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# THE NATIONAL GEOGRAPHIC MAGAZINE

JANUARY, 1939

The Transformation of Turkey

With 26 Illustrations and Map

DOUGLAS CHANDLER

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## THE TRANSFORMATION OF TURKEY

New Hats and New Alphabet are the Surface Symbols of the Swiftest National Changes in Modern Times

BY DOUGLAS CHANDLER

THE Orient Express runs over a steel path leading up to that perpetual mystery called Asia. Its branches unite at Belgrade and carry on as one until Turkey has been reached.

Snow, mushy, mid-April snow, suffocated the landscape and slid drearily down the compartment window as we clumped over the rails through Yugoslavia and Bulgaria toward Istanbul.

Next morning, when the steward roused me before arrival in Turkey's former capital, I found wintry skies weighing down on the minarets, and fruit trees showing only their first bloom. I had left spring well advanced in my Potsdam garden; here, 800 miles nearer the Equator, the calendar was lagging behind.

Istanbul was walking to work. Across broad Galata Bridge, its iron pontoons floating on the waters of the Golden Horn, streamed a mass of darkly garbed people. No bright garment, no touch of color relieved the monotony of westernized raiment (page 10).

Squeezing plaintive sobs from his rubber bulb horn, my taxi driver threaded his way up the twisting ascent of bluff through the city's main thoroughfare, the shining mudguards of his American-made car parting the pedestrian mob as a ship's bow pushes back sluggish, weedy water.

"Come, show me the modern wonders of your city," I begged a Turkish acquaintance.

"For modern architectural wonders you've come too soon," he replied. "We have just started a rebuilding program, planned by European and Turkish architects, which in five years will change the city's face. At present Istanbul's most striking feature is our emancipation from Islamic custom."

### CHILDREN IN THE SADDLE

We found Taksim Square the scene of a national celebration. A band was playing to regiments of children ranged around the Birth of the Republic monument, first sculptured group erected in Turkey.

"You have arrived on a double holiday," said my friendly guide. "Today is the anniversary of the opening of Turkey's first Parliament, April 23, 1920; also, it is the beginning of Children's Week."

For one week of each year the local government of every province is run by school children. Little boys with treble voices take over the offices of governor, mayor, alderman, police chief; their small sisters in black skirts and white blouses function as high executives. In the background, but near enough to see that no serious blunders occur, stand the adult incumbents of these positions.

During the afternoon special films were shown for the children's entertainment. Turkey does not admit minors to run-of-stock thrillers.

Pera Avenue is a Levantine Piccadilly



Photograph by Bernard F. Rogers, Jr.

THE JANISSARY KETTLEDRUM WAS A KETTLE IN WHICH BARRACK FARE WAS COOKED (PLATE IV)

In the courtyard of the Church of the Peace of God at Istanbul are four fire-blackened caldrons in which the soldiers' rations were prepared. When danger threatened, spoons beat on their iron sides. Later, drumheads were added and the kettles became kettledrums, related to the symphonic instrument and those used by the Horse Guards at the Trooping of the Colour in London.

with curvature of the spine. From Taksim Square it descends through rows of movie houses, hotels, and stores, each announcing its offerings in Latin-letter signs. Only on the walls of mosques, green-back surfaces of one-lira banknotes, and certain aluminum and copper coins are Arabic characters to be found.

Beauty shops urge black-haired feminine passers-by to acquire an "ondulasyon" or submit to the electrified caress of a "permanent" waving machine; a department

store displays its title as "Bonmarçesi"; "Vagonli Kook" will arrange your tours; "Lü Jurnal Doryan" is *Le Journal d'Orient*, a local French newspaper. Lining the outer 'tween-decks space of ferryboats are advertisements of such products as "Poker-Play" razor blades, "All-Nu Fly Spray," "Joli Fam," "Kremive Pudrisi," and various makes of "Radyo."

#### A SECOND 1938 EASTER

A visit to the printing plant of *Tan* (Daybreak), popular Turkish daily, offered the spectacle of middle-aged and elderly linotype operators with agile fingers setting type from both Latin-script copy and intricate Arabic characters.\*

Confectioners' windows were filled with an edible poultry-and-rabbit show of

chocolate-and-almond paste; also curious bread loaves in the form of a large circle-with-cross, with brilliantly dyed hens' eggs protruding from their crisp, brown surfaces. Easter in the Christian churches of western Europe was already past, but the Greek Orthodox celebration was yet to come.

\*See, in the NATIONAL GEOGRAPHIC MAGAZINE, "Turkey Goes to School," by Maynard Owen Williams, January, 1929, and "Looking in on the Everyday Life of New Turkey," 17 natural-color photographs, April, 1932.

Republican Turkey has freed itself from the domination of Mohammedan priesthood and banned religious teaching in the schools. All sects are permitted to worship in their own fashion. On Easter Sunday I found Greek Orthodox and Armenian churches crowded, censers swinging, priests chanting in ornate, bejeweled robes.

The service ended, my friend showed me these same dignitaries emerging from the doors apparelled like ordinary citizens. Neither men nor women of religious orders are permitted to appear on the streets in clerical garb.

The muezzin of today may be clad in anything from a hand-me-down business suit to plus-fours. Dutifully he mounts the inner spiral of the minaret to call the Faithful. The mass of the people beneath pass on their way, unheeding, apparently oblivious to the quavering supplication. Yet straggling worshipers are to be found in the mosques at most hours.

