceedingly well.

His affair with Pompeia was not coming off, Plutarch thinks because of the strict chaperonage of her mother-in-law, "a very discreet woman," and here was an occasion when the most vigilant *duenna* might relax.

His smooth boyish beauty fitted well a woman's dress and he arranged with Pompeia to go to the house disguised as a singing girl and be met at the door by her own maid. The maid, bidding him wait, slipped away to find her mistress.

But she was long in coming back and Claudius started to find his lady for himself.

But something had gone wrong. Perhaps Pompeia's courage failed; more probably the very discreet woman had had her suspicions aroused, for as he went through the house her maid ran up to him and called out gaily that he must come and play with her, a custom, Plutarch says, at the festival—it would be pleasant to know what they played at—and upon his drawing back, asked him what was wrong.

#### Betrayed by His Voice

Claudius had the folly to speak to her in answer and his voice betrayed him.

She shrieked, "A man—a man!" and the fat was in the fire. Great was the to-do.

The "sacred things" were covered; the holy rites pronounced null and void; the house ransacked. To no purpose, however; Claudius had been smuggled out by Pompeia's maid.

All the same, he had been recognized and of course next morning the town buzzed with the delightfully horriſic scandal.

A tribune was found to impeach the offender for profaning sacred ordinances.

Claudius contented himself with declaring that he was out of town at the time of the festival and had witnesses to prove it.

Caesar put the best face he could on the matter: swore he did not believe a word of it; Claudius had never been in the house; a lot of women's talk. It was true he divorced Pompeia, but then he was ready with a reason which commended itself to every masculine heart, voiced in the famous saying about Caesar's wife.

Claudius, we may well believe, enjoyed himself. A trial for sacrilege was certain, but he knew a way out from that.

Cicero was drawn into the affair. Rumor had it that he was extremely reluctant to move in the matter and that the reason was

the lovely Claudia, the most beautiful and notorious of the three sisters.

It is certain that he often speaks of her in his letters, and his nickname for her, "our ox-eyed goddess"—elsewhere he mentions her great flashing eyes—would point to some intimacy.

At all events, Cicero's wife, a lady built on the lines of Plautus' Roman matrons, laid down an ultimatum and Cicero came forward as the chief witness for the prosecution. The enmity he aroused thereby followed him implacably through his life and even after.

Nothing happened. Well-meaning citizens would applaud, but when it came to doing anything that meant personal effort, not to say inconvenience and even possible danger, that was another matter. Not long after, Claudius was elected to high office.

To the modern reader of the record it seems incredible that anyone, let alone those shrewd, competent Romans, should have believed that such a state of things could go on and on and a republic in which no one trusted either the electorate or the courts could in the nature of things endure. But so it was.

Cicero writes his brother during a temporary lapse of his ruling passion: "Anything more corrupt than the men and times of today cannot be conceived. And so, since no pleasure can be got of politics, I don't see why I should fret myself. I find my pleasures in literature and my favorite pursuits and the leisure of my country houses and, most of all, in our boys."

Ten years after that letter was written the Republic was ended; Antony and Augustus were dividing between them the Roman world; Cicero's headless body was lying on the seashore. In one of his letters he says that it is easy to know how to pull the ropes in a bad cause, but hard in a good cause, and "it is a difficult art to rule a republic."

If only Cicero had not been such a keen politician! Only a sentence here and there, at the best a few stray passages, throw a little light on the way of the world as the smart society of Ciceronian Rome pursued it.

#### Interior of a Roman Mansion

What the house, with gymnasium and colonnade, must have been like can be seen in a letter about his brother's house: "All's right on your estate—nothing left to do but the baths and a promenade and the aviary. The paved colonnade gives dignity.

"In the bathroom I moved the stove to the corner of a dressing room because it was so placed that the steam pipe was directly under the bedrooms. Your landscape gardener has



London Electrotype Agency, Ltd.

#### Excavation Near Langport, England, Bared a Fine Roman Mosaic

It once was the floor of the cold room in a luxurious bath (page 612). The dashing rider in the foreground is clad in tight-fitting oriental costume, with Phrygian cap and cloak streaming in the wind. The octagonal panel (center) shows a lady disrobing between two cupids holding torches (page 347).

won my praise; he has enveloped everything in ivy—even the Greek statues seem advertising it. It's the coolest, greenest retreat. Statues, wrestling ground, fish pond, water system—all are fine. Really, an edifice worthy of Caesar—and there is no more fastidious connoisseur."

Sometimes we get a glimpse of the vast slave world which did all the work and provided all the amusements (page 381).

"Do send me two of your library slaves," Cicero writes Atticus, "to help glue pages, and tell them to bring bits of parchment for title pieces. I say, you *have* bought a fine troupe of gladiators. I hear they fight splendidly. If you had cared to hire them out you would have cleared expenses on those two shows. Enough of that—but, as you love me, remember the library slaves."

Gladiatorial contests Cicero rather inclined to—from moral considerations. People call them cruel, he says, and perhaps they are, as conducted today. But certainly the spectators receive an incomparable training in despising suffering and death.

#### Cicero Chose to Ignore Impropriety

The decorum of the letters is amazing in that day and in that city. There is hardly a suggestion of impropriety even. A sample of his scandal-mongering—there are not above half a dozen in all—is a story he tells Atticus about an unfortunate gentleman who had his baggage searched and among his goods "were found five diminutive busts of Roman ladies—married, all of them! One was Brutus' sister; another, Lepidus' wife. *He* won't fret."

This is as far as Cicero will go in the way of an off-color story, and yet he wrote at a time when Rome was full of the vilest vice and the foulest talk.

Through the letters great figures pass perpetually, great still to us today. Mark Antony, "a wretched, insignificant subordinate of Caesar's," Pompey from his height of aloof superiority calls him; "the toy captain," Cicero dubs him jeeringly to Atticus, "who carries round with him that actress Cytheris and in an open litter, too."

Pompey appears often, now the great statesman and superlatively great general, and then at the crisis of his life when he faced Caesar to see which would rule the world, suddenly showing himself neither a statesman nor a general.

"His way is to want one thing and say another," that engaging young scamp, Caelius Rufus, writes Cicero, "and yet he's not clever enough to hide what he wants. But," he adds gaily, "he's undergoing a reducing treatment

at Bauli and is so extremely hungry, even I am sorry for him."

The great Augustus, first Emperor of Rome, the autocrat whose word was final throughout the civilized world, appears a very human young man before the splendid trappings of royalty covered him up.\*

"A praiseworthy youth who had better be rewarded—and removed," is his (Cicero's) final pronouncement. That remark was repeated to Augustus; three months later he agreed to Cicero's assassination.

Caesar, the greatest man Rome produced, as we all believe with perhaps no very definite notion why, is seen less distinctly than any of the other notable personages Cicero discusses with his friends. That is our great loss, for Caesar was not given to explaining himself.

A book, no matter on what subject, could hardly be less personal than his *Gallic War*.† It is the one example in literature of an impersonal autobiography. Caesar figures on nearly every page, but in exactly the same way as all the other characters do.

Even the annihilation of a legion and the rescue of another just on the point of annihilation are recounted with no more feeling than if the narrator were a historian of deeds done centuries before him.

It is the greater pity that Cicero, who knew Caesar from boyhood and was the one man among his contemporaries with ability enough to understand him, should mention him only briefly and rarely.

And yet Cicero was a good friend.

Even on his arduous campaigns Caesar took the trouble to write often. "A most cordial letter from Caesar," Cicero writes Atticus. "The result of the war in Britain is looked forward to with anxiety. There is not a scrap of silver on the island, no booty either except slaves—and I don't fancy there will be any with literary or musical talent among *them*." That was in the year 54.

The last glimpse of Caesar is in a letter dated less than three months before the Ides of March. Cicero gives him a dinner party, a very splendid affair.

"It passed off perfectly delightfully," he

\* See "Augustus—Emperor and Architect," by W. Coleman Nevils, NATIONAL GEOGRAPHIC MAGAZINE, October, 1938.

† Probably one explanation of this impersonal style is the fact that Caesar, being absent in the field most of the time, wrote reports of his deeds to be read in the Forum in support of his political candidacy. These reports, therefore, were written like news stories, and, like our modern publicity stories disguised as news, they were intended to win public favor for a political candidate.



tells Atticus. "A formidable guest, but he left no regret behind. Until one o'clock he admitted no one: at his accounts, I believe. Then he took a walk, and after two, his bath, and then, when he had been anointed sat down to dinner. He was undergoing a course of emetics, so he ate and drank as he pleased—a lordly dinner and well served."

#### Horace, a Wit Who Moralized

Horace was just turned 21 when Cicero died.

He took sides with Brutus and fought with him through the campaign that resulted in the final defeat of the republican cause and the establishment of Augustus and Antony as masters of the world.

He was a man of supreme good sense who saw that the Republic was gone irrevocably and the Empire had arrived to stay.

Who would not like to see Horace walk in through his door any day in the year? Immediately everything would seem more agreeable, the cocktails better flavored, the armchairs softer, even the comfort of the warm, sheltered room would take on the proportions of an active delight. And the talk would never center round himself. Every attempt to make it do so would be warded off deprecatingly with a touch of gay humor.

Sitting in your armchair he would be the most stimulating of listeners—but any balloon you launched would be in danger of a puncture from a sly dart of irony, which yet, with all its cutting edge, would fail to wound.

He is Benjamin Franklin turned poet, or rather, for he never borders upon the provincial, a poetical Montaigne (page 599). He is a poet whose distinguishing characteristic is common sense.\*

Through thirty years he "played with words on paper," as he called his writing, and he never had any other pursuit. Yet the result is only one slender volume.

Horace had by nature, as no one more, the gift of brevity. The result of his freedom to write as he pleased was poetry which belongs to that rare order of verse which is distilled; only the essence left. He gave a good deal of advice, first and last, to would-be writers, and of it all "Be brief" comes first: "So that the thought does not stand in its own way, hindered by words that weigh down the tired ears." And remember always, "More ought to be scratched out than left."

Through the streets of the great city Horace strolled, cocking an amused eye at a fashionable lady's short dress, at a perfumed young elegant's latest thing in the way of togas, at the bearers of a great personage's litter—no carriages were allowed in the streets during

the day—at his own slave on tiptoe to scan eagerly a poster of a gladiatorial show, at a grand funeral procession preceded by blaring brass horns and trumpets, and with especial delight at a fastidious poet's latest effusion hung outside the bookshop where it was being pawed over by the sweaty hands of the vulgar.

He stopped before a famous painter's work in a portico—there were miles of these roofed colonnades—had a look at a merchant's stock of "pearls from farthest Arabia and India, giver of wealth"; at other shops where could be bought "silver and antique marble and bronze and works of art, jewels, and Tyrian purple," rare and beautiful things from everywhere in the world.

#### Banquet Fare a Fearful Gorge

Cooking and serving and bills of fare occupy a great deal of Horace's attention. No less than the whole of two poems, and long ones at that, and the half of another are about nothing else: *Horace*: "How did you fare at the grand dinner party?" *Friend*: "Never better in my life." *Horace*: "Do tell me, if it won't bore you, what were the hors d'oeuvres?"

And a hundred lines follow which make fun of the menu, indeed, but give it nevertheless in greatest detail, together with a number of recipes for cooking the especially delicious dishes (page 597).

On that occasion those Roman gentlemen ate: cold wild boar with all sorts of pickled vegetables; oysters and shellfish with a marvelous sauce; two varieties of turbot; a wonderful dish where a great fish seemed to be swimming among shrimp, with a relish made of fish from Spain, wine from Greece, vinegar from Lesbos, and white pepper; then wild fowl served with corn; the liver of a white goose fattened on ripe figs; shoulder of hare ("so much more succulent than the lower part"); broiled blackbirds and wood pigeons.

Sweets are not mentioned and of fruit only bright red apples, but elsewhere Horace speaks of dainties for dessert as beneath the attention of a true epicure and advises a final course of black mulberries—but they must be gathered before the sun is high.

"We rise from table," he remarks, "pale from overeating," and the modern reader understands why the early Christians put gluttony among the seven deadly sins. The practice of using emetics to make more and more eating possible seems to have become the fashion only at a later date.

Along with the elegance and even magnifi-

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



F. H. Williams

### Farm Lands in England Still Yield Roman Treasure

In 1942 a laborer operating a tractor plow turned up from a field at West Row, Mildenhall, a rich cache of silver, of which these pieces were a part. Decorative motifs indicate that some of the vessels were made as late as the fourth century. Caesar's invasions of Britain occurred in 55 and 54 B. C., but actual conquest began with Claudius in A. D. 43. The country remained under Roman rule for nearly 400 years.

cence of Horace's dinner parties there might be on occasion a lack of ordinary decency.

Horace, aware of tablecloths because they were so often exceedingly dirty, sends an invitation to a friend with the promise that neither cloth nor napkins will make him wrinkle his nose in disgust.

Why should such things be, he laments, when cleanliness is so easy and so cheap. He ends the letter with the simple statement that his guest may count on plenty of room at table and not fear objectionable odors, as happens when people are seated too close.

And this is Rome of the stupendous baths!

### The Glory That Was Rome

Unlimited the Romans were, in desires, in ambitions, in appetites, as well as in power and extent of empire. Always rude, primitive, physical appetites were well to the fore.

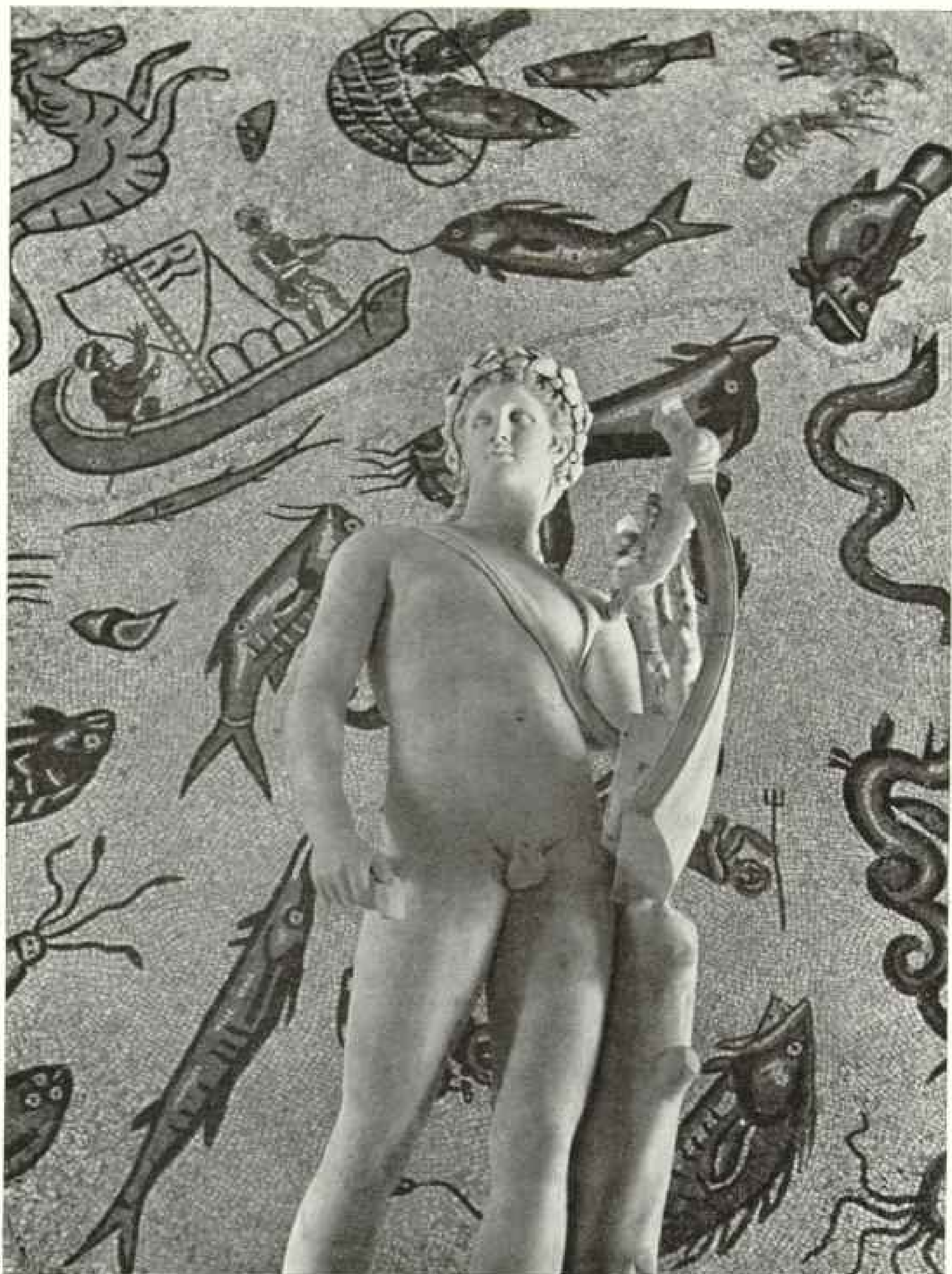
What constitutes Rome's greatness, in the last analysis, is that powerful as these were in her people there was something still more powerful; ingrained in them was the idea of discipline, the soldier's fundamental idea.

However fierce the urge of their nature was, the feeling for law and order was deeper.

Their outbreaks were terrible—civil wars such as our world has not seen again; dealings with conquered enemies which are a fearful page in history. Nevertheless, the outstanding fact about Rome is her unwavering adherence to the idea of a controlled life, subject not to the individual but to a system embodying the principles of justice and fair dealing.

How savage the Roman nature was which the Roman law controlled is seen written large in Rome's favorite amusements: so-called wild beast hunts in the arena; naval battles for which the circus was flooded by hidden canals (page 628); and, most usual and best loved by the people, the gladiators, when the great amphitheater was packed close, all Rome there to see human beings by the tens and hundreds killing each other, to give the victor the signal for death and eagerly watch the upraised dagger plunge into the helpless body.\*

\* For additional articles on Rome, Italy, and Greece, see "Cumulative Index to the National Geographic Magazine," 1899-1945, inclusive.



© Bruno Bistanti

### Lyre-playing Apollo Stands Before Sea Murals in the Roman Baths of Leptis Magna

Partial excavations at the Libian seacoast town, the modern Lebda, revealed North Africa's most imposing Roman ruins. The Emperor Septimius Severus lavished public works on this, his home town. Sand-covered mosaics and statuary were remarkably preserved. The scene on page 623 is laid in the basilica of Leptis Magna.

# Ancient Rome Brought to Life

BY RHYS CARPENTER

*With Thirty-two Paintings by H. M. Herget*

**H**ISTORICAL painters almost invariably start with the theme for their picture, usually some subject recorded by literature which has special appeal to them—Caesar's assassination, Virgil reciting the *Aeneid* to Augustus, Christians in the amphitheater. Having selected the subject, they sketch a background and supply appropriate accessories to their imaginary conception of the principal characters in action.

For our series of paintings for the NATIONAL GEOGRAPHIC MAGAZINE the procedure has been exactly reversed.

Mr. Herget's compositions are created in intimate collaboration with an archeologist who is a specialist in the civilization portrayed. This collaborator first assembles all available documentary material which can be grouped around some specific cultural aspect—for instance, the costumes and accessories used in official religious ceremonies, or the tableware, drinking vessels and eating utensils, serving trays and mixing bowls, couches and tables—all the furniture and furnishings of a banquet.

When these have been gathered, a conference between artist and archeologist decides how they can be put together into a picture.

## Everything in the Pictures Authentic

Since all the elements are authentic ancient material, nothing that cannot be directly substantiated appears in the final painting.

A good illustration of the workings of this process is afforded by the painting of the *Worship of Isis* (page 617). The problem was to portray some feature from one of the highly popular mystery cults which existed in addition, and even in opposition, to the official Roman state religion.

No one alive today could reconstruct faithfully the appearance of the secret rites in the worship of the bull-slaying Mithras, because the visual documents do not exist. But for the comparable cult of Egyptian Isis,\* when the material had been assembled, it was seen that enough was available for a complete composition.

There were the ruins of a small Isis shrine in Pompeii, a statue of an Isis priestess in the Capitoline Museum in Rome, a carved stone relief showing a cobra coiled upon a circular chest surmounted by the Latin inscription "Sacred to Isis," a column base with carvings of ritual celebrants, and, best of all, a faded

fresco showing a ceremony being performed in honor of the goddess before a sanctuary with couchant sphinxes at the head of stairs which were flanked by shrubs and palm trees, with sacred ibises perched about.

Nothing had to be supplied from the imagination except the character studies of the lower-class votaries of this exotic religion. By exercise of ingenuity in adaptation and rearrangement, an effective painting was composed.

Even so fanciful a creation as the summer bathing resort on page 611 has been put together out of modern photographs of Campanian coastal scenery, amid which have been distributed various villas and summer houses taken from some much-damaged Pompeian wall paintings.

The fishermen's method of hauling their net is drawn from actual contemporary Mediterranean practice, which is not likely to have changed much through the ages. Even the sailing boat, the roped quay, and the lighthouse on the point have their ancient authority.

## Remains Supply Some Architectural Details

A few of the architectural features in the series are taken directly, or with little change, from surviving remains. The spectacular Alcántara bridge of page 583 still spans the River Tagus in a remote district of western Spain.

The triumphal Arch of Titus in Rome, constructed of Greek marble nearly 2,000 years ago and inadequately patched and rebuilt with Italian travertine early in the 19th century, reappears on page 587 in all its original sumptuous detail.

Other scenes have been resurrected more extensively from destruction. The austere rich law court which serves as the setting for the trial on page 623 exists today only in a few shattered columns and pilasters among broken walls and floors rather recently freed from the drifting sand of North Africa.

The actual theater at Taormina has been stripped of almost everything seen on page 626 except the loveliness of Sicilian landscape; but it was not difficult to restore stage and gallery and create a play and spectators.

\* See "Daily Life in Ancient Egypt," by William C. Hayes, with 37 paintings by H. M. Herget, in the NATIONAL GEOGRAPHIC MAGAZINE, October, 1941.





Staff Photographer W. Robert Moore

### Syrian Druses Tread Time-worn Steps to Get Water from a Walled Roman Well

This ancient well serves Shahba, the ancient Philippopolis, in Syria. Paved streets, ruins of large baths, aqueducts, colonnades, temples, and an amphitheater attest a third-century Roman emperor's rebuilding of his home town. Druses are both a race and a religious group, originally from the Lebanon. Modern water jars are made from gasoline tins.

The library of Tingad (page 624) is today a mournful ruin. But the founder's inscription still survives; the columns have been re-erected by the French Service of Antiquities, and the plasterless lower courses of the brick walls still frame the entrance to the semicircular room where the books were once shelved.

Our objective was a series of paintings in which all the range and varied greatness of Rome's cultural achievement should become apparent. Roman religious rites and ceremonies, spectacles and amusements, life in town and country, indoors and out, the trades and industries, the shipping and land communications by the great Roman roads and the marvelous Roman bridges, scenes of the army in the field—all should have their place.

A single plate has been assigned to the pre-Roman culture of Early Latium (page 570), and two others (pages 572 and 574) are de-

voted to the un-Roman culture of Etruria. In all the rest, though the scene may shift from the capital city and the homeland of Italy to North Africa or Spain, Dalmatia or Greece, the theme is always Roman, while the times are nearly always imperial.

Even so, and no matter how intrinsically Roman the theme, there will appear again and again reminiscences of the Greek past, on which Rome drew so liberally and so consciously. Greek columns and capitals and carven detail will be evident in the architecture, Greek echoes in the sculpture; even Greek garments are worn by the elegants in the Gardens of Lucullus (page 594) for the twilight party held during a period when it was fashionable to despise the native Roman toga.

But all these are largely incidental matters. A distinctively Roman modification of the Greek tradition is evident in the sumptuous



Drawn for Theodora Price and Irvin E. Allman

### Father Tiber Was the Main Artery of Roman Life

Working their way up the coast of Italy, Greek and Phoenician ships found good harbor at Ostia; and the river valley, giving access to the northern interior, made possible a phenomenal trade development. Valley roads such as the Appian and Latin Ways tapped the hill country to the south, supplementing the water routes. "Thus Rome waxed mighty and surrounded her seven hills with a wall" (map, pages 352-3).

interior decoration of the public baths (page 613), in the façade which forms the background to the stage in the scene At the Theater (page 626), and in the colorfully elaborate and archeologically exact painted walls of the houses which enclose the gossiping women in the Rich Man's House (page 600) and the banquet of late republican celebrities (page 596). In the latter, a practiced eye will be able to detect the faces of Cicero and Caesar among the guests at table and discover it to be almost a literal illustration of the dinner party described by Cicero on pages 563-4.

Above all, on the structural and engineering side, the unsurpassable use of the arch to build the bridges over the Tiber (page 576) and the Spanish Tagus and, on the decorative side, the gorgeous intricacies of the mosaic floors in the Emperor's audience chamber (page 591) and the Empress's boudoir (page 592)

are achievements beyond the competence of earlier Greece.

Together with their running commentaries, the paintings make intelligible the enormous scope and variety of the Roman world.

It has been said often that the old frontier of the Roman Empire toward the east still pretty closely defines the line where the Western World ceases and the Orient begins.

However that may be, toward west and south the Empire has been overpassed, and in the Americas, Australia, and South Africa is emerging a yet greater world empire conscious of the undying Roman bequest of peace under law, with civic order based on individual rights and the freedom of universal tolerance.

Whether we succeed in achieving these or not, they were the ideals of Rome. In their promulgation and enforcement lay her true greatness. In accepting them, we truly lay claim to our Roman heritage.



© National Geographic Society

Painting by H. M. Heron

"Latium; Whence Came the Latin Race, the Lords of Alba, and the High Walls of Rome"—Virgil, *Aeneid*. "Such a Life the Old Sabines Once Lived; Such, Too, Remus and His Brother"—Virgil, *Georgics*.

## Before Rome Was Founded

WRITTEN descriptions of the lakeside communities which existed in central Italy in the centuries before the founding of Rome are lacking; yet archeological investigations have made possible the assembly of a picture of this early life.

The village here illustrated is set on the banks of the water-filled crater of a recently extinct volcano, similar to those which rise 1,000 to 3,000 feet in the Alban Hills and form the horizon to the gently rolling country of the Campagna southeast of the site of Rome. Since such a lake would abound in fish and eels and there would be game throughout the wooded slopes, most of the men are shown as fishers and hunters, but an armed warrior suggests that this seemingly idyllic life was not untroubled by quarrels with neighboring clans. The women, doing, as always in the times portrayed, much of the heavy work, are the water carriers.

The houses are of plastered mud, roofed with thatch on rudely cut timbers. Huts like these are still made by the fisherfolk inhabiting the lagoons at the head of the Adriatic; and by study of contemporary examples it is possible to give a realistic interpretation to the tiny clay models of huts which early inhabitants of Italy often put in graves.

During the so-called Early Iron Age, approximately a thousand years before Christ, it was the custom for relatives to preserve the ashes of their dead in a house-shaped receptacle made of baked clay, like a pot or urn. They buried this intended habitation for the dead person's soul in the earth along with weapons for war and for hunting and with painted jars for food and drink. Such burials uncovered in modern times have re-

vealed how the early Latin people were armed in war, what tools they used in their struggle to fell the forest trees and make their clearings for villages, and how they used saplings and reeds for their dwellings.

Their boats must have been dug-outs; and since they understood basket making, they had probably already devised weirs for catching fish.

At this period in Italy communities were small and widely scattered. There were as yet no proper roads, and nothing was manufactured on which commerce could prosper, though gold and silver were prized and worked with considerable skill and bronze had long been used for tools and weapons. Iron, because it was much more difficult to reduce from its ore and had to be worked on the anvil and tempered, was slower coming into use.

Where these people originated, how they reached Italy, whence they derived their knowledge of animal husbandry, agriculture, and metallurgy are all questions for disagreement among the experts. But a dominant element in this pre-Roman population of Italy must have come out of Europe—over the Brenner Pass from Bavaria or out of the Danube Basin by way of Trieste—since it imposed and transmitted a legacy of European speech over a considerable portion of the long, narrow Italian peninsula.

Oscan, Umbrian, Volscian, Faliscan, which survive only in brief fragmentary documents, were all a fundamentally identical tongue. Above this the stately Latin of the Romans was one day to tower as the ruling language of all the western world, the source of modern Italian, Spanish, French, and Romanian.





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"Lo, Gently in Her Arms She Holds the Aged Face and Bedews with Tears the Revered Gray Hair of Her Father"—Statius, *Silvae*

Painting by H. M. Harp

## Etruscan Funeral

**B**Y THE eighth century B. C. a mysterious ruling people, the Etruscans, had taken over many of the rude communities of central Italy.

Their earliest occupations were near the coast and they only later established themselves in the interior. Therefore, it seems likely that they came by sea from Asia Minor, from the west coast of the land nowadays called Turkey.

The full-blooded Etruscans, though evidently comparatively few in number, seem to have gained their hold by conquest of the native peoples. The center of their power lay to the north of Rome; but the little settlement beside the Tiber (founded, according to local belief, in 753 B. C., not far from the time when they came to Italy) fell easily under Etruscan domination.

The later Romans referred to their Etruscan overlords as the "Tarquin tyrants." When native Latin strength was great enough to expel them from the land, their fall was hailed as an epoch in liberation.

Etruscan occupation, however, had given Rome the basis of much of her civilization, alien and un-European though it might be. From the Tarquin tyrants Rome acquired a considerable part of her religious ritual, such as the pointed caps of her priests and the curved crooks of their augural staffs—probable precursors of the Christian bishop's crozier. She also took from them the axes and bundled rods of her factors, which Mussolini's fasciam was to revive and from which it was to take its name; her trumpets for battle; her lore of divination and auspices; her temple plans and life-size statues of baked clay—all these and much besides.

One strong indication that the Etruscan invasions of Italy came out of the Near East was their remarkable skill in working the native rock for chamber tombs and foundation platforms and in fitting quarried blocks to build walls for their cities. They were the first outstanding architects and engineers of Italy.

From them came the use of the arch, the main prop of Roman architectural mechanics. Its secret was known to the Greeks as to most of the Oriental people of the Mediterranean world, but its consistent exploitation for gateways, galleries, and drains came from the Etruscans.

Early in the seventh century B. C. the Etruscans learned to write, using the Greek letters taught to them apparently by Greek colonists on the Bay of Naples. Since these letters were never much altered from the archaic Greek forms, scholars of today have no difficulty in deciphering the characters in the thousands of surviving Etruscan inscriptions. Translation, however, remains a problem; for there is no obvious key to the weird vocabulary of the Etruscans.

The inner walls of many tombs are covered with brilliantly painted scenes, and the floors of some not touched by collectors are still laden with offerings in precious metals, cast bronze, and jet-black clay. Other tombs have rock-hewn imitations of timbered ceilings and paneled walls.

In these dark rooms the Etruscans laid out their dead on spindle-legged wooden couches, and, to the wailing of mourners and the sound of Asiatic flutes, gave the corpse its last anointing before laying it away in its sarcophagus on a rock-hewn shelf of the innermost recess.



© National Geographic Society

Painting by H. M. Howard

"Thus Surely Etruria Waxed Strong, Thus Rome Became the Fairest of All Things and Enclosed Her Seven Hills with a Single Wall"  
—Virgil, *Georgics*

## Etruscan Festival

**E**TRUSCAN enjoyment of festivals and physical pleasures in general shocked the Romans. To the severely simple early Roman mind Etruscan dancing seemed undisciplined and lewd, Etruscan music licentious, Etruscan singing immoderate, Etruscan processions beyond all bounds of decorum, and Etruscan feasting beyond all decency.

In later days under the Empire, the cosmopolitan and ultrasophisticated Roman probably left the Etruscan far behind in all such matters, but the old-fashioned Roman was a puritan.

People of today would readily understand the violent throwing about of limbs and bodies by a dancing couple depicted in a wall painting in a tomb at Tarquinia. The long processions in bright-colored garments, the trappings and accoutrements of the religious festivals, the spontaneity and vivacity, the wish to make the most of the fleeting moment—all this would seem nothing unusual to a modern spectator, though the flute music probably would be unintelligible even to the most modern ear and the words of the songs would be meaningless.

All through the 18th and 19th centuries of our era the Etruscan tombs of central Italy yielded a spectacular harvest of decorated vases, golden earrings and necklaces with soldered gold granules of unbelievable minuteness, carvings in ivory and amber, and vessels and furniture of bronze. Some of the finest Etruscan urns proved, to be sure, imported Greek, but others were of native manufacture.

In addition, the tombs fascinated modern eyes with their vividly colored paintings—colors doomed, unfortunately, to

fade rapidly as the outside air and light touched once more the pigments which had been sealed away for more than 2,000 years. These paintings furnish our chief information about the banquets, games and processions, dancing, costumes, musical instruments, feast, and festival.

Impressive portions of some of the old Etruscan city walls are still standing, despite the wars of Roman antiquity, the Middle Ages, and modern times. With their arched gateways and superstructures intact, they must have been magnificently strong.

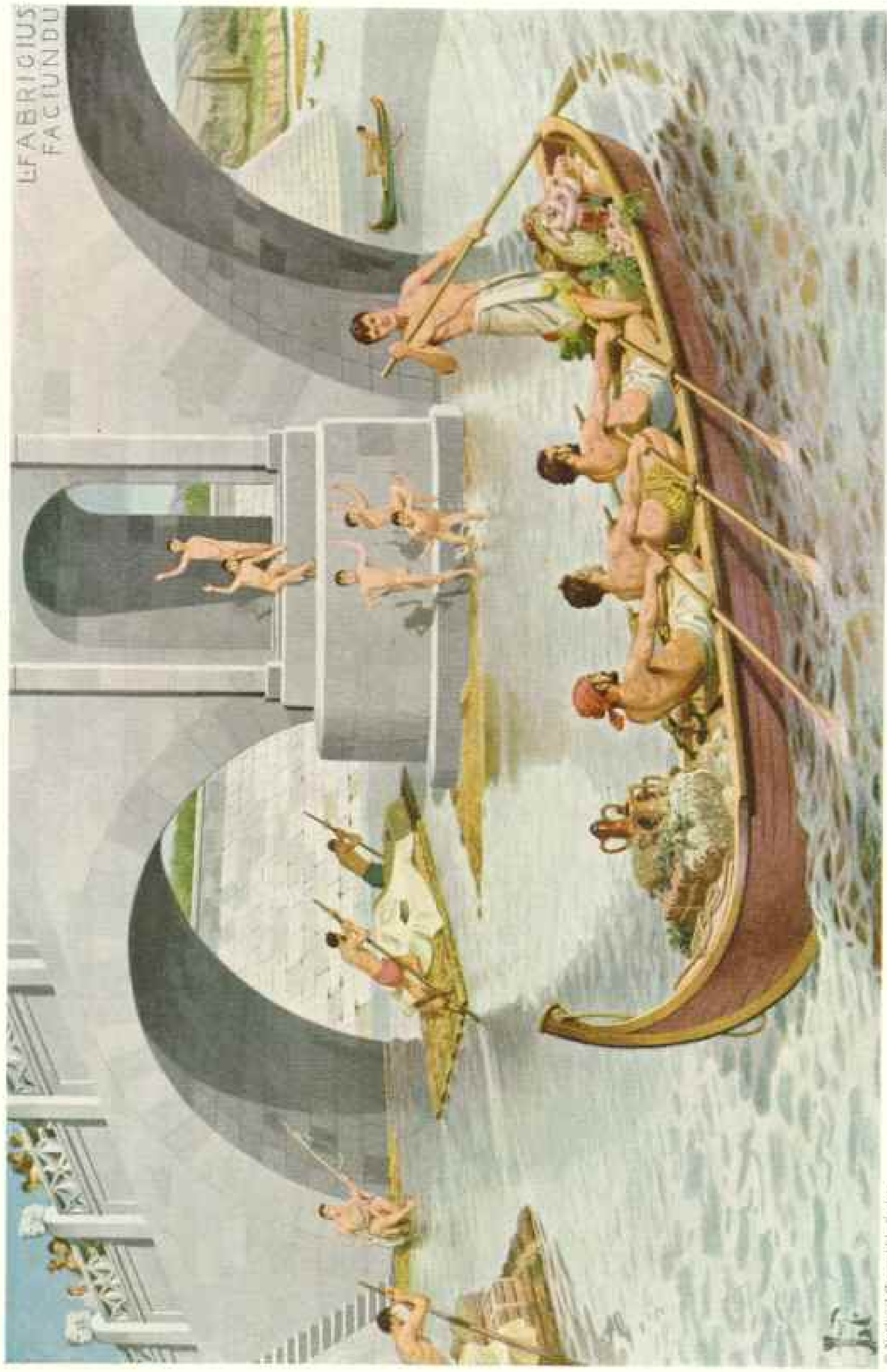
Inside the walls the houses seem to have differed radically from the native Italic and the imported Greek norm. The temples were roofed with wooden timbers which were protected from the weather by a sheathing of terra cotta carrying painted designs in strong colors. Unlike the Greek temples with broad, low steps running all around, they were distinguished by broad colonnaded porches in front and were lifted off the ground on tall platforms.

Rome, which took over so much else of Etruscan religious and cult detail, accepted the Etruscan temple and made it peculiarly her own. For centuries the temple of her three chief gods on the Capitoline Hill was unmistakably Etruscan.

The Etruscans and the Phoenician settlers of Carthage, seafarers all, controlled the western Mediterranean, shutting out the Greeks from the Spanish mines and the Atlantic trade until Rome destroyed Carthage and absorbed Etruria.

By the time of Cicero, Etruscan was becoming a dead language. The Emperor Claudius's treatise on Etruscan speech and institutions was a scholarly delving into the past.





UFABRIGIUS  
FAGIUNDU

© National Geographic Society

Painting by H. M. Harper.

"The Steersman's Cry, the Shouting of the Bargees, as over Sacred Tiber Skim the Gliding Keels"—Marzial

## Bridge over the Tiber

“**T**IMBER, Father Tiber, to whom the Romans pray,” started Rome toward greatness.

Until the seventh century B. C., little sea-borne commerce had reached Italy. What trade there was among the villages had been carried on by means of pack animals. Then the Phoenicians, and after them the Greeks, came coasting Italian shores, looking for hides and raw metals, and worked their way up the Tiber to Rome.

Open trails in the long river valley tapped resources of the interior communities all the way up to the rugged range of central mountains which shut off the eastern descent to the Adriatic. Thus the little city on the Tiber began to prosper, and under Etruscan rule trade and industry waxed mightily.

Rome grew from a group of hamlets into a walled town, from a small trade center into the ruling power of Latium, then Italy, and finally the entire Mediterranean. By imperial times grain ships from Egypt and other parts of North Africa, boats laden with olive oil and wine from Greece and Spain, were discharging their loads at the Tiber wharves and filling the warehouses at Ostia, seaport for the capital. Local transport by raft and barge and rowboat on the river vied with that by road and wagon.

Before reaching Rome, 20 miles from the sea, the Tiber, seldom fordable and often in heavy flood, has already run ten times that distance. The early settlement, ringed by the “Servian” Wall, lay wholly on the left bank; and all land communication with Etruria and the country to the north necessitated crossing the stream.

To the growth of the city, therefore, bridges were indispensable. The first spans, their timbers carried on piles, were easily swept away by floods, but after the Romans had learned from the Etruscans how to use stone blocks, the wooden structures were replaced by a bridge of stone on rock piers and arches. The modern visitor may still see in the stream close to the bend where the Forum communicates with the riverbank a few shattered remnants of such a bridge, built in 179 B. C.

A little farther upstream, pedestrians crossing to the island sacred to Aesculapius, god of medicine, move over the arches of another ancient bridge. This, bearing the clearly carved name of its builder, the Road Commissioner Lucius Fabricius, is only one of many structures still enduring to which the Romans set their hands 2,000 or more years ago.

Throughout the territory that was once the Roman Empire, arched viaducts may be seen today. These carried military roads or water channels over gullies and streams and even across great river valleys. The Pont du Gard, which brought water to Roman Nemausus on the site of present-day Nîmes, remains standing in southern France.

North African remnants of the old aqueducts testify that ancient Romans had a greater mastery over the encroaching desert than modern engineers have yet achieved.

Caesar's famous bridge across the Rhine was a temporary structure for military need. Trajan, however, bridged the Danube with a permanent crossing nearly three-quarters of a mile long. In Trajan's reign was erected the superb Alcántara in western Spain (page 583).

## Market and Wharf at a Roman Port

THE NEAR EAST today perpetuates the bazaar, where in a single street or under a single roof are grouped all the competing dealers in a commodity. From such bazaars, still to be seen in Athens, Istanbul, or Tunis, this Roman covered market differs little except for the architectural vastness of the brick-faced and plastered-concrete vaults thrown over the line of shops by the imperial builders.

Daylight from high overhead streams into the dark, cool niches where the lanternmakers, cutlers, coppersmiths, and other metalworkers display their wares. At the end of the broad central public way, the whole vault is left open to admit light and air.

Such a market can still be seen in Rome amid the excavated ruins of Trajan's Forum in the heart of the city. If it were built to take advantage of the proximity of the warehouses and landing stages of a seaport, instead of the tall buildings of metropolitan Rome, it might open on paved quays and jutting wharves against which the sailing cargo vessels would be moored stern first.

The bales and bundles are strewn about, waiting for the porters and carters, who are asleep or idle during the heavy heat of midday. In the sunlit open, a chance crowd of shoppers has gathered to watch a mountebank girl perform her juggling act.

Such quays, paved with slabs of marble, were common to the larger maritime cities in the Greek East and the Roman West of the Mediterranean. For Rome itself, Ostia was the port; and here a magnificent harbor town sprang up, with capacious storehouses for the grain on which the lower

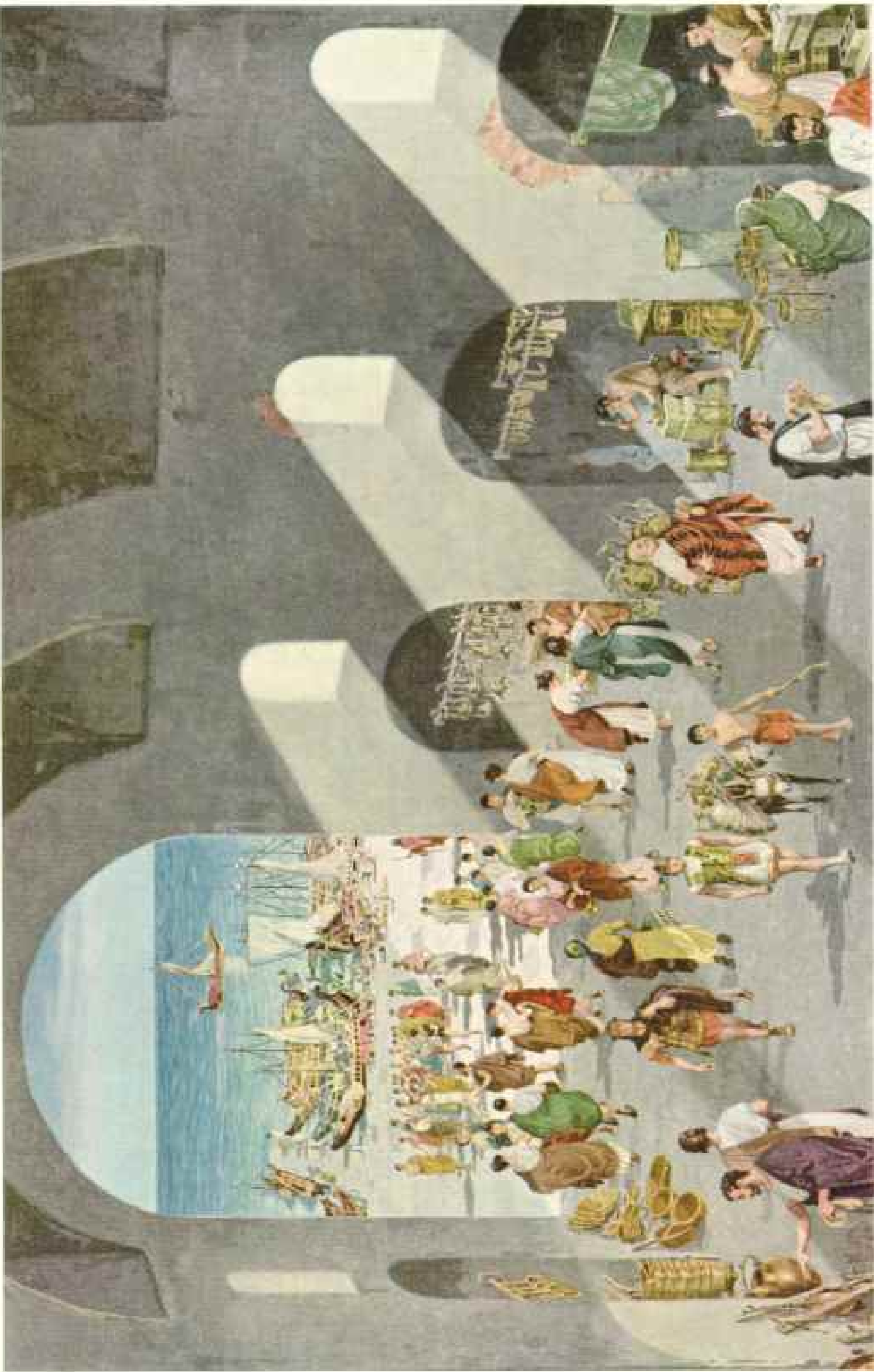
classes depended. There were market places, open and covered, baths and a theater, temples and shrines, and brick apartment houses many stories high, with overhanging balconies giving them an almost modernistic appearance.

In another mouth of the Tiber, close by, Trajan constructed a supplementary harbor. This was a great sheltered basin with wharves and docks protected by moles and breakwaters marked by a lighthouse toward the open sea.

The Mediterranean economy depended principally on grain, oil, and wine. Since wine had to be aged, a reserve could be stored to carry over bad vintage years; and the hardness and long life of the olive trees ensured a supply of oil. Grain, more perishable and rapidly consumed, was the most precarious factor in Roman economic and, consequently, political life.

The Romans fell heir to a highly organized system of exchange of goods which they exploited and expanded through every corner of their inland sea. Under the Empire, caravans brought rugs out of Persia and even silk out of China. A fleet sailed annually to Ceylon and perhaps to India, bringing back gems and spices and other rarities up the Red Sea and thence by canal to the Nile and Alexandria.

The Suez Canal thus had a predecessor which had been opened first under the ancient Pharaohs. It had been kept open with extreme difficulty, however, and was hardly of any commercial importance except for a few centuries under Roman rule. It would be an exaggeration to say that it ever represented the "lifeline of empire" for the Romans of Italy; yet the parallel with British imperial trade is there.



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Painting by H. M. Dreyer

“Think Not that Any Distinction Can Be Drawn Between Perfumery and Leather: the Smell of Gain Is Good from Any Source”—  
Juvenal



## At the Slave Market

**I**N CLASSICAL civilization it was taken for granted that much of the labor of everyday life, including agriculture and the arts and crafts, should be performed by slaves. The Romans used the Greek island of Délos as one convenient center for a slave trade so big that some contemporary accounts, hardly credible, put the number of slaves sold under hammer there in a single day as high as 10,000.

The Délos auction platform pictured here is built of planks and timbers and sheltered by an awning suspended on two long poles. Roman purchasers, some of them professional dealers and others personal bidders, wander over the mottled marble pavement, examining the slaves still to be offered or bidding for those put up for sale.

Although the range of types and races represented here among the seated captives is probably more varied and comprehensive than would normally be assembled at any single auction, the composition is intended to suggest the geographic extent of slave traders' activities.

Asiatics were valued for their astuteness and submissive-ness, blacks for their exotic appearance, Germans for their stature and strength. Most prized, however, seem always to have been the Greeks. The Roman, though he often rebelled against Darian veneer on his native Latin traditions, thoroughly respected the Greeks' superior intelligence, language, and culture.