#### THE GLORY OF BYZANTIUM

Of that army of American and European cruise-ship adventurers who trudge beneath the soaring dome of St. Sophia (page 4), how many are able to visualize the surrounding area as it appeared during the height of Byzantine glory? \* On St. Sophia's south flank stretched a vast marble-



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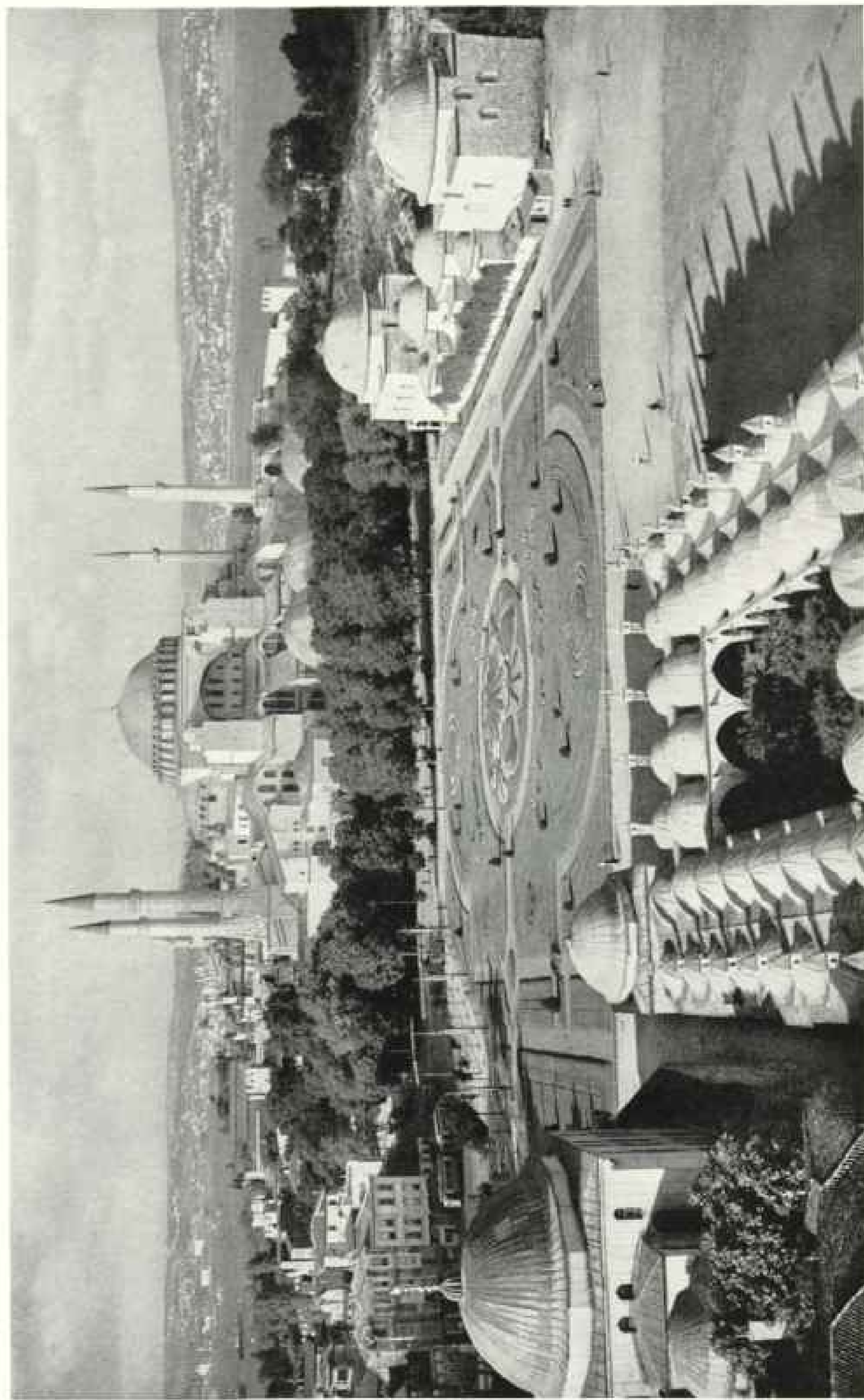
TWELVE YEARS AGO THESE FACES WOULD HAVE BEEN VEILED

One more old-fashioned woman shields herself with her hand-bag, and warns a friend. Beside her, in a modish black turban and head shawl, is a younger woman to whom the camera is a matter-of-fact feature of parades and life.

paved square, the Augusteum. To the east and south of the square, which some writers liken to Venice's Piazza San Marco, stood the Senate House and the Palace; from the lofty elevation of the Kathisma the Emperor was able to gaze down on the gory sports of the Hippodrome.

Near the location of the long-since vanished Hippodrome, in the court of the Palace of Constantine the Great, founder of the Byzantine Empire, mosaics of extraordinary beauty have recently been

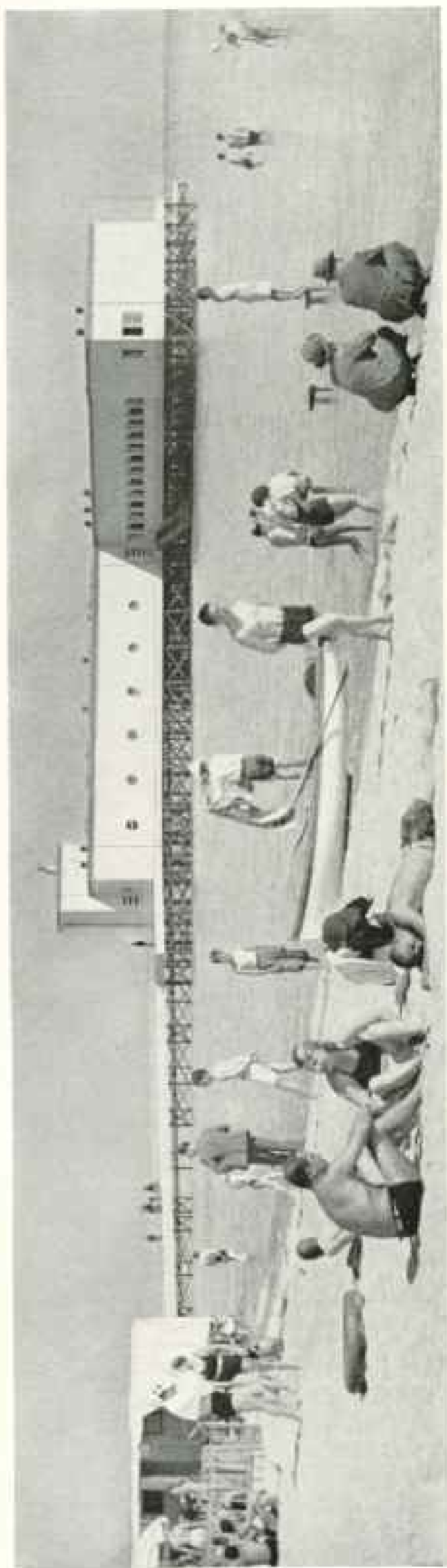
\*See "Constantinople Today," by Solita Solano, in the NATIONAL GEOGRAPHIC MAGAZINE, June, 1922.