One slave might fetch considerably less than a hundred dollars in the open market, whereas another of superior quality might be sold for several thousand. High-grade dancing girls and mistresses for the wealthiest Roman houses

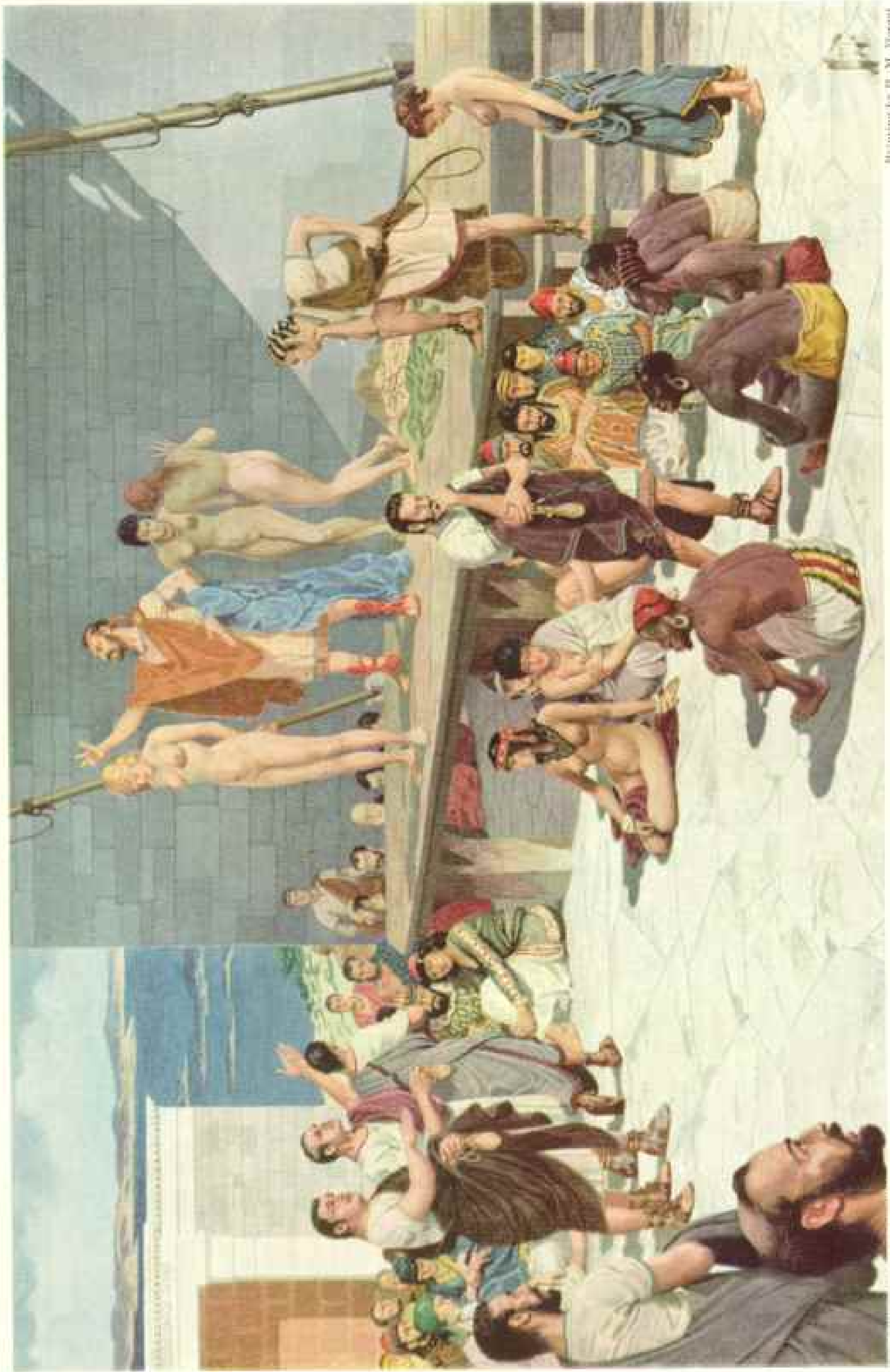
brought excellent prices. At auction men and women alike, stripped and sold naked, were handled and examined like animals. Strict laws protected the purchaser's interests, with prescribed penalties for misrepresentation or fraud.

Basically, slavery was the outcome of war, for captives must either be set to work profitably or be put to death to get them out of the way. The number of captives taken while Rome was using her armies for conquest and territorial expansion was enormous, the subjection of Greece and Macedonia alone netting, it is estimated, a million slaves. When piracy was rampant in the Mediterranean, great numbers of slaves were acquired from this source also.

Both of these easy sources of supply dwindled, however, when Pompey suppressed the pirates, and the Emperor Augustus set limits to the rapid territorial expansion of the Roman dominions. Scenes such as that in the illustration became a thing of the past.

Since slaves could always be set free, and the practice of manumission was widespread, and since Roman policy consistently tended toward extending rather than restricting the right of citizenship, the proportion of slaves to free citizens began to fall. Rome consequently had ever less and less to fear from social rebellions from beneath, such as threatened her very existence in the earlier days.

Although Rome moved toward an ever-widening democracy of economic equality, slavery was never abolished. It merged ultimately in the serfdom of medieval feudalism, which is responsible for the profound class distinction which lingers in most of Europe to this day.



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Painting by H. M. Boroff

"Doubtless This Slave Girl Is of Royal Parentage; Her Family Merely Suffers Cruel Fate. Think Not that One So True and Honorable Could Be the Daughter of a Mean Mother"—Horace, *Odes*

## The Roman Army Crosses Alcántara in Spain

ROMAN held her empire together by magnificent roads over which she moved her administrative officials and her garrisons into the remotest of her provinces. To shift her armies with maximum speed, she relied on the broad, straight, all-weather highways, traces of which still exist along a 4,000-mile track from Scotland to the Persian Gulf and on the even longer stretch from Morocco through Egypt to Turkistan.

In constructing these highways, the engineers often selected a conspicuous landmark on the horizon and ran the road toward it with surprising disregard for topography. Cuts and fills, diked embankments, viaducts and bridges, and tunnels all contributed to preserving a straight direction and an even grade.

The roadbed was always excavated to hardpan or solid rock. Layers of rubble and coarse concrete packing carried a surface of closely fitted paving blocks. Curbs and shoulders and drainage ditches were added; and the result long outlasted the empire which created it.

The great bridges over the larger river valleys were the most spectacular feature of the military network of communication. Initial responsibility for their construction must have lain with the military commanders and provincial governors acting in the emperor's name; but local communities were not slow to copy these higher authorities.

In A. D. 105 the eleven communes inhabiting the hill country where the chief river of Spain, the Tagus, crosses the Portuguese frontier petitioned Trajan to be allowed to defray the cost of a bridge across the river. It was built

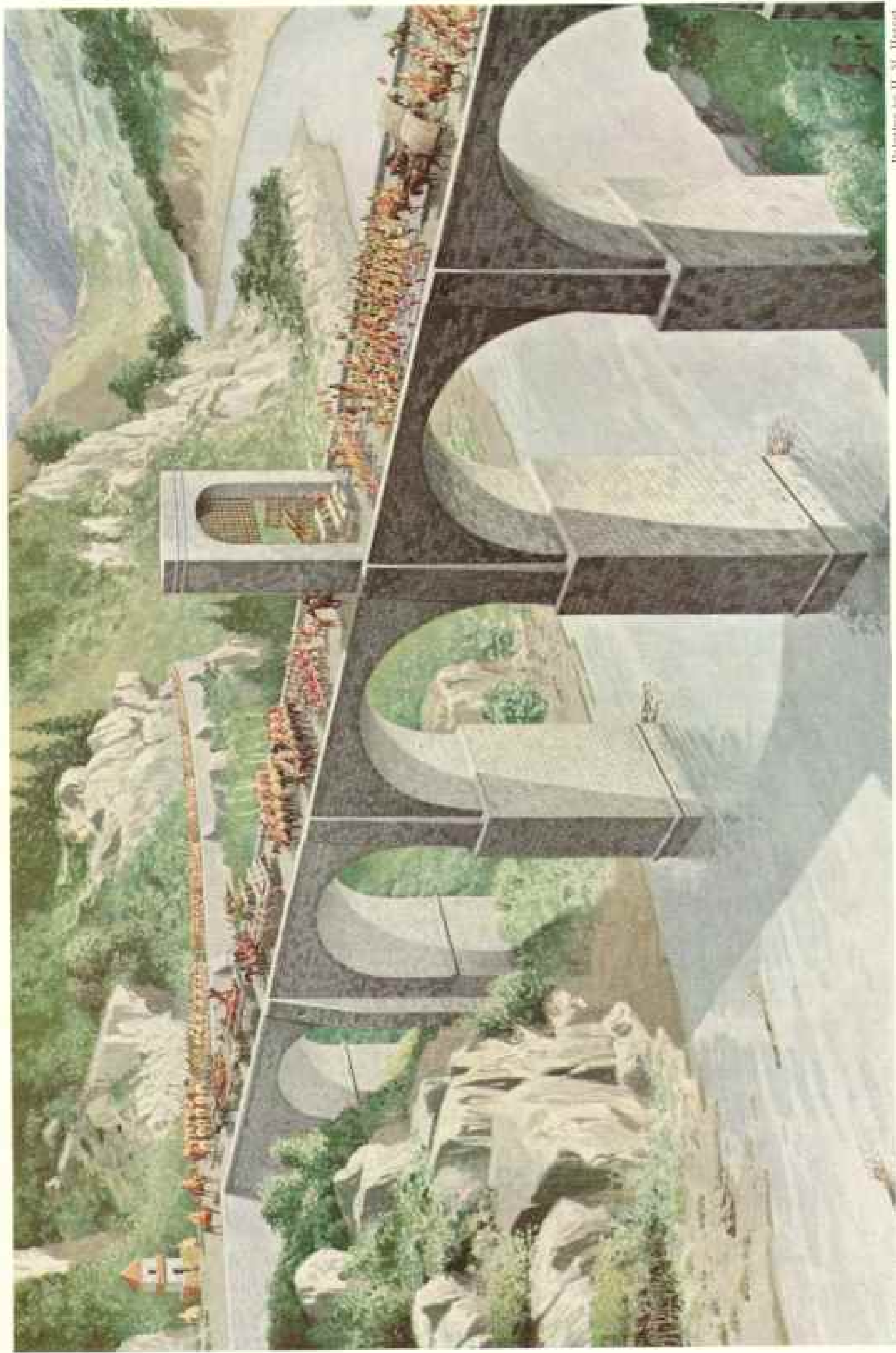
entirely of granite blocks set without use of mortar. The six arches are opposed two and two, with the shortest under the approaches and the broadest pair with 90-foot spans carried on piers set in midstream. From the footing of the piers in the river bed to the roadway these arches carry, the height is nearly 200 feet.

An army could march across with eight men abreast, and 2,000 troops could be crowded on the bridge at one time. In marching order, however, a legion with its horsemen, artillery, and baggage trains would spread out for more than a mile, its van disappearing around the spur of the opposite hills before the rear guard reached the river. Three such legions were usually stationed in Spain.

The Roman bridgeways often carried arches at the end or, as on Alcántara, at the middle of the span. These could be fitted with tollgates or with heavy barriers to check unwelcome passers.

Alcántara was blown up by the British under Sir Arthur Wellesley (later the Duke of Wellington) in the Peninsular War, 1809, and by the Carlist insurgents in 1836. The arches were repaired, however, and the bridge stands in use today, one of the grandest of all Roman remains.

The *ballistae* and catapults being hauled across the bridge have been dismantled for transport. Neither, of course, ever carried an explosive charge, but relied on the sudden release of tightly twisted thongs made of hair or sinew. Even so, such crude artillery was sufficiently feared and effective in siege-work to be worth transporting on ox-carts or mule-drawn wagons along with the marching legions.



Painting by H. St. Herbert

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"Remember Thou, O Roman, to Rule the Nations with Thy Sway, These Shall Be Thine Arts; to Crown Peace with Law, to Spare the Humbled, and to Take in War the Proud"—Virgil, *Aeneid*



## Siege of a Walled City

**E**AST of the Mediterranean, where Greek architectural traditions had introduced a highly advanced type of fortification, the Roman armies encountered enemies quite different from the forest-inhabiting barbarians of Europe—enemies who stood siege behind high walls with powerful projecting towers sheltering metal-reinforced gates.

In the illustration the direct attack against the strongest part of the city defenses is largely a diversion; and the sapping at the left, under the "tortoise" of interlocked shields, is little more than a feint. Still, the defenders on the walls strive mightily with javelins, arrows, and boulders to break up the Roman assault before the diggers succeed in tunneling beneath the foundations to open a breach in the tower or the wielders of the metal-tipped, ram-headed timber shatter the bronze-studded panels of the portal.

Meanwhile, beyond the limits of the picture, at another sector of the encircling city wall, preparations are under way for a more prolonged siege in case this direct attack fails. The machinery which the Romans could bring against fortified strongholds attained truly formidable proportions. Engines of considerable variety and great mechanical ingenuity were employed.

Movable towers of wood, taller than the parapets of the walls, even walls 50 to 60 feet high, were erected of uprights and interlacing timbers on bases carried on huge, solid, wooden wheels. These ungainly structures were trundled close to the walls by the soldiers working under the protection of their interlocked shields. The towers carried platforms at several levels, firm enough to support

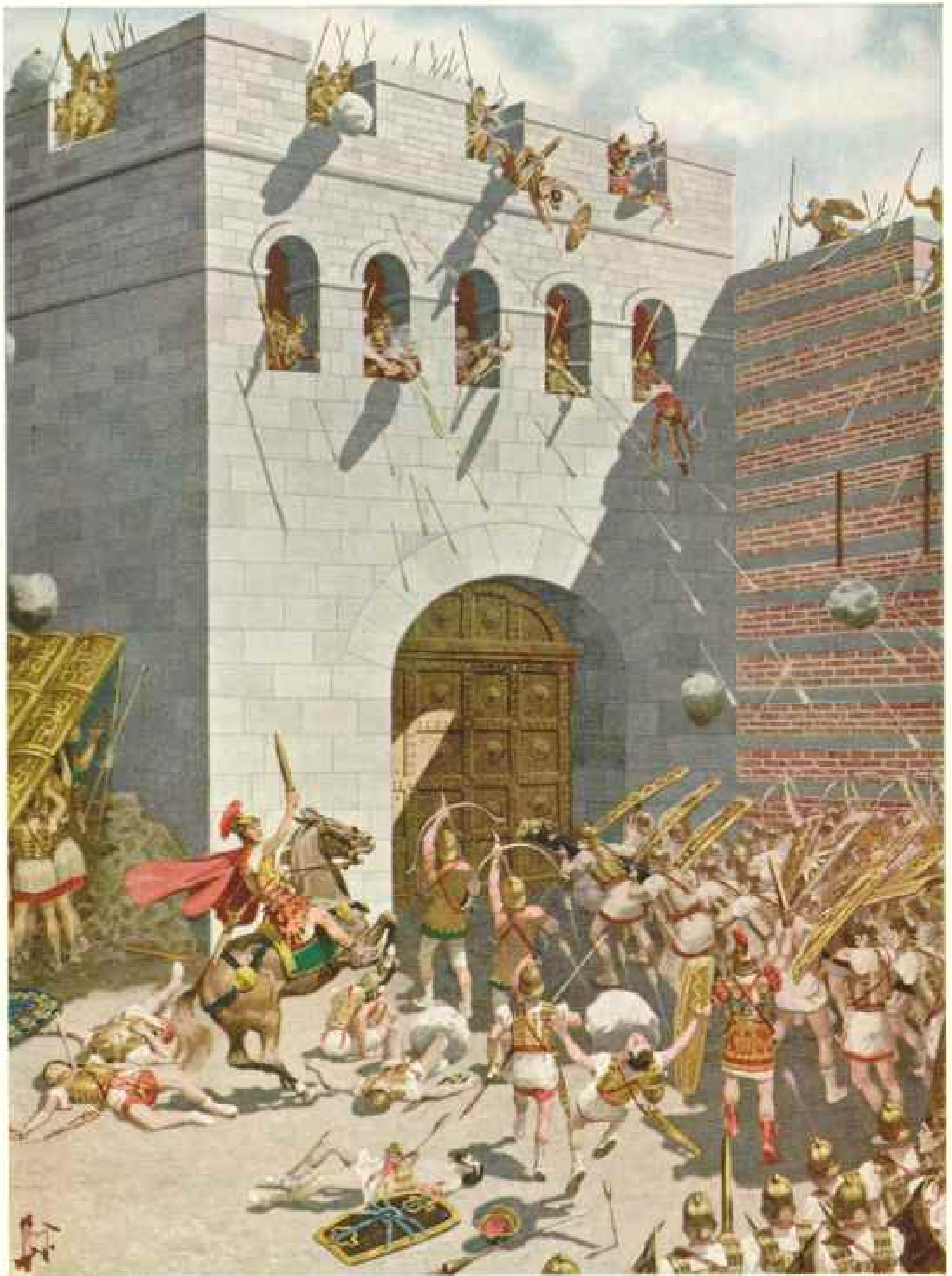
artillery batteries of mechanical slings and still more powerful catapults.

From these points of vantage the attackers could clear the parapets until opportunity offered for lowering from one of the siege towers a wooden drawbridge across which a storming party could swarm to spread left and right along the wall top. More and more troops could be thrown in by this lofty bridgehead until the gate, if not battered in from without, could be opened from inside.

Alternatively, the walls could be undermined with tunnels and the resultant galleries shored up with timbers. The props of these galleries were then doused with pitch and set afire. With their collapse an entire sector of wall would fall in, leaving an open breach. The sapping trenches were protected by sloping roofs covered with earth, wickerwork, hides, or even wet blankets.

During the fifth century B. C. the superlative Greek technique of wall building gave a definite advantage to the defensive; but during the next century, in the time of Philip and Alexander of Macedon, the attack began to make good this handicap. Such engineers as Archimedes improved methods of assault in Hellenistic times; and finally the Romans made such remarkable advances in siegecraft that no adversary could build strongholds impregnable to their well-trained armies.

The decline of Roman civilization led to a lamentable lapse in siegecraft during the Middle Ages, so that the advantage shifted back to the defense. Hence the maze of petty strongholds, châteaux, and castles in which the feudal world shut itself up, until the advent of gunpowder gave attackers again the upper hand.



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Painting by H. M. Hargett

"Meanwhile, about Every Gate They Press to Slay the Foe . . . With Left Hands They Hold Up Protecting Shields. . . ."—Virgil, *Aeneid*

## Triumphal Procession

**I**N REPUBLICAN times a Roman general who had conquered a foe on the field of battle and acquired new territory for his fatherland could petition the senate for a formal triumph. The senate would then assemble outside the city walls in the sanctuary of the war-goddess Bellona and, if favorable to the request, enact the legal fiction of extending the victorious commander authority within city limits.

Without such permission, the conqueror would lose all rank the instant he entered Rome. Fear of a military *coup d'état* by a victorious leader with his armed followers in the very seat of government was obviously behind this law, which in imperial times became so strict that only the emperor himself was ever permitted to celebrate a triumph.

The triumph having been voted by the senate, a long procession of horse-drawn floats, laden with booty and followed by captive princes and generals walking in chains, was assembled in the Field of Mars, in the bend of the Tiber opposite St. Peter's. This district, though densely settled in later times, lay beyond the old "Servian" Wall of republican Rome and thus technically outside the city.

Thence the senators and magistrates escorted the triumphal procession along an established route through the city streets and up the winding ascent to the Temple of Jupiter atop the Capitoline Hill. Sacrifices and thank offerings were made at the temple, then the prisoners were led away, traditionally to their death. A sumptuous feast followed, to which soldiery and populace were all invited.

In imperial times the emperor accorded a triumph rode on a gilded and laurel-wreathed car drawn by four

horses, his military costume brilliant with gold breastplate and red-purple mantle. The procession swung past the huge Flavian Amphitheater, known since the Middle Ages as the "Colosseum," and followed the paved Sacred Way under the triumphal Arch of Titus. From there the road led to the Forum and the Capitoline Hill.

Domitian built the Arch of Titus in A. D. 81 to commemorate his predecessor's sack of Jerusalem and humiliation of the Jews. Later emperors added two more of these curious free-standing structures to adorn the processional way—one just southwest of the Colosseum in the name of the Christian Emperor Constantine, the other in honor of Septimius Severus, at a corner of the Forum where the Capitoline ascent began.

Such imperial arches were not confined to Rome. One of the finest stands at Benevento, and another at Ancona. Both were in honor of Trajan.

Except for a few that served as city gates, these arches had no utilitarian purpose whatever. One supposition is that they represented the yoke of submission under which captives were forced to march.

Representations of triumphal arches on coins and medallions always show them carrying a bronze chariot with four horses, similar to those in traditional use for the actual processions. The celebrated four bronze horses of St. Mark's in Venice are almost certainly from such a monument.

The Colosseum, largest of Roman amphitheatres, was completed by Titus in A. D. 80. Although two-thirds of the mammoth structure have disappeared, enough remains to remind us that "While stands the Coliseum, Rome shall stand; and with its fall, falls Rome and all the world."



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Painting by H. M. Hergert

**"To Be Led Through the City, a Captive in Chains by the Conqueror's Chariot, Whereon the Victor Rides Resplendent with Purple and Gold"—Livy.**



## Unconditional Surrender

THE WHOLE Roman Empire was held with only about 150,000 citizen soldiers, supplemented by a roughly equal number of non-Italian auxiliaries!

For efficiency in attacking, subduing, occupying, and administering enemy territory, the famed Roman legion has seldom or never been equaled by another military organization. The same legionaries who routed the enemy in the open could reduce a stronghold by siegecraft, and after the foe had capitulated they could handle disarmament control, police patrol, and general administrative supervision.

Julius Caesar, the best known and probably the most gifted of the Latin army leaders who not merely conquered but pacified, organized, and administered the hostile and rebellious nations which surrounded Italy, was not unique. Many of the emperors who came after him served for arduous months and even years in the field at the head of armed forces.

Trajan, a professional soldier born and bred, passed the greater part of his life with the troops. His exploits on the Danube frontier are vividly pictured on the relief carvings which wind around the marble shaft of a spectacular hundred-foot column, still standing above the ruins of his great hall of justice in Rome.

Besides battles in the deep forests and at the river crossed by the famous bridge, these reliefs show scenes in camp, the siege and capture of Dacian towns, surrender of prisoners, harangues to the soldiers, and distribution of rewards.

Some sixty years after Trajan's conquests the Danube once again beheld the embattled Roman legions under an-

other great emperor, Marcus Aurelius. Two revolting German tribes in the lands which are today Czechoslovakia and Hungary fought stubbornly for several years and were as stubbornly pursued, defeated, and destroyed, with the Emperor himself in charge of the difficult campaign. The Piazza Colonna in Rome takes its modern name from the ancient hundred-foot Column of Marcus Aurelius, on which in rivalry with Trajan's Column the spiral band of carvings narrates the incidents of these Germanic wars.

The illustration is adapted from scenes on these two famous columns. A strategic pass in a densely wooded and mountainous region of central Europe, "across the Rhine and Danube," has been occupied by native tribes with a large log-built stockade set on an outcropping ledge of rock. Below it are the houses and stalls of a village, similarly built of logs hewn from the forests and set on foundations of roughly trimmed and fitted field stone.

The legionaries have had little difficulty in setting the stockade on fire by lobbing flaming timbers with their artillery and are now busy rounding up the few remaining warriors who still show fight. The women and unarmed males have already been captured and brought to the foot of the Roman commander-in-chief's podium, hastily put together from felled trees by the sappers.

Surrender is unconditional; but the subsequent treatment of the captives will not be merciless except where treachery and renewed rebellion prove to the occupying military authorities that the lesson of defeat has not been fully learned by these Germanic tribes.



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Painting by H. M. Henry

“Germany Has Heard the Clash of Arms Through All Her Skies: the Alps Were Shaken with the Unaccustomed Sounds.”—  
*Virgil, Georgics*

## An Embassy to Caligula

**D**URING the first two centuries of the Christian Era Rome was beyond all challenge the center of the world's civilization. Only China in the remote Orient deserved to be mentioned in the same breath.

The older cultural lands around the shores of the Mediterranean had long ago lost their importance. Egypt and Greece were minor Roman provinces; Assyria had vanished utterly; Phoenicia, Judaea, and part of Arabia had been absorbed in the Empire.

Babylonia and Persia had yielded to a hybrid culture in which Iranian, Scythian, and Greek were confused. Athens was a provincial university town.

Resurrected from utter destruction, Carthage was no longer Punic. Alexandria and Antioch were turbulent and dissolute, and, however rich and culture-loving, not the arbiters of the Empire's fashions. But Rome was a city of perennial splendor, the center of the world's interest.

To Rome came missions and embassies from all the earth. Augustus had received delegations from India, Claudius emissaries from Ceylon. In A. D. 99 Indian ambassadors sought audience with Trajan, but Trajan, a military man of plain speech and direct bearing, had no flair for pomp.

Not so had been Caligula, though the nickname *Caligula*, meaning "little boot," referred to the soldier's footgear he had worn as the boy idol of Roman troops in the Rhineland. He loved to dress, not as a magistrate but as a triumphing field commander, and, enthroned godlike, to accept the adoration of his gorgeous visitors from beyond the eastern boundaries of his domain. In contrast, the sedate togas of his

councillors bore witness that the strength of Rome still lay in simplicity and dignity.

The Roman toga was based on the draping of a single piece of cloth about the body, so wrapped as to leave the right arm free at need, but the left usually concealed. Although, when spread out, it was readily distinguishable in cut from the rectangular Greek *himation*, the dress of the two nations was essentially similar. The style survives in the robes of Arabs and North African Berbers.

The European sewn and fitted costume, with divided trousers and sleeved jacket, though not classical, was familiar to antiquity and common in northern Europe. Britons and Gauls wore sleeved coats and loose trousers; the Scythian horsemen of the Russian steppes, precursors of the Cossacks, wore tight breeches with straps under the instep; and the renowned Iranian highlanders wore trousers.

The mad Caligula had a dizzy bridge constructed to unite the Palatine and Capitoline hilltops. On this he might pass across to commune with his "other self," Jupiter.

Nero's insatiate ambition found even the Palatine too confined for him. When the great fire destroyed the lower district, he covered this with buildings and gardens utterly extravagant. As soon as he died, almost all of his fabulous House of Gold was demolished.

Some few decorated chambers in underground stories survived, to serve as inspiration for the arabesques with which Raphael and his pupils adorned the Pope's balcony apartment in the Vatican. The emperors returned to the Palatine, which they covered with ever more showy constructions.

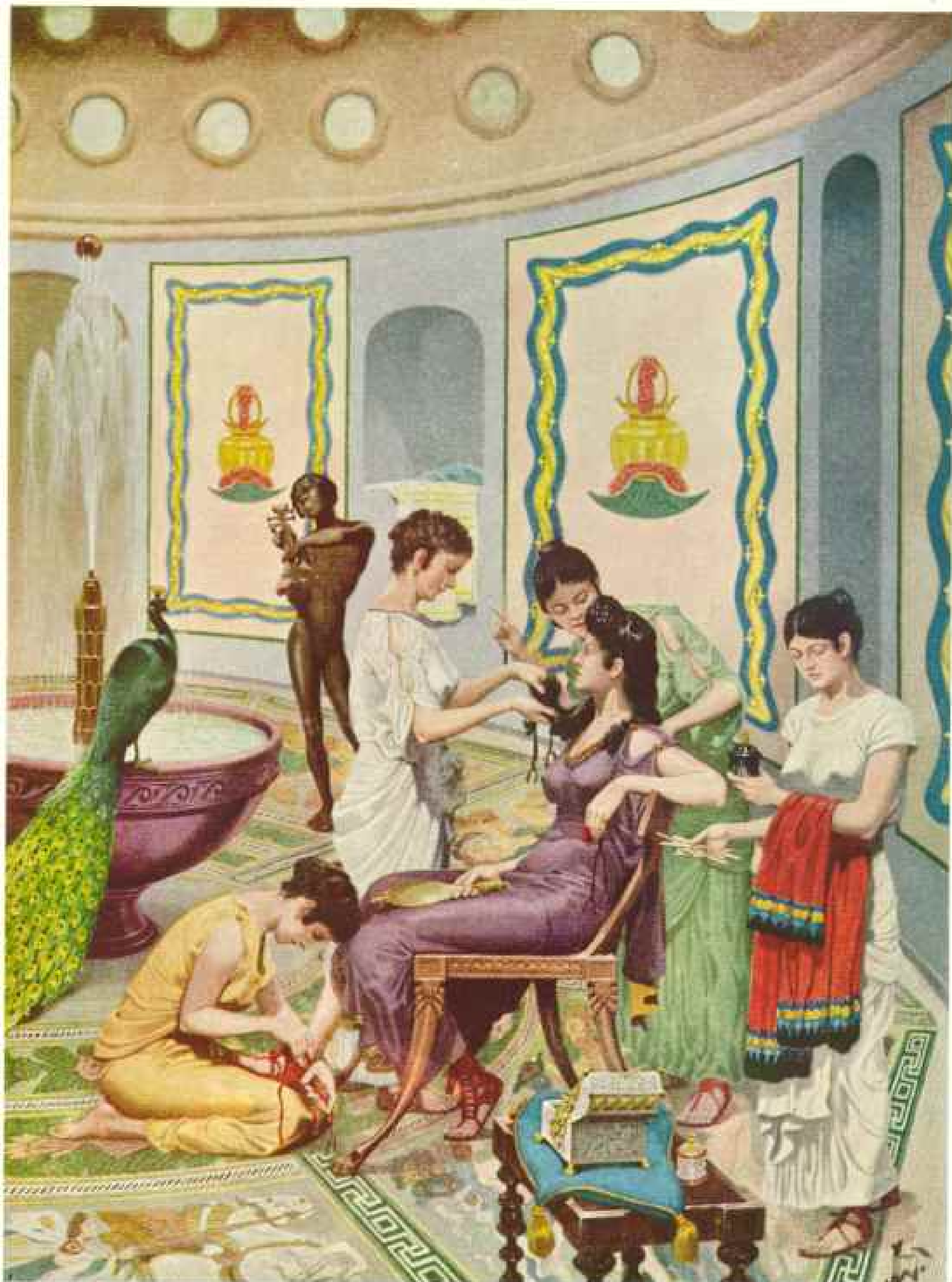


Painting by H. M. Herpin

"Augustus Shall Be Recognized as a God on Earth by Britons Subject to His Rule and by the Dreadful Persians"—Horace, *Odes*

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Painting by H. M. Berges.

"Terrified by Her Threats and Ill Temper, He (Nero) Determined to Destroy Her; and after He Had Three Times Tried to Poison Her and Each Time Discovered that She Possessed the Antidote, He Contrived a Mechanism by Which the Ceiling Should Fall on Her While She Slept. But She Learned of This in Time"—Suetonius, *Vita Neronis*

## An Empress Makes Ready

TO THE HISTORIAN Gibbon's scathing catalogue of first-century emperors, "the dark, unrelenting Tiberius, the furious Caligula, the feeble Claudius, the profligate and cruel Nero, the beastly Vitellius, and the timid, inhuman Domitian" might well be added the list of their no less sinister womenfolk: the dissipated and shameless Julia, the intriguing and insatiate Agrippina, the profligate and reckless Messalina, the calculating and unscrupulous Poppaea Sabina.

Nor was it only the evil emperors who had evil wives and daughters. There was no more virtuous character in Roman imperial history than the benevolent Antoninus Pius or the grave Marcus Aurelius; but Faustina, who was at once daughter of the first and wife of the second, was an out-and-out wanton, whose violent intrigues were familiar to everyone except her unsuspecting and devoted husband.

Lucilla, the sister of the succeeding and thoroughly vicious Emperor Commodus, almost matched her brother in evil living. She was finally put to death along with a band of her wild lovers for attempting his assassination.

Although the younger Agrippina lived only 43 years, she had time to amass a reputation for infamy rarely attained by her sex. She was sister to the lunatic Caligula and mother to the worse than useless Nero. The latter repaid his filial debt to her by trying to have her drowned in a collapsible boat and, when she was fished alive out of the Bay of Naples, coolly had her murdered by other means ashore.

Perhaps he had a reason, for she was accused of poisoning her second husband. Not only that, but after

beguiling her imperial uncle Claudius into marrying her, she fed him a mushroom from which he promptly died.

The Latin poet who satirized Claudius's mushroom eating pointed out that "there is nothing a woman won't do when she puts emeralds around her neck and fastens huge pearls in her distended ears."

Describing a boudoir scene like that in the illustration, the same poet wrote: "And another maid on her left will be combing her hair and twisting it into a braid while a family servant gives advice, and after her each in turn of age and dignity offers her opinion. So great is the business of attaining beauty!"

A peacock, perhaps imported from Ceylon especially for the Empress, perches on the edge of a great porphyry basin.

Not until the reign of Claudius was the wonderful purple-red volcanic stone known as porphyry brought from desert quarries beside the Red Sea to be cut and polished. Large quantities were imported later for imperial palaces and public buildings, particularly the baths.

So difficult is porphyry to work, however, that after the collapse of Rome artisans lost the secret. For this reason it ceased to be used in Europe until stonemasons of the late Italian Renaissance rediscovered how to handle it and helped themselves to the only supply then known, shattered fragments surviving from imperial days.

Plate glass was unknown to antiquity, but translucent glass lumps could be set in the brick-ribbed vaults and domes. These admitted a diffused daylight on the gaily painted plaster walls and the mosaic floors.



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"This Most Noble, Most Handsome Youth of Patrician Family, Poor Wretch, to Be Sacrificed to Messalina's Eyes!"—Juvenal

Painting by H. M. Herget

## In the Gardens of Lucullus

TWO THOUSAND years ago Lucullus, fabulously wealthy conqueror of Asiatic kings, patron of arts and letters, and lover of luxury and gracious living, converted the straggling slope of the Pincian Hill into a pleasure park with groves full of the Greek statuary he was one of the first Romans to appreciate. The Pincian Hill is still covered with terraced gardens overlooking the city.

A generation after Lucullus, Sallust, an unscrupulous civil servant who had amassed a fortune in North Africa, retired to write history. He laid out for himself even more sumptuous gardens on the slopes of the Quirinal.

Nearly a century passed. Then Messalina, predecessor of Agrippina in the series of wives of the dull-witted, scholarly Emperor Claudius, set covetous eyes on the Gardens of Lucullus. She schemed successfully to have Valerius Asiaticus, who had become the owner, charged with treason and condemned to death. Of course his property was confiscated to the imperial treasury, as were also eventually the estates of Sallust and others.

Amid the lovely surroundings conceived by Lucullus Messalina held her revels and debauched her lovers. It seems poetic justice that at the age of 26 she was secretly put to death here on advice of her husband's mentor, the freedman Narcissus.

Social wars under Marius and Sulla had brought on a rule of strong, unscrupulous men which culminated in dictatorship under Julius Caesar and monarchical control under dynasties beginning with Augustus.

The Roman satirists of the first century after the birth

of Christ strongly disapproved of the emancipated women who now did so shockingly as they pleased.

Of a beauty Juvenal wrote: "She flits boldly about town, turning up wherever the men are gathered, and talking to the officers in their long military cloaks. She knows what is going on all over the world, what the Chinese and the Russians are up to, and all the disreputable gossip of the city."

Deploping overluxurious living, he warned: "We are suffering from the evils of protracted peace: more cruel than war, the hand of luxury has been laid upon us. No deed of lust or violence is lacking, now that poverty is dead in Rome. Soft wealth has corrupted the age with foul ease."

Yet the spoiled and idle rich young men of Rome could join the army as officer cadets and go to the wars to throw themselves wholeheartedly into a life of hardship and heroism. No modern critic of the open depravity of the early imperial court, headed and abused by such sinister figures as Tiberius, Caligula, and Nero, should forget how soon these conditions were to be followed by the efficient, sober, and manly rule of the vast Empire under the businesslike Trojan, the cultured Hadrian, the humane Antoninus, and the sage Marcus Aurelius.

These were to make the Mediterranean and Europe so peaceful, prosperous, and politically stable that Gibbon wrote: "If a man were called to fix the period in the history of the world during which the condition of the human race was most happy and prosperous, he would without hesitation name that which elapsed from the death of Domitian [A. D. 96] to the accession of Commodus" [A. D. 180].





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Published by H. M. Herzog

"I Like Dinner Parties! There I Can Discuss Whatever Is Afoot and Turn Grumbling into Guffaws"—Cicero, *Ad Familiares*

## A Distinguished Dinner Party

FOR A LADY to eat at table, reclining with the men and responding to their toasts as the young matron is doing at the wedding anniversary dinner illustrated, was an innovation in the days of Cicero and Caesar. Custom until then had decreed that even a wife, though she ate alone with her husband, should sit while he reclined on his couch.

Equally novel was the use of a round table, with mattresses arranged about it in a semicircle in place of the traditional three straight divans forming three sides of a square and accommodating exactly nine persons in strict order of social rank.

The circular arrangement permitted eight or ten to be disposed quite as comfortably and ceremonially as nine. Where the old arrangement was used, it was bad manners to put four on a couch, and a couch with only two drew attention to the empty space.

The silverware is of the finest at this party; and the food and wine ate of the best—fowl and suckling pig, some sort of joint, an excellent mullet, fruit, and perhaps "a draught from the Alban Hills or a Setan wine whose vintage year the dust has obliterated."

To be sure, the menu lacks some of the items once sarcastically extolled by Juvenal—"a mullet from Corsica, a lamprey from the Sicilian Straits, a huge goose liver, a capon as big as a goose, and a steaming boar, with truffles in springtime, and apples for dessert."

First, there should be tasting of dainties, *gustatio*, and then the main courses, to be followed by dessert of pastry and fruit and a more leisurely sipping of some of the sweeter

after-dinner wines. But wine was seldom drunk without a generous admixture of water.

These diners are not the epicures whose line runs from the great Lucullus and passes to the rich *parvenu* Trimalchio of Petronius's celebrated banquet. Probably no one at the table could "tell at the first taste whether an oyster is from the Circean beds or the Lucrine rocks and guess at a glance from what shore a sea urchin comes."

One can eat much more lying down, and a party like this might last for hours—without the disgusting Epicurean remedy for an overfull stomach satirized by Horace. It is still daylight, and though there are no windows in this room of false columns and plastered walls, on which the shutters are painted stripes and the panes are only panels in a bright pattern like watered silk, there is abundant light because the hither wall is open to a sunlit garden court.

The room, specifically a dining room, belongs to a wealthy house built on the slope of the Palatine, before the emperors pre-empted all the hill for their palaces. Just there, only a few years ago, overcurious moderns discovered the remains of precisely such a room with enough of the painted plaster to show the colors and the decorative scheme.

Dinners began in midafternoon and lasted until dark. There were those who ordered torches and lamp stands brought in and prolonged the eating and drinking till midnight; but the penalty was the home-going through the dark, noisy streets under the high, overhanging tenement houses whence "from the topmost roof some leaky, broken vessel may be pitched from a window down on your head!"



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Painting by H. M. Hargreaves

"That Corner of the Land Beyond All Others for Me Smiles, Where Heaven Sends Warm Mists and a Slow Spring"—Horace, *Odes*.

## Horace's Villa in the Sabine Hills

“WHO BUT the wealthy get any sleep in Rome?” complained the satirist Juvenal.

No wonder that the city-bred Roman dreamed of the countryside. No wonder that with the passing of winter Horace hied him to his beloved farm in the Sabine Hills. Such retreats had been increasingly popular since late republican times. Cicero in his *Letters* admits owning no fewer than seven villas scattered between Rome and the Bay of Naples. So great an abundance of habitations was due partly to the need for resting places where he or his friends could put up on their journeys to the south. There were no hotels for the public in those times and the taverns offered only wretched accommodation.

Several of Cicero's villas were luxurious country houses, such as that at Tusculum in the hills overlooking the distant city, and included baths with warm-water pools, elaborate gardens, and rooms for reading, writing, and banqueting. All the comforts of the city were reproduced; yet no sooner was the typical Roman installed in the idyllic solitude of a country villa than he longed for the diversions and excitements of the city, to cry with Cicero, “The city! the city! That is the place to live, that is the light of life! Travel is mere concealment and misery for men whose activities can shed luster on Rome!”

The cosmopolitan town might be the perfect environment for those who practiced politics or lived off their fellows' wealth and favors; but there were professions which did not lend themselves so well to its endless interruptions. Horace, the court poet whose elegant verses were intended

for cultivated city-bred ears, passed his days by preference in a solitary villa on a farm in the Sabine Hills. There, in the interval of talking to his rustic neighbors and over-seeing the homely tasks of the eight slaves who worked his farm, he wrote the most carefully well-bred and cultured verse that Rome was ever to produce.

Through the winter he kept reasonably warm by returning to Rome; but the spring saw him back again to watch the anemones break on the hillside surrounding his little valley. He returned to the country long before his own carefully tended garden beds had bloomed behind their trellis grills below the long, raised portico where he used to wander up and down in sun or shade as the season changed.

Horace was neither wealthy nor nobly born. For him the simple actualities of peasant life were familiar and attractive. His country place was no transference of the magnificence of the Roman palaces to an ampler setting of fountain-cooled terraces and stately walks. His ancestors had lived off the land, not merely on it; and though the house was airy and comfortable, it smacked of rural simplicity and the devices of the farm.

There he enjoyed greater happiness than Rome or the emperor's court could give, a solitary but not a lonely bachelor. There, on occasion, his intimate friends from the town must have visited him. Among them the greatest of all Latin poets, his own unrivaled contemporary, Virgil, may well have sought him out in his retreat, bringing with him the young Propertius, a minor poet who wrote love verses such as neither Virgil nor Horace tried to equal.





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Painting by H. M. Herget

"You're Pleasant and Unpleasant, Agreeable and Sour Alike: I Can't Live with You—and I Can't Live Without You!"—Martial

## Interior of a Rich Man's House

THE TYPICAL Roman house, like Roman civilization in general, was a hybrid of native Italic, early Etruscan, and imported Greek. Actually, it was two houses in one.

The front half, to which the street door gave access through a side corridor, perpetuated ancient native construction by using an open rain-catch in the center of the ceiling of the large main room, or *atrium*. Above this, on the outside, the tiled roof sloped down from all four sides, throwing the rain through spouts into a marble-lined basin set in the floor.

There opened off this amply proportioned atrium several minor rooms, some useful as servants' quarters, and a master room, with wide doorway hung with curtains against the draft, the entertainment room of the large double house. In the atrium a rich and important proprietor received his following and adherents, his "clients" as they were called, at the early-morning reception with which he began his day.

Beyond the reception room with its flanking passageways for servants and familiars, the sunlight shines between the columns of a portico surrounding an open garden court, forerunner of the *patio* which Rome bequeathed to Spain and Spain transmitted to her American colonies. Here began the inner portion of the Roman double house, the part borrowed directly from Greece.

Sunroom, dining room, gaming room, and lounge were all likely to be located off this peristyle court. The main sleeping quarters were probably upstairs in a second story, the women's rooms almost invariably so. The ground floor turned blank walls to the outdoor world of streets and alleys, since it drew its light directly

down into atrium and peristyle; but in the second story there were windows and balconies, equipped no doubt with shutters and grills.

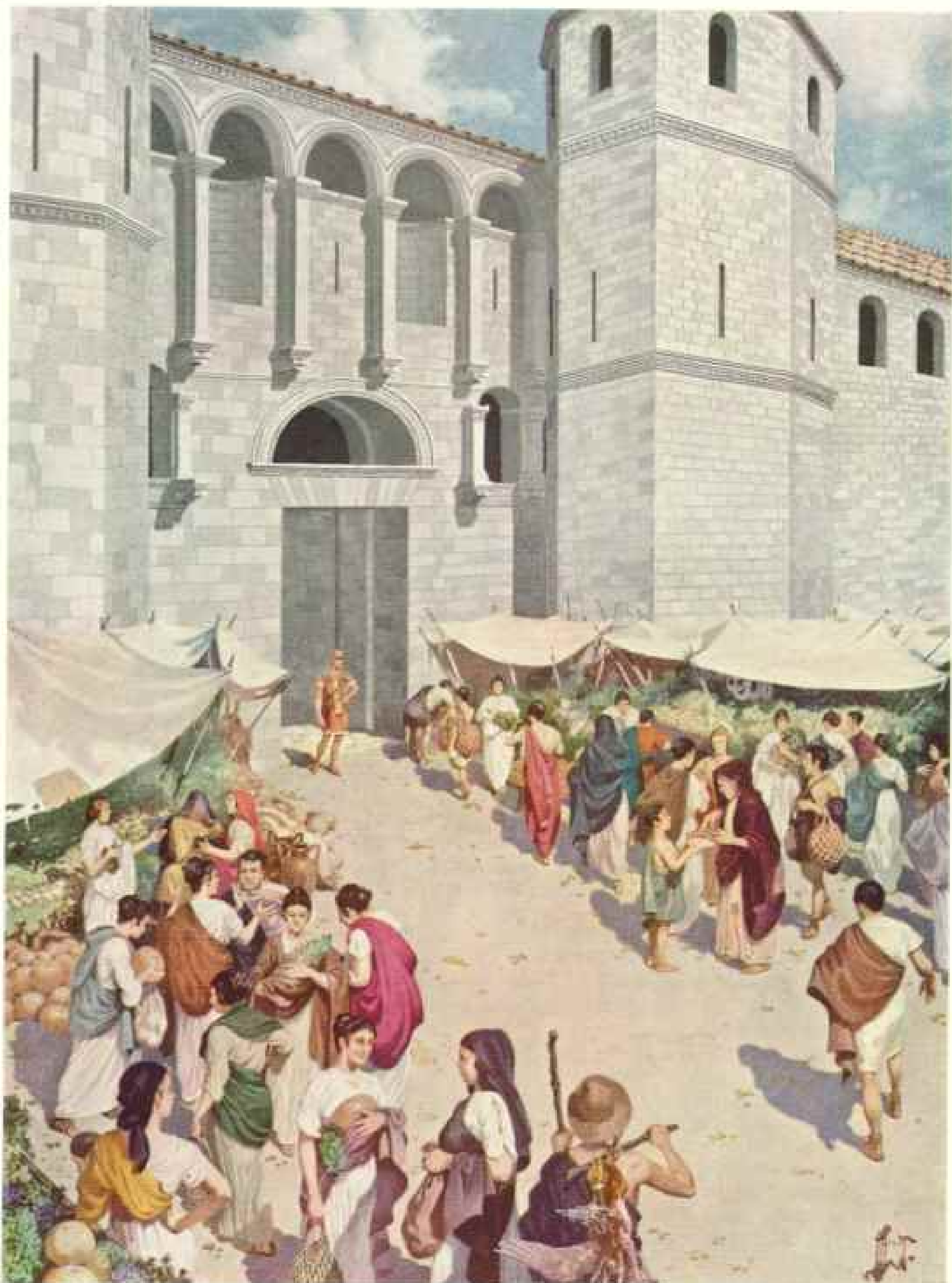
Roman women were by no means confined to their quarters in Oriental seclusion. Even though chance visitors or business callers never reached the inner house, there was nothing to prevent the married women of the house from appearing in the atrium or frequenting the houses of their friends for news and gossip.

A wealthy Roman house was not so elaborately furnished as its American counterpart; but it was more carefully decorated, and color was used more freely. On the floors, where there would seldom be matting or rugs, the favorite tradition, as in Italy today, was for the coolness of tile, elaborated in the more important rooms to the geometric fantasies of intricate mosaic settings.

The most costly and spectacular way to decorate the walls was to cover them from top to bottom with a veneer of thin, sawn slabs of marble, white or colored, blank or veined, with contrasting materials such as alabaster, porphyry, and mother-of-pearl inserted in patterned shapes.

Painted imitations of the glories of veined and colored marble satisfied most requirements for private homes, however. More tasteful were decorative designs applied directly to the finished plaster.

Paintings in the grand manner, echoing famous Greek masters, were not put on canvas and hung, as in our homes, but were copied directly on the plaster walls themselves. Our most extensive information about the lost paintings of Greece has come to us from these copies, discovered in Pompeii under the ashes of Vesuvius.



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Painting by H. M. Bagot

“There Was Nothing Lacking That the Poor Man's Table Requires, and Much There Was  
That Rich from Poor Might Borrow”—Virgil, *Moratum*

## Vegetable Market

THE VEGETABLE market with its tented booths set up before the gate of a fortified town displays a surprising variety of foodstuffs bought and sold in Roman times. Although orange and lemon trees had not been introduced to the European West, nor had white and sweet potatoes and tomatoes migrated from the New World, the rich man's fare from garden and orchard was fabulously composed. Even the poor had a wide choice of things within their means, though leek and garlic were their favorites.

In late summer green-rinded watermelons, the much-prized honey melon, and large yellow Persian melons were available. Many kinds of grapes of excellent quality were abundant; and apples, though small and savory rather than showy in appearance, were much in demand.

All through Roman times there were pears and plums, the latter often dried as prunes; and quinces, which were better for preserves than for eating raw. Apricots were introduced rather late from Armenia, and peaches from Persia. Cherries had been mean and poor until a larger and more succulent kind, discovered on the shores of the Black Sea, was brought to the European West.

Occasionally pomegranates reached the Roman market, and figs, both purple and green, were almost overabundant. The figs, eaten soft and warm and ripe from the tree, were lusciously different from their brown desiccated remnants strung on a cord and hung up to dry for winter consumption.

Dates had all to be imported from Africa, because the date palm will not ripen its fruit in Italy or anywhere else on the northern shore of the

Mediterranean, save for a few spots in southeastern Spain.

Whoever was fond of berries could choose from mulberries, blackberries, raspberries, and strawberries; and whoever liked nuts could purchase almonds, hazelnuts, walnuts, chestnuts, or even the subtle pistachio and the giant seeds of the stone pine which the Mediterranean world still loves to nibble.

The market pictured here is being patronized for its vegetables: unbleached celery, cucumbers of many shapes and sizes, gourds, yellow squash, cress, chicory, lettuce, and even endive. There are also green beans of several sorts, a change from the dried beans which, used for soups and porridges, shared with lentils and split peas the prime place on the peasant's winter table.