Photograph by Bernard P. Rogers, Jr.

**ST. SOPHIA, BUILT AS A CHURCH AND USED FOR CENTURIES AS A MOSQUE, IS ISTANBUL'S PRIZE ATTRACTION**

Behind the massive dome with its minarets lies the Bosphorus, separating Europe (left) from Asia. At the extreme right is Uskudar (Scutari). The formal garden in the center was a bare drill ground in the days of the Sultans.



KEMAL ATATÜRK'S SUMMER WHITE HOUSE AT FLORVA, NEAR İSTANBUL, WAS BUILT ON A PIER

Near the sandy shore of the Sea of Marmara, the first Turkish President maintained this place of relaxation where he could indulge his love of sea- and sun-bathing.



Photographs by Bernard P. Rogers, Jr.

ROBERT COLLEGE, OUTPOST OF AMERICAN EDUCATION, IS FRAMED BY MOHAMMED THE CONQUEROR'S CLASSIC WALLS

Here Darius, the Persian monarch, watched his soldiers cross into Europe over a bridge of boats, en route to fight the Scythians. On September 16, 1863, the college, named after its chief benefactor, Christopher Rhinelandt Robert, was opened by its first president, Cyrus Hamlin (page 12).



Photograph from *Pia*.

"FORBIDDEN AND DANGEROUS," READS THE WARNING, BUT THEY "HOOK A HIDE"

While a Kurdish porter plods along, newsboys show that they don't believe in signs. Behind the car is the slope which climbs from Galata's wharves to the shops and hotels of Beyoğlu (Pera).

unearthed by Professor James H. Baxter, of the University of St. Andrews, Scotland (Plate V).

Shaking off the gadfly guides, I wandered for hours around and within the portals of that architectural jewel, the Suleimanieh, or Mosque of Soliman the Magnificent (Plate XII).

The Seraglio Museum offers an almost intolerable temptation to one who loves to touch things of beauty. That collection of unset gems, quite without reference to its incredible value, invites a caress.

#### WHITE-TIE-AND-TAILS A SYMBOL

In almost every public room is a portrait or bust of Kemal Atatürk. He stands frowning in bronze in the lobby of the Park Hotel, tail coat, rigid bow tie, hand thrust in bosom. When the Islamic ban on reproduction of the human figure was first removed by the Republic, bronze, plaster, and marble were wrought into incredible parodies on art. Now these early sculptured oddities are being replaced by well-executed statues.

Late sunset from the Pera Palace Hotel reveals the Golden Horn turning to gun

metal; a few minutes ago it was truly golden. Lights prick out from along the curving waterway. Twilight Istanbul drags at the heart, so much of human drama has been here enacted since its founding, A. D. 328.

#### NOISES OF THE NIGHT

Sleep is an elusive jade in Constantine's overgrown town. Roosters crow the night through. There's a continuous far-off barking from the descendants of those furtive yellow beasts which were "hoarded" at the time of the island dog purge. At brief intervals comes the trilling whistle of vigilant night watchmen, answered from post to post like an echo.

I attended the annual general meeting of the Istanbul Service Center, new name for the Y. W. C. A. since the legislation regarding religious institutions was passed. The Y. M. C. A. retained its old title for a time, but now has a Turkish designation.

A solitary man in the midst of strange Turkish and American women, I gave my attention to a very "high" tea consisting of homemade devil's food cake, Lady Baltimore cake, sand tarts, walnut cookies,



Photograph by Bernard F. Rogers, Jr.

THE STORK, EMBLEM OF GOOD LUCK, SURVEYS KEMAL'S NEW CAPITAL FROM HIS STATUE

Pictures and statues of the "Father of the Turks" are found throughout the Republic (page 6). This equestrian figure rose when "made-to-order" Ankara was a cheerless settlement. The boulevard leads to the railway station between the Ankara Palace Hotel and the Parliament Building. Beyond, as far as the eye can see, stretches the Anatolian steppe (page 17 and Plate VIII).





THE TURKISH REPUBLIC OCCUPIES ONLY A FIFTH THE AREA OF THE OTTOMAN EMPIRE:

watching the while a program of esthetic dancing performed by chunky Levantine girls upon a little stage.

The meeting was presided over by Bayan Nebabat Karaorman, philosophy department director of the Istanbul Normal School.

"You would perhaps be interested in the derivation of my name," said this charming lady across the tea table. "*Kara* means black, *orman* is forest. My husband and I first met in the Schwarzwald of Germany. When the Turks were ordered in 1934 to take new family names, we chose this as a tribute to our happiness."