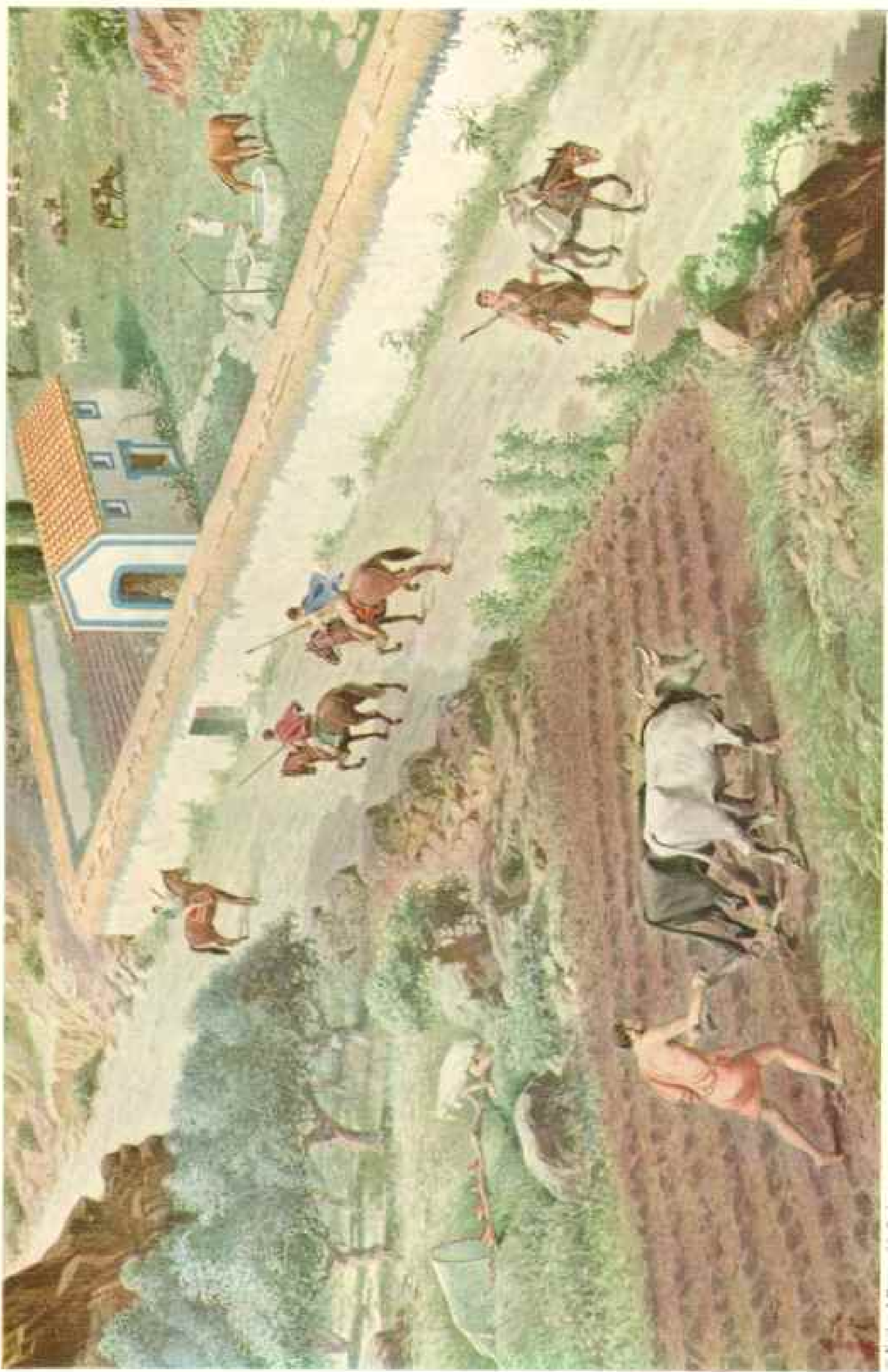
A rich man could grow his own asparagus in deep-dug, carefully planted beds; but if he wanted artichokes for his guests, the best would have to be sent him from Tunisia or from Spain. Cabbage and kohlrabi and Brussels sprouts were common in Roman markets.

If mushrooms were in season, some belonging to the ordinary genus *Agaricus* would be offered, as well as the *Boletus*, with its spongy mesh in place of gills. Truffles, too, which live underground till the pigs smell them and root them up, were dainties enjoyed in ancient Rome.

The countryman in the foreground, with his bird and rabbit slung from a stick over his shoulder, is bound elsewhere to dispose of his game, for this market has no stalls for sellers of meat.

Above and behind all towers the splendid fortified gate of Diocletian's palace in Dalmatian Spalato (p. 631).





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**"O Happy Husbandmen, Too Happy if They but Realize Their Blessings—for Whom, Far from the Clash of Arms, Earth Most Just Pours Forth from Her Soil an Easy Living"—Virgil, *Georgics***

Painting by H. M. Bennett

## Tunisian Farm

Besides some sizable cities, among which recolonized Carthage was the leader, Roman Tunisia developed extensive and populous rural settlements, where landed gentry resided in luxurious houses on fertile farms.

Several of the Tunisian villas have been uncovered by the French Service of Antiquities, and the Bardo Museum in Tunis is stocked with their treasures. In surprising contrast, Carthage itself, however carefully its site has been explored, has yielded almost nothing to illustrate its thousand years of African supremacy.

Archaeologists uncovered in one especially fine example of a villa a mosaic floor into which a rather incompetent but ambitious local artist had introduced little scenes from the country life of North Africa in his day. With remarkable vividness, but complete incoherence, he depicted a Tunisian cattle stead and its animals, a horse being watered, a farmer plowing with an ox team, a laden donkey being led to market, hunters on horseback with lances, and a man disguised under a goatskin driving quail into a decoy net. These scenes, assembled in proper perspective, afford a realistic picture of suburban life near ancient Carthage.

A dirt country road, dusty in dry weather, abominably muddy in wet, leads past an adobe wall of whitewashed plaster over sun-dried brick, carried on a hidden base of field stone and protected from disintegration by a cover of straw thatching held down by flat rocks. Within the wall stands a combination cattle shed and house, where the slaves in charge of this corner of the estate may eat and sleep.

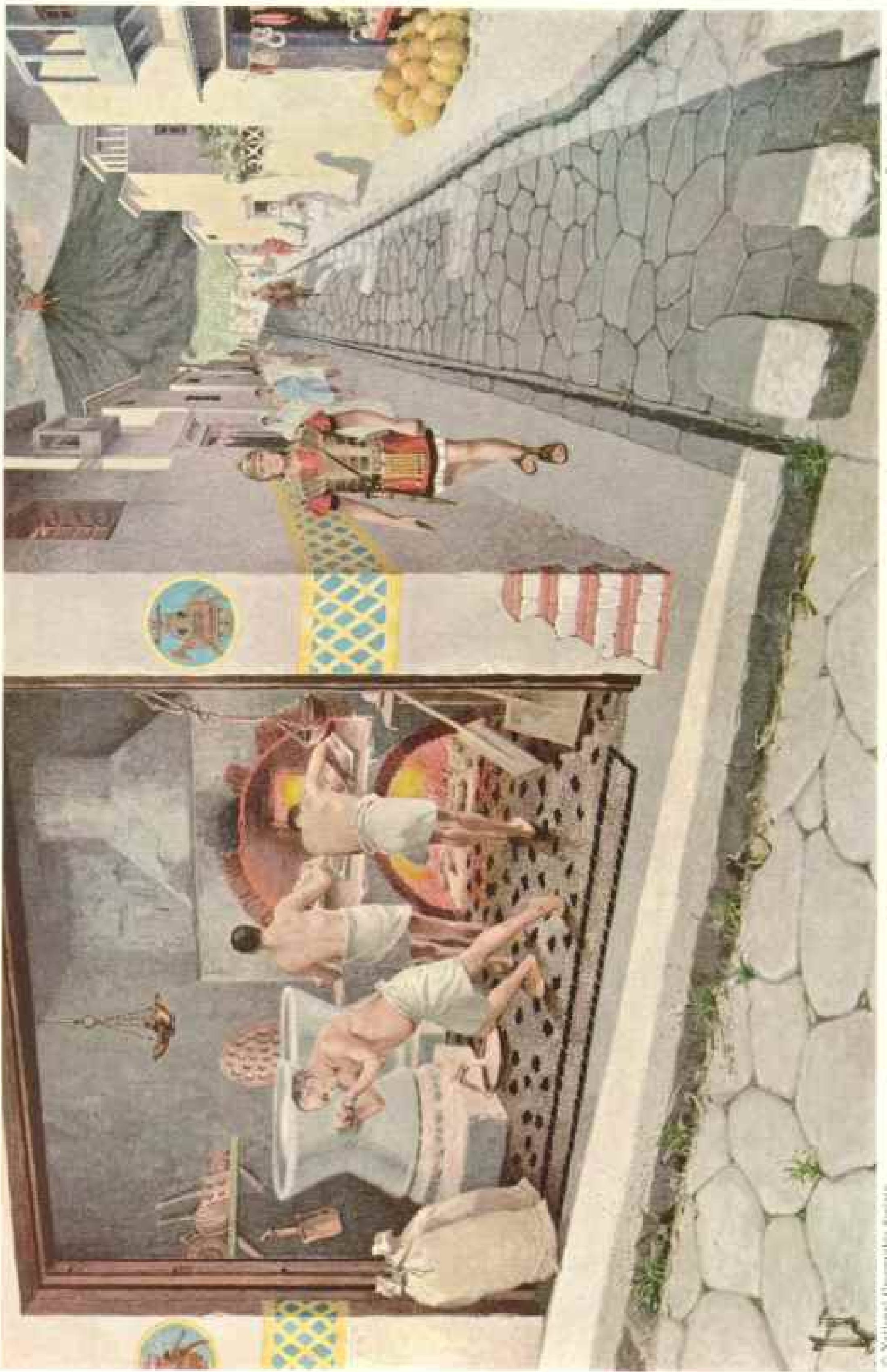
An olive grove is growing in thin soil close to limestone

cliffs across the road, and on a sunnier slope just outside the picture there will be grapevines. Every large estate produced its own oil and wine and at least enough grain to tide the livestock through the winter. On export of oil, wine, and grain the rich province primarily depended.

The owner's villa, the plan of which has been unearthed, was quite different from the little byre behind the thatched wall in the picture. Around a large interior garden court were grouped suites of rooms all laid with exquisite mosaic floors. The composition which adorns the principal room, showing cupids at work in grapevines, has passed into the handbooks as a specimen of Roman mosaic art at its most delicate and charming.

The typical *villa rustica* had ground-floor rooms equipped for pressing the oil from the olives and storing it in vats. There were rooms with wine presses, connected with cellars where the wine could be laid down in jars; cool airy rooms for drying and storing fruit; dry lofts for grain and straw; a threshing floor outside; and stables for the horses and cattle. In remote or unsafe districts there was sometimes a fortified compound, and slaves were kept armed.

With such an establishment under his orders, a landed proprietor could expect to be both busy and prosperous. Nor would he have entertained any qualms for his social position and privileges. The dyed-in-the-wool aristocratic Roman despised trade, business, manufacture, and all arts and crafts, no matter how lucrative or extensive. It was beneath his dignity to be anything except a warrior or a ruler, or a farmer with slaves to do all the work.



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"A Cloud of Unusual Size and Shape Had Made Its Appearance . . . Rising from Vesuvius . . . in Form and Likeness Most Resembling a Pine Tree"—Pliny the Younger, *Letters*.  
Painting by H. M. Barrett.

## Street Scene in Pompeii

POMPEII was not overwhelmed in an instant and buried under lava from Vesuvius, or even so covered with ashes that it was sealed away untouched and untrifled till its rediscovery just 200 years ago.

After the eruption of A. D. 79 had subsided, the townsfolk who had escaped—and these were probably ten times as numerous as those who had tarried too long and perished—returned to the scene.

Ashes and pumice, cinders and tiny stones lay so deep and had been so closely packed by the torrential rains which followed the disaster that only the charred tops of the houses emerged above what seemed to be solid ground.

All attempts to clear the site and rebuild the town were abandoned; but by means of shafts and tunnels through the debris, most of the valuable movable objects were recovered. Even the marble slabs veneering the public buildings were salvaged.

The town which the modern diggers uncovered not only had been collapsed and buried by a volcano, but had been ransacked and picked over by men. Even so, the ground plans of the buildings were clear. Most of the lower walls of the houses were standing erect, and enormous quantities of damaged furnishings and odds and ends had survived.

At first, modern investigators deemed thorough reconstruction of the houses impossible because of the loss of the roofs, upper stories, and ground-floor ceilings; but more practiced excavation revealed in the higher levels of the ashes traces of beams and joists. These discoveries betrayed the original construction. Today detailed archeological information

makes reconstruction of the probable appearance of almost every important sector of the town comparatively easy.

Most of the streets ran straight, with the intersections at right angles. A curbing of upended blocks of volcanic stone framed a raised sidewalk, hardly wide enough for pedestrians to pass one another. The street itself was too narrow for more than a single cart at a time, and steppingstones set at crossings necessitated adroit maneuvering of wheels.

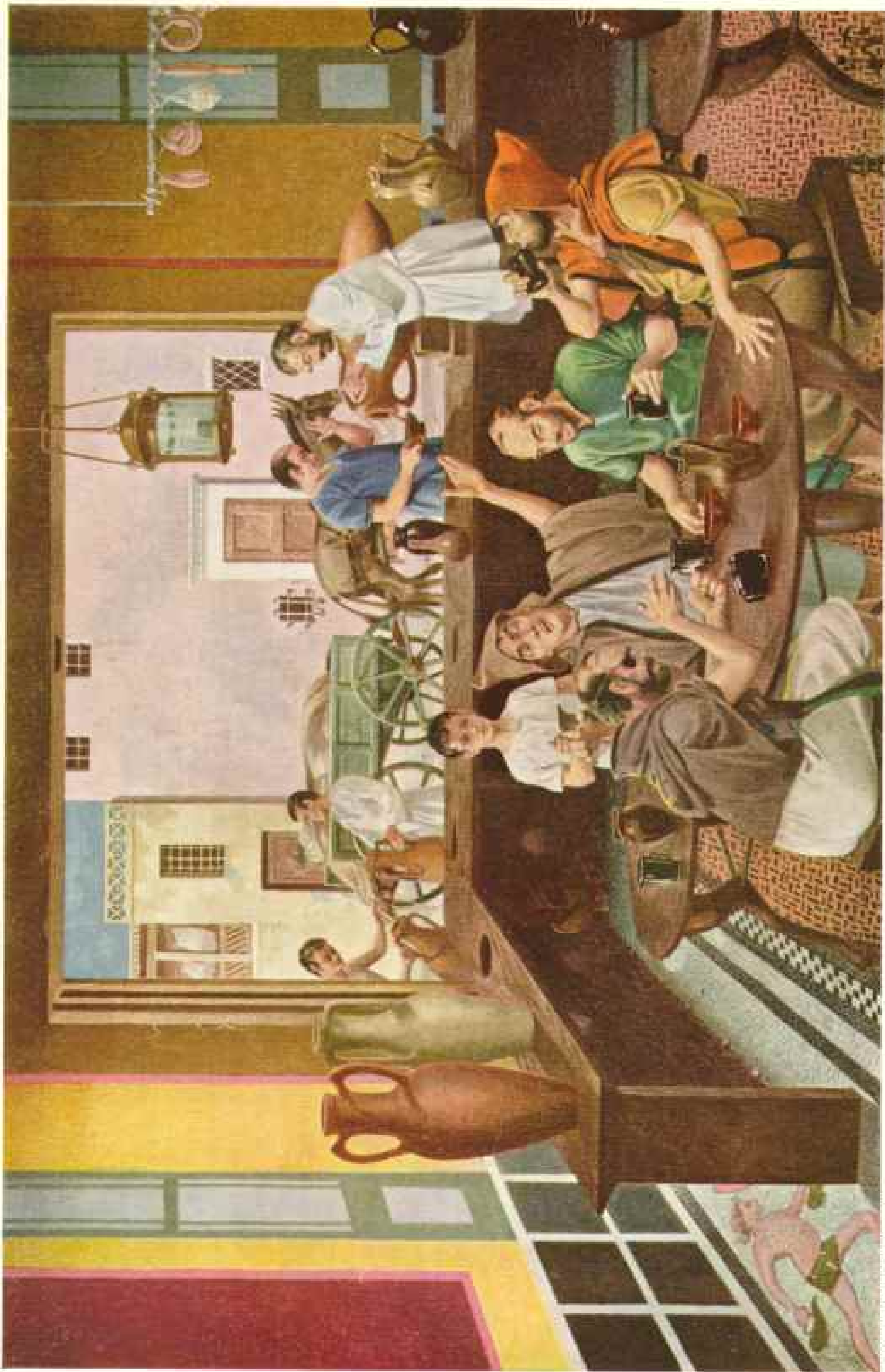
Although the paving blocks were of all shapes and sizes, they were expertly matched and fitted without broad crevices. The sidewalks were laid in similar fashion, but a thin coating of hard earth and pounded brick covered the joints.

During heavy rains water rushing from the lower slopes of Mount Vesuvius washed the long avenues clean. Cross streets, on the other hand, often accumulated dirt. Blank stuccoed walls of private houses flanked the sidewalks, but there were windows and occasional balconies in the upper stories. At intervals along the street, open fronts of shops were built directly into the houses.

Much of the bread to supply the 20,000 inhabitants of Pompeii came from establishments which combined milling and baking. In mortarlike stone grinders, turned sometimes by donkeys or mules, sometimes by slaves, grain was crushed into coarse flour, which was made into flat loaves and baked in closed ovens or open hearths.

For 16 years after the earthquake of A. D. 63, Vesuvius poured out smoke and vapors; yet Pliny reports that many residents of Pompeii, scouting the idea of peril even after ashes began to fall in A. D. 79, stayed in their homes to perish.





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Painting by H. M. Briggs

"Now Is the Time to Drink and Beat the Ground Freely with Your foot!"—Horace, *Odes*. "Out-Greek the Greeks, Be Drunk Both Day and Night"—Plautus, *Mostellaria*.

## In a Pompeian Tavern

AMONG the most frequent and frequented business establishments opening on the sidewalks of Pompeii were wineshops.

The counters held the wine jars erect in circular holes cut in the counter top, and customers could purchase wine directly at the "bar," even if they hardly lounged and sipped there in modern fashion.

To serve a client, the attendant lifted a jar out of its rack and tilted it over a pouring block. A Pompeian wall painting gives warrant for showing in the illustration a mule team bringing up a wagon loaded with skins full of wine. Doubtless jars of reserve stock were stored in an inner room or cellar.

Wineshops were patronized mainly by the lower classes and by people of doubtful occupation. Drinking and gaming and ready argument only too often led to open brawls. Two crude paintings preserved from Pompeii record such scenes.

In one, two men are seated with some sort of checker-board balanced on their laps between them. Disagreement has already set in.

"I'm out!" shouts one.

"No," cries the other, "not three! It's a two!"

In the other picture two standing disputants are already pushing each other about and pulling hair, while the tavern keeper tries desperately to expel them from his premises, crying, "Out of doors with your brawling!"

The tavern keepers themselves were not in too good repute. Many must have acted as intermediaries for shady patrons, such as footpads off the highways and robbers from the hills.

Pimps and panders, fences and stools, vagabonds and beggars made up a thoroughly dubious company.

Wine of many kinds was to be had at varying prices. The grapes thriving in the volcanic soil of Vesuvius yielded a good but fiery brand. The more northern regions of Campania produced the famous Falernian and the Caecuban which Horace praised as superior to all others.

If there was imported wine to be had here, it probably came by ship from Greece and had sea water or resin in it to preserve it on the journey. Travelers in the interior of Greece today have to acquire a taste for resined wine, often with no greater success than the Roman poet Martial, who thought very little of such *resinata vina*.

In Rome wine was to be had from all over the Empire—"Moselle" from the Rhineland; "sherry" from Spain; good Gallic wines from France, and Chian, Lesbian, and Rhodian from the Greek Aegean isles. There was even a brand from the Nile-Delta.

Drinking cups were usually of baked clay, glazed to avoid porosity; whereas the exposed wine jars, like the water jugs, were unglazed, since evaporation kept them cool. When the last customer departed at night, wooden shutters were fitted into the slots on each side of the wide entrance and the light in the hanging lantern was extinguished.

From across the street the private dwelling turns a blank and probably disapproving stare on the wineshop with its noisy crew. Its street door is tightly shut, and all its windows, however small, are fitted with iron gratings as defense against tramps and burglars.

## Seaside Villas

“**N**OTHING in the world can rival the lovely bay of Baiae!” exclaims a rich Roman in one of Horace’s *Epistles*.

The visitor to this region today finds only remnants of brick and stucco hidden among the vineyards on the slopes, and breakers roll in on empty beaches above which Greek Cumae stood. Yet somewhere here Cicero had his Cumaean villa, and not far away his rival, Hortensius, fattened the lamprey eels on which he loved to dine.

Lucullus built here on a spectacular headland a country home wherein, a century later, the gloomy and degenerate Emperor Tiberius was to die, and Nero briefly was to live. In a villa near by, Nero had his mother Agrippina murdered.

Roman literature records that the gentry came here to summer villas when the capital city was oppressively hot. But neither historian nor archeologist has ever succeeded in putting together from the few and scattered fragments a visualization of the gaily dissolute life at the baths of Baiae and Bauli.

A series of pictures on the walls of the main room of a finely decorated house unearthed in Pompeii in 1900 seems the most credible source from which to assemble a picture of these long-lost Roman watering places. To be sure, what the Romans actually built and used cannot be determined exactly from the rather fanciful wall paintings, but as an experiment in recalling a civilization which has been virtually destroyed, our illustration merits attention.

Everything about these clustering villas is full of variety, movement, and life, and the effect is heightened by a liberal

use of towers and pergolas and terraces and open colonnades. In the background are the hills, and in the foreground is the sea. Rowboats carrying folk on pleasure excursions move along stone quays which are lined with masonry posts spaced close along their edge.

All the bizarre and attractive materials which go to make up Mr. Herget’s illustration have been taken out of the flatness of the ancient artist’s conventional wall paintings and distributed over a realistic landscape. No details represented are without authority.

The structures depicted are not the splendid country houses of which Cicero and Horace make mention and which Pliny describes in detail. They are not permanent edifices containing many richly furnished rooms and nestling in complicated and ornate gardens full of covered ways and resting places.

Instead, they are inexpensive creations designed for the holiday use of a civilization in which great seaside hotels were completely unknown. They are the seaside cabins and bungalows of antiquity, in their architectural sprightliness much more imaginative and colorful than modern attempts at seashore colonies usually can claim to be.

Across the Gulf of Naples, above the sheer eastern cliffs of the isle of Capri, rose the pretentious palace of Tiberius. Outside of Rome, not far from the waterfalls of Tivoli, the Emperor Hadrian realized the most complex architectural dream this side of Kubla Khan’s pleasure-dome in Xanadu. But such colossal enterprises give no proper idea of the simpler frivolities of a Roman seaside resort.



© S. S. (1904) (Goussard) (1904)

Painting by W. M. Bennett

"The Curving Waters of a Tranquil Bay, a Spot of Nature's Bounty, 'Twixt Sea and Hill a Bench That Ends in Cliff'—Status, *Silvae*



## Roman Baths: Tepidarium

NO OTHER civilization has ever evolved the conception of a building for public recreation, exercise, and amusement even remotely comparable to the imperial Roman baths.

The Baths of Caracalla in Rome included an area of more than 20 acres, fitted with reading rooms, auditoria, running tracks, covered walks, and planted gardens, surrounding a single unified building which alone covered six acres.

In the central building were halls so vast that thousands could wander through them at one time, rooms with vaulted ceilings 70 feet above the floor, an enclosed swimming pool 200 feet long, and a steam room half as large as the Pantheon. Hundreds of bronze and marble statues, acres of mosaic flooring, and thousands of square yards of costly marble veneering were adornments.

Huge as this recreation center was, it was only one of seven in Rome. Others were the Baths of Diocletian, of Agrippa of Nero, of Titus, of Trajan, and of Constantine. In every province of the Empire were similar, though somewhat smaller baths—in Germany at Badenweiler and Trier; in England, where the city of Bath still perpetuates them in its name; in Spain, France, Asia Minor, and North Africa.

The Roman bath of the illustration lay under drifting sand in Tripolitania until it was cleared and studied by Italian archeologists.

Framing and setting off the geometric mosaics of the floor, marble steps lead down into a marble-lined pool filled waist-high with lukewarm water from a pipe concealed in a statue base behind a bronze lion's-head spout and connected with

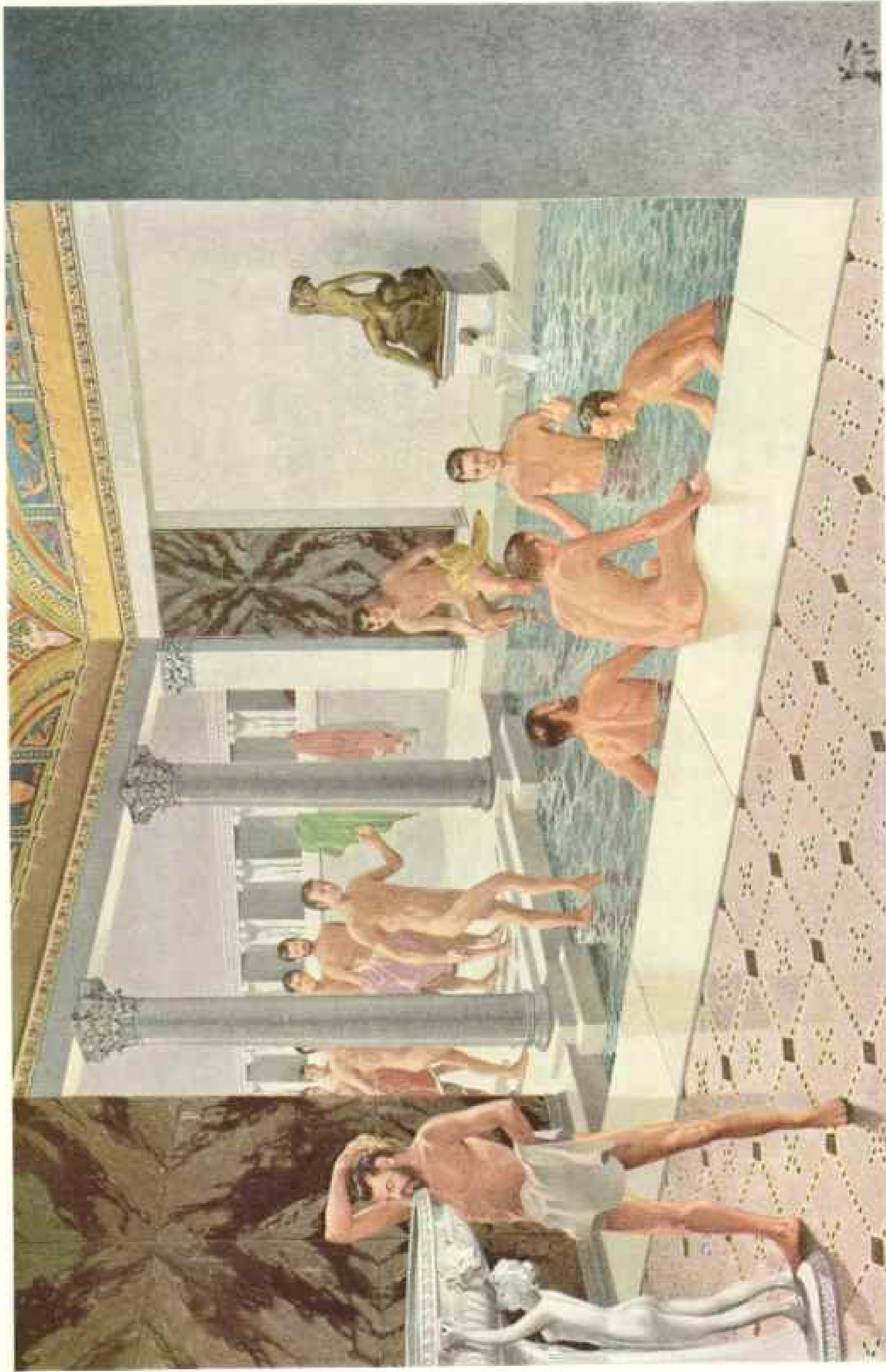
the furnace boilers in the basement. An invisible overflow is located in one of the angles of the pool.

The room adjoining on the left is a disrobing room (*apodyterium*) and the niches in the wall are to be used as open lockers by the bathers. The elegantly carved marble basin partly visible at the extreme left foreground is fed with cold water for sponging.

For most of the wall surfaces, veined marble has been sawn into thin veneering slabs, and these have been spread out to take advantage of the pattern which their irregular markings can produce. Unfluted Corinthian columns add coherence to the whole composition and justify a continuous running cornice treatment for the wall top, as a transition to the intricate painted detail on the molded plaster designs which fill every inch of the lunettes and spandrels of the gorgeous ceiling.

Furnaces were concentrated in one part of the basement, and floors and basins situated nearest them had the greatest benefit from the hot air and the heated water (page 614). As the entering bather moved toward the sector underneath which the fires were kept, the temperature of walls and floors, of air and water, gradually increased to a maximum, and then as gradually dropped when he reversed his course. He took a final dip in the swimming pool in the *frigidarium* as precaution against chills when he went outside.

Often in auxiliary rooms, recitations, readings, lectures, and discussions invited attendance, and any citizen who had one cent to pay his admission to the bath could divert himself for an entire afternoon without quitting the premises.



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Painting by H. M. Bennett  
"The Blue Translucent Flood in Its Snow-white Border, Whom Would It Not Tempt to Throw Off His Idle Garment and Plunge In?"—  
Statius, *S/llrac*

## Furnaces Beneath the Baths

THE GLOW that was Rome showed at times a battered and tarnished reverse to its medallion.

Upon the ground level of the resplendent baths all was magnificence and ease for unburied patrons; but in brick and rubble-walled caverns under the mosaic floors public slaves sweated to keep the furnaces alight. They stoked the fires, carried in the fagots, supervised the flow of water, patrolled the intricately twisted passageways, and led a mole's life in stifling, overheated quarters.

Modern Trier on the Moselle River occupies, with its 88,000 inhabitants, only a portion of the ancient city which once stood there and which a late Latin poet called "Rome beyond the Alps," the second city of the Empire. In Trier, which was the favorite residence of the first Christian emperor, Constantine, may be seen the most extensive Roman remains in Europe north of the Alps.

Time-battered remnants of the vast public baths built in Trier in Constantine's reign have supplied extremely detailed information on the underground arrangement and workings of a great Roman thermal establishment. From this source is drawn most of the pictorial detail of Mr. Herget's illustration.

The squat, square shafts of brick and stone in the middle background support a solid concrete slab which serves as the underpinning of a warm pool in a large rectangular room similar to that illustrated in the preceding painting. Since the hot air from the open hearths of the furnaces, sucked through the labyrinth of underground passages, circulates under the floors and through the hollow tile inside the walls,

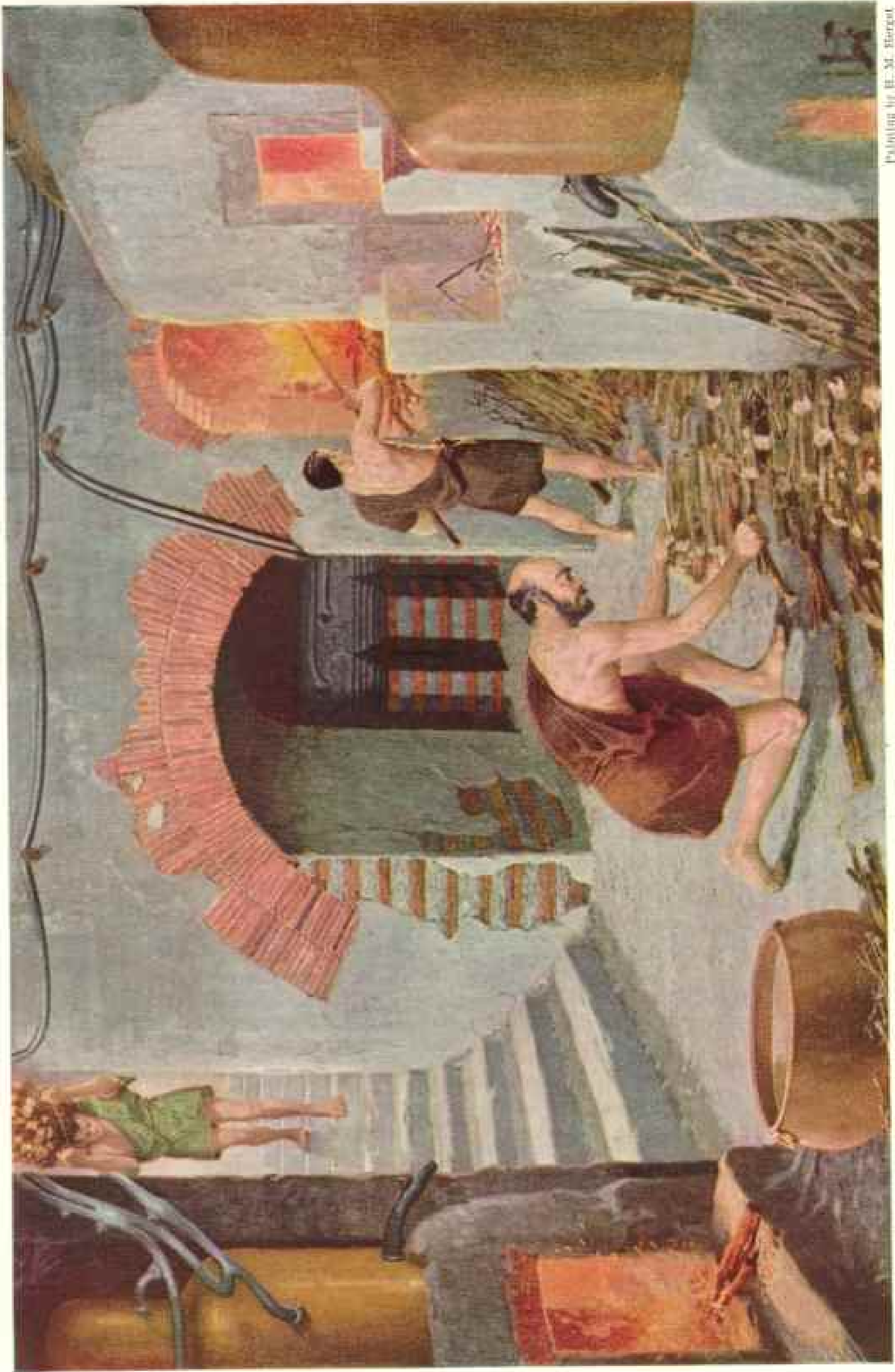
not only the room containing the pool but adjoining apartments are kept warm. It is questionable whether a better way has ever been devised to heat a large building in a reasonably mild climate.

An aqueduct supplied the establishment with a steady flow of cold, clear water, which minor conduits of stuccoed masonry, terra-cotta pipes, and lead tubes and fittings distributed to the elaborate series of pools and basins. Hot water was conveyed through pliable lead pipes directly from the boilers to spigots of bronze in the sweating room and the tepid pool.

Since the soft lead could be easily cut, joined, and melted together, check and control valves were set in the pipes without any attempt to thread the metal. For the same reason there were no T joints or right-angled arms and bends. The pipes could be hung like modern telephone cables on hooks as they were carried under and through the floors and inside the walls.

Boilers of bronze or brass operated on the principle of huge kettles. Under the boilers wood (probably very seldom lignite or soft coal) was burned in open hearths, rather like domestic fireplaces of today. Long brick flues assured a steady draft and carried the soot and smoke well above the building.

Although much of the octopuslike plumbing looks crude to the modern eye, it must be judged by what it accomplished. The colossal scale of some of the thermal establishments proves that the heating system must have been little short of extraordinary. There was never any lack of hot water.



Painting by H. M. Bergot

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"Where Languid Creeps the Warmth Around the Building and a Thin Steam Spreads Upward from the Furnaces Below"—Statius, *Silvae*



## Worship of Isis

**F**OUR TIMES within 10 years the Roman senate issued decrees forbidding the worship of the Egyptian goddess Isis and commanding her statues to be overthrown and her shrines razed. Apparently the effort was futile, for, half a century later, the Emperor Augustus and, after him, Tiberius issued orders to suppress the cult. It steadily gained adherents, especially among the lower classes.

At last, Caligula gave in to the inevitable. In A. D. 38 he decreed that an Isis temple should be built in the Field of Mars; and later in the century Domitian converted this into one of the most splendid buildings in all Rome. The cult of Isis was there to stay, as long as paganism should last in the world.

Whoever served the Greek Olympian deities or the State divinities of Rome was promised kindly protection during mortal life, but he was given nothing to look forward to after death but wandering bloodless in the cheerless underworld of departed shades. On the other hand, he who faithfully followed Isis was promised immortality and bodily resurrection like that of the Egyptian god Osiris.

Never to die, no longer to be wretched, oppressed, and unhappy! Against a religion that held forth such prospects to its adherents, senate and emperor alike were powerless.

The young woman standing on the topmost step in front of the shrine, with a fringed mantle about her shoulders and the sacred cobra on her forehead, is a priestess dressed as Isis. The bowl in her hands contains water from the sacred river, the Nile, and is so holy that even she may not touch it barehanded.

On either side of her there stands an attendant priestess shaking the

sistrum rattle traditional to this service. At the foot of the stairway, the chief priest with the palm fronds of victory salutes the risen sun, while a woman fans the embers of yesterday's fire into fresh flame upon the altar, and a second priest with wands in his hands leads the singing of the morning hymn of adoration. This is the ceremony known as the Awakening of the God.

Isis, in the guise of her holy statue, has been sleeping as one dead all night within her closed sanctuary. Now, at the sound of singing and the tinkle of her sacred rattle, she has awakened and stepped forth, in the person of her priestess, to greet the sun and to witness the return of life to her faithful votaries.

In the fortunately surviving Latin tale *The Golden Ass*, more properly entitled *Metamorphoses*, Apuleius gives a vivid account of Isis worship. He describes a procession at Corinth in honor of the goddess on the annual occasion of the launching of her sacred ship to inaugurate the sailing season.

First came the mummers, then a group of maidens dressed in white and strewing flowers. Bands followed, leading white-clad initiates—men and women, old and young, high and lowly—all shaking sistrum rattles.

Next marched priests with upper bodies bare, heads shorn, and a sacred mark branded on their foreheads, and behind them elders carrying the tokens of the god—a lamp shaped like a golden boat, altars in miniature, etc. The gods themselves, disguised priests representing Anubis by a jackal's mask and leading a cow to signify Isis, brought up the rear where last of all was borne the Mystic Casket, containing what could not be shown.



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Painting by H. M. Bogart

"In Her Right Hand She Held a Curved Implement of Bronze, Crossed with Little Rods, Which When Shaken Gave Out a Sharp, Shrill Note"—Apuleius, *The Golden Ass*

## Rehearsal for the Mysteries

**T**HE CULT of Isis with its promise of immortality and bodily resurrection competed for a long time successfully against the rising faith of Christianity; but the most formidable competition came from Persia through Syria and centered in the mysterious figure of Mithras, the slayer of the bull.

Since this Mithras worship was strictly confined to men, women who sought a more emotional outlet than was offered by the rites of Isis turned to initiation in the secret revels held in honor of a god whom the Greeks called Dionysus, and Greeks and Romans alike recognized as Bacchus.

The effects of alcoholic intoxication are usually ascribed by primitive devotees to some sort of divine possession-taking. To partake of wine was, therefore, to commune directly with godhead and attain a more-than-earthly state.

Wherever the process of extracting and fermenting the juice from the ripe grape was introduced, the worship of a wine god accompanied it. From the interior of the Balkans the rites of this god reached Greece. The Greek emigrants who settled southern Italy brought them to the peninsula. Thence they spread among the Latin and other Italic people.

But in Italy there was already an indigenous worship of a pair of deities, Father Liber with his wife Libera; and, as often with pagan cults, the worship of the Greek Bacchus somehow fused and became identified with that of Liber and Libera.

Of the native pair, Libera was naturally the women's deity, as Liber was the men's; and since Libera seems to have been a protector of motherhood and childbearing, her worship added the notion of feminine fertility

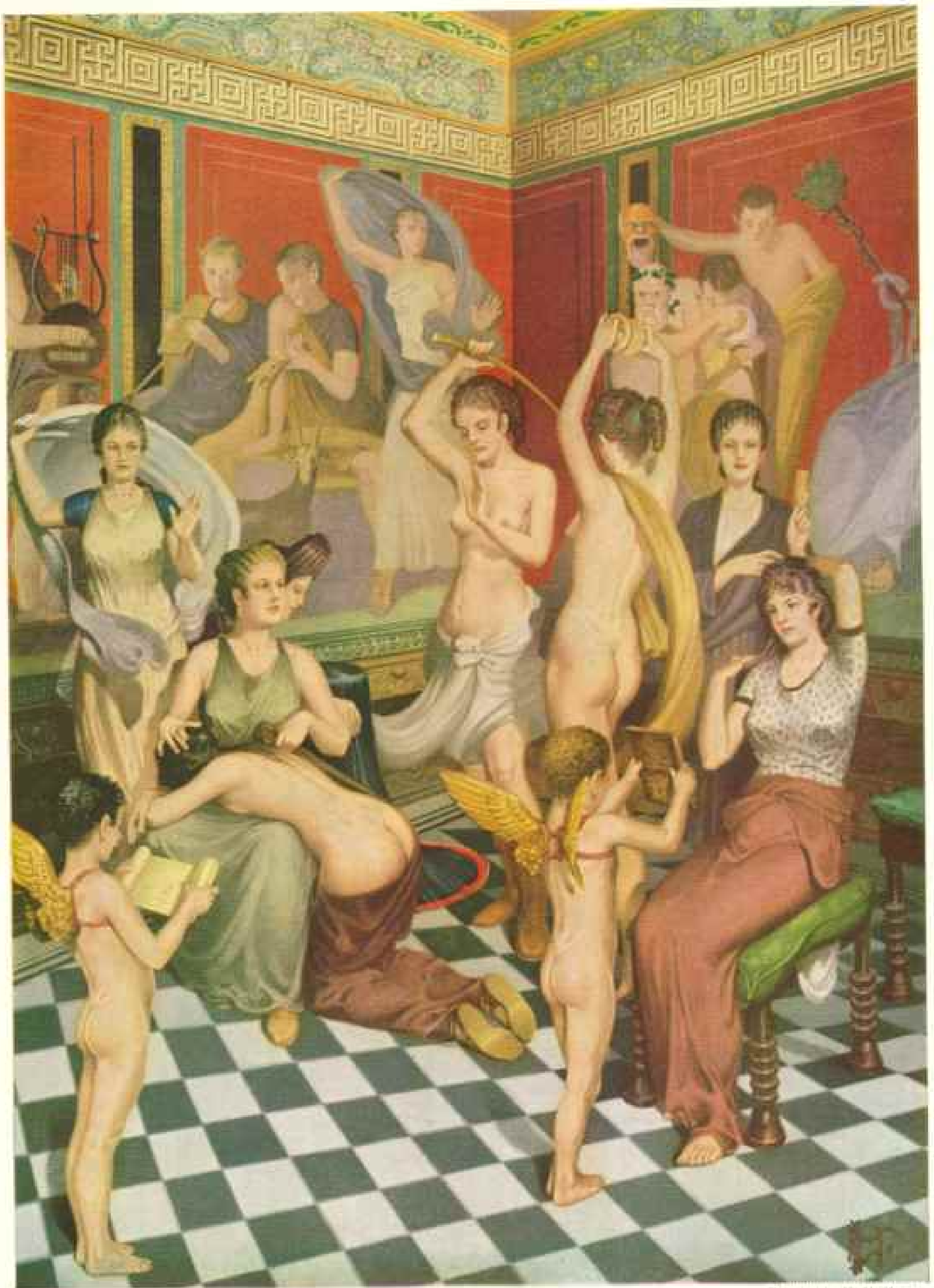
to the Bacchic rites which were conducted in her honor.

Such a combination of functions, abetted by nocturnal celebration, could easily give rise to misapprehensions among the noninitiated; and the staid Roman senate seems to have become thoroughly alarmed when it was informed, in 186 B. C., that Bacchanalian rites were being celebrated clandestinely within the city limits. Convinced that such practices were inimical to State religion and morality alike, they issued a national decree—still extant among our Latin inscriptions—on the strength of which they proceeded pitilessly to stamp out the offending cult.

By the time of Julius Caesar the cult had been reintroduced into Rome. A villa on the outskirts of Pompeii has preserved around the walls of a large room a series of paintings devoted to the celebrations in honor of Bacchus and Libera.

In these pictures, some of the characters seem to be contemporary Pompeian women, while others are even more obviously the imaginary creations of mythology. The chief theme appears to be a ceremony of initiation of young matrons, to whom is revealed the mystery of generation and upon whom is imposed a ritual flagellation to ensure fertility (a common superstition).

We have chosen to imagine that the mortal celebrants among the people of these wall paintings have assumed flesh and blood. Within this very room they are rehearsing their roles for the initiation ceremony which they intend to perform in honor of Bacchus and his consort, whom Greek mythology identified as Ariadne, but whom Italic piety had endowed with Libera's powers to induce fertility.



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Painting by H. M. Herbet.

"Known unto All Are the Mysteries, Where, Roused by Music and Wine, the Women Shake Their Hair and Cry Aloud"—Juvenal



## Sacrifice of the "Suovetaurilia"

THE OFFICIAL State religion of Rome was a totally different matter from the popular mystery creeds. Perhaps it should not be termed a religion at all, but only a ritual, since it was largely impersonal, had no moral dogma, and evoked little emotional response.

It smacked of the practical Roman legal mind, regarding faith as a contractual relationship with deities, wherein man agreed to observe certain ceremonies and make certain offerings in return for divine protection. To avert calamity and ensure prosperity for the community through magical acts calculated to placate the unseen forces around them was the priests' business. If the proper magic was performed, the demons and spirits would be benign.

The calendar listed many such procedures, each set for its correct day or season and each scheduled to be performed in its due place and manner. Naturally some of these appointed days became general holidays, precursors of the numerous saints' days and fixed festivals of southern Europe today.

Among the common animals sacrificed to propitiate the gods, a pig was the least prized, a sheep of more moment, an ox or a bull of prime merit. A white steer was fitter for celestial gods, a black one for the underworld divinities, a red one for the fire god. Male animals were suited for male gods, and female for goddesses.

Once every five years, when the registry office of the two censors had completed its enumeration and property lists of the entire people, a specially elaborate sacrifice of lustration was performed on behalf of the populace. A pig, a

sheep, and an ox, representing the three grades of living sacrifice, were solemnly led in procession as in the illustration and slaughtered at the altar.

The beasts must not be tugged or dragged, but must seem to come as if of their own accord. After incense and wine had been consumed on a living fire, the victims were sprinkled with wine and with coarsely ground salted meal and then slain according to a precise ritual. A strange superstition was that the favor of the gods and the fortune of men could be determined from the appearance of the victims' internal organs.

In the illustration the Roman temple on the distant hill-top is in the modified Etruscan tradition. That in the foreground adheres closely to Greek architectural forms, retaining from older usage only the high-platform base with the steps restricted to a single approach from the front.

As in Greek practice, the Roman altar stood out of doors and in line with the central doorway of the shrine which it served. It was sometimes, as in Greece, placed completely free on the paved area in front of the temple; at other times it was built into the stairway so as to be level with the temple floor, the steps descending around or past it.

The columns of the greatest temples rose 50 to 60 feet above their platforms, which in turn were raised considerably above the level of the heads of the human throng. Consequently, the victims and their attendant train might move to the altar where the high priest and his colleagues awaited them and yet be wholly unaware of the height to which the splendid temple towered above them.



Painting by H. M. Derrill

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"The White Flocks and the Bull, Chief Victim, Have Led Roman Triumphs to the Temples of the Gods"—Virgil, *Georgics*

## In a Court of Law

OUR PAINTING shows a provincial governor newly arrived in Africa with the proud title of proconsul hearing a case in the basilica. Built originally as covered halls for public meetings of all sorts, basilicas came more and more to be used as courts of law.

The litigants here are represented by professional advocates, freeborn Roman citizens of rank and eminence. Besides the ordinary civil suits, the governor could adjudge criminal cases and, if he chose, impose the death sentence.

Only full Roman citizens had recourse to any higher authority than the provincial governor. "I appeal to Caesar!" could not be said by the ordinary provincial, until the late Empire abolished such distinctions.

In the early days of Rome's expanding power, when such men as Pompey and Cicero and Julius Caesar were alive, Roman governors undoubtedly plundered the provinces which were entrusted to their rule. When they returned to the capital city on the Tiber after a year or two of depredation under the guise of official administration, bringing with them inordinate wealth in precious metals and jewels, they were often impeached and tried before senatorial committees, but not often convicted and sentenced.

The theory of personal civil rights and universal impartial justice was so deeply rooted in the Roman mind, however, that sooner or later it won out. Little by little it led to the establishment of empire-wide government under codified law and firmly maintained order, with the pursuit of gainful enterprise guaranteed by a stable military and civil administration. Ancient Rome thus created and handed down

to modern times its most cherishable contribution to the development of civilization.