Many of the new names were selected for similar reasons of sentiment. General Ismet İnönü, former Premier, and recently elected to succeed Kemal Atatürk as President, took his from the decisive battle which he

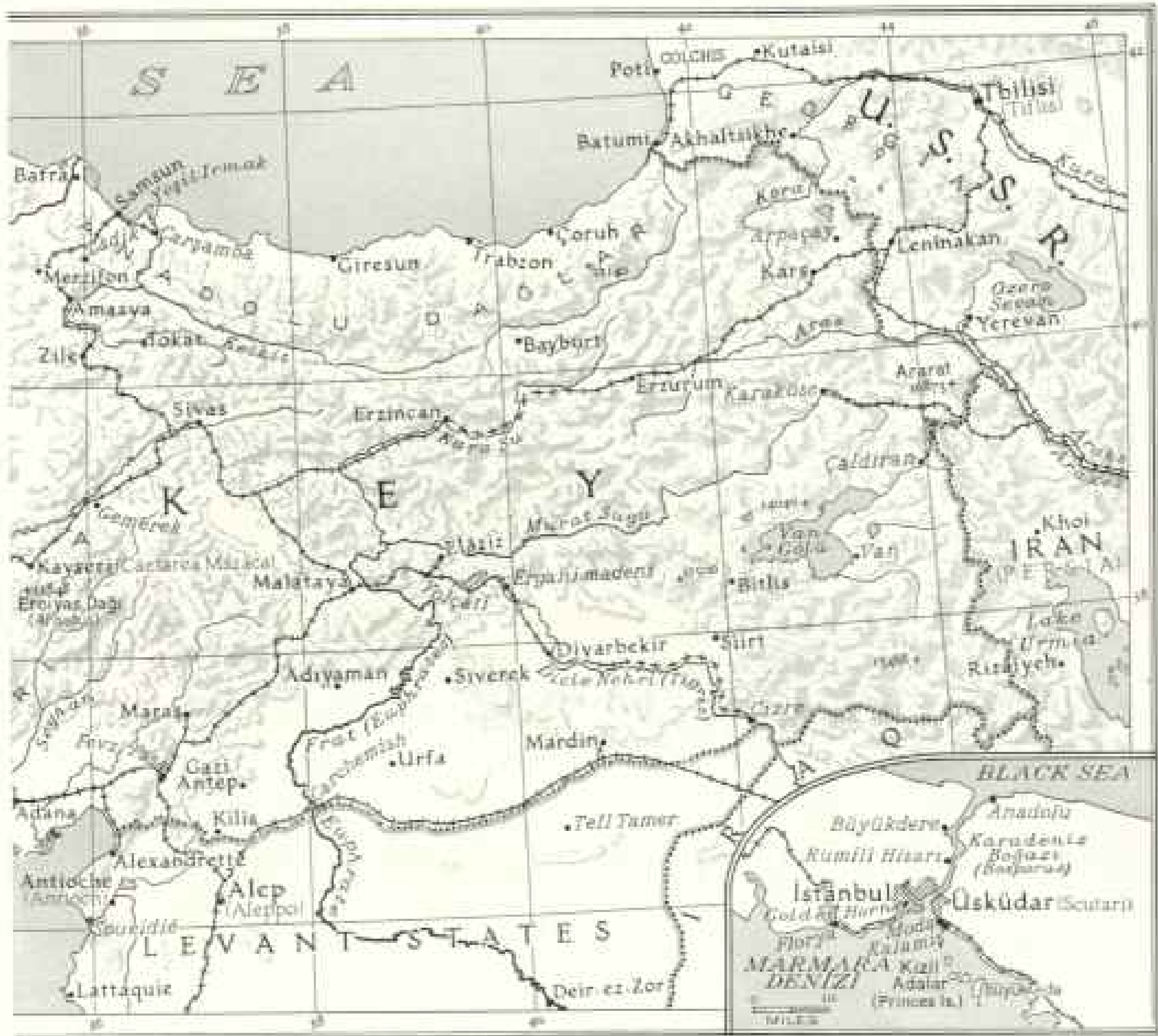
won at İnönü during the War of Independence. *Bay* is Mr.; *bayan* both Mrs. and Miss, confusing in performing introductions.

#### FROM HAREM TO COLLEGE

Bayan Karaorman opened her report by quoting from a speech of the late President:

"Woman's primary duty is motherhood, and higher culture will be attained only by the education of future mothers. Our nation has decided to be strong, and our absolute need today is the higher education of our women. They shall be instructed in every field of science and receive the same degrees as men. Men and women will work together in all paths of life and help each other."

The Service Center is carrying on a varied program of education in Turkish



IN 10 YEARS ITS CITIZENS HAVE ACHIEVED NATIONAL UNITY AND AMAZING PROGRESS

homes. It includes cooking, serving of meals, flower arrangement, interior decoration, music, and other domestic subjects. It is also organizing playgrounds for children in the larger cities.

Noticing the countless hucksters staggering under heavily loaded baskets as they cried their wares through the streets, I thought it strange that donkeys were not bearing these loads.

"That long-eared friend of man is legally banished from the city limits of Istanbul," I was informed.

"What's his crime?" I asked.

"He is regarded as a symbol of that past with which we have broken."

However, one of the animals I did discover, peacefully munching grass in the walled garden of a certain foreign functionary. It had been smuggled in, hidden

in a moving van, to serve as playmate for two delighted children.

TURKEY'S MOTORLESS BEERMUDA

The donkey still holds his own on Büyük Ada, largest of the Kizil Adalar, or Princes Islands (Plate VII). Here the motorcar is not allowed; horse and donkey reign supreme. A fashionable commuting population of Istanbulers occupies the handsome villas of this verdant isle.

I arranged an interview with Mrs. George L. Manning, founder of the Turkish S. P. C. A. This American lady, decorated by several governments, has devoted her fortune and her life to ameliorating the sufferings of dumb animals.

"We have succeeded in outlawing cock-fights, dogfights, and camelfights," she continued. "But the most dramatic battle



Photograph by Bernard F. Rogers, Jr.

FROM AN IVORY-COLORED TOWER, FIREMEN WATCHING FOR TELLTALE PUFFS OF SMOKE SURVEY THE ROOFS AND DOMES OF OLD İSTANBUL.

The Genoese "Tower of Christ," or Galata Tower, flattened in the buildings across the Golden Horn (left center) also serves as a lookout post. Beyond the Galata Bridge spreads the Dolma Babçe Palace, which Kemal Atatürk abandoned, except as a summer residence, after it had served as a home for three Sultans, Abdul Mejid, Abdul Aziz (Plate XIII), and Murad V. In this home of the Sultans the first President died, on November 10, 1938, amid scenes of garish but lonely magnificence.



Photograph by Maynard Owen Williams

BRUSHWOOD FUEL RACES ONCOMING WINTER ACROSS THE ANATOLIAN STEPPE

Central Anatolia has few trees, and a permit is required before the peasants may cut their winter's fuel. On the road from Alaca to Merzifon were sixty oxcarts laden with branches to heat ovens and stoves during the long winter. By roads, railways, and reforestation, Turkey is trying to alleviate the fuel problem.

we ever won was in combating the introduction of bullfighting into Turkey. Its sponsors had built an arena; tickets were sold for the opening fight. No legal grounds for an injunction could be found. However, at the eleventh hour it was ruled that no bull might be killed—a Portialike adjudication of the issue!

An invitation for dinner at Istanbul American College coincided with the only brilliant day of my stay. Four years ago the administrations of Robert College and of the American College for Girls at Istanbul were combined under one president. Turkish Government officials refer to the two colleges as one institution—Istanbul American College. The fine scholastic tradition established by their founders 75 years ago is being continued (page 5).

#### A PANORAMA OF HISTORY

From my host's balcony on that superb bluff above the Bosphorus,\* we looked down upon the subtly smiling, current-dimpled waters which link the Black Sea with the Marmara (Marmara Denizi). The crenelated gray wall of Rumeli Hisari, 15th-century citadel, cut a jagged section from our view of the strait which at this narrowest point is scarcely half a mile wide.

Leander's Tower on the shore marked a popular beach where in summer mixed bathers make faster records than that of Hero's lover. Other popular places are Florya (page 5), Büyükdere, Büyük Island, Moda, and Kalamış (map, pages 8-9).

Hidden around a wide curve of shoreline lay the Dolma Bahçe Palace, which President Atatürk made his summer headquarters (page 10).

"The President, the ministers, and the entire diplomatic corps will be moving down here in a few weeks," said the professor. "Now, before the hot days come, is the time for you to head for the capital. Spend as much time as you can spare in Ankara; there is the experimental laboratory for this ambitious nation."

With a large map spread upon a table, we sketched out a route for my journey through Anatolia—that Anatolia of the Hittites and Seljuks, where now dynamos and wheels have commenced their driving whine.†

A daily plane dashes in two hours from Istanbul to the capital. Lowering skies and poor visibility made me prefer the

railroad. In my pocket was a yellow "People's Mileage Ticket," bearing a photographic libel of myself and my name, written "Bay Santler." This was a bargain, guaranteeing two months' continuous travel on any line for about \$60.

For miles the railway line skirts the Sea of Marmara, a Turkish Riviera of compelling charm. At a point well toward the apex of the bay of Izmit (Nicomedia) lies the Turkish naval base, with fleet at anchor.

Eastward we mount toward the high Anatolian plateau. In a jungle-grown waste of small trees moves a herd of camels browsing; storks hold a plebiscite upon a marshy plain. I noted one example of forbidden headgear, a turban worn by an aged farmer, his white beard arched toward the brown earth in which he toils.

The new Ankara railroad station resounds with early-morning arrival and departure. Except for that of Helsinki, I know of none more impressive.

There is a theatrical unreality about this city when one first glimpses its geometrical, "little-Washington" formation, spreading out under the crumbling peak of the Citadel (Plate VIII).

That *ankıya* is the Greek word meaning "anchor" is significant, for it is here that the passionate spirit of nationalism has attached itself, radiating outward, fanwise, to the provinces.

#### EMERALD CITY ON A GRAY STEPPE

Atatürk Boulevard, broader than Broadway but not so wayward, will shortly be eligible to contend for first place in a Greenest Streets Olympic of world capitals. Already parks line its sides from midtown to the President's mansion, built on the shoulder of Çankaya slope. Hose-and-bucket bearers water the roots of scores of thousands of fast-growing acacias.

A law passed last spring requires that every citizen in the rural districts shall, between the last week in February and the first week in March, plant a tree, and care for it for one year.

\*See "Beside the Bosphorus, Divider of Continents," by Maynard Owen Williams, in the NATIONAL GEOGRAPHIC MAGAZINE, October, 1919.

† See "Change Comes to Bible Lands," by Frederick Simplic, in the NATIONAL GEOGRAPHIC MAGAZINE, December, 1938, and the supplement, "Map of Bible Lands and the Cradle of Western Civilization"; also, "Crossing Asia Minor," by Maj. Robert Whitney Imbrie, October, 1924, and "East of Constantinople," by Melville Chater, May, 1923.



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## FROM VEILED WOMEN TO LIFE CLASSES WITH NUDE MODELS

Such scenes would shock many of Turkey's farmers even today, but not so students at the modern Academy of Art in Istanbul. Art, which Moslem tradition formerly restricted to exquisite handwriting and geometrical design, now includes undraped figures.

There are no streetcars. Single-decker green and white autobuses congregate every quarter-hour at the city's center by the equestrian statue of Kemal Atatürk (page 7), then trundle off on their various runs to the tune of ten cents a ride.

Ankara's smooth avenues have made bicycling popular. On bright-colored bikes with oversize tires groups of black-eyed boys and girls dodge between buses and scurrying taxis.

Up near the Diplomatic Quarter are awning-covered sidewalk cafés, filled at noon and late afternoon with Government employees returning from their bureaus.

Eleven ancient mosques thrust their minarets into the clear air. But in all the city there is not a church. The French and Italian Embassies have chapels where those who wish to attend Mass are welcome.

There is little attempt to display wares in the windows of the small, one-story shops of the retail center. There are three bookstores in one short block. I observed among titles of books in their windows many ponderous tomes in German and French on scientific subjects.

## FASHION SHOWS ATTRACT CROWDS

Opposite my room in the Ankara Palace Hotel I heard a great buzz one afternoon. Peeping through a half-opened door into a reception hall across the corridor, I saw a crowd of a hundred or more women engrossed in a fashion show.

"These are all wives and daughters of Turkish officials," explained the hall porter. "The foreign diplomatic ladies mostly import their clothes from their own countries. And to think that less than ten years ago



© Kurt and Margot Luténki.