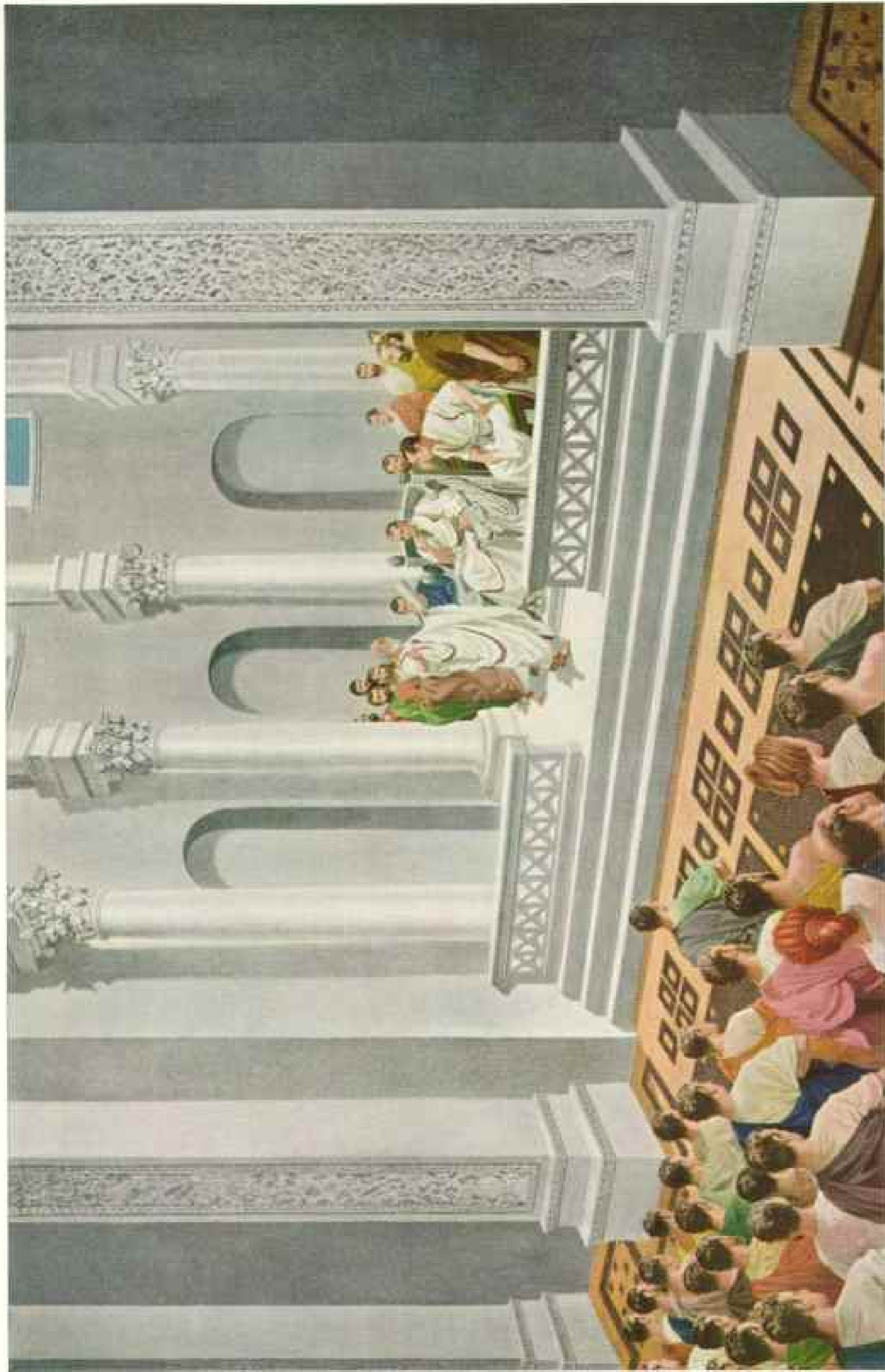
Even as the organized tradition of the Roman law survived into medieval Europe, so the type of building in which legal assizes had been held influenced the architectural thought of the Middle Ages. The Christian church could not evolve from the pagan temple; for the temple was not a place of communal assembly but a god's private dwelling, open only to priests and temple servants.

After Christianity had emerged from the secrecy of subterranean chapels or private houses to become the State religion, it had need of buildings which could accommodate great throngs of worshippers.

Precisely such a type of building was the law court, or *basilica*. In its broad hall could gather the congregation; and on its raised dais in the semicircular apse could sit the bishop and his assistant clergy, even as in earlier times the judge and his ushers had taken their places for the pronouncement of earthly law.

In pursuance of this obvious inspiration, basilical churches were erected through the length and breadth of the Empire, with their rows of columns separating nave from aisles, their walls lined with marble veneer, their floors covered with inset patterns of stone. They reproduced all the splendor of Roman imperial architecture, even though not always on the same plane of craftsmanship.

Many of these churches have survived, and it is from them, rather than from the mournful ruins of imperial Rome, that we can gain the best impression of the lost basilicas.

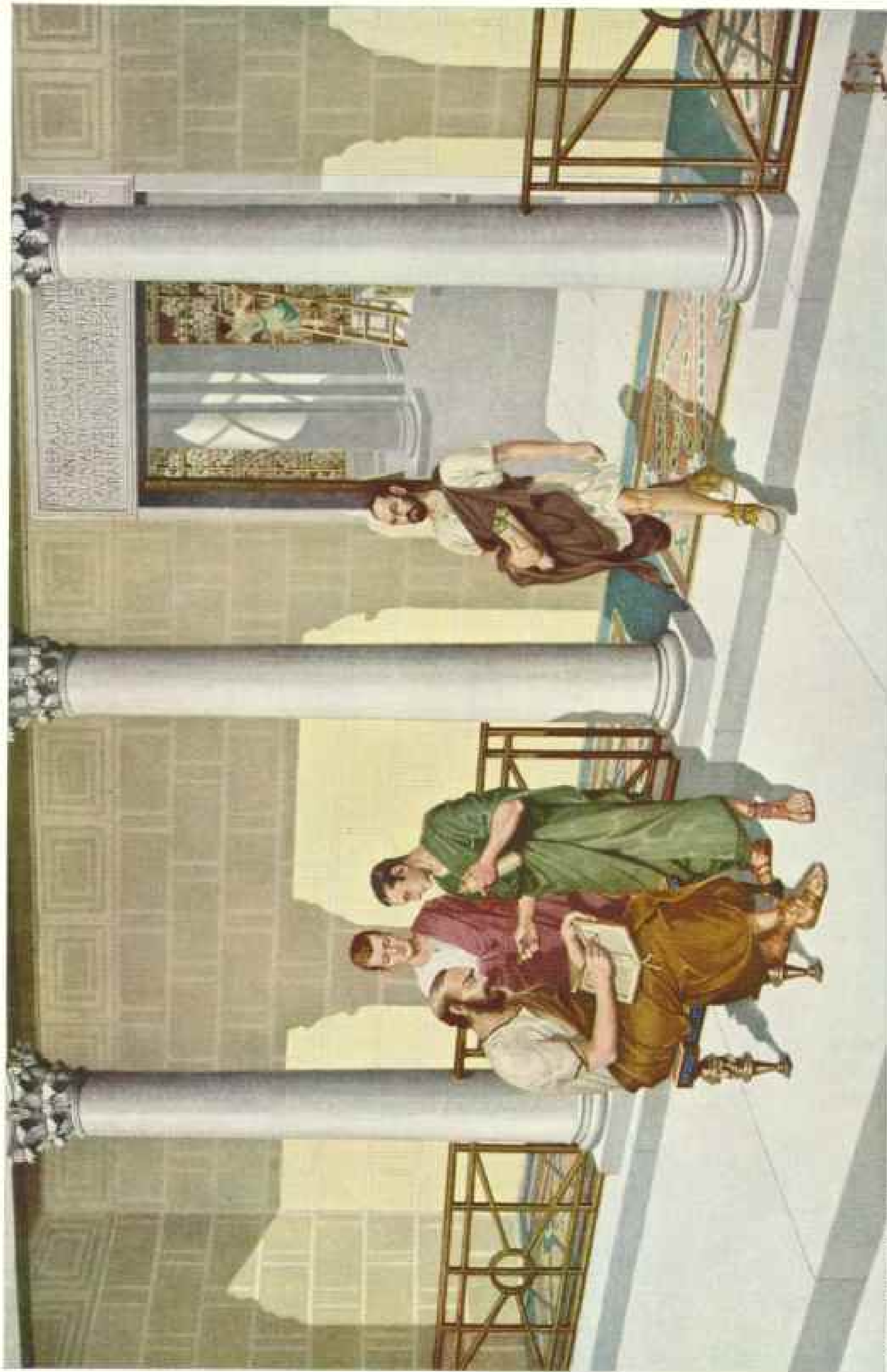


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Painting by H. M. Hermit

“Wherefore You Ought to Maintain and Preserve That Public Inheritance of the Law, Derived from Your Ancestors, with No Less Care than You Do Your Own Personal Property and Possessions”—Cicero, *Pro Caccina*





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Painting by D. M. Hervey

**"Now the Reader Has Had His Fill, and Even the Scribe Himself Says, 'Enough Now, Enough, Little Book!'—Martial"**

## The Library in Timgad

THE PUBLIC library with its reading room, where books from the stacks could be consulted, was to be found not only in long cultured Greek cities and in Rome but even in remote towns of North Africa and Gaul. Probably the shelves of a library such as that of Thamugadi (Timgad), in North Africa, held works in Greek as well as in Latin. There is evidence, too, that the books could be borrowed and taken home. At some of the libraries in Rome borrowing of books is definitely known to have been permitted.

Philanthropists of ancient times sometimes presented libraries to their native towns. At Timgad a large block of marble, probably once set as the lintel above the main doorway, recorded in the elegant letters of the Latin monumental script the name of the donor by whose last will and testament the building was erected.

Written long before Europe knew mechanical printing and modern papermaking, the "books" were not bound volumes, but manuscripts on sheets of a material made by pressing and pounding together crisscross thin slices of the pith of a sedge called papyrus. The remarkable thing about papyrus, whence the word *paper*, was that it could last for 2,000 years in a desert climate.

Actually it was rare for both sides of a papyrus sheet to be used, the blank reverse being left comparatively rough and only the side intended for use being scraped and rubbed to a surface smooth enough to take the ink. The ancient ink, whether made from vegetable matter or the jet-black juices of the cuttlefish, must have been of extraordinary quality, for letters written with it remain legible to this day. Pens

were made of reed and were trimmed with a penknife. To make a "volume," or roll, sheets were glued end to end into a strip many feet long. Obviously there was no limit save that of reasonable bulk to the length that could be put together thus. Livy's *History* filled 142 rolls.

To peruse a book, a reader used both hands, unrolling with the right to expose a convenient portion of a vertical column of text, and rolling up with the left the portion read. When the entire roll had been perused, it would have to be completely rewound in reverse before another reading.

The rolls were thrust into cylindrical cases, "capsules," from which a written label or ticket hung with the title of the volume. The capsules were stored on shelves. Greek and Latin books were stored separately, but otherwise we have little notion of how they were arranged and catalogued.

Memoranda, notes, and letters not intended to be preserved could be written on wax slates with a pointed metal scratcher, or stylus. A pair of such slates, hinged face to face, tied with string, with a lump of wax or clay daubed over the knot and the imprint of a seal ring pressed upon it, would make a letter which could be sent by messenger. The recipient could scrape the wax smooth and reply on the same slate.

Books made of sheets of vellum bound together into tomes were known in antiquity, but did not really become popular enough to challenge the papyrus rolls until the very end of imperial times. Medieval preference was overwhelmingly in favor of such books ("codices") and almost abandoned the use of papyrus until contact with China brought in paper made from mulberry bark and other materials.



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**"You Would Never Guess It Was Only an Actor Talking, but Think It an Actual Woman—Thais the Courtesan, a Matron, a Dorian Girl"—Juvenal**

Painting by H. M. Berges

## At the Theater

THE ROMANS reconditioned the Greek theater into an organized structure. Undismayed by the weight of superimposed arcades, they solved the problem of throwing a sloping vault from "pit" to "gallery" to carry the tiers of seats for the auditorium.

Having erected the high, arcaded support underneath the spectators' section, the architects naturally evolved the idea of carrying up the remaining elements of central stage building and wings to an equal height and of tying them all together into a single, homogeneous unit. They thus produced a playhouse, complete although still uncovered except by awnings, whereas the Greeks had been content with an outdoor, hillside gathering place.

The portion of the circle of the dancing floor which projected beyond the mouth of the *cavea*, or tiers of seats, was sliced off, and a deep stage platform of wood was stretched all the way across. The stage was raised some five feet above the orchestra and backed by an elaborately ornate stone, or brick and stucco, façading to mask the actors' building. Over this broad, deep stage was suspended a sloping wooden ceiling to protect it from the weather and to serve as a sounding board for the actors' voices.

Heavy wings flanked the stage and maintained the effect of loftiness. For balance in the general design, a colonnaded, vaulted gallery was often carried above and behind the topmost tier of the auditorium, moving at the same level as the ceiling hung over the stage or the eaves of the heavy, towerlike wings. The painting shows better than words the interesting unified composition which resulted.

Famous Greek plays, both tragic and comic, were presented on the Roman stage in direct translation or modified adaptation for Latin-speaking audiences. In Sicily and southernmost Italy, where Greek continued to be spoken and many of the townsfolk were Greek by descent, the traditions of the Greek stage were faithfully observed.

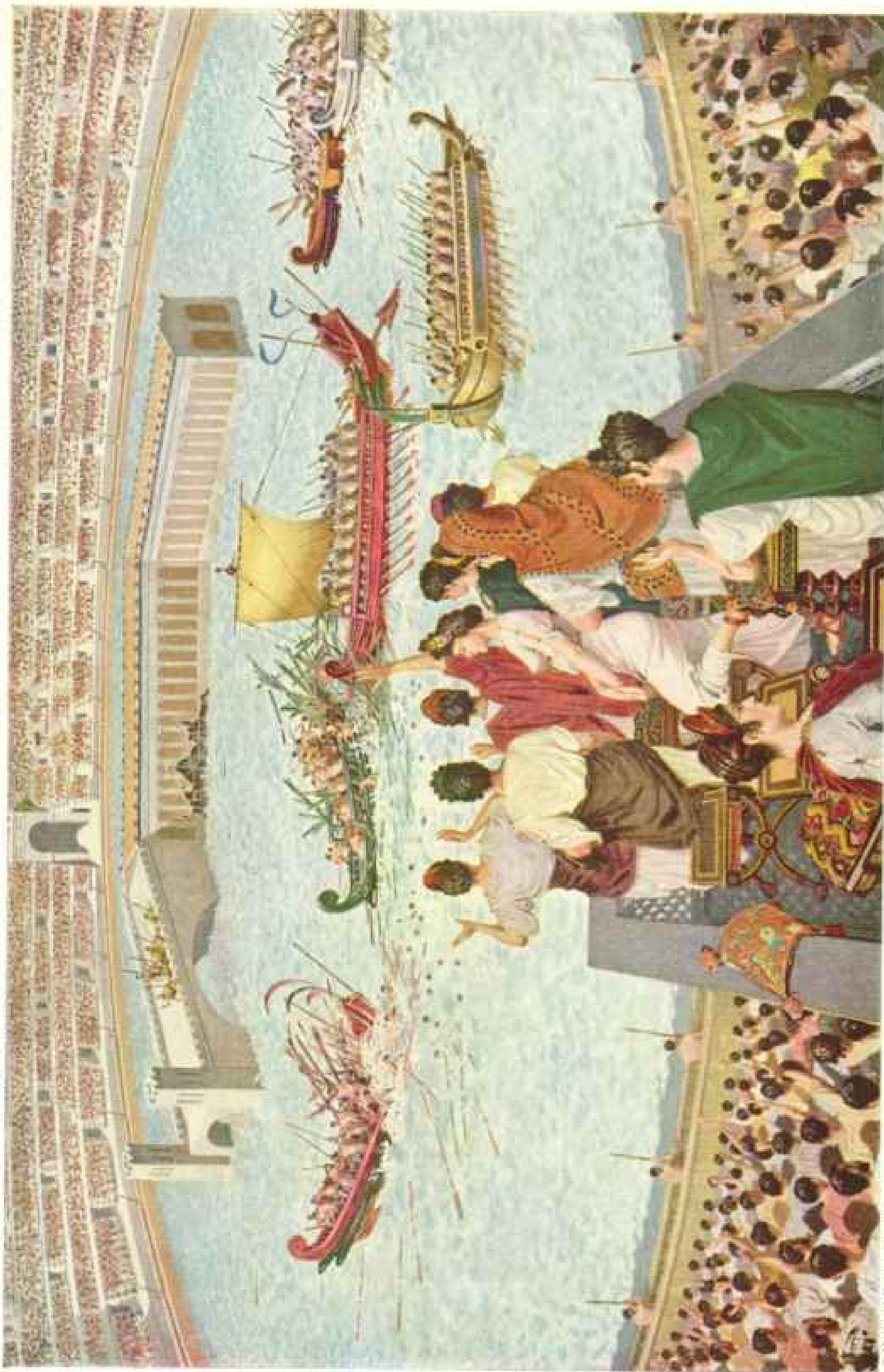
Farther north, as in Rome itself, native Italic elements were introduced. Thus, until about Cicero's time, no masks were worn by Roman actors; and in the native type of play, such as the mime, ordinary costume was worn in place of the fantastic Athenian "mask and wig" and stilted shoe.

The Roman actor's art is said to have reached its zenith in the first century B. C. during the last years of the Republic. Under the Empire, the popular preference for stage spectacles led to a steadily mounting emphasis on elaborateness, expense, and purely quantitative display. Therefore the drama as a fine art rapidly deteriorated.

Interest in tragedy after the old Greek tradition and in the classic comedy of Plautus and Terence died out almost completely as the Roman adulation of pageants and contests invaded the theater from the circus and the amphitheater. Pantomime akin to modern musical comedy alone managed to preserve sufficient popularity to survive.

The painting shows a revival performance of a classic Latin comedy in a theater in Sicily, active Mount Etna in the distance. The building stands on the site of an older Greek theater, which has been remodeled in the Roman manner. So good were the acoustics that even the spectators in the curving gallery at the top could hear every word.





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Painting by H. M. Herbet.

"If You Are a Spectator Lately Arrived from Afar, Let Not This Naval Warfare Deceive You with Its Fleet and Its Waters Like the Sea; Here Just a While Ago Was Dry Land"—Martial, *De Spectaculis*.

## Sea Battle in the Arena

THE COLOSSEUM was so called not because of its size but because of a colossal, gilded-bronze, "sun-god" statue of Nero which stood close beside it until long after the fall of Rome. Moved on rollers from Nero's House of Gold when that fantastically sumptuous palace was destroyed, the hundred-foot colossus probably was already in place for the inauguration of the gigantic stone and concrete amphitheater which Vespasian began and his successor Titus saw completed (page 587).

The ceremonies opening the amphitheater in A. D. 80 lasted for a hundred days of festivals, games, and displays to which flocked city dwellers, provincials, and foreigners. "What race is so barbarous or so remote that a spectator has come not thence to thy city, O Caesar!" exclaimed Martial, the Spaniard with a genius for flattering the right people and lampooning the wrong ones.

"Sygambrians have come with their hair in knots and Ethiopians with different curl," he continued, and declared that some of the crowd hailed also from Bulgaria, Russia, Egypt, and Arabia. His verses on the games filled a large papyrus roll.

Since the huge structure stood on low ground previously covered by a pleasure pond in Nero's gardens, its central area could be flooded easily and converted into a miniature sea for sham naval battles. These spectacles, in which heads were broken, blood flowed freely, and sailors were drowned in the churning water, offered novel interludes among the gladiatorial combats, the displays of bloodthirstiness in the slaughter of thousands of wild beasts, and the

pageants and processions which were the entertainment offered when the arena was left as dry ground.

The next emperor, Domitian, repeated the feat, but because of difficulties of installation presented the naval spectacles on artificial lakes dug especially for the purpose.

Julius Caesar seems to have been the first to devise and carry out such a project. During the games with which he celebrated his triumphs two years before he was assassinated, fleets of two-, three-, and four-banked vessels, manned by a couple of thousand rowers and bearing a thousand armed marines on their decks, fought and destroyed each other in the sight of the Roman holiday crowd.

The last such spectacle recorded was presented at the celebration of the thousandth year of Rome's existence, A. D. 248. It was staged in the flooded Colosseum arena.

Some fifty thousand onlookers could find sitting room in this greatest of ancient theaters. Since they surrounded the exhibition and looked down on it from all directions and angles, no coherent entertainment could be presented.

Particularly popular were dangerous struggles against wild beasts and dueling matches between trained fighters, one in full armor and the other equipped with only a casting net and a three-pronged fishing spear. Death instead of mere defeat was the usual outcome for the loser.

Mortal combats between different kinds of wild animals were loudly acclaimed. Among the human contestants more and more fanciful weapons and equipment were devised. Bassus perhaps outdid all rivals by strolling around the arena defending himself with a golden chamber pot.



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“Could You Come Here and See the Vegetables That I Raise with My Own Hands, You Would No More Talk to Me of Empire!”—  
Diocletian

## Diocletian's Palace at Spalato

BY THE TIME of Septimius Severus, early in the third century of our era, the entire Palatine was covered with a maze of buildings for the Emperor's public and private use.

But at length there ruled an emperor who, after tasting its splendors, decided not to live on the Palatine or even in Rome.

Below the gray limestone mountains of his native Dalmatian coastland, Diocletian tried to forget the cares and fatigue of having been the ruler of the world for 20 years. A soldier of extremely humble origin, he was close to his fortieth birthday when his soldiers proclaimed him emperor and elevated him into the supreme power over the body of the commander of the Praetorian Guard he had killed with his own hands. That was in A. D. 284.

Soon Diocletian had reorganized the entire system of government for the vast Roman Empire by dividing it into four regions and putting each under its own ruler, installed in a separate capital city. The Emperor himself still kept the ultimate authority, which he strengthened, outwardly at least, by introducing the ceremonials of the Orient and enthroning himself like a god aloof from the eyes of the people.

Not since the mad Caligula had a Roman emperor insisted so strongly on his own divinity while still alive. This policy in Diocletian, however, was calculated, not dementia praecox. The senate met only to ratify his orders, and all semblance of democracy vanished from the State.

Fortunately, Diocletian was an able administrator with an extreme sense of responsibility. On the basis of his lifelong military experience he expanded the armed forces

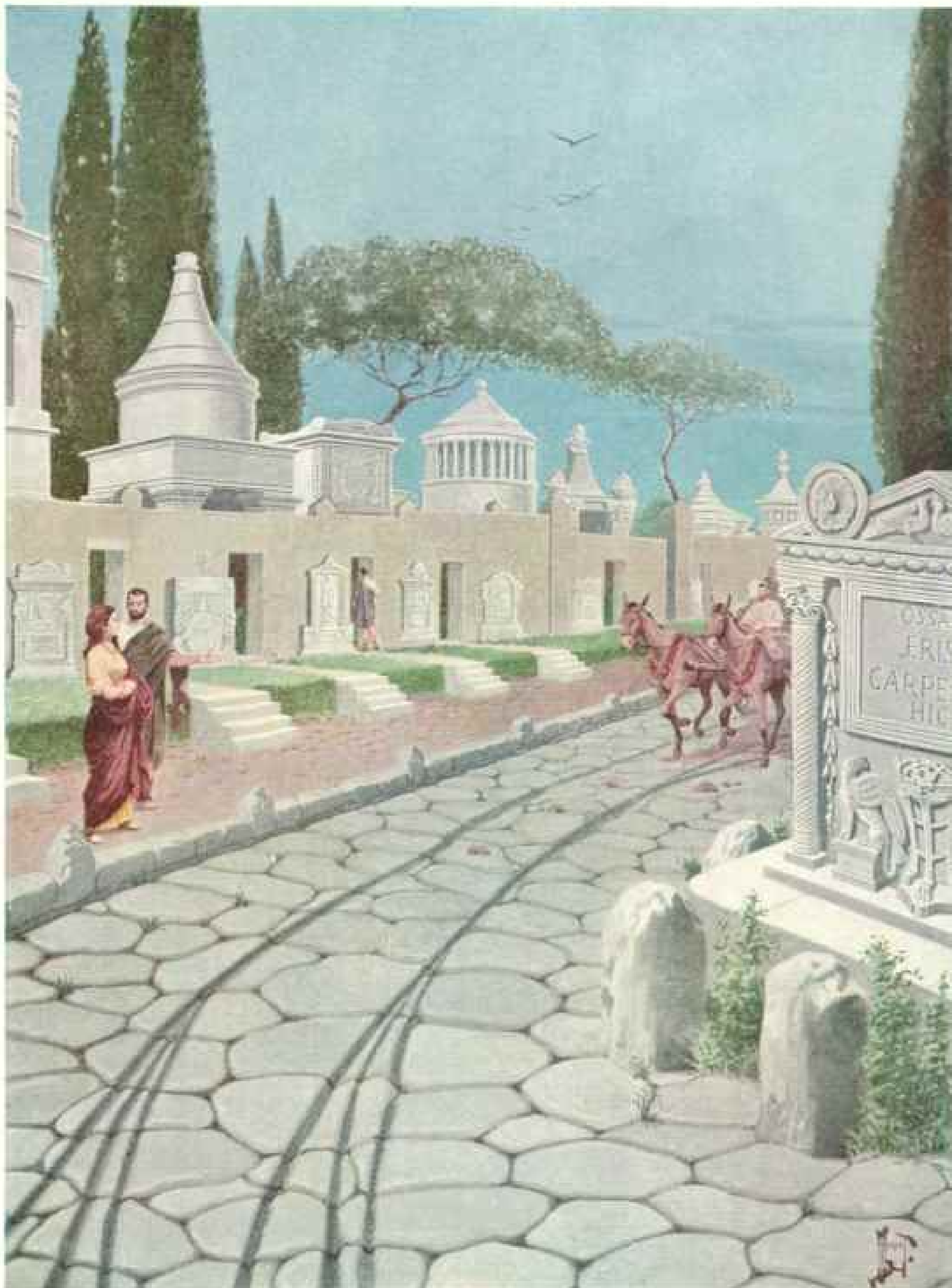
and reorganized the system of legionary occupation of the provinces. He changed the monetary basis for the coinage, suppressed trusts and monopolistic unions, contested graft and corruption, and in A. D. 301 fought a threat of inflation by proclaiming an elaborate schedule of ceiling prices on food and daily essentials as well as on wages.

Worn out with unremitting effort, he voluntarily retired before his sixtieth birthday to a quiet life in his native Dalmatian land, still possessed of sufficient wealth and authority to dwell in kingly fashion in a huge fortified palace which his Syrian architect built for him at the edge of the Adriatic. There he lived perhaps for eight, perhaps for eleven years, and there he died and was buried in the crypt of a temple within his palace.

His great scheme for combating inflation with ceiling prices had already collapsed, having proved a failure because, economists say, it cut too crudely across the workings of the normal forces of supply and demand. His wonderful palace on the Adriatic still stands.

Its plan, like that of a fortified Roman military encampment, was roughly a seven-acre square subdivided into four smaller squares by a pair of principal avenues running from the mid points of the four sides and intersecting at the exact center of the area. Of the four gates, named in Oriental manner after the four elements—gold, silver, copper, and iron—the modern visitor to Yugoslavia's Split may still see the remains of three and may enter the oldest part of town through the best preserved, the Golden Gate (page 603). The temple tomb of Diocletian is the cathedral church of Split.





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Painting by H. M. Brown

"Funerals of Age and Youth Are Crowded Together; No One Escapes Relentless Proserpina"—  
Horace, *Odes*. "Death Should Even Be Looked Forward To if It Takes the Spirit Some  
Whither Where It Will Be Eternal"—Cicero, *De Senectute*

## Dusk on the Street of Tombs

NO HEAVY wagons or laden carts were allowed during daylight on the crowded, narrow streets of Rome. But after sundown the highways which led to the city gates from the surrounding country began to echo with the hoofs of mules and horses and the rumble of wheels as produce was brought in to feed the million inhabitants.

The living were fed with provisions brought in at night past the houses of the dead, which stretched on either side of the paved roads for many miles into the Campagna. The old Appian Way today still leads between the ruins and overgrown traces of almost innumerable ancient grave monuments.

Most ancient towns thus buried their dead at their gates, without setting aside hallowed ground comparable to our churchyard cemeteries, but merely invading the open fields to left and right of the roads. The natural desire to keep kinsmen and families together and to bar intruders led to the erection of walled enclosures.

Often, burial societies were organized with like intent, ensuring an undisturbed resting place to all subscribing members. Where cremation was in favor, a wall niche in an underground chamber would suffice for each; where entombment was demanded and the beneficiaries were numerous, their needs, expanding with time, ultimately produced the miles of subterranean passages and rooms called catacombs.

Above ground, whether for sarcophagus or urn, engraved tablets and carved markers would preserve the identity of the family or clan or corporation, or on occasion the individual deceased. The arts of architecture,

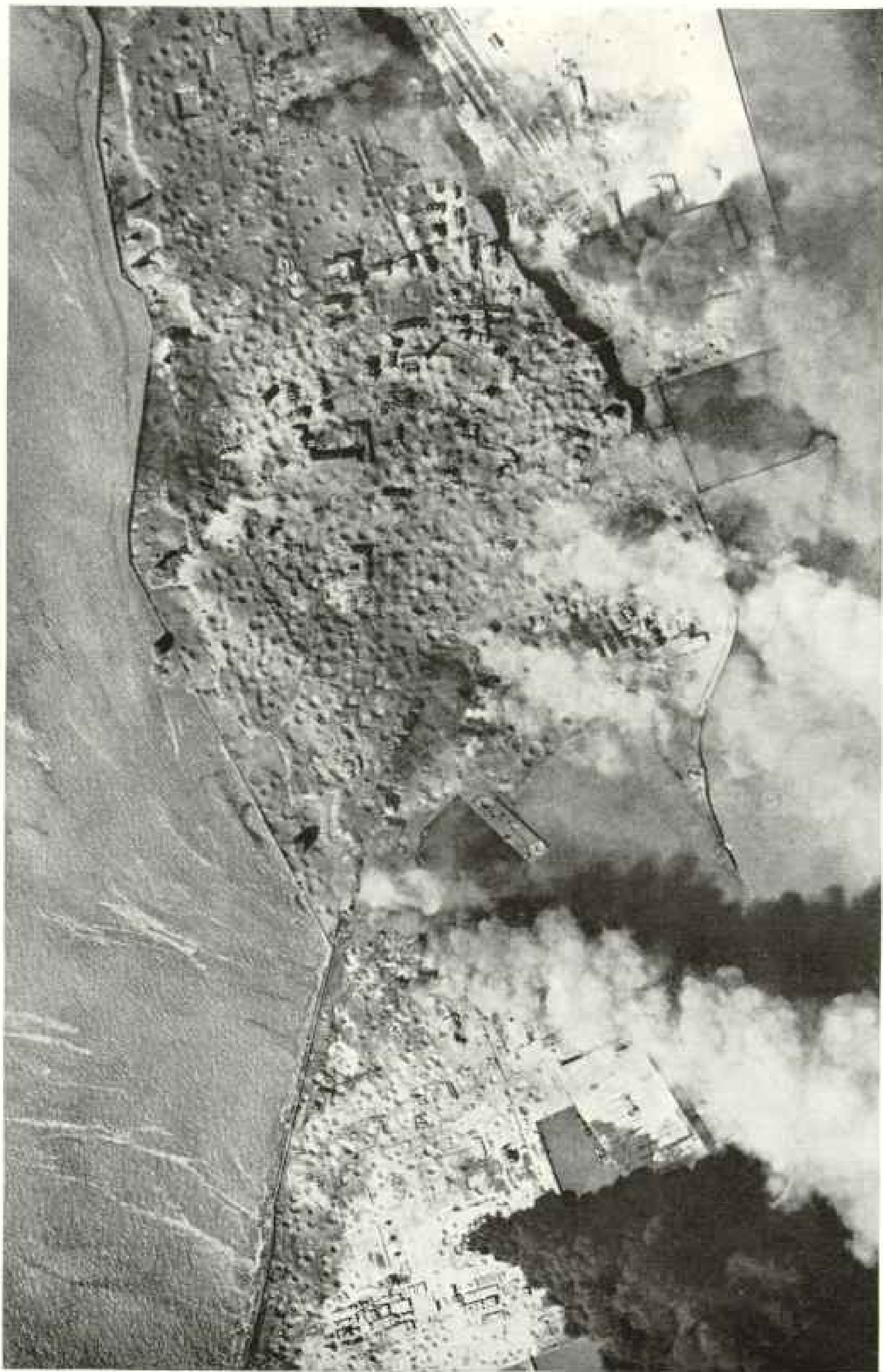
sculpture, and painting were all employed to make important plots more memorable to mourning relative or casual passer-by.

A miniature colonnaded mausoleum might alternate with a tall shaft carrying a marble vase, to be followed by some elaborate storied structure, according to the ambitions of the family head and the competence of his architect. Even where the detail was coarse and the execution poor, the cumulative effect of such a succession of monuments could not fail to be impressive, especially when the slender, almost black spires of the cypresses and the greener, spreading umbrellas of the pines added their somber note of movement or repose.

At El Djem in Tunisia still stand the arcades of the fifth largest amphitheater ever built by the Romans. It once accommodated 30,000 spectators. Today the once-irrigated and highly productive countryside about its site is all but empty arid waste. The ruins, like the tombs along the Appian Way and the Latin Way on the approaches to Rome, bear witness to departed glory.

The Roman world of antiquity has passed away. But though outwardly it has disappeared or lies in ruins, many of its intangible glories survive. Its striving for a reasonable life ruled by law and order, its organized grouping of towns and cities into self-administered states, its basic belief in individual human dignity and in equality under secure government—all these have come down as a precious legacy to modern times.

Our letters are Roman; our speech is nearly a third Latin; the very fundamentals of our science and learning are those which Greece began and Rome preserved and transmitted.



British 070344

**Smoke Rises from Big Fires as Helgoland Crumbles Under the Impact of Bombs from 1,000 RAF Planes**

British flyers delivered this all-out blow to Germany's North Sea rampart in April, 1945. Bombed the same day was the airfield on nearby Düne Island, once a bathing resort. To destroy Helgoland's military potential forever, Royal Navy engineers using dynamite took up where the RAF left off (page 636).

# Demolishing Germany's North Sea Ramparts

BY STUART E. JONES

ONCE again destiny has caught up with Helgoland—destiny in the shape of a Great Britain, backed by her United Nations partners, determined to end forever the menace of Germany's powerful Gibraltar of the North Sea.

Ripped and torn by thousands of tons of high explosives set off by Royal Navy engineers this past summer, Helgoland has reverted to the status of a peaceful island, useful only as a fishing center and bird sanctuary.

Heaps of broken masonry and twisted metal now mark the spot where, in two world wars, Germany maintained a naval base and other paraphernalia that made Helgoland a menacing weapon aimed straight at England.

Americans, too, had a part in the destruction of Helgoland's fortifications, although the island, part of the Province of Schleswig-Holstein, lies within the British occupation zone.

For three months before the demolition program began, Royal Air Force Lancasters and United States Army Air Forces B-29s practiced their new techniques by dropping 22,000-pound deep-penetration bombs upon the thick concrete submarine pens.

Many returning Helgolanders will find their homes in ruins, although authorities have spared as many as possible.

In April, 1946, Helgolanders petitioned the British occupation authorities to be readmitted into the British realm. The islanders, 250 of whom claimed birth under the British flag, said that if that were impossible, they wanted to be annexed to Denmark. A similar plea, made after World War I, came to naught.

## The Geography of Helgoland

Germany's former North Sea rampart is a flat-topped, roughly triangular chunk of red sandstone rising about 200 feet above the water at its highest point. Its steep cliffs give it the appearance of having been dropped by a gigantic but misshapen cookie cutter.

About a mile long and less than a half-mile wide, Helgoland was once perhaps five times that size, as indicated by surrounding reefs. For centuries the waves gnawed relentlessly at the island.

Lying 30 miles off the northwest German coast, Helgoland served as a defensive outpost for the ports of Hamburg, Bremen, and Cuxhaven, and the Kiel Canal. From it German ships could command the mouths of the Weser, Jade, Elbe, and Eider Rivers.

Had it not been for its transfer in a trade

made half a century ago, the course of history might have been different.

During the Napoleonic Wars the British had seized Helgoland as a base for blockade running and had obtained its formal cession from Denmark in 1814.

With the rise of Prussia and the German Empire, little Helgoland began to loom big internationally. Bismarck wanted it to guard his coast, particularly his pet project, the Kiel Canal, through the narrow Danish province of Holstein.

Meanwhile, German and British interests were discussing the partition of Africa. By terms agreed to July 1, 1890, England assented to organization of German East Africa, and Germany agreed to Great Britain's protectorate over the island of Zanzibar. The incomparably smaller island of Helgoland was delivered to Germany.

## Importance of a "Trouser Button"

Criticizing the transaction, Bismarck declared that Germany had traded "a whole suit of clothes for a single trouser button."

Germany proceeded to make the most of her button. The island shores were faced with granite against the ravages of the sea (Plate IV). Heavy guns were emplaced on its flat top and along its steep sides. Millions of tons of sand were brought from the Elbe estuary to make a naval harbor.

The first test of Helgoland's defensive power came on August 28, 1914, with unhappy results for Germany. A fleet of light British vessels raided close to the island's shores and enticed German cruisers into the arms of the British battle cruiser squadron. The Germans lost three cruisers and suffered 1,242 casualties, while the Royal Navy counted only 75 casualties without the loss of a ship.

Under the Treaty of Versailles, signed in 1919, the Allies undertook the first pulling of Helgoland's teeth. All fortifications and military harbors on the island, and on the neighboring sandy islet of Düne, were destroyed by German labor at German expense under the supervision of the Allies.

The Treaty also provided: "These fortifications . . . shall not be reconstructed, nor shall any similar works be constructed in future."

Germany's few years of uneasy peace under the Weimar Republic saw Helgoland relegated to the role of fishery center and summer resort. Periodically the island's people, grumbling at



their lack of support from the home government, made efforts to have their little land placed under British rule again.

Rumors of refortification became prevalent after Adolf Hitler came to power. In 1936 non-Germans attempting to visit the island were confronted by "Verboten" signs; later, even Germans, unless they were under 15 years of age, were excluded.

By the time Hitler was ready to strike at neighbor nations, Helgoland was a fortress stronger than it had been during World War I. Its rebuilt naval base included pens for U-boats and torpedo boats, hidden under many feet of concrete impervious to the heaviest bombs then known.

Atop the sandstone cliffs and in niches facing the sea were heavy coastal batteries and anti-aircraft guns. Helgoland's radar and sound-detection devices picked up approaching Allied bomber fleets and relayed the alarm to inland German industrial centers.

For all the ingenuity that Germany displayed in fortifying Helgoland, Allied air power wrought such havoc there that Britain's postwar demolition program seemed an anticlimax. The island was hit repeatedly, by day and by night, and not once did its guns turn the attackers back.

A 1,000-plane RAF raid less than a month before V-E Day made the island look "like a stale cake crumbling under a knife." But the U-boat pens were intact under their thick concrete (page 634).

When victorious British forces stepped ashore amid the rubble in May, 1945, they were met by 4,000 thoroughly beaten German troops. They also found a few civilians, most others having been evacuated to the Cuxhaven area on the mainland because of the heavy air attacks.

#### Blasting Timed to Save the Birds

When Britain's demolition program became known, many persons feared that it would deprive migratory birds of a resting place. One group of bird lovers even appealed to the United Nations. However, their fears were without basis: the British selected a time when blasting operations would be least likely to disturb the birds.

Helgoland has always been a bird paradise. In peacetime years some 400 species have been identified in the island's observation station, where the birds were banded and freed. Thousands of guillemots nest in May and June on the northern tip of the island.

It is possible that the British will continue the work of bird observation here; also, pleas have been made to the United Nations to

internationalize Helgoland as a biological station.

Within easy reach by water from Hamburg, Bremen, and Baltic cities, Helgoland in happier times was a small-scale German Coney Island. Before World War I, and briefly between that conflict and the one just concluded, 30,000 persons stayed at its hotels each season. Many more thousands came for week ends and shorter stays. The permanent population numbered about 2,800.

Chief centers of population on the island were the twin towns of Unterland and Oberland, the first situated on a strip of sand at the foot of the cliffs, the second on the flat plateau. The two were joined by an elevator and long flights of steps (Plate VI).

Houses were built so close together that many had no view of the sea. They huddled as if for protection from the wild winds of the North Sea winter.

Less than a mile from the rock is gourd-shaped Düne Island. It was once a part of Helgoland proper, but in 1720 a storm forced a passage through the narrow neck that joined the two. On Düne's white sands the bathers congregated (Plate III). This islet, too, was doomed under Britain's program; for the Germans had built a fighter base there.

#### Fishing in Peacetime

Most Helgolanders earned their living in peacetime by fishing, mainly for lobsters, which found their way to the dinner tables of central Europe (Plate I). Other islanders, familiar with the vagaries of wind and current in the North Sea approaches to German ports, served as pilots. Aside from these pursuits, the principal occupation was that of catering to holidaying surf bathers.

Peacetime visitors approaching Helgoland on the Hamburg steamer saw what at first appeared to be a big ship on the horizon. Then the red of the sandstone rocks, the white of the sandy stretches, and the green of the upland pastures revealed themselves in a striking array of colors which inspired its flag:

Green is the land,  
Red is the rock,  
White is the sand—  
That is the flag of Helgoland.

Although German is the official language, the people of Helgoland and the other German islands have clung to a Frisian dialect.

On Helgoland in 1841 a visiting German wrote "Deutschland, Deutschland über Alles," which became a martial song of would-be world supremacy. Today the ruin of retribution mocks those who tried to place "Germany over all."

## Demolishing Germany's North Sea Ramparts



© National Geographic Society

Photos by Wilhelm Tobien

### Before the War, Hand-fed Helgoland Lobsters Supplied Berlin Tables

The big crustaceans are found off the cliffs of this small North Sea island. Fishermen kept the lobsters in crates beneath the surface of the sea and fed them daily. In 1935 Wilhelm Tobien made for the NATIONAL GEOGRAPHIC MAGAZINE this series of natural-color photographs of the North Frisian Islands. The pictures are unique. Soon after they were made, Germany began to re-fortify Helgoland and cameramen were barred. Now the German islands are in the British occupation zone. The fortifications are being demolished.

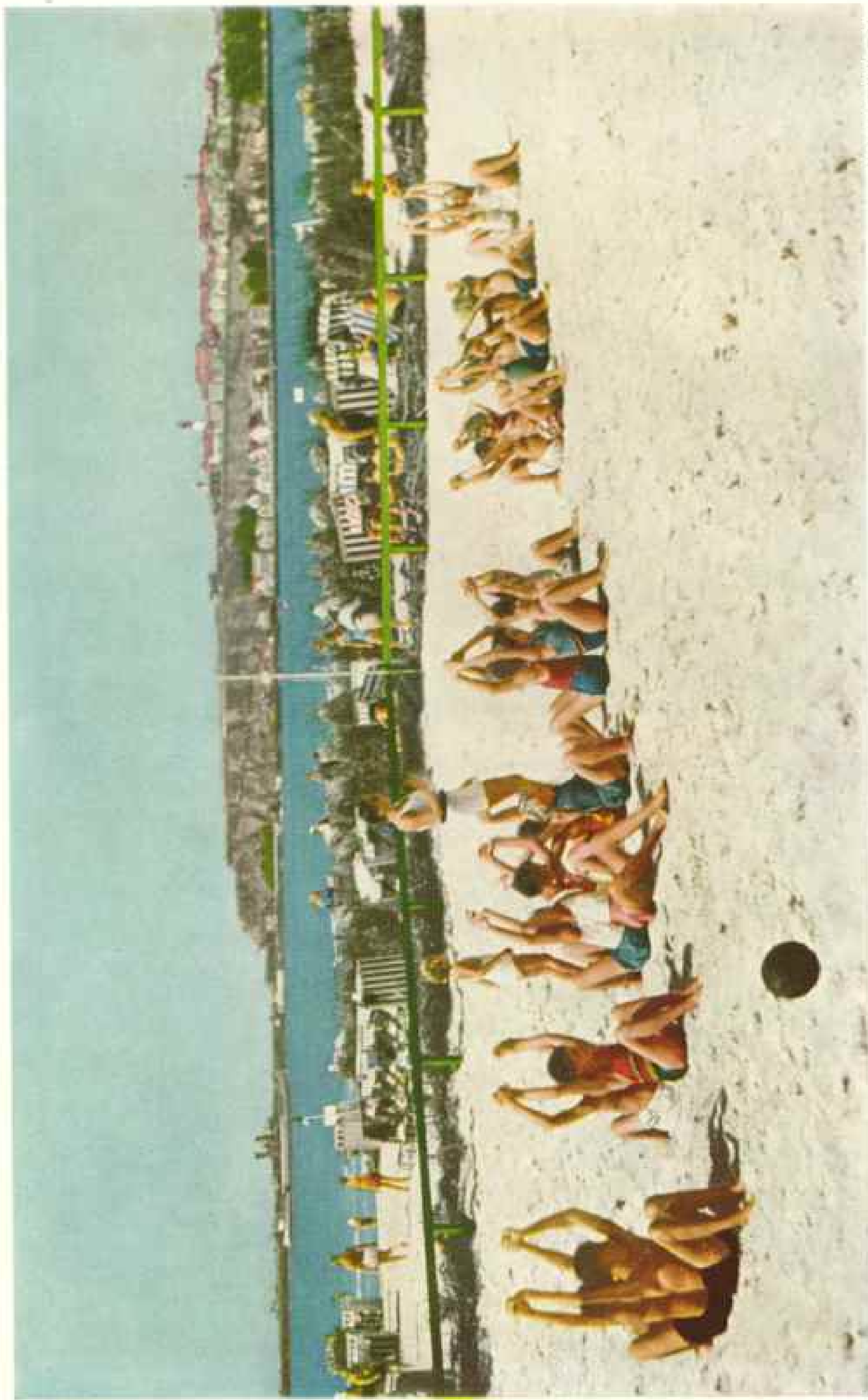


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### Such Helgolanders as These Now Are Among Europe's Displaced Millions

Sandstone cliffs, paved with brick to combat erosion, became a honeycomb of tunnels and gun emplacements during World War II. Civilians were removed to the mainland. Now Britain is demilitarizing the island under terms reached at Potsdam. Heligoland, less than a square mile in area, once belonged to Denmark. More than a century ago England took possession. In 1890 the British ceded it to Germany in exchange for Zanzibar and other African territories.

Plan by Wilhelm Tübner



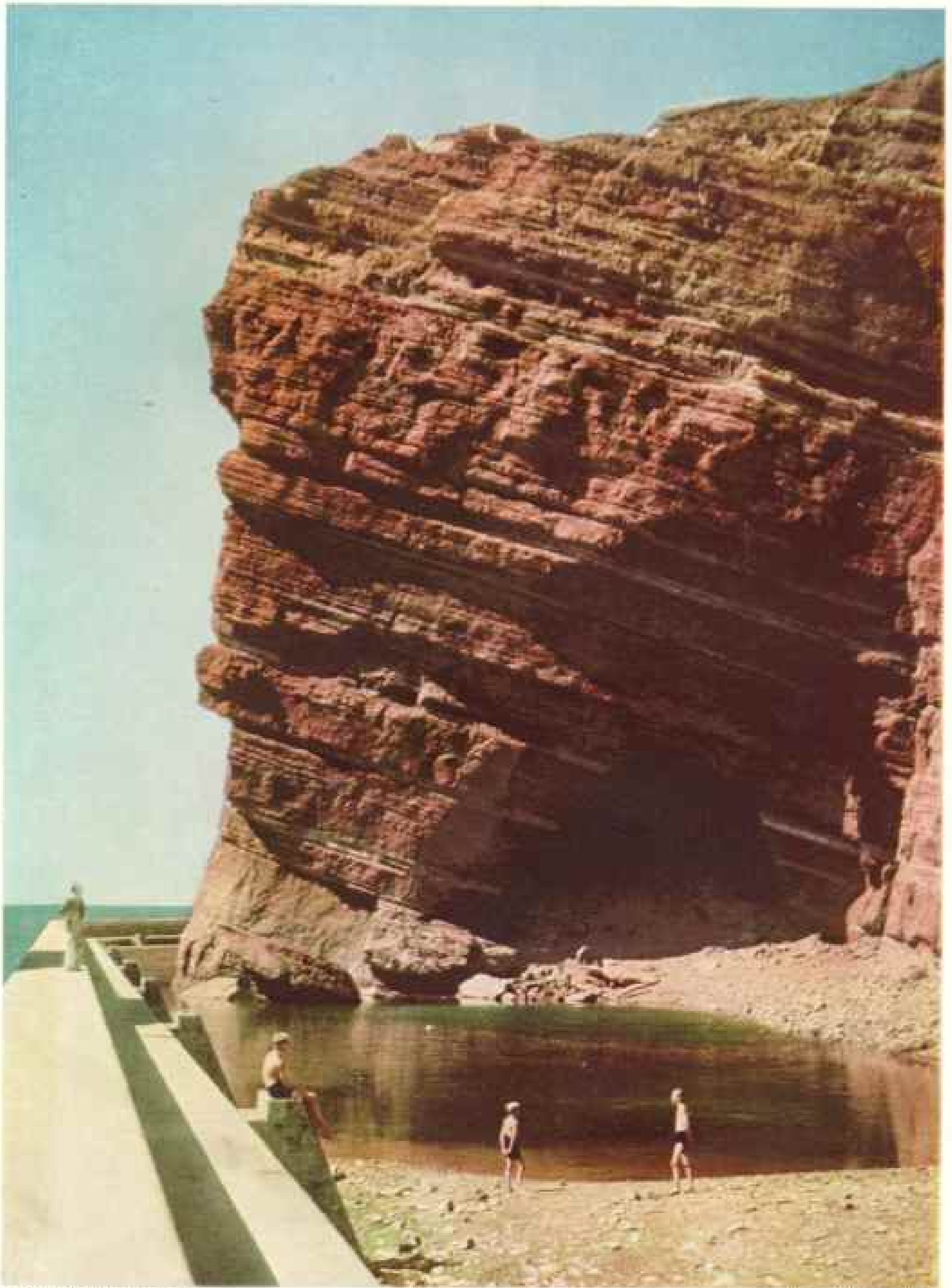
© National Geographic Society

Photo by Wilhelm Fabian

### Carefree Play on the Beach Belongs to Helgoland's Happier Past

Thousands of summer visitors from Germany and Baltic countries once came annually to enjoy surf bathing on this sandy stretch, Düne Island, just off the shore (Plate VI). Luftwaffe fighters were based on Düne during the war. The town (background) is divided into two parts—the Oberland, atop the cliffs, and the Unterland, along the narrow shore on the east side of the island. The British, in demolishing Helgoland's fortifications, planned to suspend operations during spring and autumn bird migrations. Germany's famous national hymn, "Deutschland, Deutschland über Alles," was written on Helgoland in 1841.