FAITHFULLY HE WASHES HIS FEET BEFORE ENTERING MOSQUE

Ablutions play an important part in Islam. In a desert they may be performed with sand. Having laid aside the hat of new Turkey, this man retains the close-fitting skullcap which is worn under turbans from the Mediterranean to the Gobi. The heels of his slippers are turned down so that when he enters mosque or home he may easily lay aside the street-soiled footwear (Plate XI).

our Turkish women were all veiled, and prohibited by custom from going into any public place!" (Pages 3 and 13.)

Ankara has no theaters as yet, nor any opera. Several movie palaces present slightly stale films.

For music lovers there is the twice-weekly concert in the hall of the Music Conservatory, by an extraordinarily fine orchestra composed entirely of Turkish instrumentalists and now led by a Turkish conductor. I heard one concert, with music by Paul Dukas and Bach.

Golf has not yet arrived, but tennis is popular. The great winter sport is skiing, and on frozen ponds within the town's limits fancy skaters cut their rhythmic figures. Fine horses are available for riding, and the treeless land offers exciting open stretches for cross-country gallops.

An invitation to a formal ball given by one of the ministers in the mansion of the Ghazi Farm provided a remarkable example of the innate friendliness of the Turk.

Proceeding somewhat belatedly to put on white-tie-and-tails in my hotel room, I discovered that I had neglected to bring studs and collar buttons. I telephoned to various acquaintances.

Desperate, I sighted in the lobby of my hotel a member of the Turkish Parliament, retired army general, whom I knew well by reputation but had never met. Last resort! I approached him with a simulated serio-tragic face. "Monsieur" (introducing myself in French), "I am in a diplomatic quandary. Minister's party—haberdashery lack—"

"Well, well! We must do something about this. Let's see. The studs I can furnish you, as I am not attending the ball. But unfortunately I have only the collar buttons I am wearing."



© Douglas Chandler

**HORSE POWER TOWS IT UPHILL TO FLY WITHOUT A MOTOR**

In nine glider schools, boys and girls are given free training. Here at the İnönü School 550 girls and 550 boys are taught. The barren slopes of central Anatolia are free from the hazards of trees. The Glider Department of the Aeronautical League is known as "The Turkish Bird" (page 16).



Photograph by E. Quellet

**BY "HORSE AND BUGGY" THE BALLOT BOX IS TAKEN FROM TOWN TO TOWN ON TURKEY'S ELECTION DAY**

Judges accompany the big receptacle, which is fastened behind the wagon. Ghazi Mustafa Kemal Pasha was unanimously re-elected every four years from 1923 until 1935. He was given the name Atatürk (Father of the Turks) in 1934. Voting is fostered as a training in democracy.



He deliberated a moment, then seized my arm and led me into his bedroom. Before I could grasp his intention, he had whisked off coat and shirt. Removing the two collar buttons, he went to his dresser and, sprinkling cologne in his hands, briskly rubbed the buttons between his palms. Then he took the studs from an embossed silver box and presented me with my necessary equipment.

"Go to your party, my friend," he said with a flourish. "A sport shirt will suffice for my quiet evening of bridge."

A Pasha, distinguished officer of the Turkish Revolution—I, a stranger!

With the departure of the more formidable officials about midnight, waltzes and one-steps gave way to a frolicsome dance, originally imported from Izmir (Smyrna).

#### SHAKESPEARE IN TURKISH

Ankara University is under construction, though certain portions of it are already functioning. Primary and secondary schools for boys and girls are modern. Of the institutions of specialized instruction, I devoted my attention to the College of Agriculture, the Music Conservatory, the Normal College, and the Construction School, all but the latter co-educational.

Under the guidance of a fruit specialist of the Agricultural Institute I sampled grade-A dried fruits produced under Government supervision. "Our soil produces both tropic and Western fruits," he explained. "Turkey has 52 generic species, with 3,500 varieties of those different kinds; 70 kinds of apples alone; fifty kinds of pears. Of vegetables we have 54 separate species, and 750 kinds of grapes!"

Two trips to the Music Conservatory were not enough; I want to go back. I heard a young baritone from the plains of Adana (Turkey's cotton patch) sing Brahms, Dvořák, and Fauré. I want to hear again those students from the provinces, brought up as children in the old Turk tradition of music, yet now performing Western compositions.

In the Dramatic Art department I saw an act from *Romeo and Juliet* and a scene from Schiller's *Die Räuber* presented without costume in Turkish. Not a word did I understand, but did that matter? I reacted with bated breath and goose flesh in all the proper places. Turks are born actors.

The Ghazi Institute (Normal School)

had last year an enrollment of 244 boys and 64 girls. The State provides free board, lodging, books, clothing, and an allowance of pocket money. While girl teachers are not prohibited from marrying, it is required that they give a minimum of eight years' service in the field.

The boys in the Construction School were erecting an addition to their own school building. Every branch of the building trade is taught.

#### A MICROBE HUNTER AT HOME

Dining in the home of the Rockefeller Foundation anti-malaria chief of operations for Turkey, I learned of the progress made in curbing this malady, long one of the worst scourges of Asia Minor. With swamp drainage and hygienic education among the peasants, the jittering yellow sickness is gradually losing some of its terrors. Quinine still is handed out yearly through Government health stations.

My hostess was voluble in praise of house-keeping advantages in this land. "Strawberries are solid honey, and no straw. The white mulberries are a special treat; also a small purple plum, fit for Hittite kings. Grapefruit from Jaffa have appeared this year for the first time. I do most of my marketing at the Çiftlik stores, outlet for the products of the Ghazi Model Farm. Meat, dated eggs, pasteurized milk and cream come from the same source."

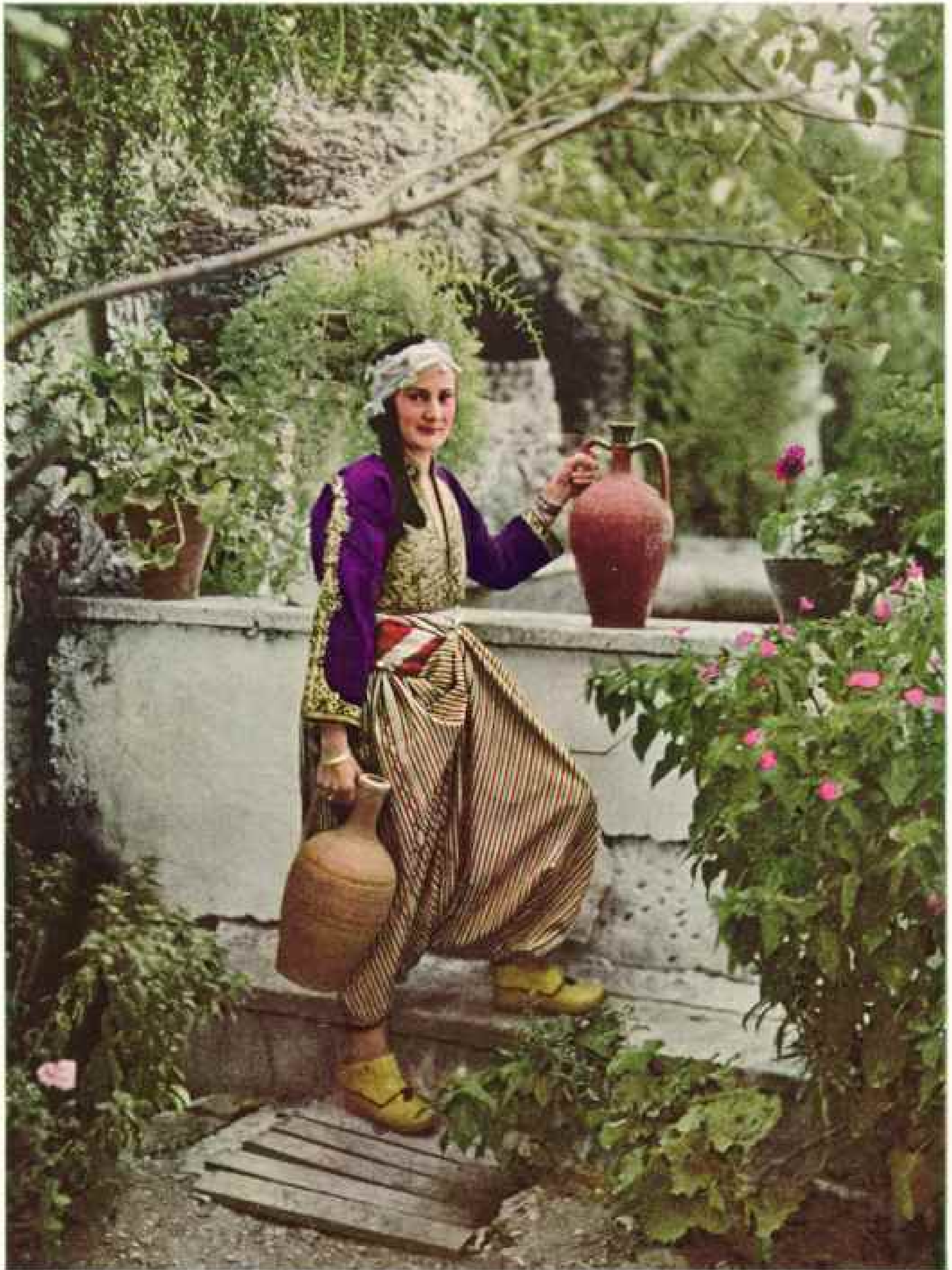
There are certain restaurants in Ankara operated by the Çiftlik organization, which is nonprofit and patterned somewhat on the co-operative plan. The Ghazi Model Farm, a couple of miles outside the city, is open to the public as an object lesson in modern agricultural methods. Adjoining the farm is a public park with the nucleus of a zoological garden and the Sea of Marmara and the Black Sea copied to scale in miniature.

#### BLUEBIRD IN THE SKY

"Those three looping birds up there in the clouds are girl students taking tests for pilot licenses," said the pretty young secretary from the press attaché's office. We were standing on the landing field of the Bluebird, Aeronautical League of Turkey. "Within a few days now they will be commissioned as officers in the Reserve."

When ten minutes later they had all executed perfect three-point landings, I was presented. Charming and noticeably