© National Geographic Society

Photay by Wilhelm Tollon

### Thick Granite Walls Kept Helgoland from Crumbling into the Sea

Caves and grottoes indent the cliffs of the west coast, pounded by heavy waves. Once, geologists believe, the Frisian Islands were part of the European mainland. When they were cut off, Helgoland was five times as large as it is today. Before Germany owned it, shrinkage amounted to about half an acre every ten years. By ringing the island with granite imported from Denmark's island of Bornholm, the shrinkage was greatly reduced. Later the Germans also girdled the island with giant iron chains to help hold it together.

## Demolishing Germany's North Sea Ramparts



### Bathers Visiting Sylt Island Today Would Find Bomb Craters

British aviators blasted this air and mine-laying base. It is ten miles from the German mainland and about 500 miles from the English coast. Local tradition says Hengist, 5th-century invader of Britain, left from Sylt.



© National Geographic Society

Architectural Lenses by Wilhelm Pöhl

### Islanders Cling to Peaceful Ways on Föhr, Off Schleswig-Holstein

On this 30-square-mile island, fisherfolk live in such cottages as this. Most fertile of the North Frisian Islands, Föhr in peacetime was a popular summer resort (Plate VII).



© National Geographic Society

### Above These Housetops of Helgoland, British and German Planes Met in Battle

Illustration furnished by William Topley

Roofs of the Unterland (Plate III), the harbor, and Düne Island beyond are seen from atop the heights. Once a big white chalk cliff stood between Helgoland and Düne Island, forming a snug harbor. More than two centuries ago a violent storm swept away the cliff. Since then, Düne has been slowly disintegrating. To make Helgoland the "Gibraltar of the North Sea," the Germans dumped millions of tons of sand from the Elbe estuary into an area surrounded by retaining walls. The naval base, guarding the Elbe and Weser approaches to Hamburg and Bremen, was likened to "a dagger pointing at England."



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Printed by Wilhelm Tölgem

### Costumes of Föhr's Maidens. Once Charmed Summer Visitors

The war halted resort business on the small island. Finery has been put away until vacationists may return once more. All the North Frisian Islands, with the exception of a few which belong to Denmark, are part of the German Province of Schleswig-Holstein (Plate V).

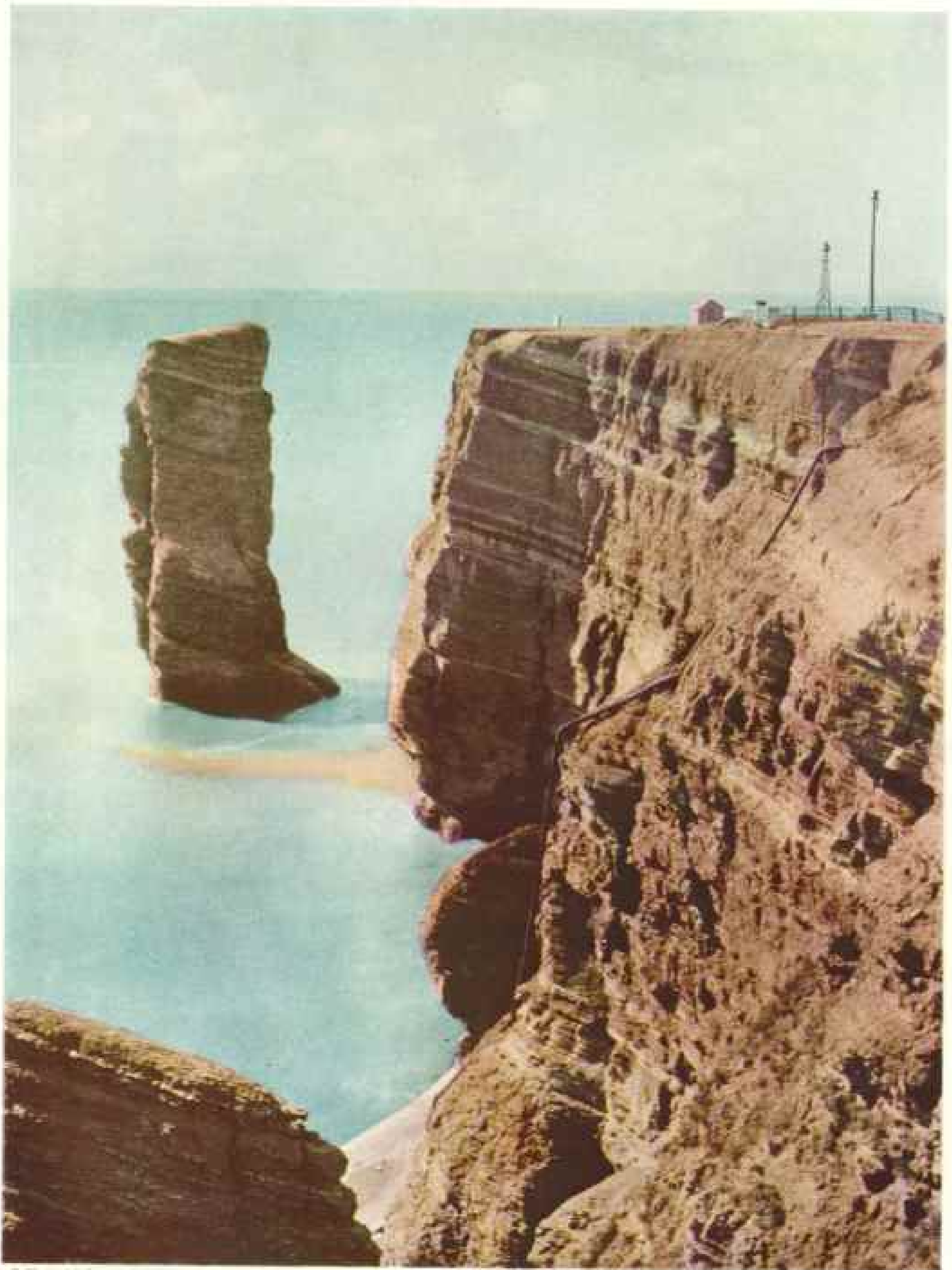


Printed by Wilhelm Tölgem

### Only Another Helgolander Can Follow Their Gossip

German is the official language, but these young folks speak a Frisian dialect of their own, preserved for generations. Even residents of near-by islands cannot understand them readily. Before the war, about 2,800 Frisians lived here. All were evacuated as Allied air attacks became more intense.





© National Geographic Society

Autochrome Limited by Wilhelm Tölgner

### Pounding Seas Cut a Sentinel Rock Away from Helgoland

Only a century ago, the restless waves isolated this solitary pillar at the northern tip of the island. First, the water cut two deep caves in the mainland cliff and later pierced a tunnel to connect them. As the sea enlarged the tunnel, the roof collapsed and the "sentinel" stood alone. Later a breakwater was built here. Near by, in Helgoland Bight, the first serious naval engagement of World War I took place, on August 28, 1914, between British light cruisers and a German squadron. In World War II, radar equipment on the island often detected Allied bombers headed for German cities.

# More Water for California's Great Central Valley

BY FREDERICK SIMPICH

**W**ATER supply sets a limit to human activity. This truth is plain in the Central Valley of California.

Pacific Ocean clouds each year roll east across California to dump nearly 275 billion tons of rain and snow on the Sierra Nevada. Later, as water, some of this flows back down to irrigate that valley. But two-thirds of it escapes, running west into the Pacific through Golden Gate.

Hence, prodigious as are this region's food crops, it still has much land not put to best use because its water resources are not put to their best use.

Till more of this runaway water is captured and put to work raising more food for a hungry world, these lands cannot exceed their present levels of crop yields. That is the theory on which Uncle Sam is busy out there now, on the biggest irrigation job in our history.

## Bigger than Valley of the Nile

Men often compare Central Valley with that of the Nile. They *are* alike, in some ways, except that this American valley is much bigger.

Hemmed in by mountains, its main basin is nearly 500 miles long and averages 120 miles wide. On its east flank rises the Sierra Nevada and on its west the Coast Ranges. These converge at Mount Shasta on the north and are joined by the Tehachapi Mountains on the south, thus enclosing this fabulously fertile area (map, page 648).

The rich, flat floor of the big basin itself is an alluvial valley, fed by two main rivers. Rising near Mount Shasta, the Sacramento flows south; the San Joaquin, rising more than 11,000 feet up, north of Mount Whitney, flows into the southern section of the valley and turns northwest. Joining in the Sacramento-San Joaquin delta (page 652), these two rivers find a common outlet to the ocean through San Francisco Bay.

Larger in area than England, this valley shelters about 1,252,000 people. It has some 83 sizable cities and towns, including Sacramento, Fresno, Stockton, Bakersfield, Lodi, Modesto, Merced, and Chico.

Despite floods and regional water famines, it already yields half of the world's supply of dried fruits. Into Stockton, for example, came one solid 55-car Santa Fe train of Fresno

raisins, to be loaded on ships for London. Most of the State's dried fruit originates here, and the 1945 crop would have loaded 54 Liberty ships.

## Here Grow 220 Kinds of Crops

On some 59,000 farms this valley grows 220 different crops. It has about 2,000 factories, over half of which are engaged in processing these crops. California Packing Corporation alone, with its Del Monte brand, sells up to 111 million dollars' worth of food a year.

In this valley are more than 32,400 wells with electric water pumps for irrigating its fields.

With new water coming in now as work on the vast project advances, it should add another 1,000,000 acres to its cultivated gardens by 1960. In that year, statisticians figure, California's population may reach 12,000,000; thus many more thousands will find homes on these additional watered acres.

In the valley today are about 52,000 business enterprises, large and small, many based on the use of agricultural products. As crop acres multiply, new business employs still more wage earners.

Some 18,000 men may be steadily employed for the next 15 years in advancing the Central Valley Project itself.

But before talking about that giant job, with all its dams, canals, flood and navigation and power problems, let's see how the first Americans got here.

They didn't come originally to cut asparagus, can figs, or toss prunes about on this 18,000-square-mile dance-hall floor they now call their Central Valley. As gold seekers they crossed the Plains with ox teams years before California had dried a prune or heard the words "alligator pear."

## Spaniards Came Before Bunker Hill

Spaniards were here long before Bunker Hill. When Americans finally filtered in to trap furs and find gold the Dons had already given Spanish names to rivers and mountains; they had brought cattle and horses, but at first irrigated only small fields and orchards about their missions.

Trudging down the west slope of the Sierras, pioneer Americans saw the great valley mostly as a dry, empty plain except for green strips along the streams. That didn't



Staff Photographer J. Taylor Roberts

### Sheep Walk Across the 3-mile Yolo Causeway Which Carries a Highway over Lowlands Subject to Floods

When the Sacramento River reaches a certain high flood stage, part of its flow is diverted into these great natural sloughs in accordance with U. S. Army Engineers' flood-control plans. Large flocks of migrating waterfowl stop here to feed. Others go on to near-by wildfowl refuges.

worry them then; gold was too easy to find, and nuggets more exciting than figs or walnuts.

When gold fever cooled and hordes of gold seekers remained to be fed, many farsighted forty-niners started cattle ranching and the dry farming of wheat. In time California ranked among the top half-dozen States in wheat production, sending thousands of shiploads around Cape Horn to Liverpool and Europe. Lowell A. Richards came to operate a gigantic wheatfield, stretching almost across the whole big State.

But such soil mining couldn't last. Worn out and lacking water, wheatland yielded less and less. As cattle multiplied, ranchers had to irrigate also to grow grass. Those lucky enough to own pastures along the streams fared best. One cowman famous in valley history was Henry Miller, of the old Miller and Lux firm. With holdings variously esti-

mated between 1,000,000 and 3,000,000 acres, he was the largest landholder the State ever knew. Old cowboys have a saying, "You could drive a herd from the Oregon line down to the Mexican border and never be off his land."

Miller was also a pioneer in water controls; he built levees along the San Joaquin and a canal 35 miles long. Other farmers objected. Court battles raged, with now and then a gun fight over water rights.

Greatest of all early irrigation projects here was the San Joaquin and Kings River Canal, begun in 1871. Our whole Nation hailed it then as the biggest venture of its kind since the digging of the Erie Canal in New York State.

#### "Ten Acres and Independence"

Grapes, melons, fruits, vegetables—settlers found they grew amazingly in this new Garden of Eden. "Go west! Get a fruit ranch in



California State Chamber of Commerce

### Hindu, Arab, Armenian, Chinese, Mexican, Jap, and Filipino Workers Bring a Babel of Tongues to Central Valley's Truck Farms

That bearded, turbaned patriarch at the right might have stepped straight from *Arabian Nights*! From the flat, fertile Sacramento delta, where these men cut celery, trainloads of fresh vegetables are shipped in refrigerator cars to eastern markets. Now and then, in times of labor shortage, asparagus cutters have earned as much as \$40 a day! (Page 655.)

California. Ten acres and independence!" So read the railroad homeseeker advertisements. Rate wars in those old days raged between the Southern Pacific and the Santa Fe lines until, in one boom, you could buy a ticket from Kansas City to the Coast for \$10—and on one certain day of heated rivalry, for only \$1!

More canals were dug, more irrigation districts and private water companies formed, more acres plowed. In time there wasn't water enough to go around. Some lands had plenty, as they still do, while other regions were short. Lawsuits multiplied.

Finally the State said, "We've got to stop this fighting among ourselves and unite on one big valley-wide project, to get the most water and divide it fairly between big and little men."

So engineers and surveyors measured the

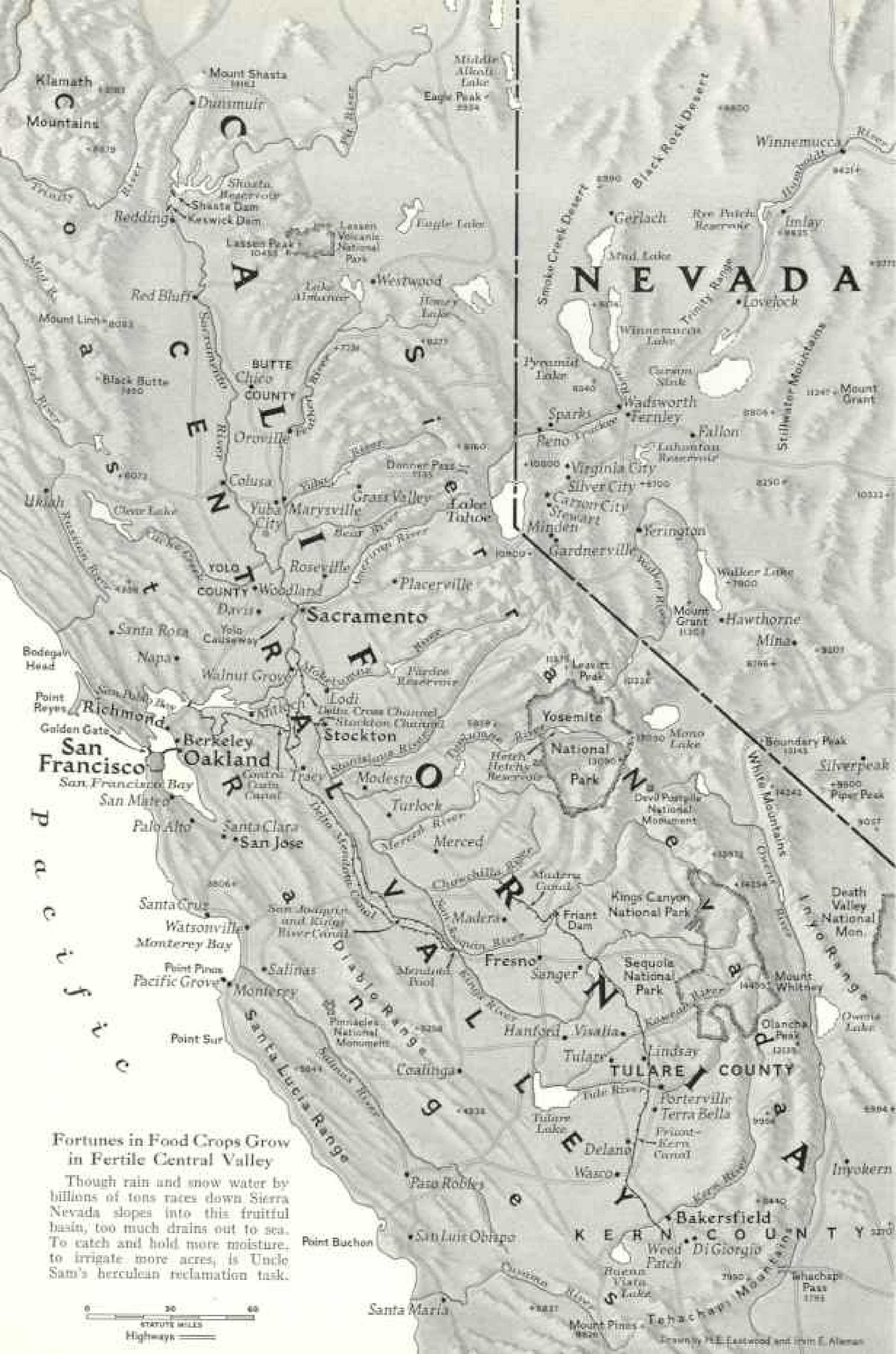
rivers, charted the hills, and mapped thousands of square miles. In time they evolved a giant picture, showing how best to round up, control, and divide all of the State's vast water resources. At last, on December 19, 1933, by State-wide vote the now-famous Central Valley Project was adopted.

For two years California tried to raise the millions needed for the job. It couldn't. Meantime, floods and drought ravaged the valley. Then Uncle Sam took over. On December 2, 1935, the U. S. Bureau of Reclamation, or "USBR," moved in, to begin the biggest of all its big irrigation jobs.

#### Railroad Moved for Shasta Dam

Two master keys to this Project are completed: Shasta Dam, on the upper Sacramento River, and Friant Dam, on the San Joaquin River, at the foothills of Mount Whitney.





**Fortunes in Food Crops Grow in Fertile Central Valley**

Though rain and snow water by billions of tons races down Sierra Nevada slopes into this fruitful basin, too much drains out to sea. To catch and hold more moisture, to irrigate more acres, is Uncle Sam's herculean reclamation task.



Drawn by H.E. Eastwood and Tom E. Allen

Shasta Dam was a spectacular undertaking, with stunts new in engineering (page 650). How the weary Pyramid builders would have marveled at that 10-mile-long belt conveyor that moved mountains of material for concrete mixing!

Even 31 miles of railroad were moved. For 65 years the Southern Pacific had run through the valley and the gorge where the dam now stands. To get it out of the way, men bored a tunnel for it under the site of the dam's foundation. For two years the trains used this great hole while Uncle Sam was building a new route for the Southern Pacific, which now runs east around Shasta Reservoir.

After the track was moved, they turned the whole Sacramento River into the former railroad tunnel to get *its* water out of the way while they built the dam! When the dam was done, they plugged up the tunnel.

So, centuries from now, when some future engineer is pecking about these hills, he may find that mysterious hole under the dam and wonder what we "ancients" dug it for!

#### One River Sends Water to Another

Most dramatic aspect of this giant job is that the waters of one river, the Sacramento, are to be pumped 200 feet up into a canal, carried far to the south, and then dumped into the San Joaquin at Mendota Pool. This is because Sacramento Valley has the most water, while San Joaquin Valley has the most good land but needs more water.

Another curious feature is the clever way engineers found to repel salt water, which seeped in from the sea to ruin vast areas of good farm land. At first men planned a big dam across the Sacramento delta to hold back this salt water. But after they'd finished Shasta Dam, with its big reservoir, they found they could shoot enough fresh water down the Sacramento to "push back" the invading sea.

At Terra Bella, now a ghost town, cameraman Joe Roberts and I saw what damage water shortages cause. Here are dead orchards, dried-up fields, empty village stores, and abandoned houses.

Looking at this ruin, I recalled a day in Babylon. From atop a wall of Nebuchadnezzar's palace—part of that banquet hall where long ago the Hand wrote *Mene, mene, tekel, upharsin*—I looked through binoculars out across the plains of Mesopotamia and its ancient sand-filled canals.

Beside me stood Sir William Willcocks, famous British engineer who helped build irrigation works on the Nile. "Once this was a waving sea of verdure from end to end, Herodotus wrote. . . . But look at it now.

That's what happens in irrigated lands when waters fail," said the Britisher.\*

No such ruin can come in our time to Central Valley, because Uncle Sam will not let these waters fail.

This many-sided project has features peculiar to it. Consider those 32,400 wells. Some, bored 60 years ago, found water within a few feet. But as more wells were bored and more water was pumped, the water table fell.

Today some once-shallow wells have had to be deepened as much as 400 feet. West of the San Joaquin a few wells are down 2,000 and 2,500 feet. These are costly depths to go for water.

Some water brought up was entrapped thousands of years ago. The rest is "new" water. It seeps into the ground after rains or from passing streams.

To restore or replenish this vanishing store of underground water and thus feed the wells is one result the USBR is attaining in its battle for better control of that rain and snow which Pacific clouds dump on the Sierra Nevada. This must be done, or there'll be more dead orchards and empty houses such as Roberts and I saw at Terra Bella.

South of Fresno are three rivers, the Kaweah, Tule, and Kern, which never reach the ocean. A fourth, the Kings, has a hard time getting some of its water there. All four drain into Tulare Lake sump. Once this was a big body of water, but it's drying up because the streams that fed it now give most of their water to wet the fields.

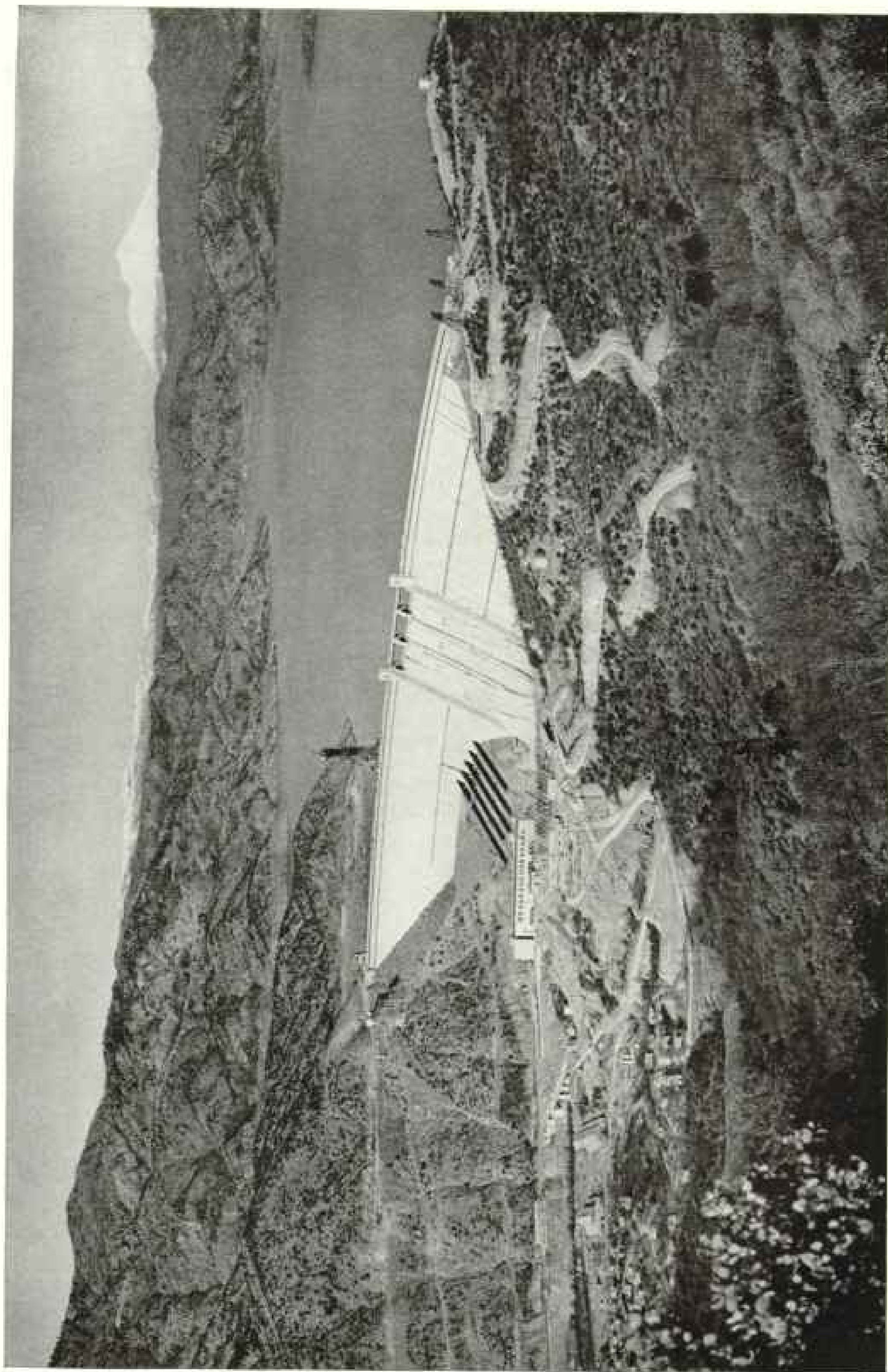
#### Moving Rain, Running Water Uphill!

Valley rainfall varies from 6 inches in the south to 23 inches in the north. Even this meager amount comes at the wrong time; in summer, when most needed, none at all falls. Hence, by canals, men "move the rain" from where it falls to where it doesn't. Two-thirds of the irrigable land lies in the San Joaquin Valley, but two-thirds of the rain and stream flow occurs in the Sacramento Valley.

That's why Shasta Dam is to send water 440 miles south. It will run down the Sacramento River and through the Delta Cross Channel to a point south of Stockton, where a big pump will lift it up 200 feet to the Delta-Mendota Canal. This canal leads 120 miles south and empties into the San Joaquin at Mendota Pool. This, workers say, "is making that river run uphill."

It does look like that, since the natural northern trend of the San Joaquin water is

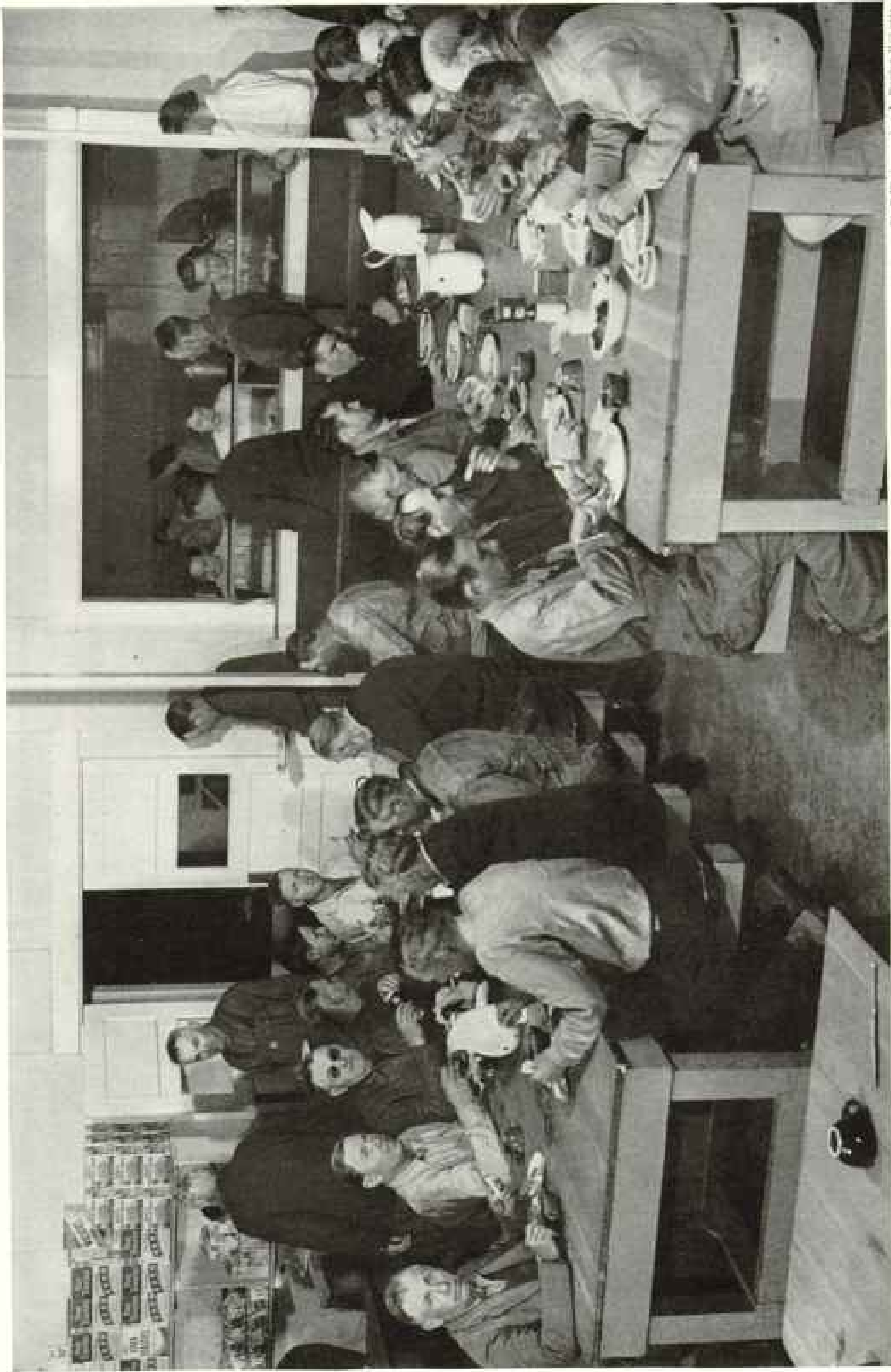
\* See "Change Comes to Bible Lands," by Frederick Simplic, NATIONAL GEOGRAPHIC MAGAZINE, December, 1938.



Don G. Fisher

**Shasta Dam, with Snow-capped Mount Shasta in Background, Impounds This Lake Whose Waters Play a Big Part in the Central Valley Project**

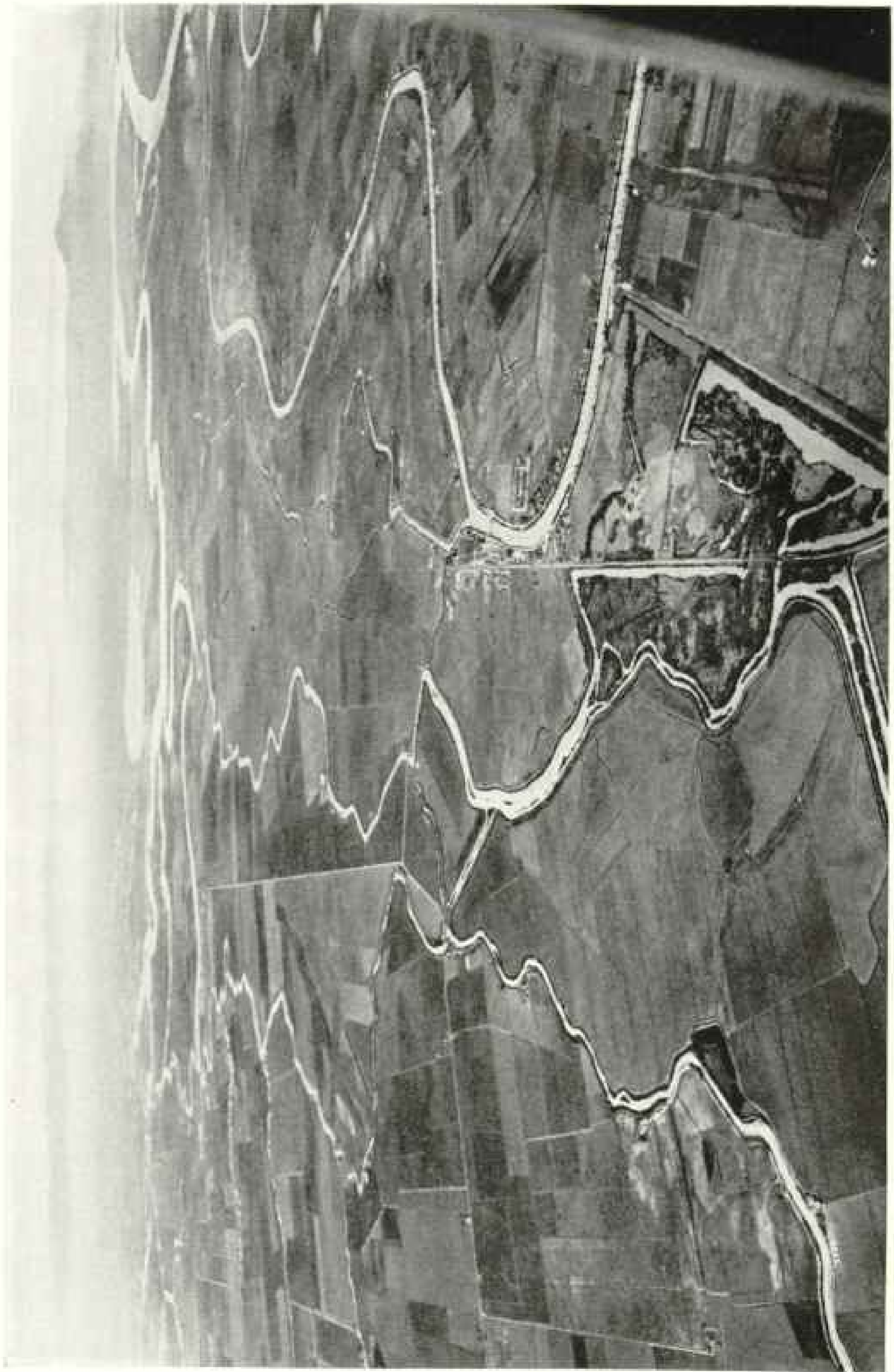
Set in the upper Sacramento River, the dam now partly controls flood conditions in that stream by regulating the escape of impounded waters. The big spillway is set in the center. At its left the five black pipes are penstocks whose swift streams strike the water wheels in the hydroelectric powerhouse (page 649).



Staff Photographer J. Barthel Horvath

**Most of Central Valley's 1,252,000 People Are Engaged, Directly or Otherwise, in the Production, Processing, and Marketing of Food Crops**  
Here bachelor farm workers on a Di Giorgio farm in Kern County enjoy lunch in a company-managed dining room. Some are immigrants; many are native-born Americans who moved here from Arkansas, Oklahoma, and other Midwest States. Wages are high, running up to \$40 a day for certain kinds of work (page 659).

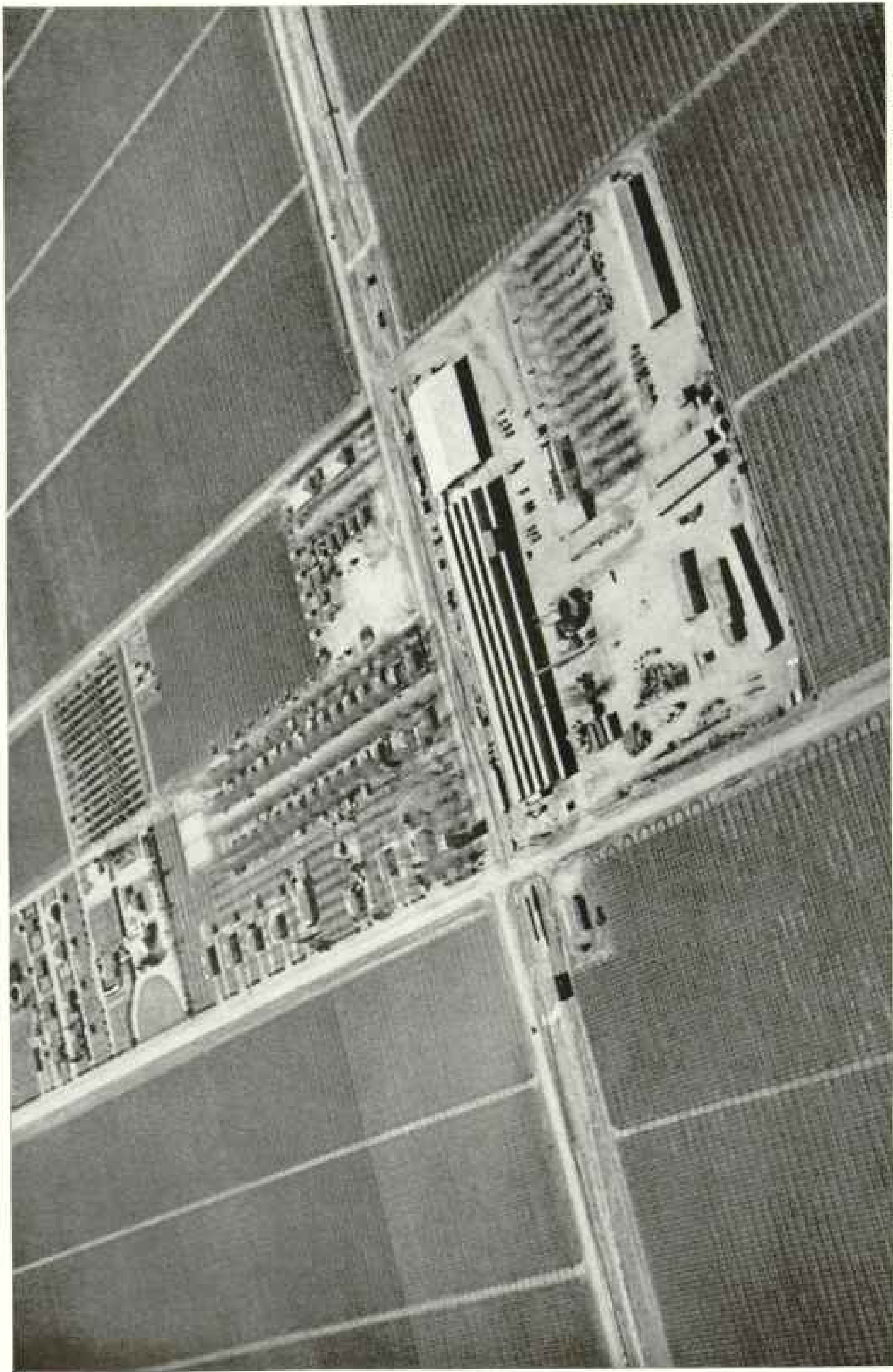




Chief Photographer J. D. Foster Roberts

**To Control All These Streams and Distribute Waters Wisely Is the Work of Our Army Engineers and Bureau of Reclamation**

This is the delta of the Sacramento and San Joaquin Rivers. At right the Sacramento makes a U turn at the town of Walnut Grove. Water from this river will be lifted up by giant pumps to a canal and carried to the upper reaches of the San Joaquin River, seen in the far background, coming in from left (page 649).



Kern County Chamber of Commerce

**Employing 1,800 Hands and Farming 14,957 Acres in Kern and Tulare Counties, Di Giorgio Fruit Corporation Is One of the World's Largest** Ranch headquarters near Bakersfield is an island in a sea of irrigated fields. Hereabouts grow 6,200 acres of grapes, 1,253 acres of plums and peaches, 1,158 acres of potatoes, and other crops. To study Almería table grape culture one Di Giorgio viticulturist spent a year in Spain (page 658). The firm's new winery will cover 40 acres.



Bluff Photographer J. Bayler Roberts

### In the Vast Di Giorgio Vineyards a Mexican Prunes Almeria Grapevines

By agreement between Mexico and the United States, thousands of workers come north each year for agricultural work west of the Mississippi. About a third are employed in California's "stoop labor" and fruit crops (page 643).

now replaced by a stream that is running south!

What becomes, you ask, of the San Joaquin's own water? Well, it's stored behind Friant Dam in a big reservoir, and, as needed, is sent 36 miles back north in Madera Canal to the Chowchilla River region and 160 miles south through Friant-Kern Canal to where Bakersfield marks the south end of the valley.

This south end is really thirsty. Even if all water that runs down from mountains about it were wisely applied, it would still be short. Some privately owned water systems, such as certain holdings of Kern County Land Company, have water enough, but the region

as a whole has not, if it's to yield maximum crops.

San Francisco Bay region also looks up to Shasta Reservoir for help. Part of the water it sends down the Sacramento River is diverted at the delta into the 48-mile-long Contra Costa Canal. Some of this goes to farms, but most of it to industries.

While San Francisco city gets most of its water from its own waterworks at Hetch Hetchy, in Yosemite National Park, it hasn't enough to divide with certain Bay cities and industries; so these now use fresh water from Contra Costa Canal, finished during the war. Dependent on it are the Dow Chemical Company, the Shell Oil Company, Columbia Steel Company, Tide Water Associated Oil Company, and many other large industrial concerns.

Square-rigged ships used to navigate these valley rivers. In places big trees grew so thick along the banks they shut breezes off from the sails. Then crews scrambled ashore with ropes and warped the

ships slowly along by hand. In gold-rush days and for years later, big towns like Sacramento enjoyed enormous water-borne traffic.

Bacon, sugar, coffee, machinery, all came in by boat, often from around Cape Horn. Smaller craft got as far north as Red Bluff, 280 miles up the Sacramento from San Francisco. Downstream, wheat became the cargo. One big barge could haul 18,000 sacks.

In time irrigators took so much water from the San Joaquin that it got too shallow for boats. On the upper Sacramento hydraulic miners clogged the stream with their waste dirt and gravel.

But between San Francisco Bay and Sacra-

mento, on the stream of that name, traffic still moves.

Motion-picture people come here to shoot Mississippi scenes and to re-enact historic steamboat races.

Part of the Army Engineers' good valley work has been to deepen and widen this lower Sacramento and strengthen its levees. They plan also to clean out the upper reaches of this river and make it again usable by small craft. Though of smaller importance when compared with heavy traffic on the lower Mississippi and the South's great Intra-coastal Waterway, these valley rivers, where navigable, take their place in our vast inland-waterways system.

#### Ocean-going Ships Run Through Asparagus Patches

Stockton itself, with its deep-water channel, is truly a Central Valley seaport. Its vast docks are used by both U. S. Navy and merchant vessels. Mr. Roberts photographed a Victory ship as it unloaded sheet steel, pipe, metal fence posts, soap, and paper. Prodigious piles of processed fruit and vegetable foods leave here for faraway seaports.

This whole vast rich delta is made up of many islands separated by sloughs and channels, used by launches and fishing boats. Roadways run on top of the levees. You get a big surprise when, riding quietly along, you suddenly glimpse the smokestack and white bridge of a big ocean vessel sliding silently through the Stockton Channel. From a distance it actually seems to be plowing, half submerged, right through the tomato and asparagus patches (page 663).

Hereabouts many Japanese and Filipino



Staff Photographer J. Bayler Roberts

#### Happy, Healthy Sunbonnet Annie Came to Central Valley from Oklahoma

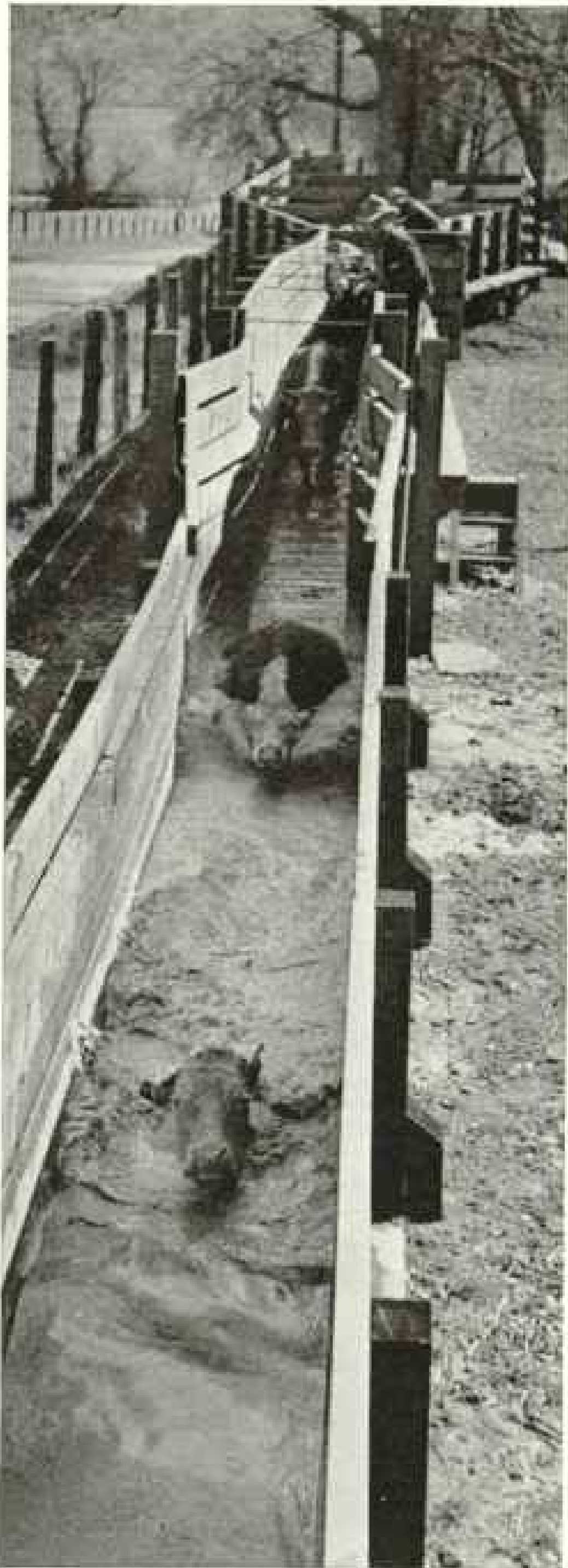
Employed on a Di Giorgio farm in Kern County, Annie May Bennett ties vines of seedless grapes to supporting wires. She likes her outdoor job and earns far more than if working at a desk.

truck farmers live behind the levees. They pump seepage water out of their fields and back up into the canals, and then pump fresh water down to their crops.

George Lopez, successful Filipino farmer, told me he had to pay as much as \$30 and \$40 a day to cut asparagus, to harvest the delicate market crop speedily. Native Americans do not like, or cannot endure, this so-called "stoop labor." In the valley it is nearly all done by Orientals or Mexicans (page 647).

On one farm we visited, old Tony and Mrs. Tony were setting out tomato plants on 40 acres they are rapidly paying for. While Roberts made their picture they talked.





Staff Photographer J. Barber Bonetta

#### Chico Dips Cattle to Ward Off Parasites

Driven down a slippery board at one end of the chute, animals fall into the disinfecting water and swim through. Spaniards founded cow ranching here long ago. In *Two Years Before the Mast*, Richard Henry Dana, Jr., tells how hides were loaded on ships anchored offshore. Before irrigation spread, some ranches covered hundreds of square miles.

"Best land here can rent for \$75 cash an acre, but even at that you can make money when prices are high.

"Most truck farmers who do the hard work here are foreigners—Poles, Italians, Filipinos, Japanese, and Mexicans. Our boy is getting out of the Navy; we need him here. Tomatoes take a lot of work."

#### Years of Work Needed to End Floods

When I was a newspaper reporter in San Francisco I went up to see a typical Sacramento flood. In one delta area only roofs and treetops showed above a vast stretch of yellow water dirty as that which the Yangtze pours into the East China Sea.

Railway trains were stalled in water that put out the engine's fire. Refugees were coming out by skiff. Much livestock had drowned. Crops were ruined. It was the familiar old flood story, where inundated towns had no light, drinking water, food, or means of traffic.

Pioneers found a fourth of this valley floor subject to periodic overflows. Since they also found that richest lands lie in areas most subject to flood, that is where they built their first low levees.

As farming spread, more and more levees were built. In time the State and Federal Governments joined with farmers and local groups to build yet more flood-control works and dig more irrigation and drainage ditches.

This still goes on, with U. S. Army Engineers specializing on flood problems. Some such works have so hemmed in all natural spillways to the ocean that danger of levee breaks increases; so higher and higher levees must be built (page 659).

Sacramento Valley is a good example. It gets much protection now from control works built by State, Federal, and local interests in a system known as the Sacramento River Flood Control Project. It uses leveed channels along natural waterways, aided by leveed "by-passes" for surplus water. This job is almost done.

Of course Shasta Dam now also helps defend the valley below it against floods. But it is an error to assume that this dam, despite its size, can hold back all water that threatens the lands below it. Why? Because a large part of the flood water that menaces the valley flows into it from below the new dam.

Sudden winter rain floods here, not slowly melting snow in summer, do most harm. They run down the Feather, Bear, Yuba, and American Rivers, and from many creeks. Until dams are built *on them*, the valley cannot enjoy maximum protection.



Staff Photographer J. Bayler Roberts

**This Big Fan Automatically Protects Butte County Almonds from Frost**

Whenever temperature drops to 34° F., it throws a switch which starts these powerful electrically driven propellers. They create an air disturbance which mixes warm upper air with cold ground air to guard against frost. Protected by tariffs, almonds grown here compete with imports from Spain and Italy.

In the same way, though to a less degree, the San Joaquin Valley, despite its levee systems, also suffers from both snow water and rain floods. Tulare Lake basin and lands along the Kings, Kaweah, Tule, and Kern Rivers all have their occasional flood problems.

The new Friant Dam, like Shasta Dam, is helping and will divert much water down its Madera and Friant-Kern Canals to where it's needed.

But here, too, other extensive work remains to be done.

"It may take us 50 years or more, and may cost about \$1,800,000,000," said one engineer, "to do everything here which should be done for irrigation, to stop floods, and to make wisest use of all water."

I found mistaken ideas current, especially among some small landowners and newcomers, that because both Shasta and Friant Dams are now complete, all flood risks are ended. No such claim is made by USBR engineers or any others.

On their big map the Reclamation people showed me where they must build more than 30 additional dams, with multiple-purpose reservoirs. On your own map you can see how many rivers and streams flow down Sierra slopes into this big valley *south* of Shasta Dam and *north* of Friant. Most all these runaway rivers will have to be dammed before the annual dump of billions of tons of snow and rain can really be held in check and put to best use.

In the past 75 years engineers have written shelves of books and drawn acres of maps to explain this water problem. Only a good engineer understands these, and even the best one couldn't tell this whole flood story in just a few words simple enough for the layman to grasp.

#### Government Water for How Much Land?

I heard on-into-the-night debates about how much land any man may reasonably own and still retain the right, under the Federal law, to buy water from this Government-built project.

Confusion grows out of the Federal Government's Reclamation Law of 1902. Its original aim was to help settle homeseekers on arid *public* lands in the West, and it says that nobody can get water for more than 160 acres (page 663).

This law was passed to give farm homes to a maximum number of little people and yet keep others from monopolizing too much land or making too great a profit out of Uncle Sam's investment in irrigation works.

But this Central Valley Project is different from any other. All lands it will benefit are already privately owned; some have been, for generations. Many are already highly developed, and many already have enough water from private sources. Others are short of water.

Some areas never have been irrigated, and can't be, and are good only for grazing. There are hundreds of farms of 1,000 acres or more and a very few land companies that own scores and even hundreds of square miles, where cattle raising is mixed with the irrigated growing of cotton, grain, potatoes, fruit, alfalfa, etc.

Some such big landowners look with favor on the building of the Central Valley Project because of the wide benefits it is bringing the valley as a whole; but they have had water enough of their own for two or three generations and do not need to buy any now from Uncle Sam. Other large operators say the Project is unnecessary. As always, there are two schools of thought.

#### Good-bye, Horse! Farewell, Mule!

"All day I used to slap a mule on the rump or watch his ears to see if I'd made him mad," said an old farmer. "But no more. Now everybody uses tractors."

Though Roberts and I explored this valley from end to end, we didn't see a single horse or mule used for farm work. We did see endless farm machinery, some of strange new types, from potato diggers to plants for pressing waste raisin seeds into bricks for fuel.

In one vast Kern County field we even saw a tractor, pulling a cultivator, running all alone like a radio-controlled airplane. Beside it, keeping up, a man rode in a pick-up truck carrying gas and oil. Every now and then he would stop his truck, jump off, and climb on the moving tractor.

After monkeying a minute with the tractor's controls he would jump off and climb back into his truck. We watched this human jumping bean until he turned into a speck on the horizon. We couldn't chase him, to ask questions, without running over his crop. Unusual? Sure! But in Central Valley something unexpected always happens.

One startling example of big-scale farming is that of the Di Giorgio Fruit Corporation. Years ago, Joseph Di Giorgio took a gamble in that vast desert area south of Bakersfield known as the Weed Patch. Here he bought thousands of acres, dug wells 600 feet deep—and got water!

He sent a man to Spain to study Almeria grape culture and bring back cuttings. Now



California Dept. of Public Works

**"Levee's Breaking! River Still Rising! Get Your Families and Livestock to High Ground!"**

That grim warning is too often heard in areas subject to floods, such as these orchards inundated north of Colusa in 1940. To the mighty task of flood control in the Central Valley, U. S. Army Engineers now apply themselves (page 656). Many more dams, to aid in flood control, remain to be built in smaller streams.

the corporation he founded has enormous vineyards, is building a 15,000,000-gallon winery, and has cold-storage space for 200 carloads of fruits (page 653).

At first this corporation grew only grapes and plums. But it saw that these two crops alone couldn't give work to its crews the year round, and it wanted them to stay and be happy. So it began to diversify, growing other things from potatoes to peaches.

This planned schedule now keeps men busy the year round, from planting potatoes in January to pruning vines in December.

Comfortable homes are provided for both married and single workers. To feed its army this corporation runs its own hog farm, poultry yards, and dairies and grows its own vegetables. It keeps its people and their children happy with tennis courts, swimming pools, playgrounds, and other recreational facilities.

Many of the so-called "Okies" and

"Arkies" who figure in John Steinbeck's *Grapes of Wrath* came to this valley, and many worked for the Di Giorgio Corporation.

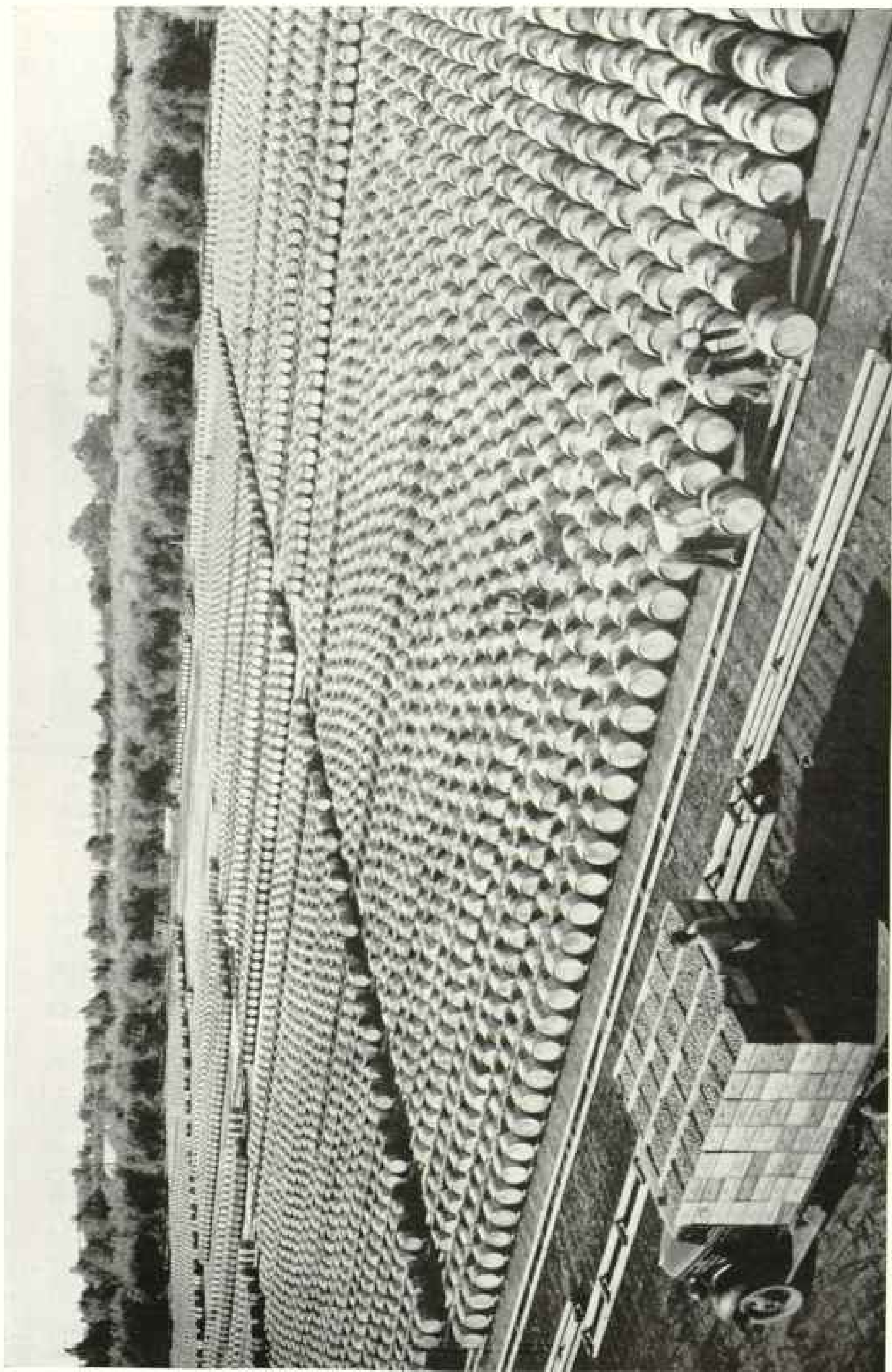
"They're fine, industrious people," a foreman told me. "Many who used to work for us saved their money and bought their own small farms" (pages 651, 654, 655).

They ought to save money! Wages range from \$10 to \$14 and even \$20 a day!

Here, too, farm mechanization is 100 per cent. No Dobbin, no Maud or Jack. And all that old-time back-breaking toil has gone out of potato growing. They're planted now, and dug and the dirt shaken off, all by machines.

This corporation says water sent here by the Central Valley Project would be beneficial if brought in by canal to eliminate pumping. But it is not interested, if by taking that water it has to limit its acreage or is prevented from farming its land in what it considers the most prudent, businesslike way.

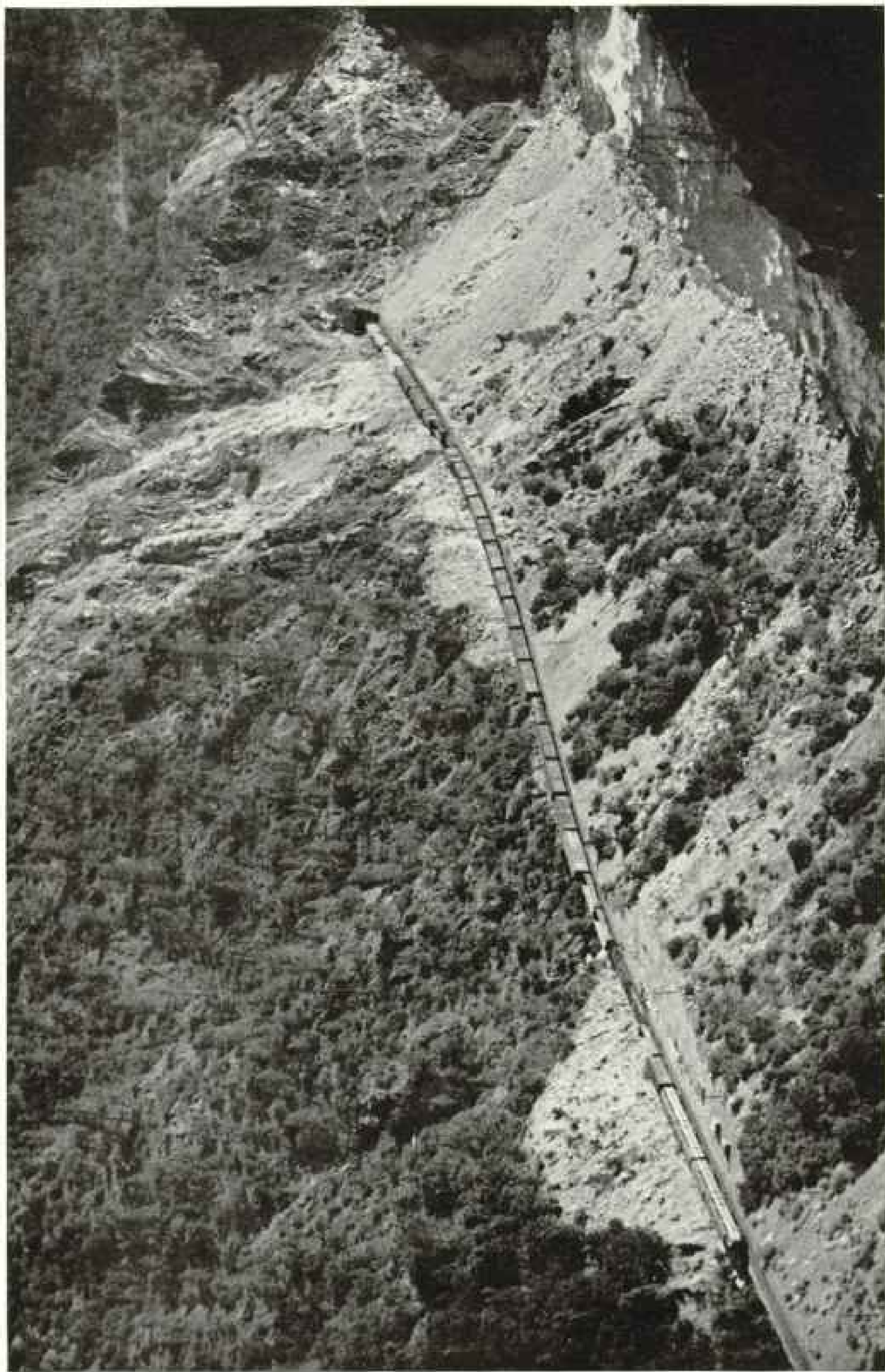




Tom Glavin

**Since Civil War in Spain Interrupted Her Green Olive Industry, This Olive Business in California Has Vastly Expanded**

Spanish padres introduced olive trees into California. With crude presses they extracted olive oil, so popular in Spanish cooking. Today olive oil, ripe and green olives, and stuffed olives, are all produced here in enormous quantities. This green olive barrel yard is located at Lindsay, in the Friant-Kern Canal District.



Hans Photo, Courtesy Healdtravel

**Eastbound with Cars of Central Valley Products, a Western Pacific Freight Rolls Along Feather River Canyon**

This mile-long train is hauled up a one-percent grade by a 5,400-horsepower 4-unit Diesel electric locomotive; seen at left, this locomotive looks like two Pullman coaches. At right, the train is issuing from tunnel No. 9, which is 15 miles north of Oroville, western gateway to the long Feather River canyon.



Staff Photographer J. Taylor Roberts

### Like Rows of Little White Tents, Hot Caps Save Tomatoes from Frost

Here plants are being set out and capped. This farm is owned by two Chinese. Their sons, daughters, and one grandfather work in the fields. Forced production to meet early markets often brings the cost of growing tomatoes up to harvest time to around \$500 an acre; for canning tomatoes it is about \$175 an acre.

This valley is the most highly electrified agricultural region on earth. All day long myriad purring motors run its busy pumps. Nightfall sees its endless farm homes all atwinkle like stars along a man-made Milky Way.

#### Light and Power from Snow and Rain

Some few towns and irrigation groups run their own power plants. But most of the valley buys its power from Pacific Gas and Electric Company, or "P. G. and E."

Foothill ditches, dug by placer miners long ago and later dammed and fitted with water-wheels, were among the early sources of power for now colossal P. G. and E. Today it includes in its far-flung system some 54 hydroelectric and 13 steam plants, besides 10 other interconnections.

P. G. and E. is one of California's pet giants. Its investments run into hundreds of millions. In the valley and elsewhere thousands of people own shares of its stock. It pays wages to veritable armies of workers. It is one of the State's heaviest taxpayers, and it serves about two million customers.

But on the scene now appears a new competitor. He is Uncle Sam, who will not sell

out or be absorbed. Thereby hangs one of the oft-told tales in this amazing book of tales about dams, ditches, and the power of falling water.

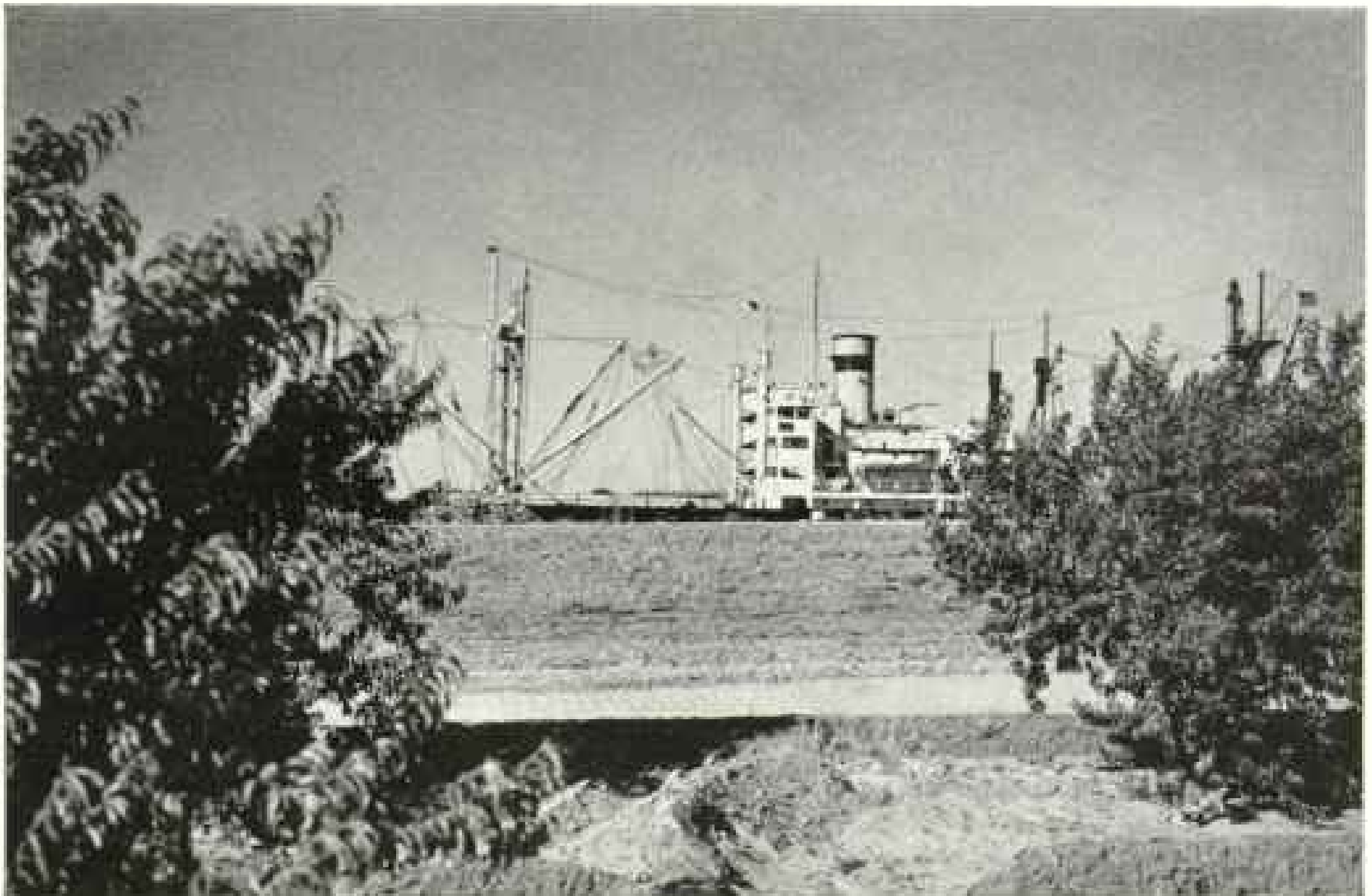
When this Project was first voted for as a State-of-California enterprise in 1933, the making of electricity was "incidental."

But after the Federal Government took over in 1935 by Executive order, the Act of Congress of 1937 provided "for the generation and sale of electric energy as a means of financially aiding" the water features of the Project.

So today Uncle Sam makes electricity at Shasta Dam and soon will at smaller Keswick Dam, a few miles down the Sacramento River. He expects the sale of this electricity to return two-thirds of the reimbursable cost of the Project to the Federal Treasury.

Till now this power has been sold to P. G. and E. and distributed by it. No transmission lines have so far been built by USBR, except a short one to the town of Oroville, on the east side of Sacramento Valley.

Much power will be used at that spot in the delta near Tracy where Sacramento River water is to be pumped high up into Delta-Mendota Canal for shipment south. USBR



Elliott's Studio

### Visitors Approaching Stockton Meet Ocean-going Steamers Cruising Inland

A deep-water channel, tying Stockton to San Francisco Bay, makes this inland town really a seaport. At its long docks merchant ships from London may take on canned goods and raisins. Here goes the *Czechoslovakia Victory*, outward bound. The Navy also has extensive docks at Stockton (page 655).

wants to build a power line from Shasta Dam down to this point and also a steam power plant here to help out.

Congress authorized this power line, but has refused to vote money for construction of the steam plant.

USBR wants to build more power lines and sell power wholesale to other customers. But P. G. and E. says that there is no unserved market; consequently, the company maintains, there is no use spending millions more of Government money merely to duplicate its own existing network, which already ties in with Shasta Dam and is fully adequate to bring power to all the pumps the Project will ever need.

P. G. and E. says also this plan is the most profitable for the Government—much more so than the Bureau's plan to build transmission facilities and sell the power in competition with existing service. And they stress the fact that the area in which the power must be sold is already completely served.

That's the question. Everybody accepts the fact that Uncle Sam is now in the business of *making* electricity. But opinions differ about how he should sell it. Thus arguments never end.

"They can't make that 160-acre rule stick," Madera Irrigation District men argue (page 658).

"The anti-speculation idea is good. But look: for 25 years we've paid assessments to build up our water system. Our State law is plain. It says that a man is entitled to his share of the water supply in proportion to the land he owns."

This 160-acre limit may soon be lifted. USBR men told me it can possibly be interpreted as applying only to one person's holdings. Thus, if the farmer takes a wife, she may get water for another 160; and if she's stout enough to have 10 children, maybe each of them claim water for another 160. That's one valley argument only Uncle Sam and the Golden State itself can settle.

But it doesn't stop new people from swarming in by thousands to buy farms, build houses, shops, and more fruit-packing sheds.

### Migrant Workers Invade the Valley

Migrant seasonal workers also invade the valley. From below the Rio Grande, by treaty with Mexico, trainloads of swarthy contract workers come, wearing identification tags and herded by immigration agents.





Staff Photographer J. Hector Roberts

### Cleft Grafting Changes One Variety of Fruit Tree into Another

Short-length scions, or budsticks, of the wanted new variety are inserted in the split ends of the old tree trunk or branches. A horticulture class learns the method in the student orchard at the University of California's branch of its College of Agriculture, at Davis, Yolo County.

They work six months, or longer, then go back south of the border, carrying new guitars and radios and maybe wearing three or four new wrist watches each.

One peon we saw had on three new hats, one atop the other, like a stack of hot cakes. They work in racial groups, doing their exclusive social gambling and fighting only at night, never on company time.

Native whites come, too, by truck and trailer. Camping in colonies, they enliven the nights with song and dance; some hold religious services on Sunday and even have baptizings and get married.

#### Cantaloupe Juggling to "Apple Knocking"

Moving north with the advancing seasons, these workers begin with January cantaloupe juggling in the hot Imperial Valley, near the Mexican border, and wind up with autumn "apple knocking" in Oregon and Washington.

When you look once more at how fruit fortunes pop out of the earth here, you see why the valley cries for more strong backs and sweaty brows. Few seeds here seem to fall on stony soil or among the tares.

Last year, *six and a half million tons* of beans, rice, sugar beets, grain, hay, and other

crops! Of potatoes alone, 928,000 tons. Of meat, milk, poultry, and eggs, nearly four and a half billion pounds.

Fruit? Well, there aren't ciphers enough on my typewriter to add up everything from figs and olives to peaches and plums. And the 1945 crop and livestock products sold for more than \$790,000,000! No wonder many small farmers with "know how" and industry are paying for their well-manicured acres with profits from only two or three years' crops.

We talked to one young farmer just back from the wars. "I'll pay out easy in two years, if prices keep up," he said.

Behind his plow fluttered a whole chattering aviary of crows, gulls, robins, and killdeers, grabbing up worm omelets mixed by the moving plow.

"You even raise more worms here than anywhere else on earth," I bantered.

"In a minute I'm picking up a canful, to go fishing Saturday," he grinned. "That's one advantage this valley has—it's so near the beaches, the reservoirs, the Yosemite, and the Big Trees. It gets hotter than the middle kettle of Hades here in summer, but we can climb out to cool off in two hours' run. . . . This land is a good place to live."

# Sigiriya, "A Fortress in the Sky"

BY WILSON K. NORTON \*

*With Illustrations from Photographs by the Author*

OUR GROUP had just returned from a series of combat photographic missions in China and the Arakan region of Burma. After the hardships of the fighting front, the security and comfort of Headquarters in Ceylon were a welcome change. Before we had time to unpack our belongings, however, orders came through that we were to cover training activities in Trincomalee, in northeast Ceylon. This type of assignment was considered a form of rest.

It was still early afternoon when we abandoned the comfort of the Colombo-Trincomalee highway at Inamalawa to drive our jeeps six miles off our course to the historical monument of Sigiriya.

We thought the trip from Inamalawa to Sigiriya would be easy, but little did we suspect the effects of the recent monsoon rains. Several times we had to stop to retrieve our baggage, which bounced off as we hit a deep rut or a sharp turn. There were far too many of both.

## First Glimpse of the Lofty Fortress

Our anticipation heightened as we caught occasional glimpses of Sigiriya rising imposingly out of the surrounding jungle.

We arrived at the resthouse about 4 o'clock in the afternoon. The cordial innkeeper escorted us to our rooms. Our veranda gave us an unbroken view of this extraordinary rock which rises a sheer 400 feet from the sea of emerald jungle at its base (page 670).

We could not have arrived at a better hour. Though the western sun had dropped low enough to leave the distance between our vantage point and Sigiriya in shadow, it crashed full upon the face of the citadel, causing the red granite to stand out in sharp relief against the dark streaks.

The black curved lines on the surface etched by the monsoon rains of many centuries emphasized the overhanging or mushroom effect of this gigantic geological freak.

The innkeeper interrupted our ejaculations of delight. "This way is good," he said, pointing to the sky, "but tonight is the moon."

After dinner we learned what he meant. The white tropical moon spotlighted the side of Sigiriya eerily against the darkness of the jungle below and the sky behind.†

Guests familiar with the history of Sigiriya told us its story. They made frequent refer-

ence to the *Mahavamsa*, or Great Chronicle, which had been begun by the Buddhist priest Mahanama, relative of the royal family, who had been an eyewitness of some of the events he described.

## Tales of Revenge, Patricide, and Fear

Sigiriya was the fortress of King Kasyapa I, who sought refuge there after brutally murdering his father, King Dhatu Sena.

During his youth Dhatu Sena lived in retirement because of the supremacy of Tamil conquerors from India, who were in power between A. D. 434 and 459. He studied under Mahanama, his uncle, for the priesthood, but upon reaching manhood he abandoned the life of contemplation to wrest his land from the alien rulers and recover the throne.

Dhatu Sena succeeded in routing the Tamils and re-established peace. He restored the old religion to its former pre-eminence. The nobles who during the Tamils' rule had formed alliance with the usurpers were reduced to serfs on their own land.

All those who had remained loyal, he rewarded generously. He founded hospitals and monasteries, restored and redecored religious edifices, and constructed reservoirs, which were sorely needed. Much of his large store of jewels went for the readornment of statues that had been desecrated by the Tamils.

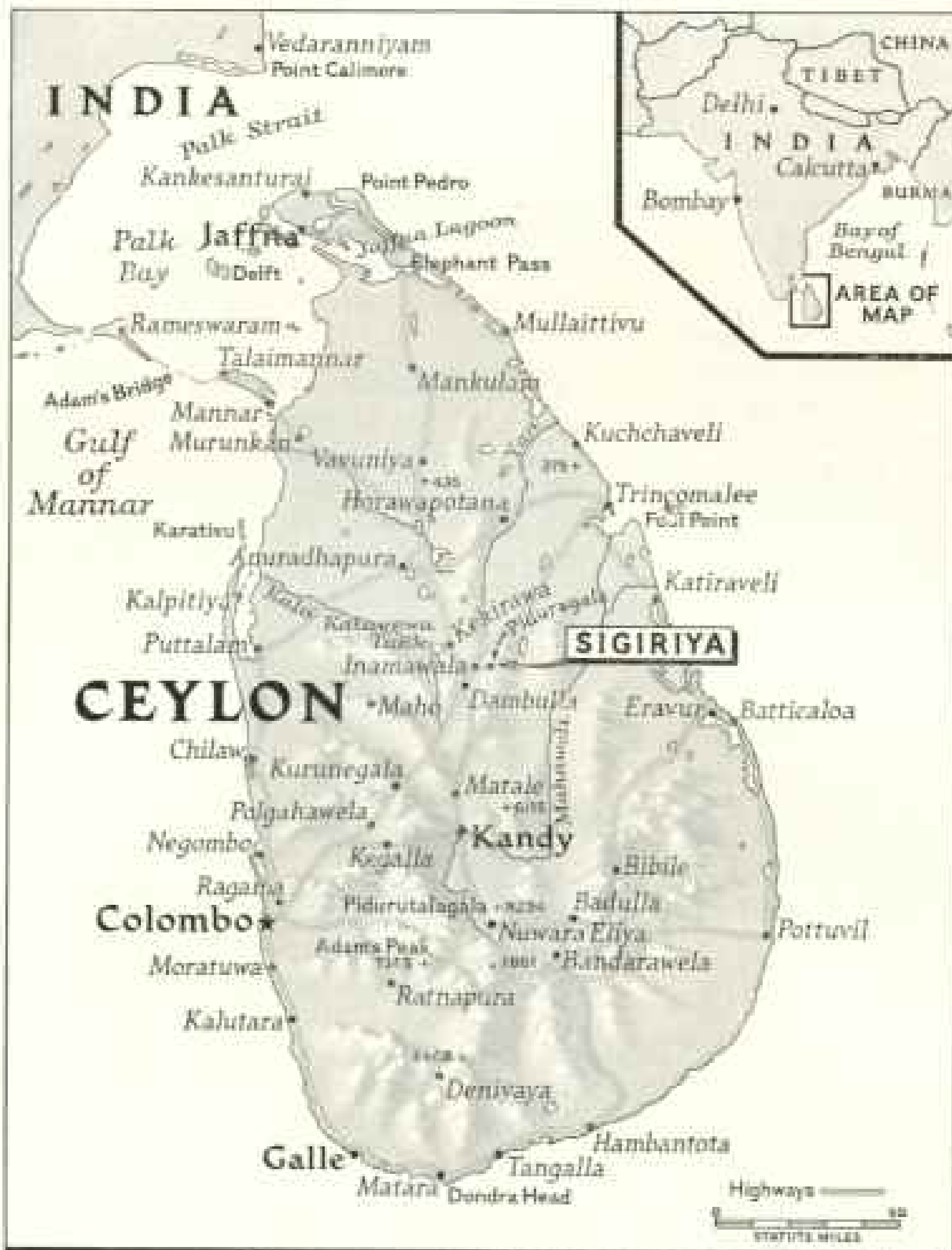
One of the outstanding accomplishments of Dhatu Sena was the construction of the great "tank" of Kalawewa, or Black Reservoir, three miles from Kekirawa. This huge irrigation lake of more than 4,000 acres, now partly restored, is a feat which commands the respect of modern engineers.

The embankment built by Dhatu Sena was about six miles long, 60 feet high, and 20 feet wide at the top, with a spill 260 feet long and 200 feet wide. The old spill still exists, and a modern spill covers a wide breach. Today there is a two-lane paved highway on top of the embankment.

Although Dhatu Sena was a good ruler and did much for the welfare of the kingdom, he

\* The author was a member of the Field Photographic Branch of the Office of Strategic Services. Capt. John Ford, USNR, of motion-picture fame, organized and commanded this branch of Maj. Gen. "Wild Bill" Donovan's famous organization. The author was in charge of OSS photographic operations in southeastern Asia, India, and Burma.

† See "Archaeology in the Air," by Eliza R. Scidmore, NATIONAL GEOGRAPHIC MAGAZINE, March, 1907.



Drawn by Theodor Pries and Fritz E. Ahlmann

### India Wears Ceylon Like a Pendant Pearl

Ceylon, a British crown colony, is a little smaller than Ireland. A majority of its six million people are Buddhists. The island was occupied 2,500 years ago by the Sinhalese, an Aryan-speaking people. Some of their old capitals, like Maya ruins, today preside over the jungle. One of them is Sigiriya, a fortress rock lying a few miles off the Colombo-Trincomalee highway. The story of its 18 glorious years and utter ruin is told by an American serviceman.

was imbued with a streak of fiendish cruelty. He had his own sister burned to death because her son, Migara, Dhatu Sena's nephew and son-in-law, was cruel to his wife.

Infuriated by his mother's death, Migara revolted against Dhatu Sena. He secured the help of Kasyapa, Dhatu Sena's son by a woman of inferior birth. Winning over the people, the conspirators seized the King and bound him with chains.

With Kasyapa on the throne and Dhatu Sena imprisoned, Migara desired further vengeance. He persuaded Kasyapa that his father had hidden his treasure, with the inten-

tion of giving it to his royal son Moggallana.

Kasyapa sent a message to his father in prison demanding to know where the treasure was hidden. Recognizing the risk of bringing a violent death upon himself, Dhatu Sena told the messengers that if he were taken to Kalawewa he would point out his treasure. Kasyapa complied with this request.

After bathing in the great reservoir and reminiscing with his old friend, the monk Mahanama, Dhatu Sena pointed to Mahanama and to the waters of the lake and said, "These are all the treasures that I possess."

When the guards heard this, they knew Dhatu Sena had worked a ruse. They took him before Kasyapa, who handed him over to Migara to be killed. The King was stripped, bound in chains, and walled up alive in his prison (A. D. 477).

Kasyapa, fearing retribution for his crime, abandoned the capital of Anuradhapura. Desirous of having an inaccessible refuge from his brother's vengeance, he went to

the Matale district, where he built a palace on the summit of the great rock which he named Sinhagiri, meaning "Lion Rock." The name was later altered to Sigiriya (or Sigiri).

From this fortress Kasyapa ruled in comfort for 18 years until he chose to abandon its security to meet his death in the plain below in battle with Moggallana (A. D. 495).

### A Sight-seeing Trip Up Sigiriya

The morning after listening to this tale, my companions and I piled into our jeep and drove to the huge pillar of rock on which Kasyapa had built his refuge.

The road from the resthouse to the base of Sigiriya ends on the valley level. As we were getting out of the jeep, we met two enterprising Sinhalese, aged approximately 10 and 12 years, who offered us their services as guides and made gestures indicating that they would assist us in carrying our equipment. We were delighted to accept their offer.

Although their names sounded pleasant enough, none of us could pronounce them. We arbitrarily named the boys Happy and Gunga Din.

A swift appraisal of the towering rock and the diminutive stature of our new assistants decided us against taking anything other than the miniature cameras. Beckoning us to follow, Gunga Din and Happy each put a camera pack over his shoulder and started up a path.

We followed them up a slight incline to Cobra Rock, King Kasyapa's ceremonial bath and low throne (page 677). The cobra was an important religious symbol of the Sinhalese,

and the rock formation was suggestive of the head and neck of a cobra. According to legend, the king of the cobras spread its hood over Buddha as he sat in meditation. We climbed the rock, using footholds cut in it centuries ago by King Kasyapa's workmen.

Standing at the edge of the ancient ceremonial bath, we looked down at the throne and platform. I tried to visualize the sumptuous ceremonies which once took place here—the gold-wrought, silk-clad luxury bringing to life the drab rock as the King held court.

From this point we had a closer and more impressive view of Sigiriya's rugged face, which rose dizzily above us. The only variation from the perpendicular we could see was



A Crowned Figure with Hourglass Waist Walks in Clouds

In a Sigiriya cave glows the three-quarter-length portrait of a lady of the royal court. Fifteen centuries have not withered her bright beauty. Her almond eyes are dark and lustrous; her face expressive. Above her skirt she wears costly jewels and a diaphanous gauze bodice (pages 668 and 679).

where the rock projected outward in mushroom fashion.

Not far from Cobra Rock was a large walled brick staircase, the first flight of a series ascending to a promontory which furnished an excellent view of Cobra Rock far below and the expanse of jungle behind it. We could see our resthouse in the distance to the west and the paddy field in the plain between.

Beyond the promontory, a footpath traversed the precipice. There was a small iron guardrail, fortunately, for the path was narrow, with a sheer drop below. After about 200 feet it ended abruptly at the base of a wall. Here an iron ladder led us to the





#### Bulging Rock and Ancient Wall Line the Lower Gallery

Barefoot guides climb a terrace once used by Kasyapa's artisans and soldiers. Leading to the Lion Staircase House, the gallery winds around a quarter of the face of the cliff. The 9-foot wall is finished with a soft yellow glare whose preparation is a lost art.

security of the lower gallery approaches. The entrance was guarded by an iron grillwork resembling a prison gate (page 674).

A few steps farther we met the gatekeeper, a rotund Sinhalese. He greeted us pleasantly and engaged us in a conversation most of which we could not understand. We talked briefly and without point; then, waving good-bye, proceeded toward the circular staircase which leads to the galleries.

#### The Gatekeeper Demands a Fee

As we walked away, the gatekeeper called after us. We paid little attention, for we assumed that he was either wishing us well or giving advice. Then the boys started tug-

ging at us and gestured toward the gatekeeper. At length, having gained our full attention, Happy opened his hand and patted the palm. "Rupees, master, rupees," he said, beaming.

I offered Happy a handful of change, from which he selected three 50¢ pieces. Pointing a half rupee at each of us in turn, he held up three fingers and ran back to the gatekeeper with the coins. Returning, he swept his arm in the direction of the galleries and said, "Okay, master."

We followed our guides to a neatly painted sign with translations in Sinhalese, Tamil, and English, a stern warning against defacing the properties. Then the boys scampered ahead to the vertical circular stairway, which they mounted enthusiastically.

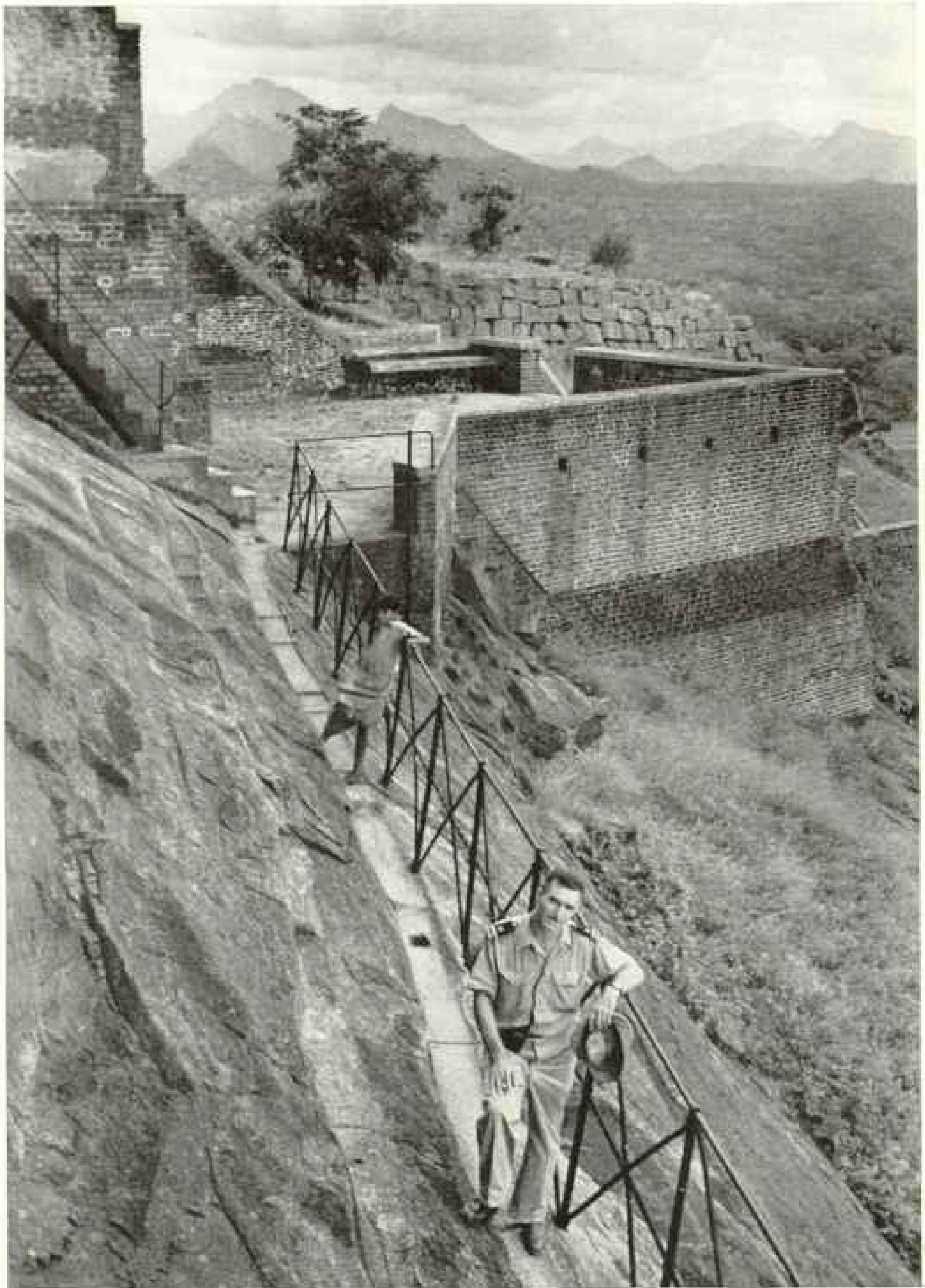
Noting that the lower gallery or walk continued ahead on our same level, we questioned the advisability of a detour. Sensing our indecision, Happy called emphatically and, pointing to the dizzy heights above,

said, "Good, master, good."

Breathing heavily, we arrived at the gallery of the frescoes. The top of this vertical staircase opened on a narrow planked walk attached somehow to the sheer face of the cliff. A wire mesh surrounded this position. Its purpose was probably to discourage bees from frequenting the place (page 674).

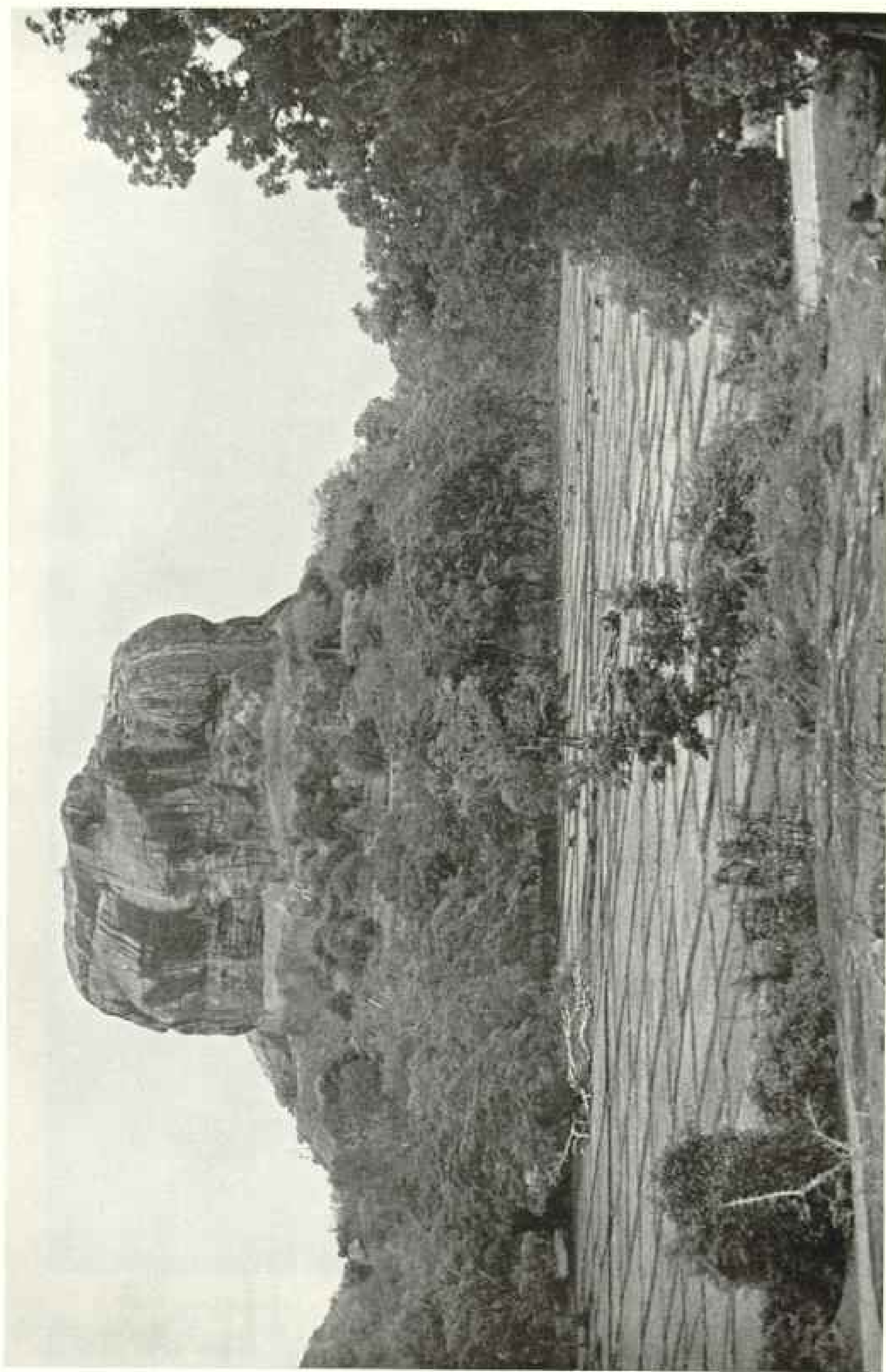
We wondered how this construction was held in place. There was an outcropping of rock above the cage and a sheer drop below. It must have been anchored by drilling into the cliff itself.

The frescoes, painted by Buddhist priests on smooth, concave surfaces in the deepest recesses nearly 1,500 years ago, are among the



**Following a 1,500-year-old Path, the Author Rests on a Modern Guardrail**

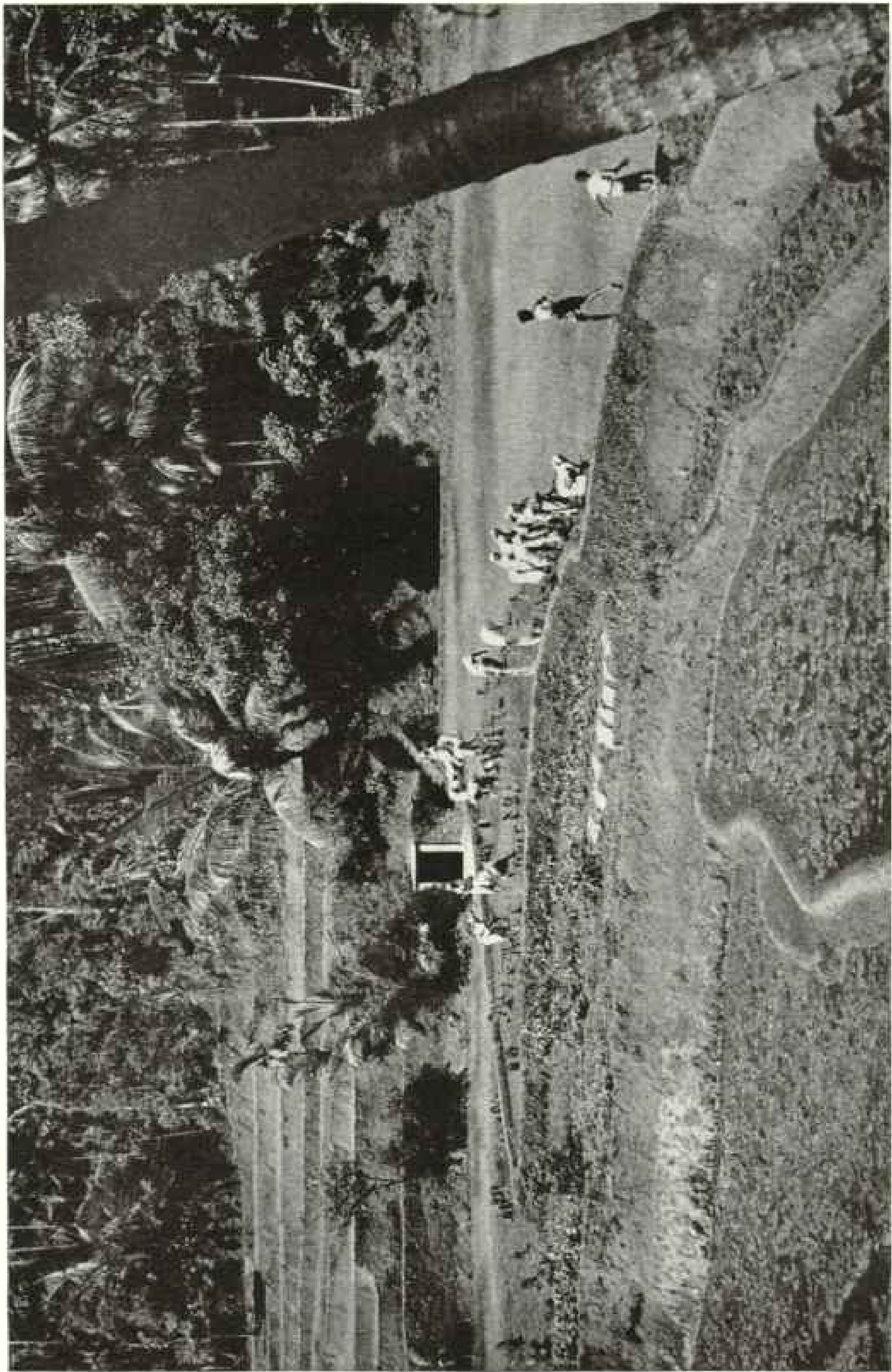
On Sigiriya, Ceylon's Lion Rock, a fortress palace was decreed by King Kasyapa, who slew his father and stole the throne. On its summit the isolationist monarch lived secure from avenging spears. After 18 years he ventured down to engage his brother's army. Defeated, he died by his own hand (page 680).



Arthur T. Griffin

**Sigiriya, a Granite Mushroom, Blooms Out of a Paddy Field. Water Buffaloes Now Keep the Ruined Court of King Kasyapa**

Near this spot two brothers' armies met "like two seas that had burst their bounds." Kasyapa, the parricide, lost the battle and his life. His eagle's-nest palace, built atop the 400-foot Lion Rock, was left to decay. Where stood an artisans' city at the base of his citadel, the jungle has crept in.



Macmillan & Co.

**On a Terraced Green Hillside, Women Plant Rice, Ceylon's National Diet**

Thousands of reservoirs irrigated ancient Ceylon. When wars ruined them, the country decayed. In 1869 the British began restoring old tanks and sluices. Now nearly every stream is deflected. To ensure rice crops, Sinhalese consult astrologers. Drums and devil dances welcome the harvests.





Martin T. Griffin

### Gloomy Caves Explore Massive Rocks at Sigiriya's Base (Left and Right)

Seen just above the steps, a Ceylonese woman stands silhouetted against the granite. Far above her, the lower gallery's wall clings to the perpendicular cliff. Still higher, a wire mesh protects the fresco gallery (pages 667 and 679).

most beautiful to be seen in the East. They are, so far as I could learn, the only early Sinhalese paintings of outstanding merit which remain in such an excellent state of preservation. This is due to the perfect natural shelter of the granite rock overhead and on all sides, and to the inaccessibility of the galleries to vandals (pages 667, 679).

#### Fresco Painters Were Contortionists

There are 21 female figures of half or three-quarter length. Possibly because space did not permit the artists to reproduce complete figures of the desired dimensions, they created an effect of legs disappearing into clouds. These are portraits of court ladies, attended by their maids.

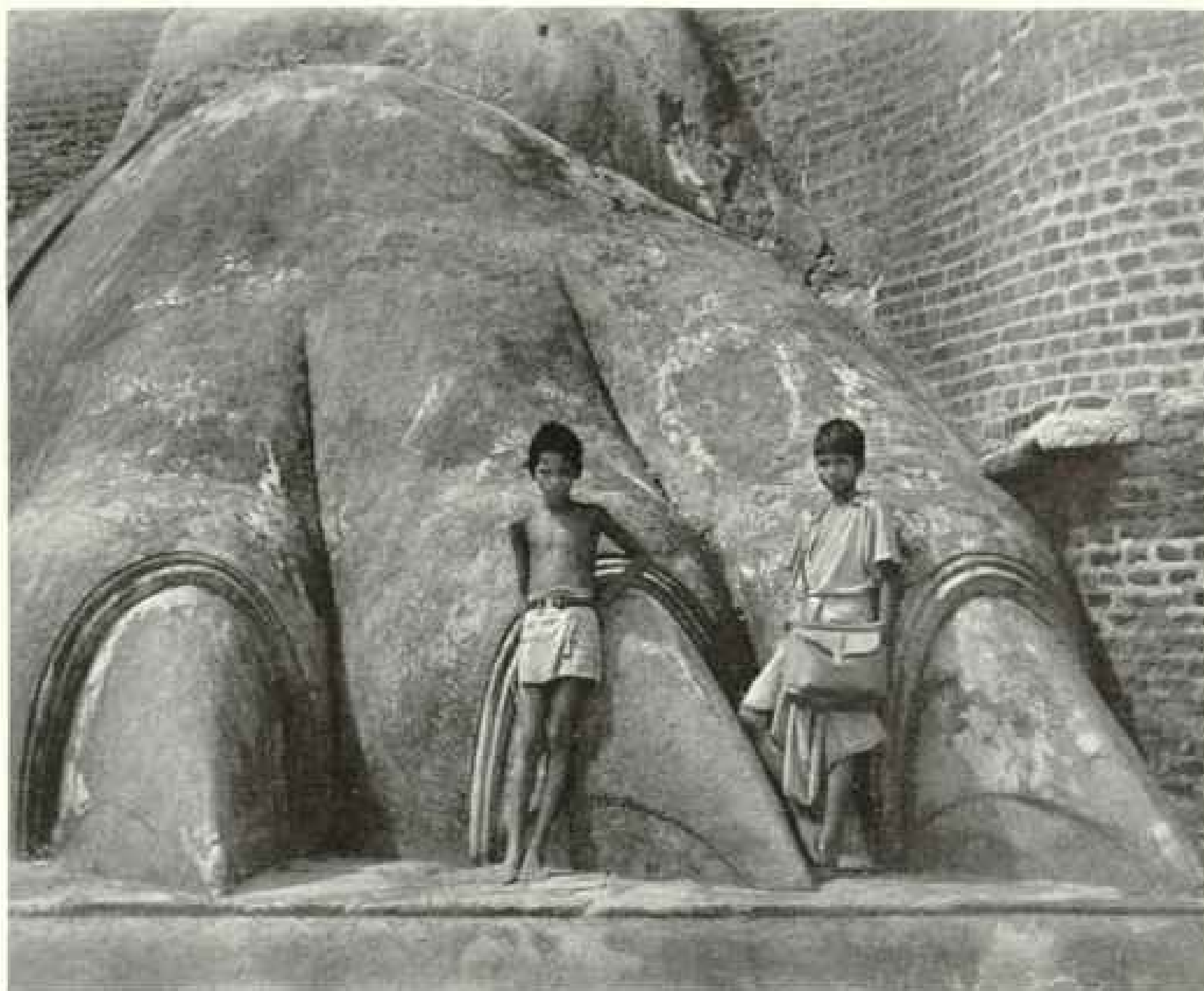
The procession was on its way to the Buddhist *vihara* (a house for images, or temple) at Piduragala, a hill north of Sigiriya. If the portraits are accurate, the pilgrims were certainly a voluptuous group.

At first glance these full-breasted women appear to be naked from the waist up, except for jewels on their necks and arms. Closer inspection reveals that every torso is covered with a filmy gauze. The ladies have Aryan and Mongolian features, and their skins are painted in pale yellow and orange tones. The serving maids are portrayed in greenish tints, indicating that they were of a darker race.

Descending to the level where we had met the gatekeeper, we proceeded along the lower-level gallery in the direction of the summit.

Of the original gallery only a hundred yards remain. It is four and a half feet wide and is sheltered by a high parapet wall.

Inside this wall Kasyapa's followers must have had a sense of security from the missiles of any enemy. The wall is coated with a cement called *chuanam*, which takes a polish comparable to that of marble. It retains its polish even after having been exposed to the monsoons of 15 centuries.



**Once a Lion's Colossal Body Enclosed Sigiriya's Staircase; Paws Alone Remain**

On this spot a shapeless heap of debris attracted archeologists. Excavation exposed two claws; they gave a measure of a beast that reared halfway up the rock's perpendicular face. These paws clutched a gateway; the body covered a flight of stairs. Brick and plaster were the lion's bones and skin. Its discovery in 1898 explained why the builders had named their citadel Sigiriya (Lion Rock). At Lion Staircase House the talons reach to the guides' elbows (page 675).

The gallery follows the face of the sheer rock. Except for several steep flights of stairs, the walk ascends gradually for approximately a third of Sigiriya's circumference and ends at a promontory on the north side. From here we had a good view of Piduragala in the distance and the expanse of jungle on all sides.

To the west as we looked down at Cobra Rock at the foot of the ascent, we could appreciate the climb we had made. Happy tugged at my shirt again, then ran over and patted an object about four feet high. It was one of the gigantic claws of Kasyapa's lion. There was a staircase between the two claws. This structure dominated the plateau. Happy stroked the claw and asked, "Good, master, good?"

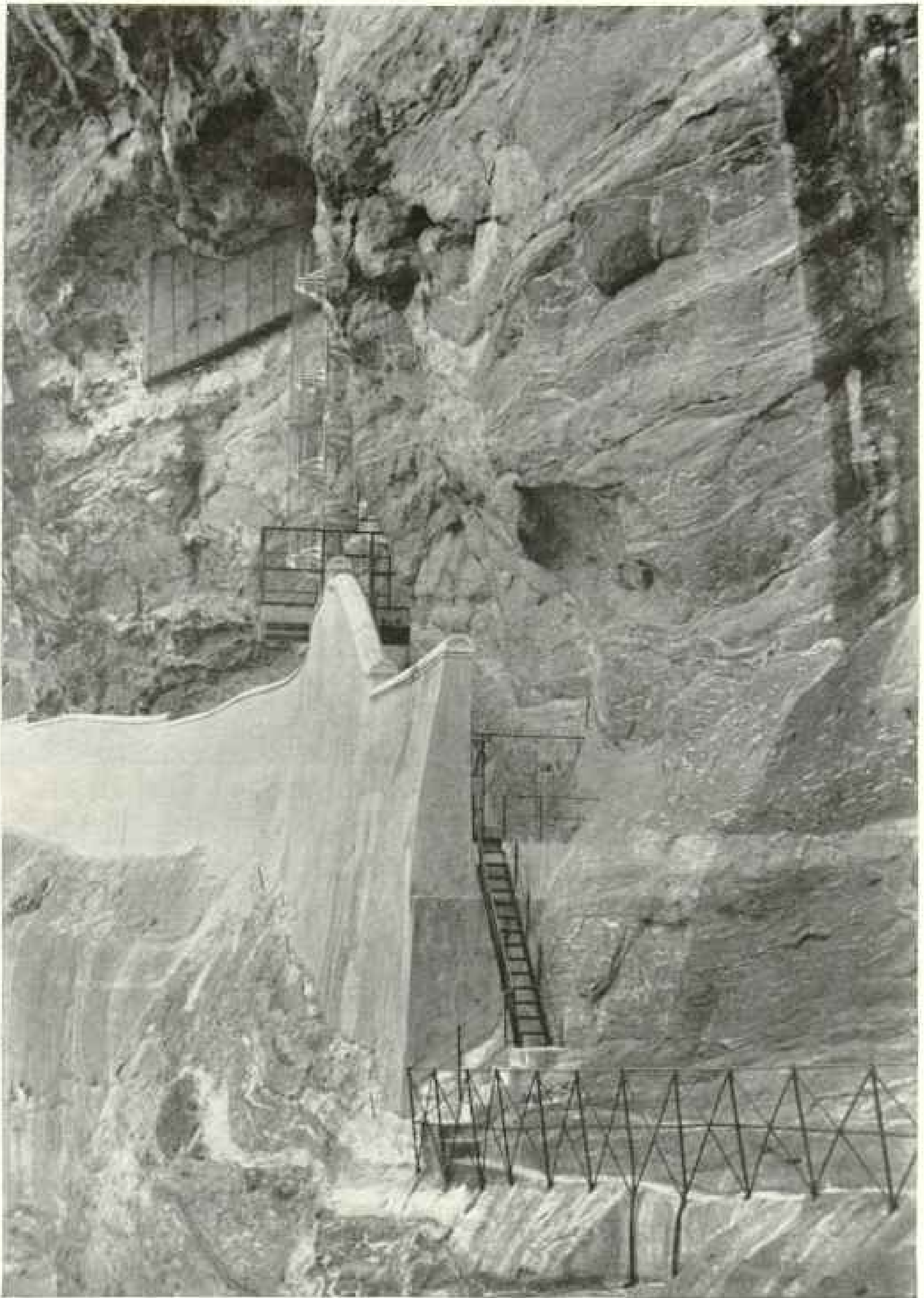
I was at a loss for superlatives. "Yes," I replied with feeling, "this is very good."

These claws and staircase are what remain

of a lion which once reared its colossal height up the sheer cliff above us. In the lion's chest was the entrance door to the palace and other buildings on the summit (page 675). Contemplating the paws, we visualized the lion in his original grandeur, gazing defiantly across the plain at Kasyapa's enemies and welcoming into safety his friends.

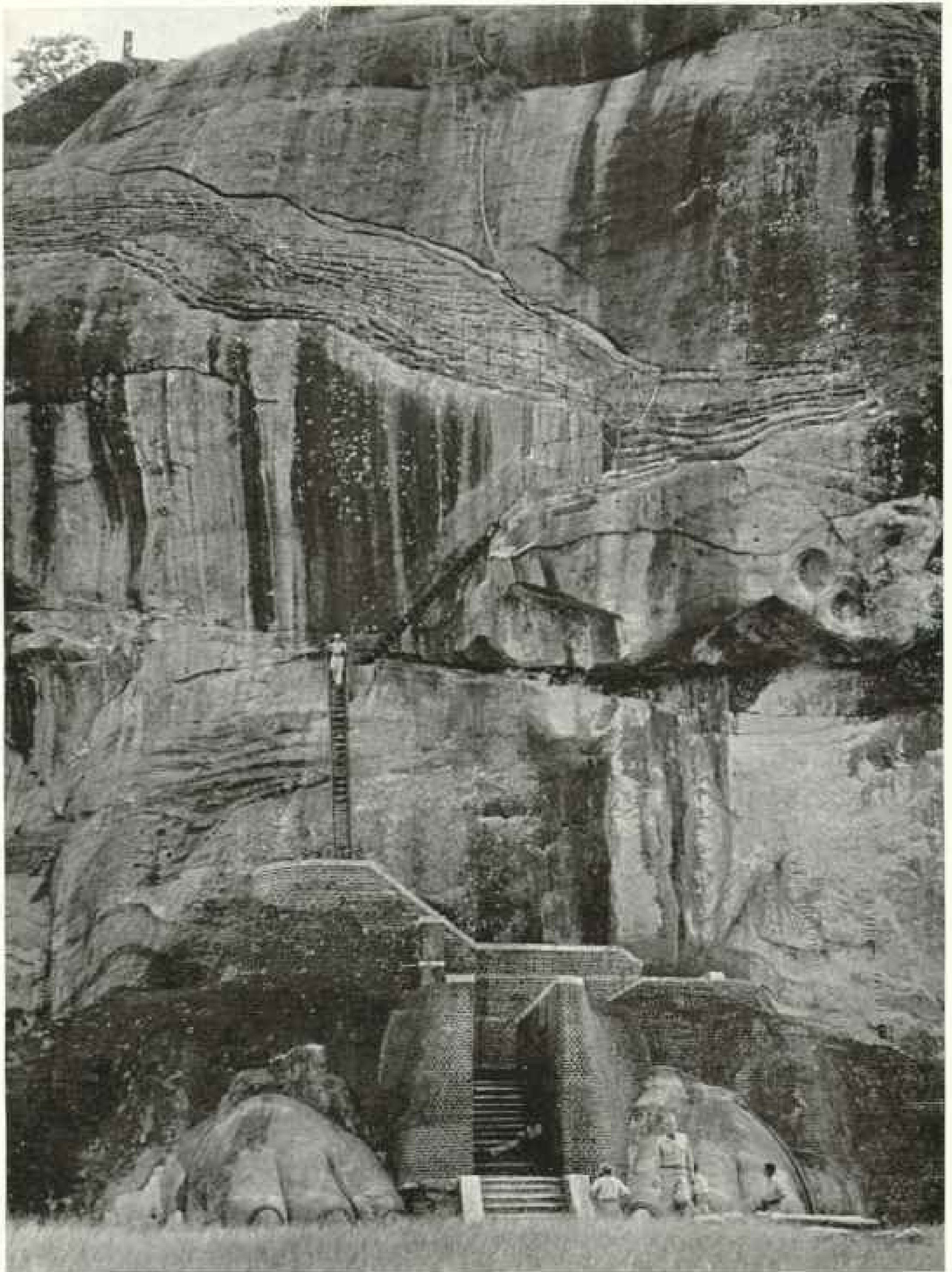
Gunga Din again took charge by tugging at my shirt in the now accepted manner. "Master, master." He pointed to something behind us and near the summit's edge. "Good, good."

I could hardly agree, having just had my attention distracted from Kasyapa's lion. But this other thing, covered with modern screen wire, seemed so obviously out of place that we were compelled to examine it. It was a cage, about six feet square, with a door which locked only from the inside.



**Spiral Stairs Soar to the Fresco Gallery; Its Screen Hangs Like a Swallow's Nest**

Ancient artists painted Sigiriya's face below the ledge (upper left). Their frescoes, long abandoned, survive because vandals could not scale the rock. A modern staircase now leads panting visitors to a precarious observation platform, screened against nesting birds and bees (page 668).

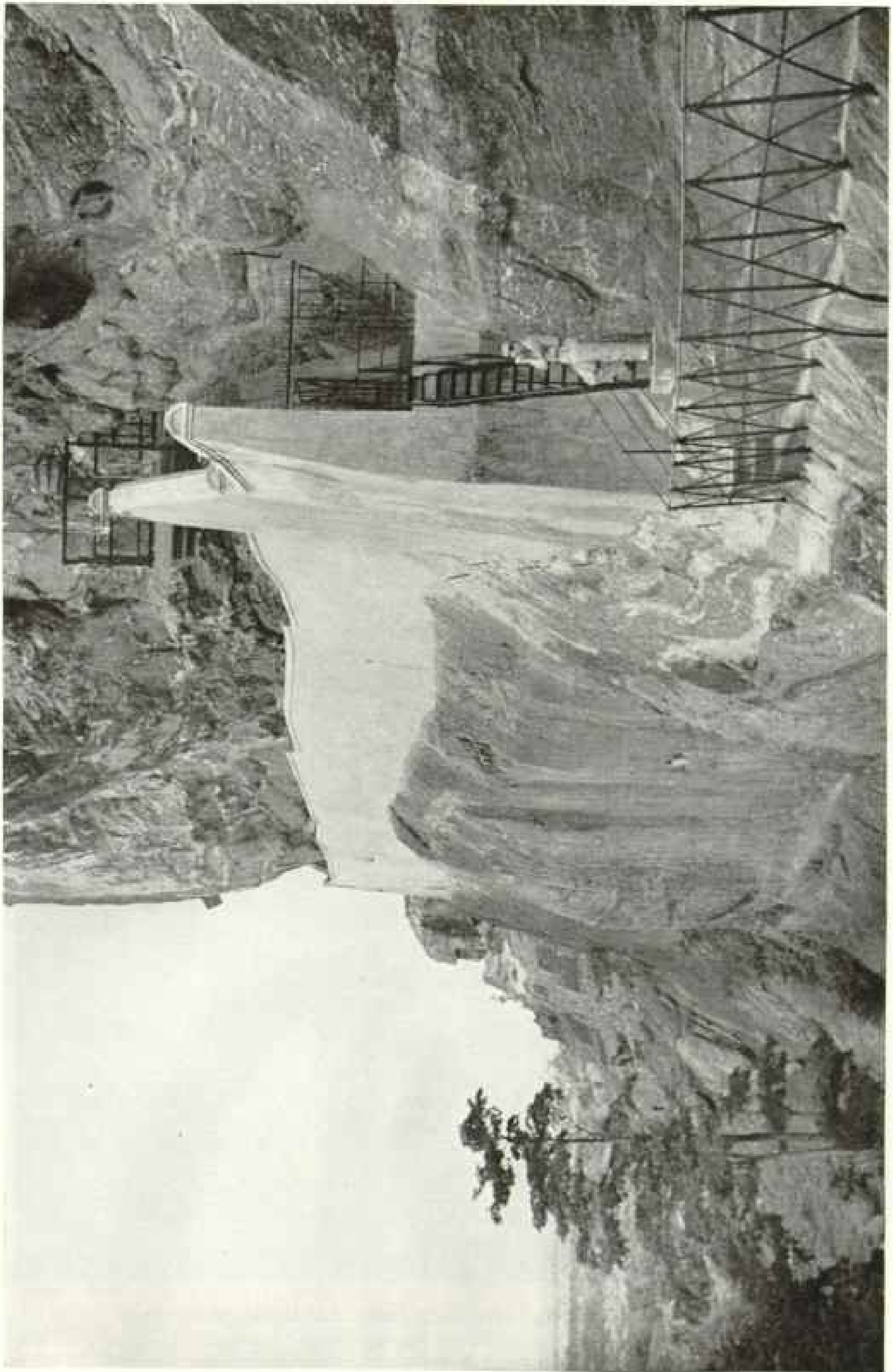


Martin T. Griffin

### Soaring Iron Ladders and Dizzy Handrails Scale Lion Rock's Sheer Face

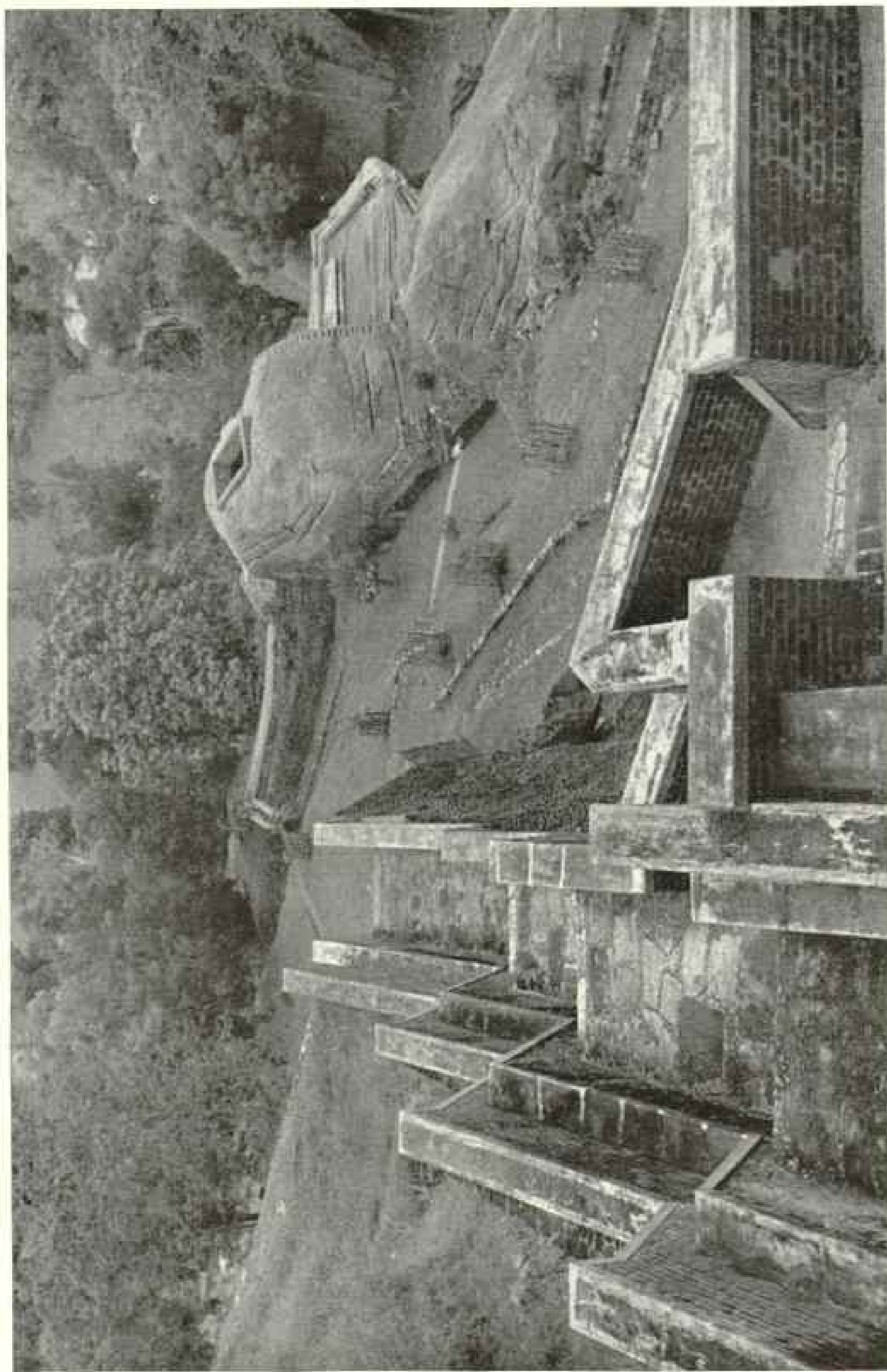
Steps built over empty air replace a huge brick lion which anciently enclosed a staircase. Long ago it fell into dust like a wasp's clay nest. Now its paws grip a new brick entrance. Steps grooved into the lip of the abyss make the final ascent to the summit. Visitors run a gantlet of wild bees infesting the walls (pages 673, 678).





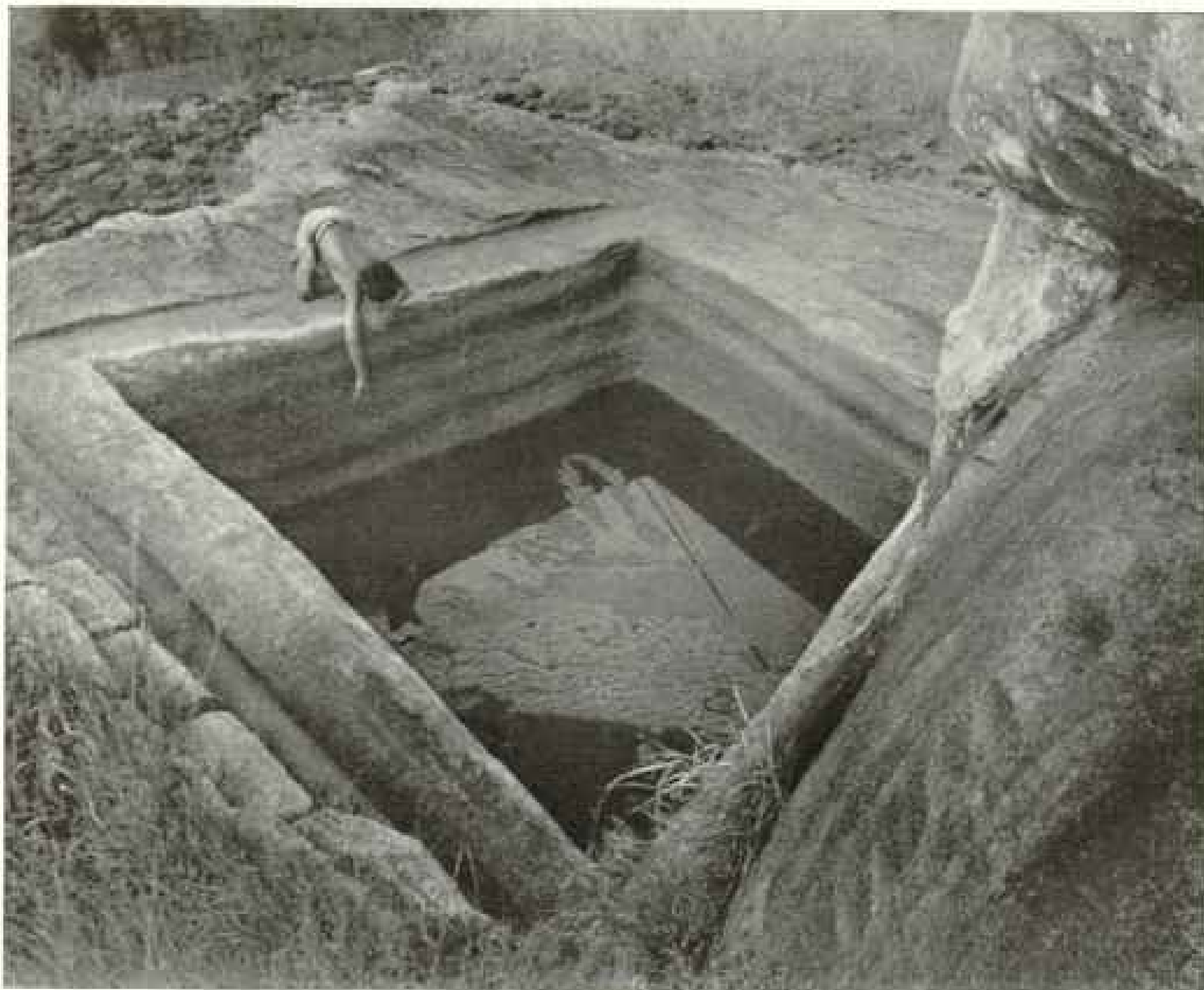
An American Surveys the Ceylon Jungle from a Walk Where a King's Sentinels Kept Watch 15 Centuries Ago

A plaster wall shields a gallery leading to the Lion Staircase House. Behind this parapet Sigitriya's guardians were safe from any flying weapon. Just above the iron steps there is a cage in which fees are collected from visitors. Above it, two Yanks climb the spiral staircase.



**Bath and Throne, Enduring Remnants of Sigiriya's Splendors, Are Carved in Cobra Rock**

This lonely spot, hemmed in by jungle, once teemed with life. In Audience Hall King Kasyapa or his deputy sat on the stone seat (right) and faced attendants. Grooves hewn by his masons still lead to the bath (page 667). The brick staircase, a restoration project, starts the climb up the rock's face.



**"Happy," a Sinhalese Guide, Uses a King's Granite Bath as His Mirror**

On the summit a royal inner city spreads across some three acres. There king and court lived amid silken hangings and golden utensils. This hilltop pool, similar to the one on Cobra Rock (page 677), endures where other luxuries have vanished. Crumbling foundations locate the royal palace.

Happy, recognizing that we were again baffled, pointed to a spot higher up the rock and waved his arms to suggest flight. Slapping his neck and frantically waving his arms, he dashed into the cage and closed the door.

We then understood. This cage would be our refuge if we were attacked by the thousands of bees, the only inhabitants of the rock.

Noting that the enormous beehives were a hundred feet up the rock and uncomfortably close to the treacherous path we must take, we reluctantly began the ascent.

Beyond the lion staircase the steps change to a narrow iron ladder and then turn north-east across the face of the vast rock, by a series of foot holes cut almost horizontally but ascending gradually. The climb was precarious, for the holes were cut in the face of the cliff to fit the side of a man's foot.

Kasyapa's engineers again showed their brilliance by gaining the summit in a winding

climb at the only place where the rock did not actually overhang.

As we approached the level of the hives, we prayed that we should not disturb the bees, for an attack by a swarm when we should be giving attention to our footing might mean a fall down a sheer precipice of 250 feet.

We noted many caves on the upper reaches which show definite indications that they once contained art similar to that of the other galleries. Since they did not have the protection of an outcropping of rock, the murals have long since been destroyed by monsoons.

Upon reaching the summit, I was bathed in perspiration, but Gunga Din and Happy appeared cool and comfortable. I looked with new respect upon their sensible costumes.

When we had recovered our breath sufficiently to appreciate our surroundings, we had the feeling that we were on top of the world.

This place was so sun-baked and wind-swept that it was hard to realize that it was



#### A Frescoed Princess and Her Handmaiden Carry Flowers to a Sinhalese Shrine

In King Kasyapa's art gallery 21 female pilgrims preserve the fashions of 5th-century Ceylon. Servants (as on the right) are pictured in dusky tints, indicating an alien race. Buddhist artists executed the frescoes on the plaster walls and ceiling of a lofty cave (pages 667 and 668).



Marlin T. Griffin

#### An American Tests King Kasyapa's Pink Granite Throne for Size and Comfort

Carved out of the hill's hard top, the throne has resisted the decay of centuries. Facing the rising sun, it commands a view of the jungle. Here sat the moody monarch watching for the glint of enemy spears.



once the site of a small city which sheltered Kasyapa and his court. It is comparatively flat and more than three acres in area.

Nothing remains of the palace buildings except suggestions of foundations and retaining walls. However, the King's pink granite throne, facing east, is still perfectly preserved (page 679). It has strong classic outlines without ornament of any kind.

The simple grandeur of the throne is in harmony with its surroundings, the great elevation, and the far-reaching sweep of the view before it. Far below in the valley we could see the lake and imagined we could trace the limits of the ancient outer city, now overgrown by jungle.

As we appraised the ruins, we could picture the bygone pageantry of multitudes of artisans swarming to the top of the cliff, each to do his bit to accomplish the bold and ambitious plans of the energetic King. Unlike the bees we had just passed, they could not live on the rock itself but must return to the level plains each evening. The summit was reserved for the court and its retainers. The narrow paths and stairways, the only means of approach, must have been crowded constantly with a stream of people ascending the magnificent rock.

#### Roman Empire Coins Found Here

We know Kasyapa was interested in commerce, since 1,687 coins were found in the process of excavation. All but 12 were of Roman or Indo-Roman bronze, dating from A. D. 317 to 423. The idea of currency from the Roman Empire being used here approximately 1,500 years ago stirred my imagination.

Passing from the granite throne southward, we came to the great tank on the summit, which supplied water to the population living there. Scattered over the rock's surface were other tanks constructed in natural depressions. This tank was the main reservoir and by far the largest. Numerous flights of steps radiating from it led to all the palace buildings.

We followed one to a sharp rise on the southwestern edge of the summit and came to a ceremonial bath which was in an excellent state of preservation. This bath had much the same size, shape, and general features of construction as the one we had seen on Cobra Rock (page 678).

I was profoundly impressed with the magnitude of the work accomplished under Kasyapa's direction. The thousands of stone slabs, bricks, tiles, and logs used in construction of all the buildings which once stood here had to be brought up from the plain.

It was late afternoon when we completed our tour of the 5th-century citadel, but before returning to the world below we were drawn again as if by a magnet to Kasyapa's throne. Storm clouds had gathered around the sun, and in the eerie light the scene was conducive to meditation.

#### The Approach of Doom

From this point Kasyapa saw his almost certain doom approaching. According to the *Mahavamsa*, the King was sitting in his terraced garden on this very throne when, in the light of the rising sun, he noted a disturbance in the jungle to the north. As the shadows receded, the jungle sprang into life with waves of spears driving inexorably toward his stronghold.

Kasyapa knew the day of retribution had arrived. His brother, Moggallana, had returned with a great army to avenge the murder of his father.

Leaving the fortress, Kasyapa went down to the plain to give battle.

Each brother was mounted on an elephant for the conflict. The *Mahavamsa* says that the rival armies met "like two seas that had burst their bounds." For a while the fortunes of battle were equal.

Then Kasyapa, on coming to a deep marsh, turned his elephant back so that he might attack by another direction. His followers interpreted this as a sign of flight and broke in reckless disorder. Recognizing that defeat was imminent, Kasyapa cut his throat rather than be taken prisoner.

With the death of Kasyapa, Moggallana became king. He established his court at Anuradhapura, the capital city of his ancestors. Sigiriya for a time was occupied by priests, but they did not remain long. They found Lion Rock too large and inconvenient.

So for nearly fifteen centuries Sigiriya has been abandoned to the ravages of monsoons while the city below it succumbed to the merciless encroachment of the jungle.

As we descended the lion staircase, I realized why Kasyapa had abandoned the comfort and security of the summit. Had he elected to remain at his fortress, Moggallana would have needed only to lay siege to this one approach to ensure death by starvation for all those on the heights above.

We paused by the great claws of the lion and contemplated the jungle which had been drenched with the blood of Kasyapa's army. Catching a glimpse of our jeep in the valley below, we remembered that we, too, had a military rendezvous.

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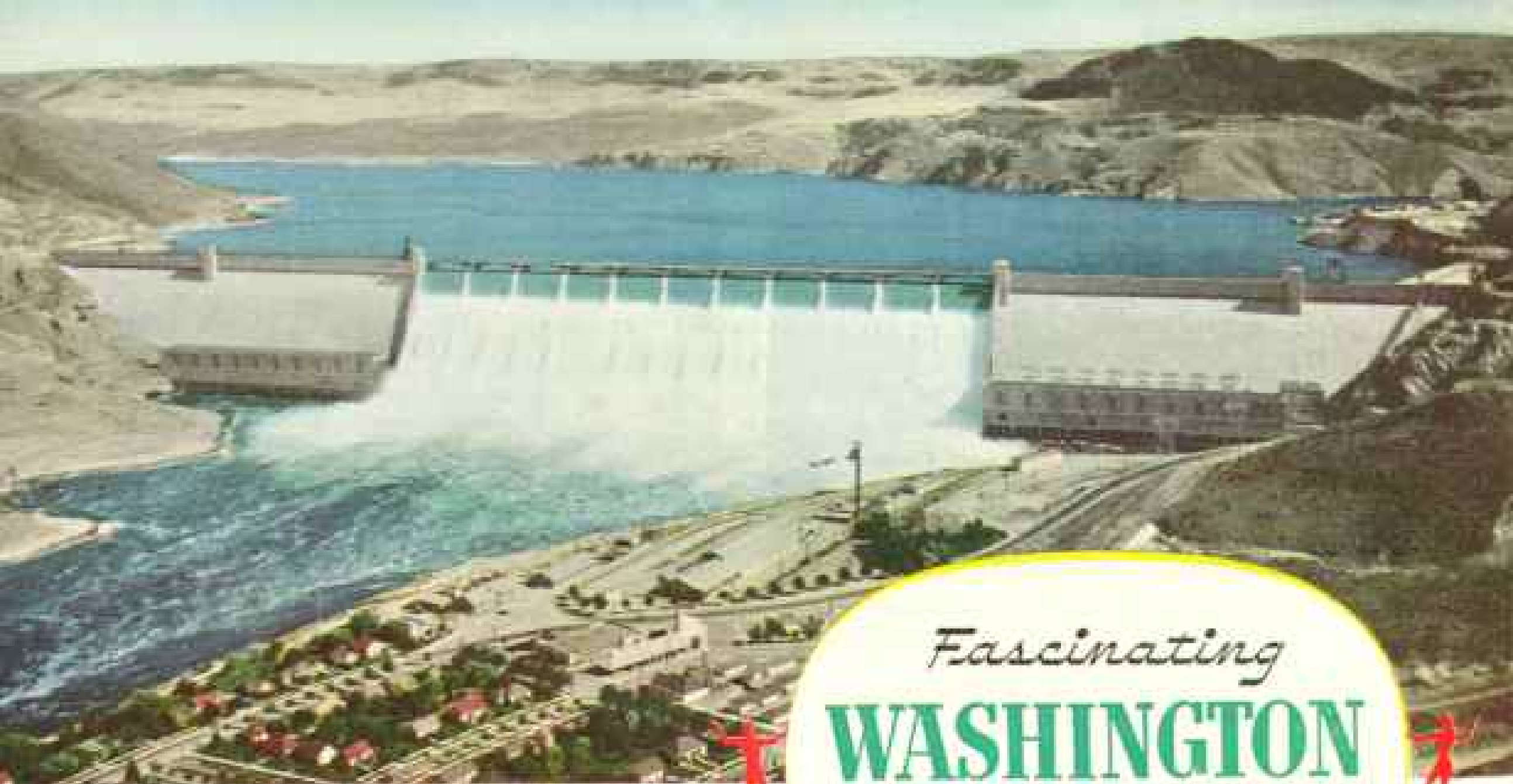
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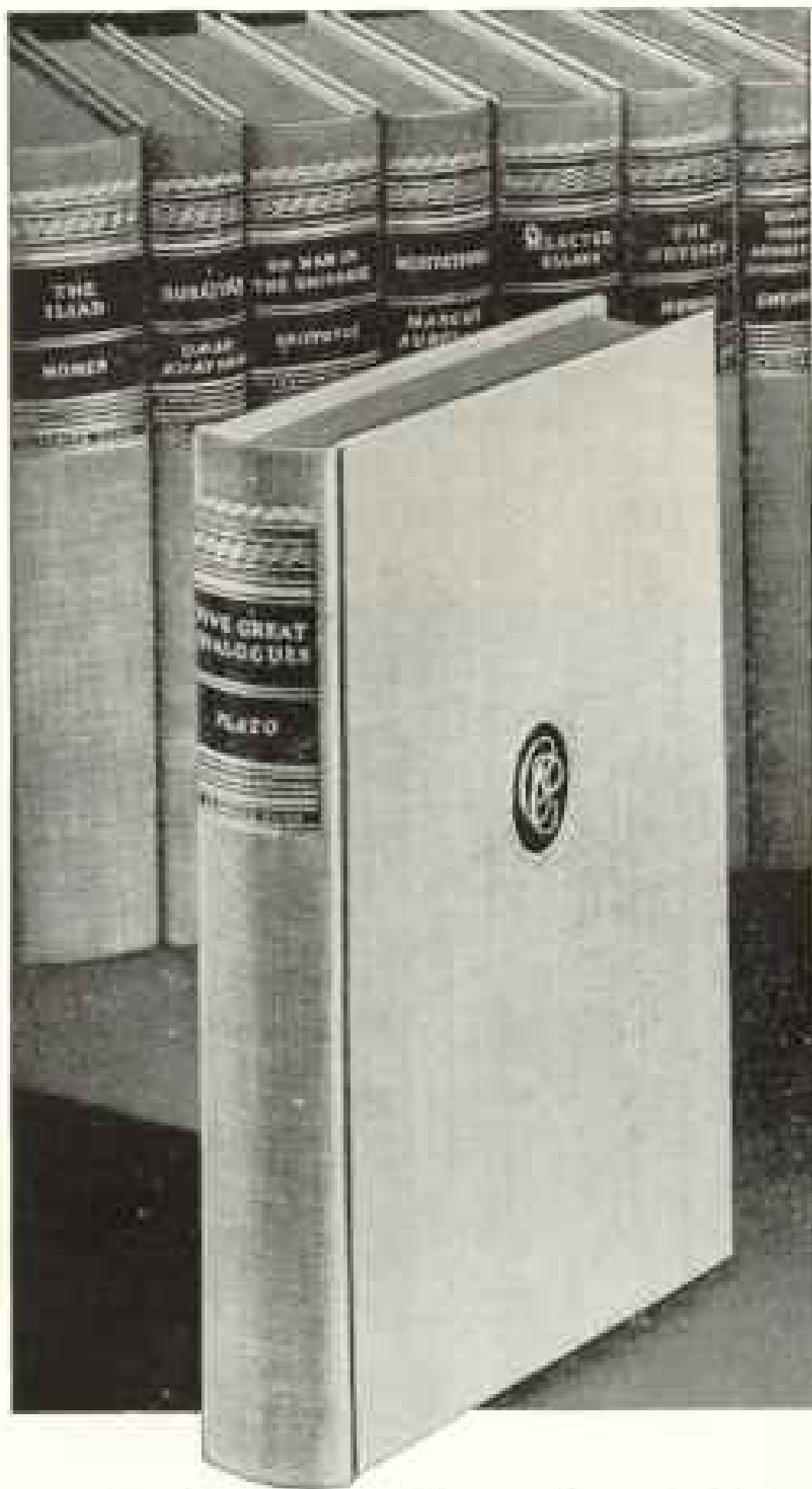
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*Photography: Paul Hest*

*Irene Dunne enjoys her Magnavox with Playwrights Howard Lindsay and Russel Croft*

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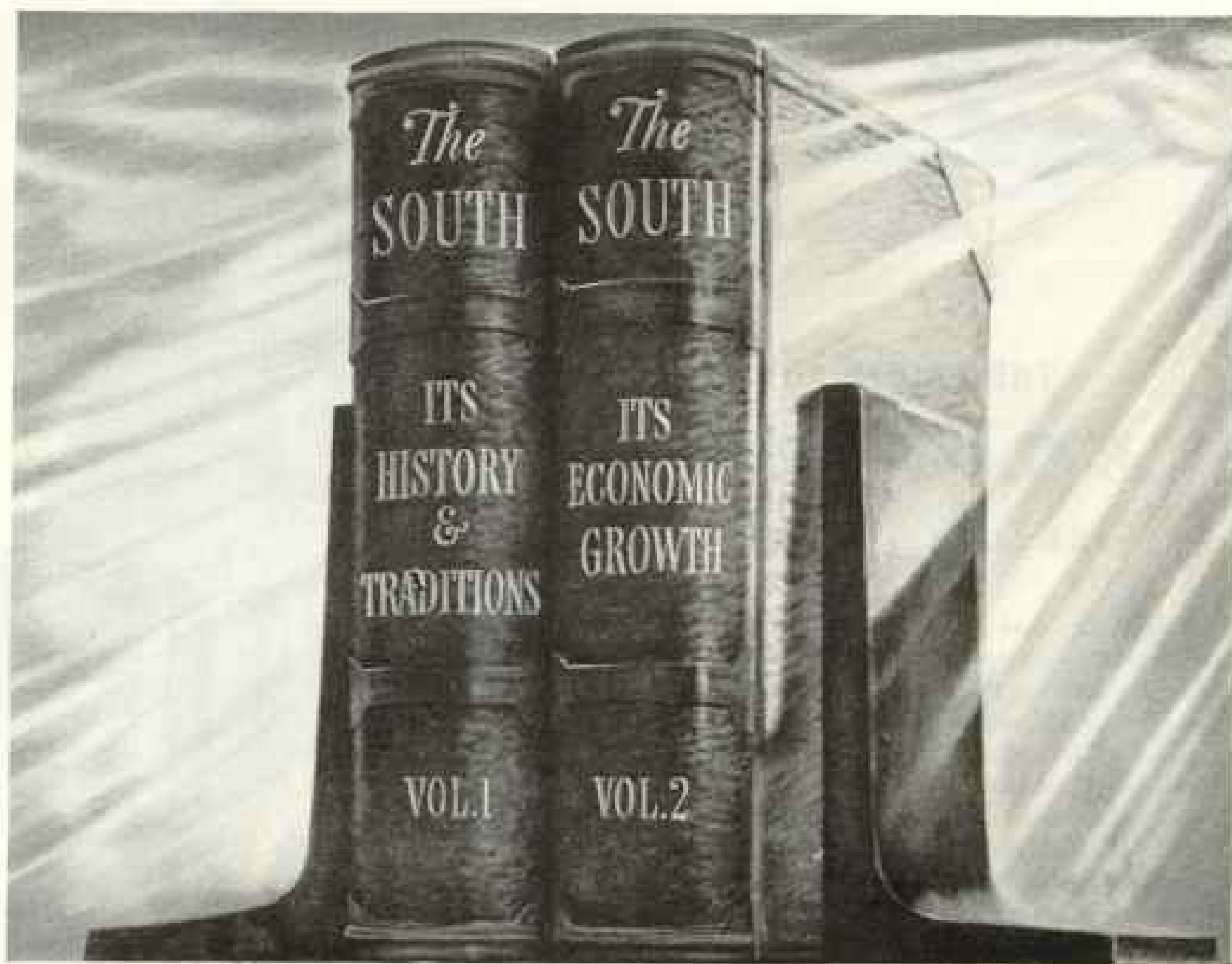


Illustration:

The *Constellation* enters the "Race Against Time" as the Chariot of Boadicea continues to challenge London's famous Big Ben. Water color by Noel Quinn.

*Lockheed Constellation*

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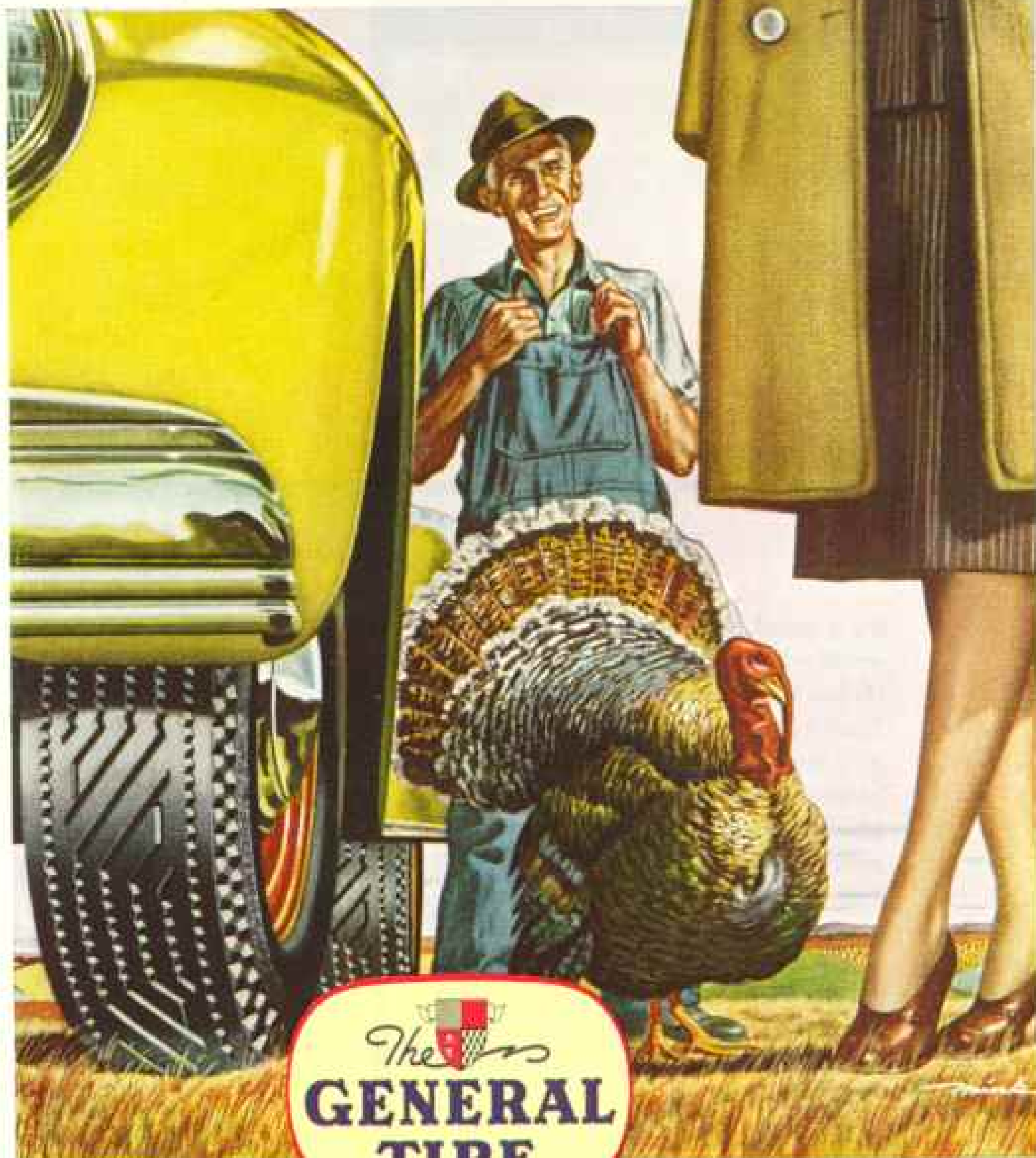
*Ernest E. Harris*  
President



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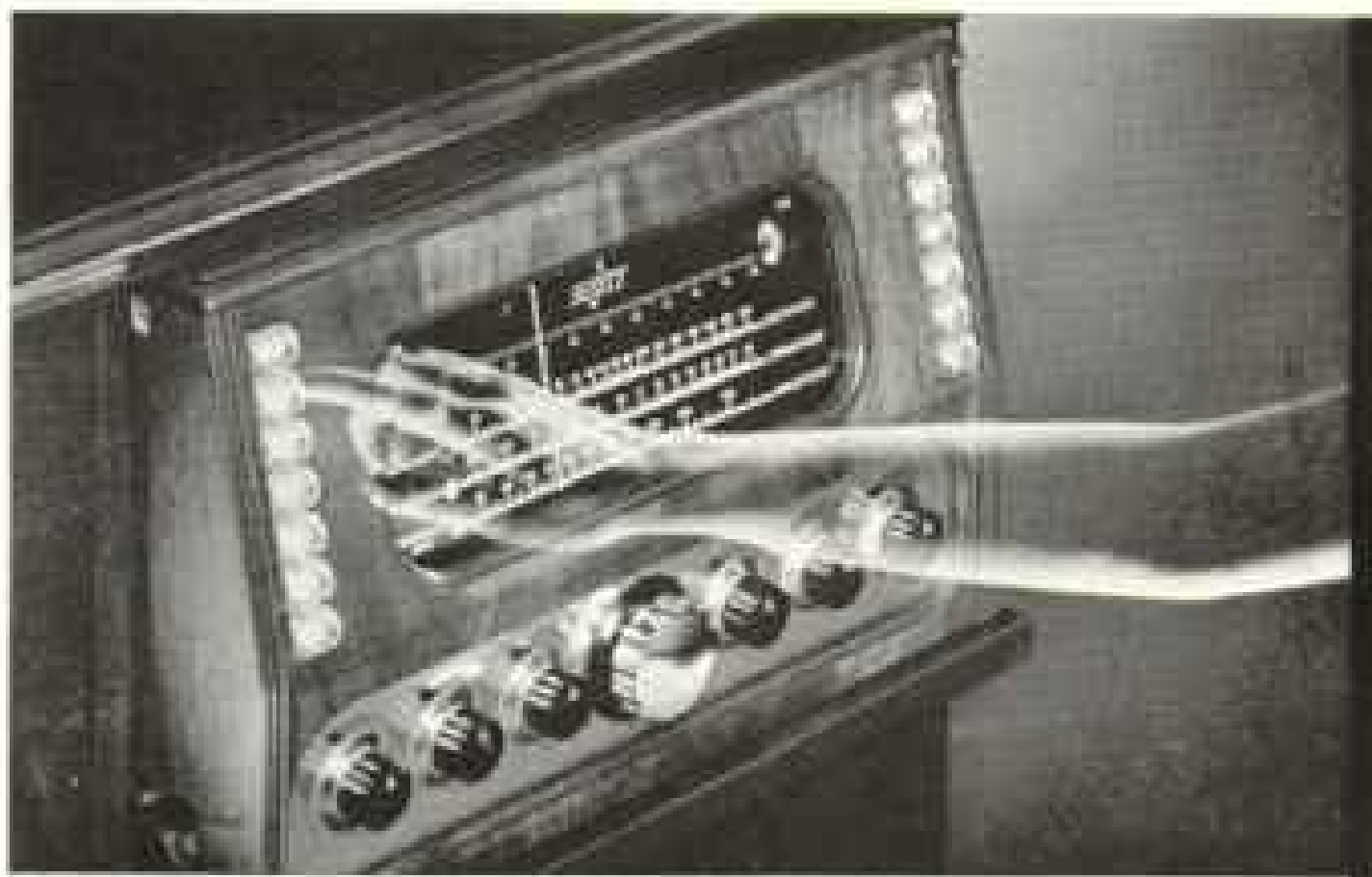
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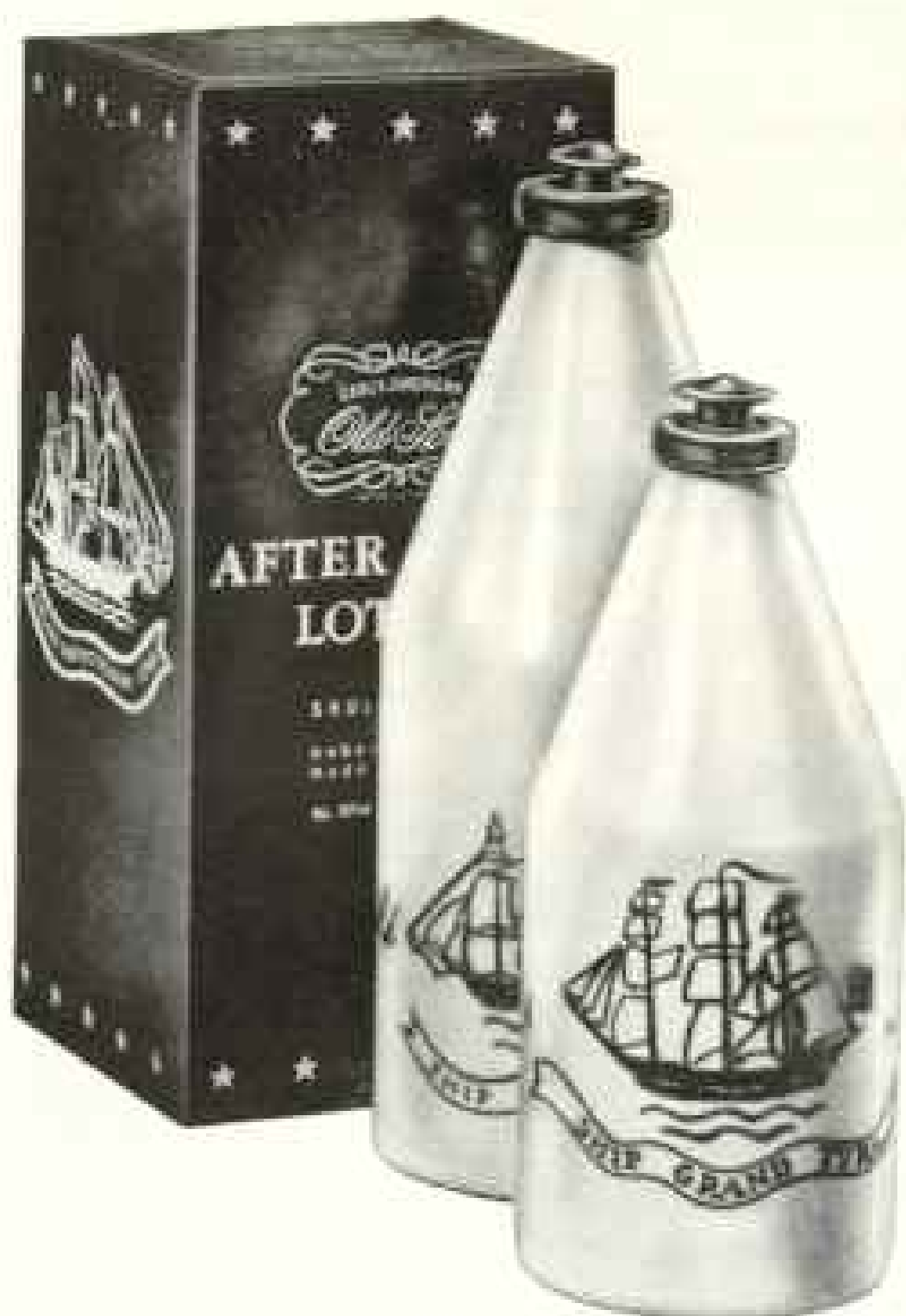


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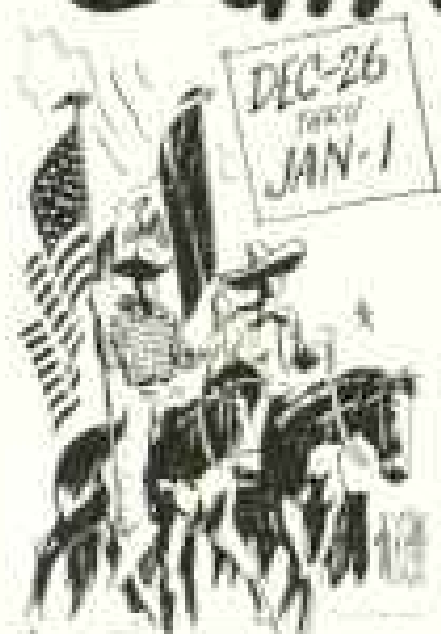
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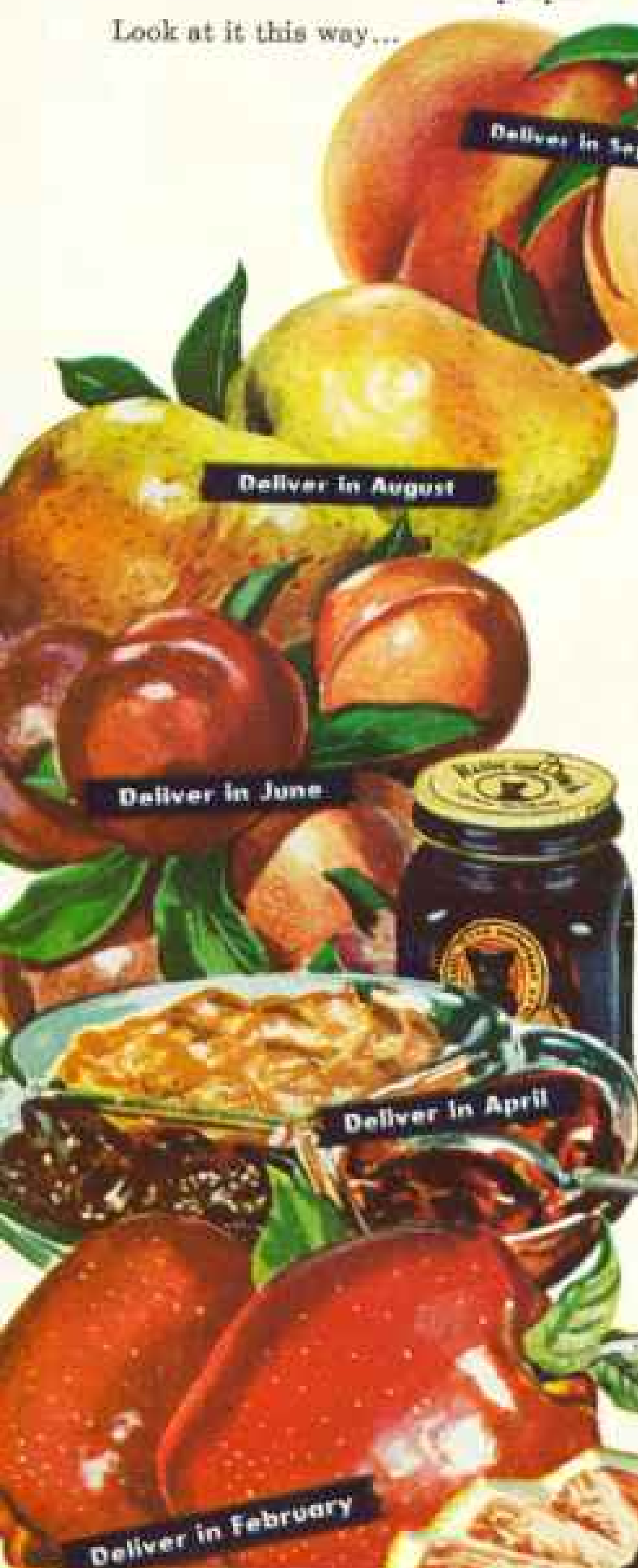
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\*In 5-Box Gift a special Pleasure Chest in March is substituted for the April Preserves.





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*"The Gift that makes me a boy again"*

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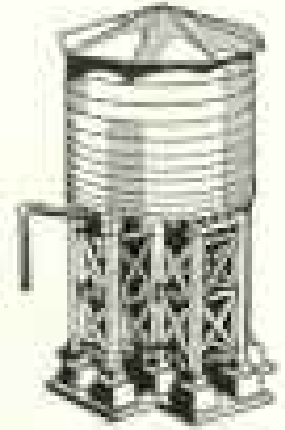
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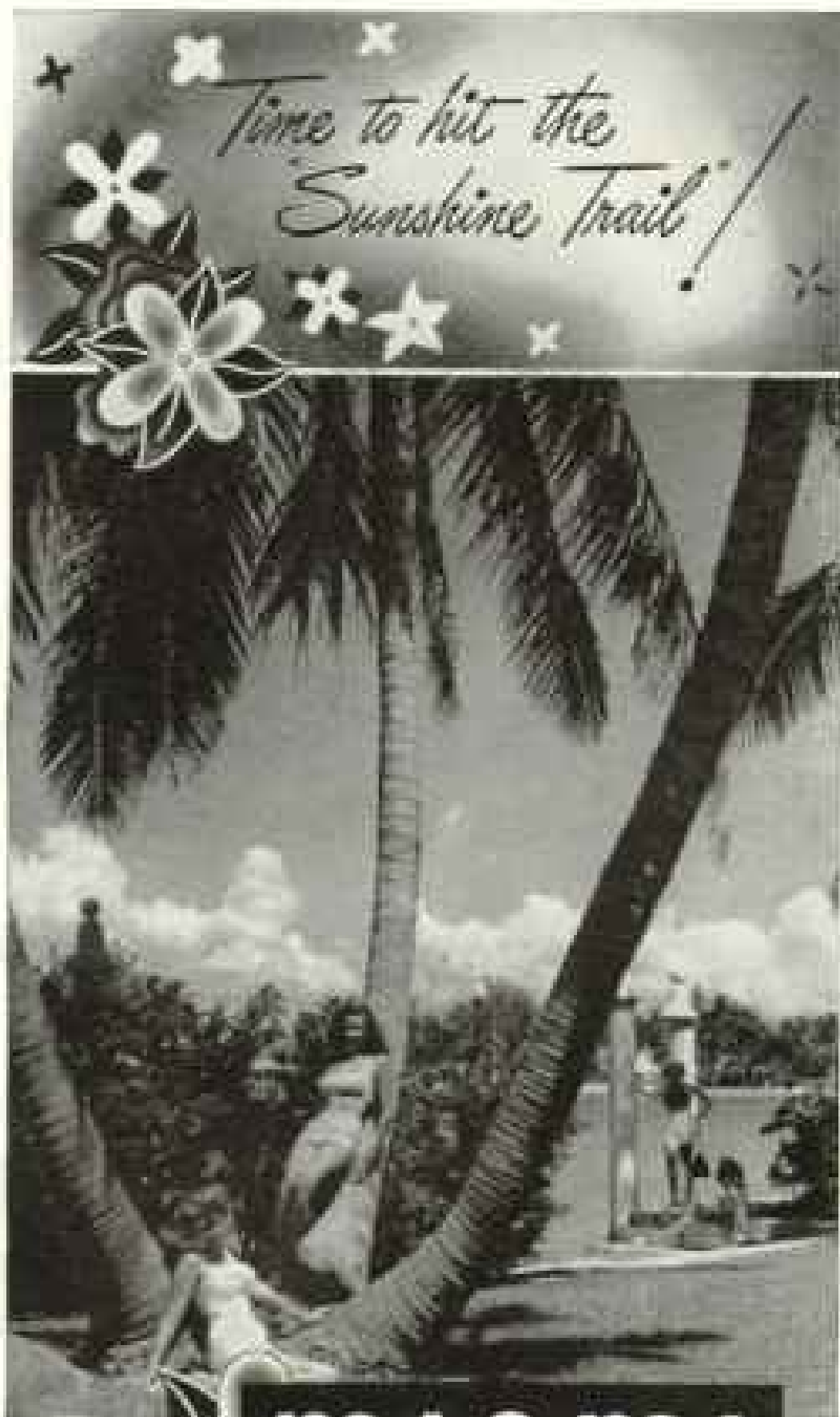
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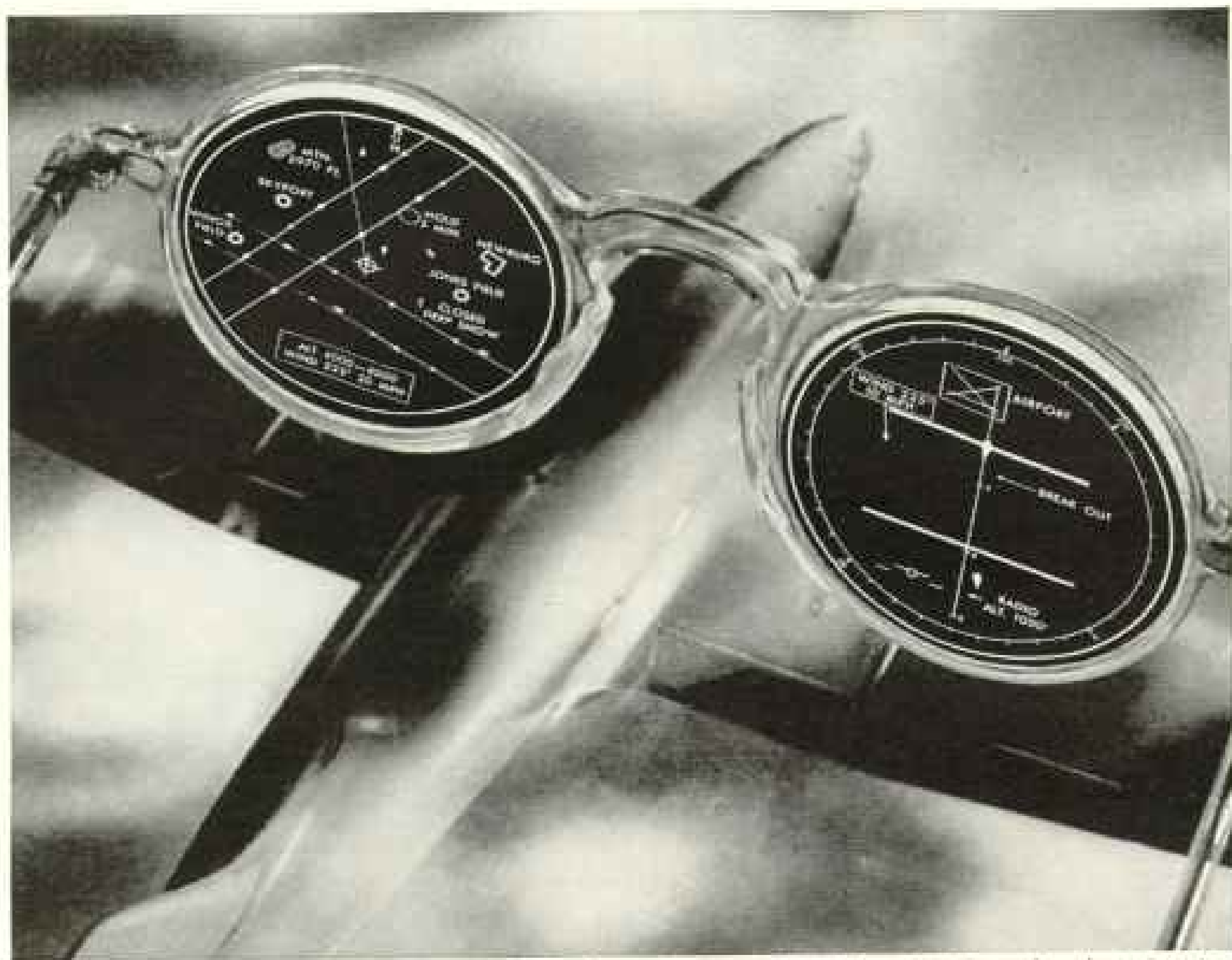
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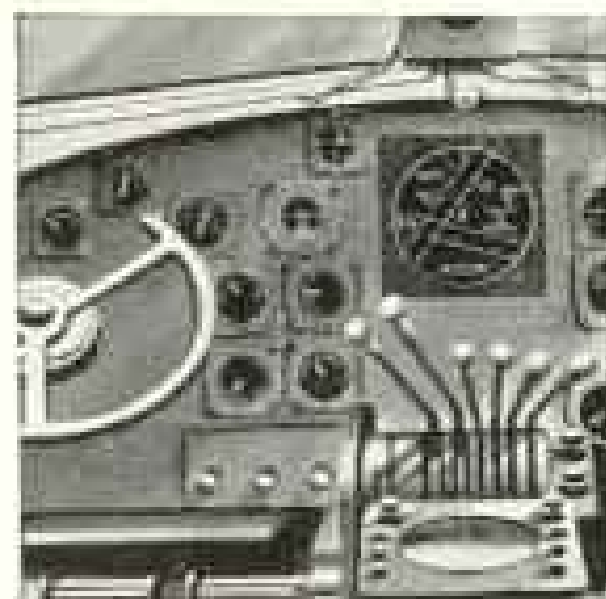
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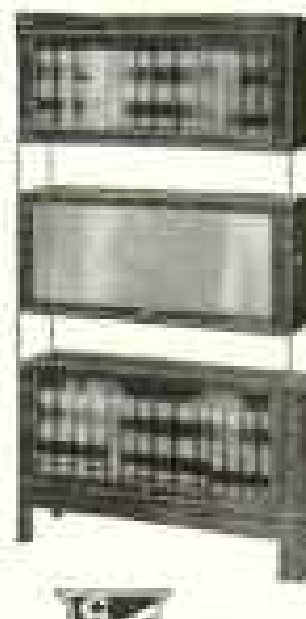
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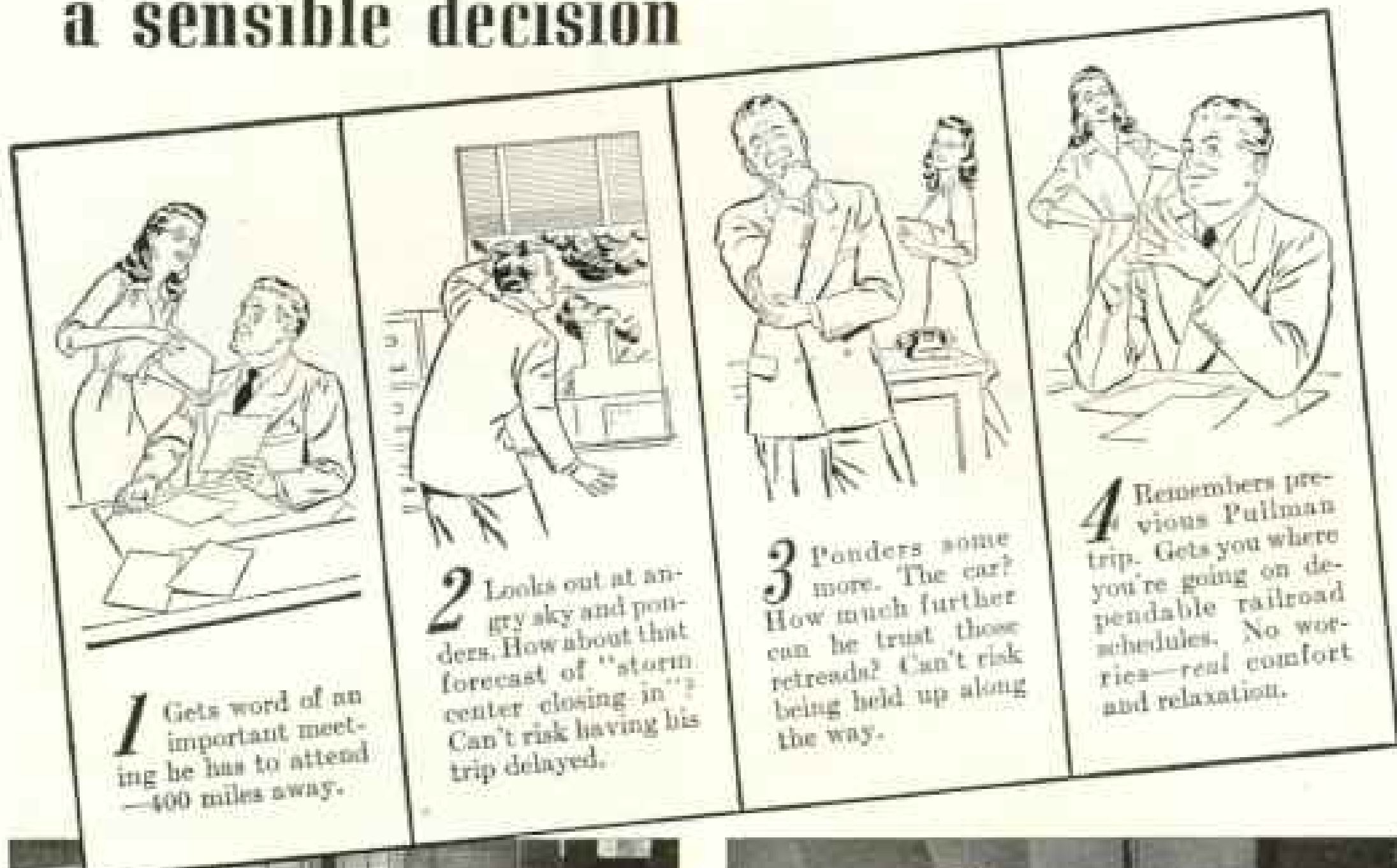
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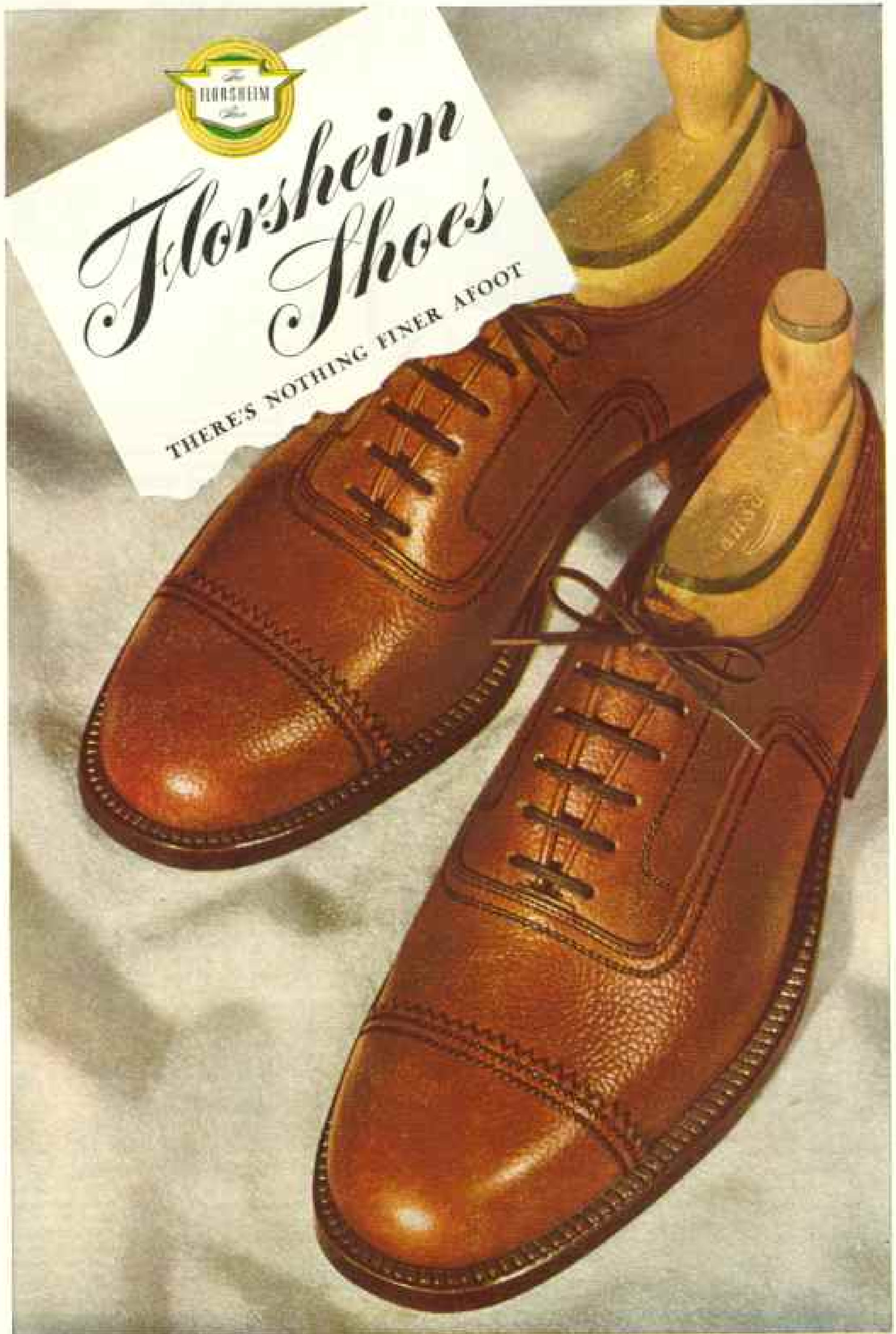


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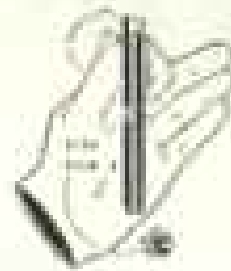
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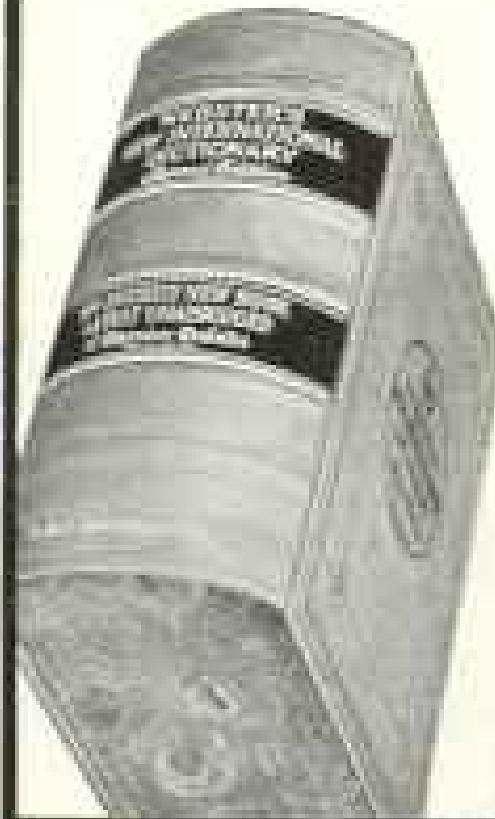
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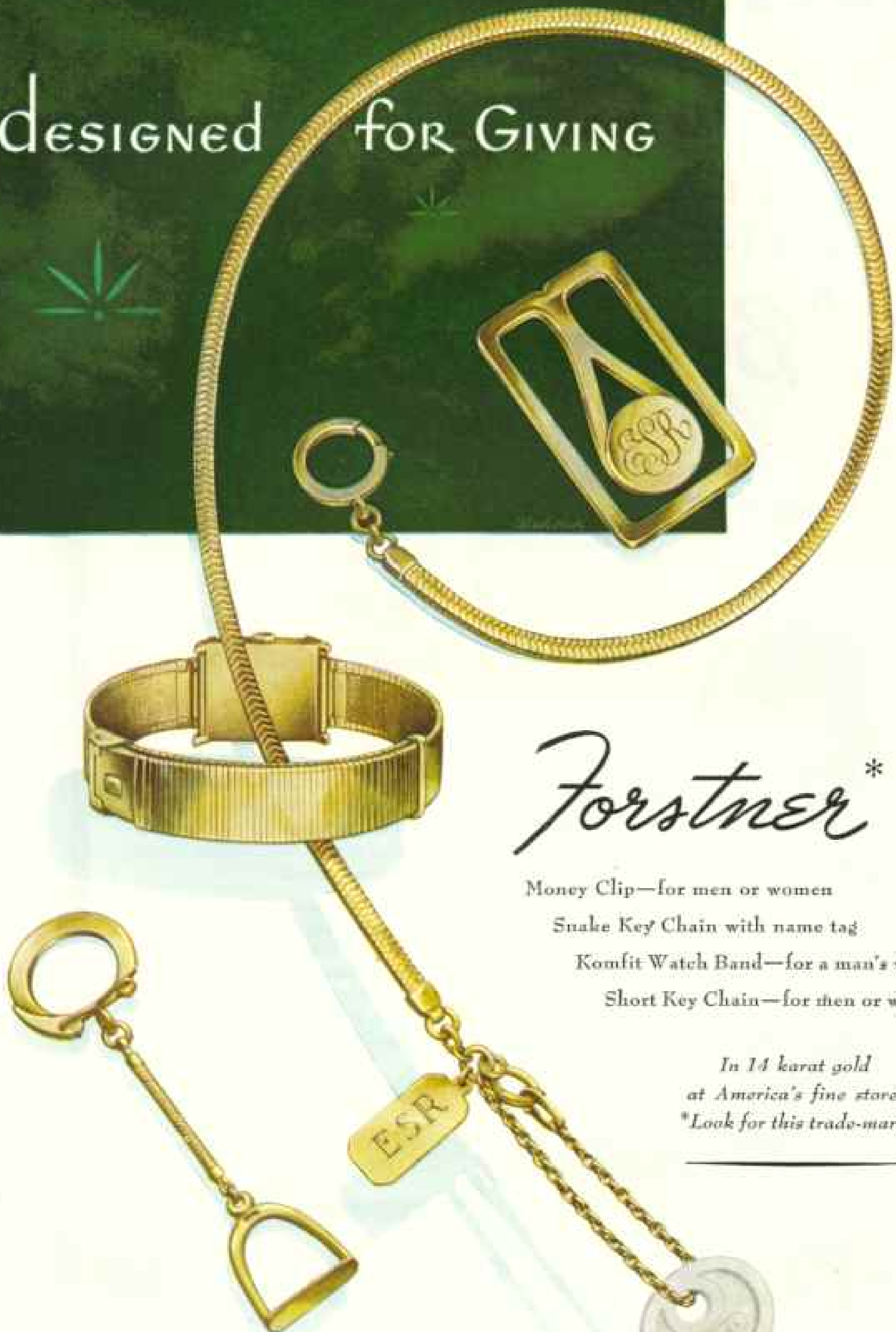
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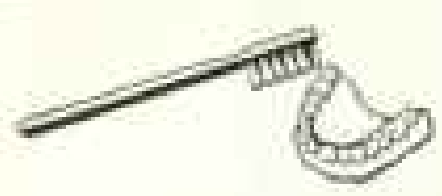
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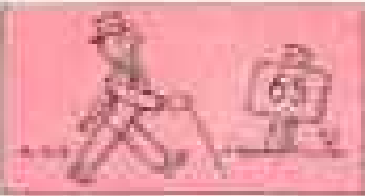





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At this point, the stalwart explorers began to lean heavily on a woman. Her name was Sacajawes, the Bird Woman, and she was the Shoshone wife of the Frenchman, Charbonneau, whom Lewis had hired as a guide.

The Bird Woman not only convinced her fellow Shoshones that the expedition was friendly, but persuaded them to sell the white men horses, help replenish the food supply, and provide her with directions which let her lead the explorers over the perilous passes to the safety of the broad and fertile Pacific slopes, which lay beyond.

Now although you may never have thought of it just this way, the average man's life is not unlike an exploring trip. Before reaching safety, he must face certain hazards, both known and

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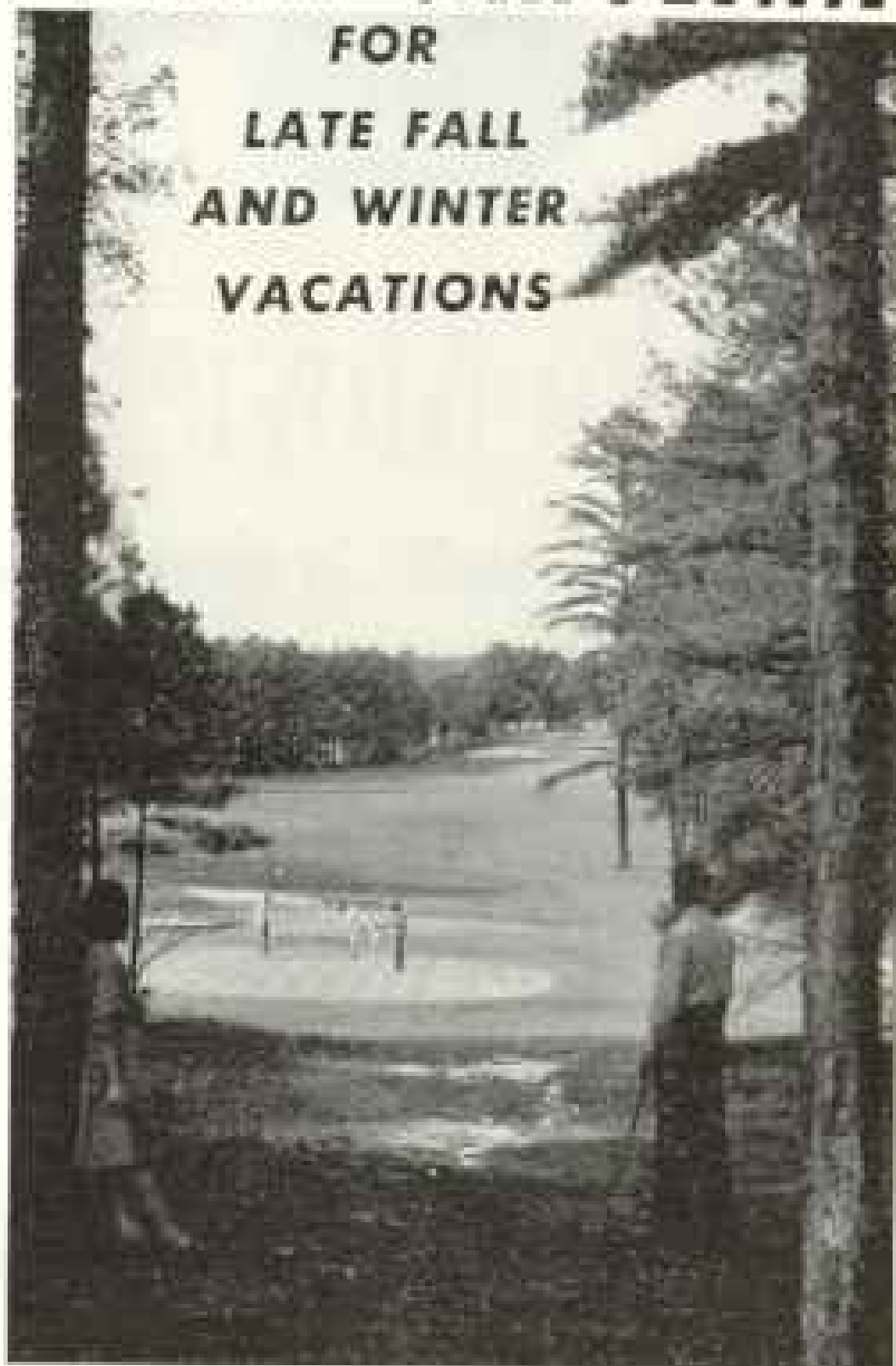


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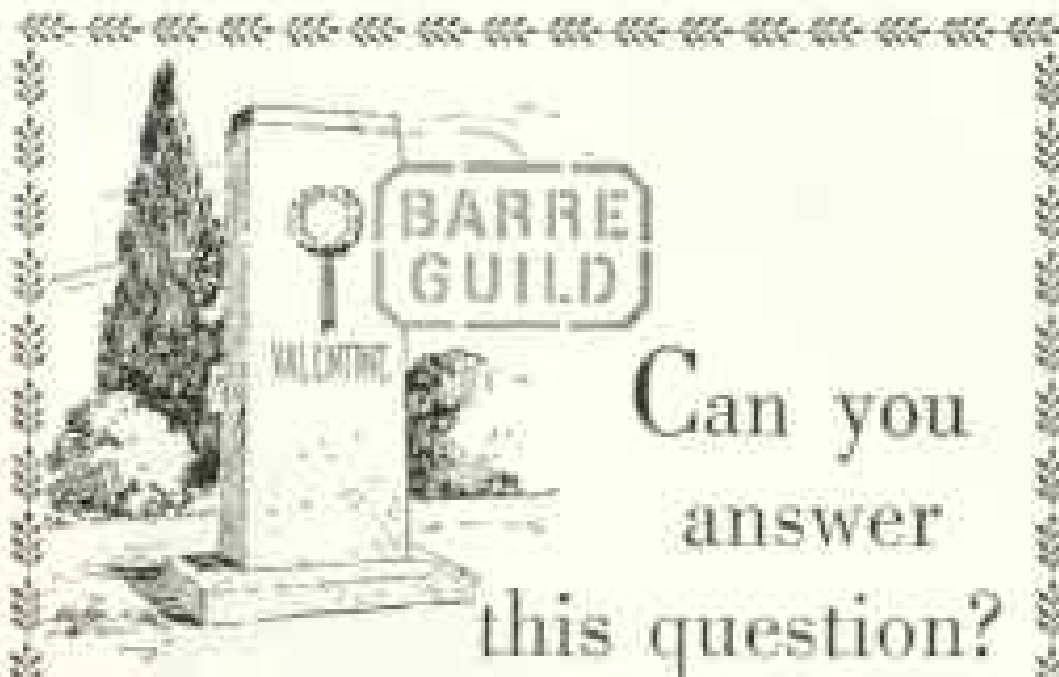
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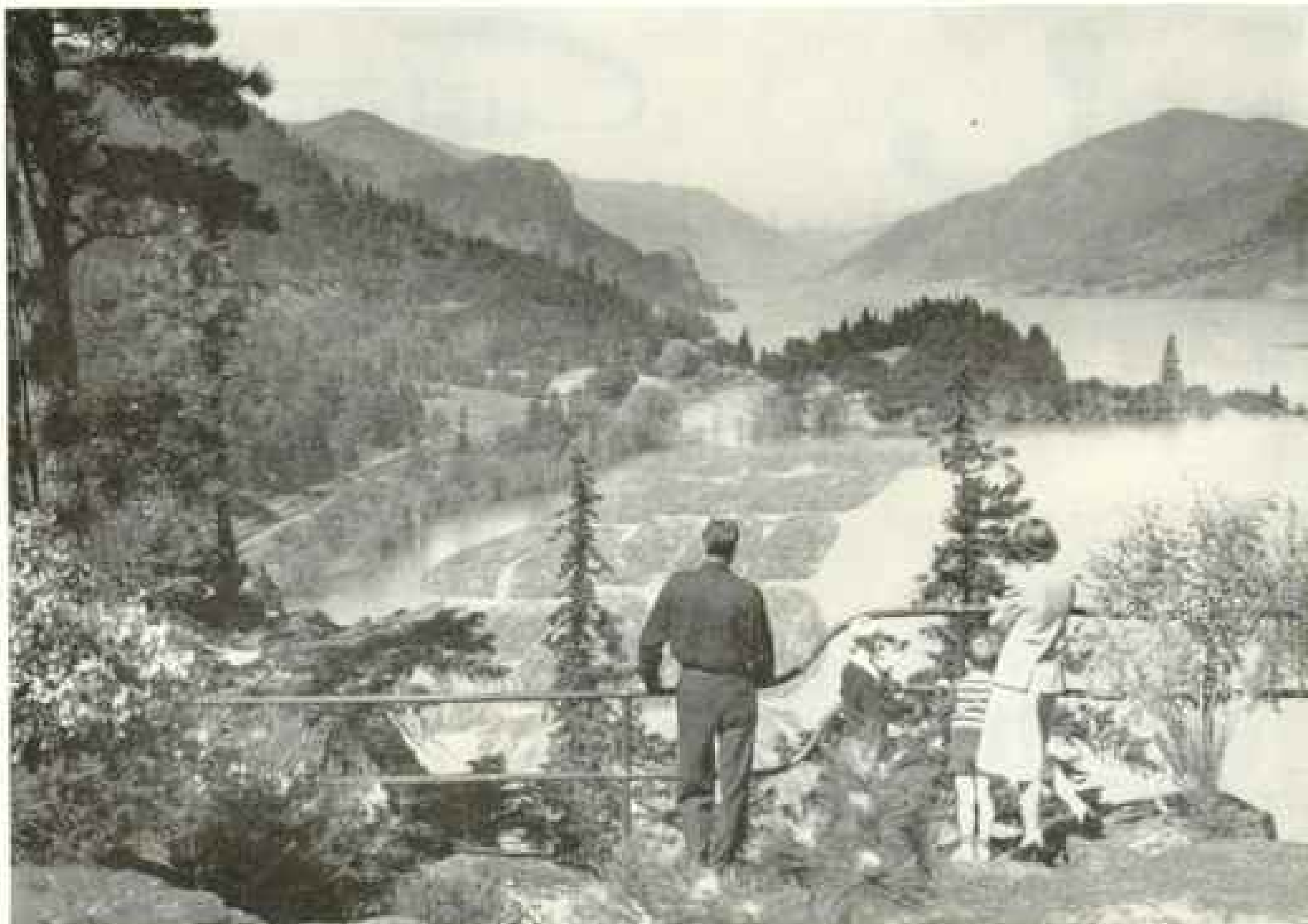
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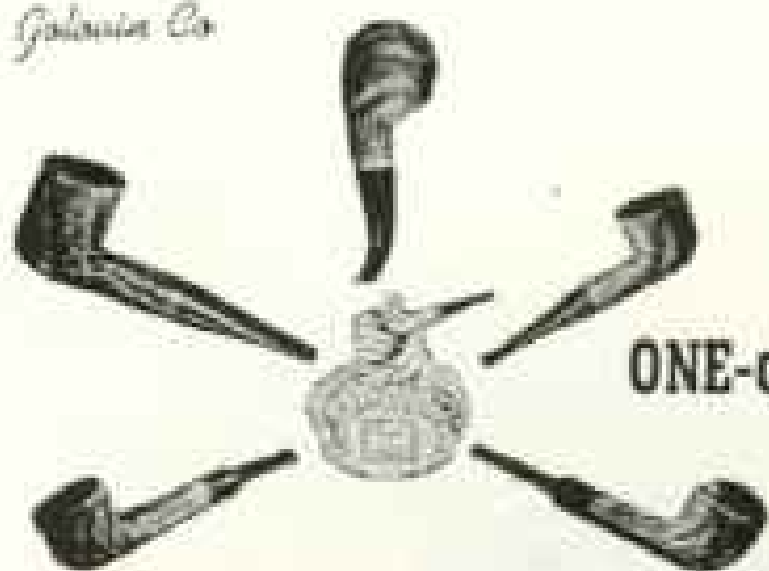
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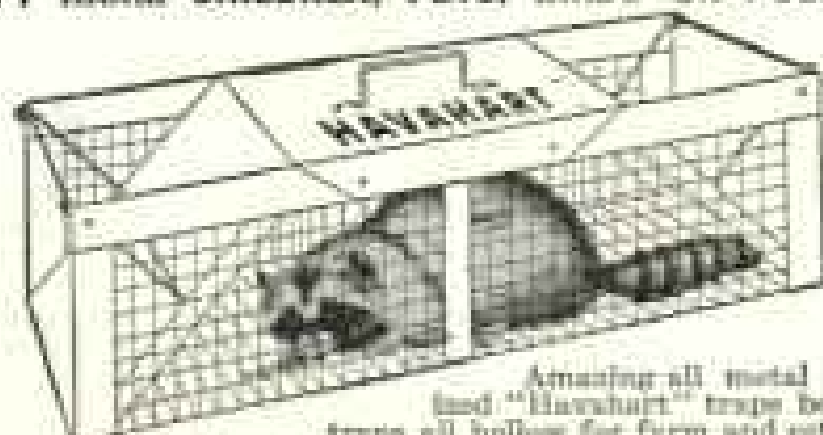
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