OLD PATTERN AND NEW IN TURKEY

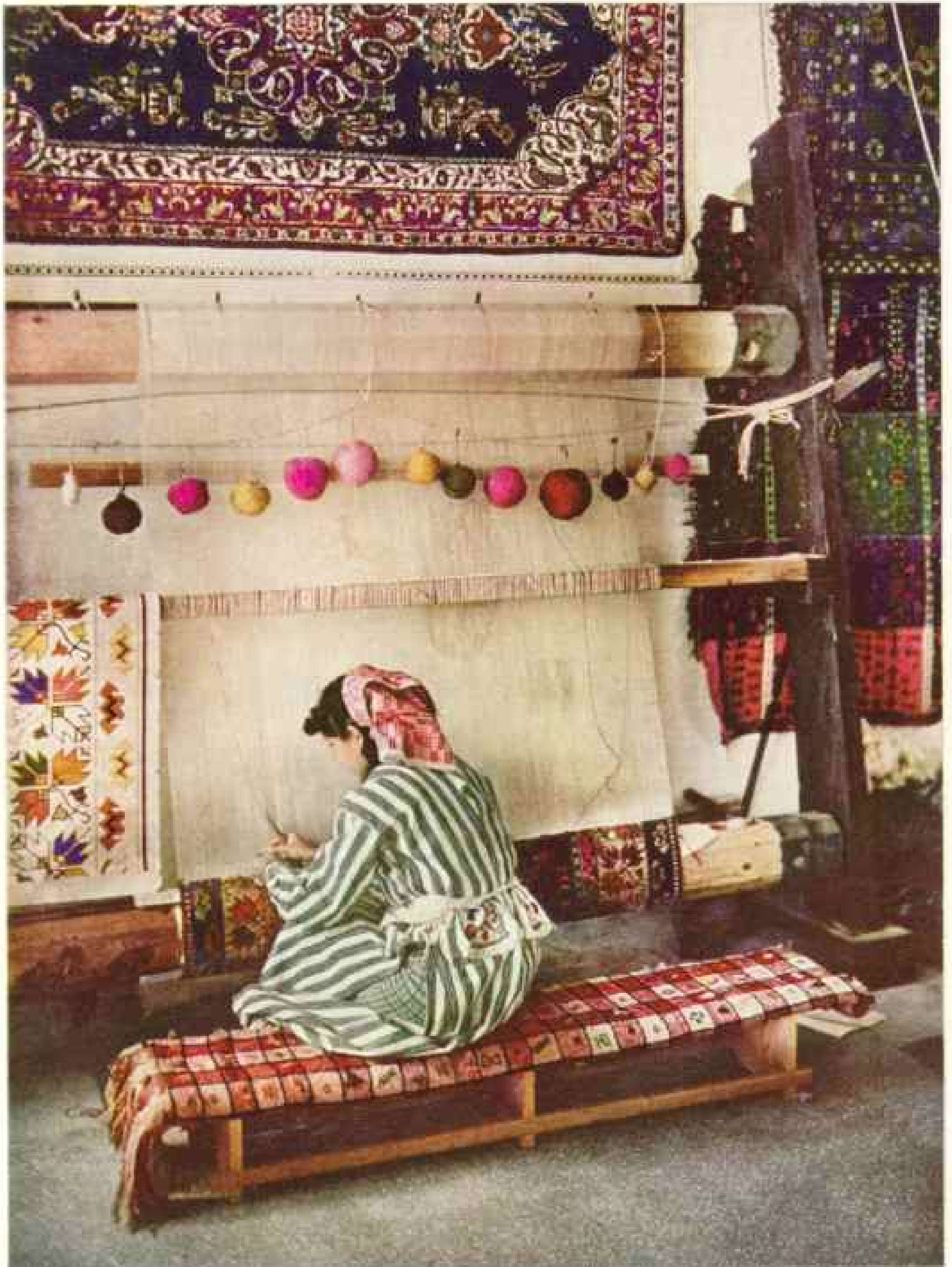


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Finlay Photograph by Bernard F. Rogers, Jr.

GOLD-BRAIDED "LOCAL COLOR" WILL SOON BE A MEMORY BESIDE THE BOSPORUS

Visitors buy such glittering costumes for fancy-dress balls, picturing harem life à la *Arabian Nights*. Turkey's women have turned from Turkish trousers to ski pants, sport shorts, and backless bathing suits—from the seclusion of the Seraglio and haremlike to a full share in world life.



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Finlay Photograph by Bernard F. Rogers, Jr.

TURKISH COLLEGE GIRLS COMPETE WITH MODERN MACHINERY BY MANUAL SKILL

In the Agricultural College at Ankara this student uses the age-old Ghiordes (Gördes) knot, tied by hand. Rug weavers, prohibited by Mohammedanism from using pictures, followed geometrical patterns such as those at the left. As each knot is tied, the tuft is pulled down so that when the rug is finished it will have two tones, the lighter one caused by the sheen on the side of the yarn and the darker by the ends of the tufts. Designs once local are now widely copied, Bokhara patterns being woven in China, and Aighan in Anatolia.

OLD PATTERN AND NEW IN TURKEY



SINCE SUCH DRESS GRACED THE SERAGLIO, A NEW ALPHABET HAS MADE READING EASIER.

Women in the Great Palace were far from ignorant; sultanas often wielded much power. Today night schools have decreased illiteracy and 17 of 399 Deputies in the Grand National Assembly, or Parliament, are women.



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Finlay Photographs by Bernard F. Rogers, Jr.

WEARING AN 18TH-CENTURY COSTUME OF FUR AND SILK, A MODERN TURK SHOWS HOW HIS ANCESTORS RECORDED OTTOMAN HISTORY.



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MODERN TEXTILE FACTORIES ARE REPLACING HAND METHODS OF CARDING WOOL.

Angora, now Ankara, gave its name to soft-haired goats and cats; exported mohair and wool. New Turkey, with modern cotton mills, is soon to produce its own cloth from the rich crop of the Adana plain.



Play Photographs by Bennett F. Rogers, Jr.

A FIRE-EATING "SCOURGE OF THE EAST" NOW DREAMS, SMOKES, AND DRINKS—IN EFFIGY

Fondling a marghile, this museum figure wears the uniform of the Janissaries, first standing army of modern times. At the sound of their battle call, the beating of drums on kettles, eastern Europe trembled.



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ANCIENT MOSAICS, BURIED DURING CENTURIES OF CHANGE, NOW COME TO LIFE UNDER THE CLEANING TOOLS OF A TURKISH ARTISAN  
Constantinople was built upon pagan foundations, some of which antedate recorded history. Kemal Atatürk remained this first Christian city Istanbul, but moved his capital to Ankara. This find is in the grounds of the Great Palace, a matchless royal site dating back to Byzantine days.

Faded Photograph by Bennett F. Rogers, Jr.



IN BURSA'S GREEN TURBEH SLEEPS A "GREAT GENTLEMAN"

With a royal turban surmounting the headstone and Koran verses decorating his catafalque, lies the Çelebi Mohammed I (Plate X). This fifth Ottoman sultan re-established the Empire A. D. 1413, after Tamerlane's savage raids. Smaller tombs are those of his sons.



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Pinlay Photographs by Bernard F. Rogers, Jr.

MISS TURKEY TAKES HER EASE IN THE SULTANS' KIOSK, OR PAVILION

The original "Divan" was a council of empire, composed of four viziers and military, legal, and religious functionaries. In new Turkey it is a low couch on which one lies to read. This secluded spot in the Grand Palace gardens is now open to the public.

OLD PATTERN AND NEW IN TURKEY



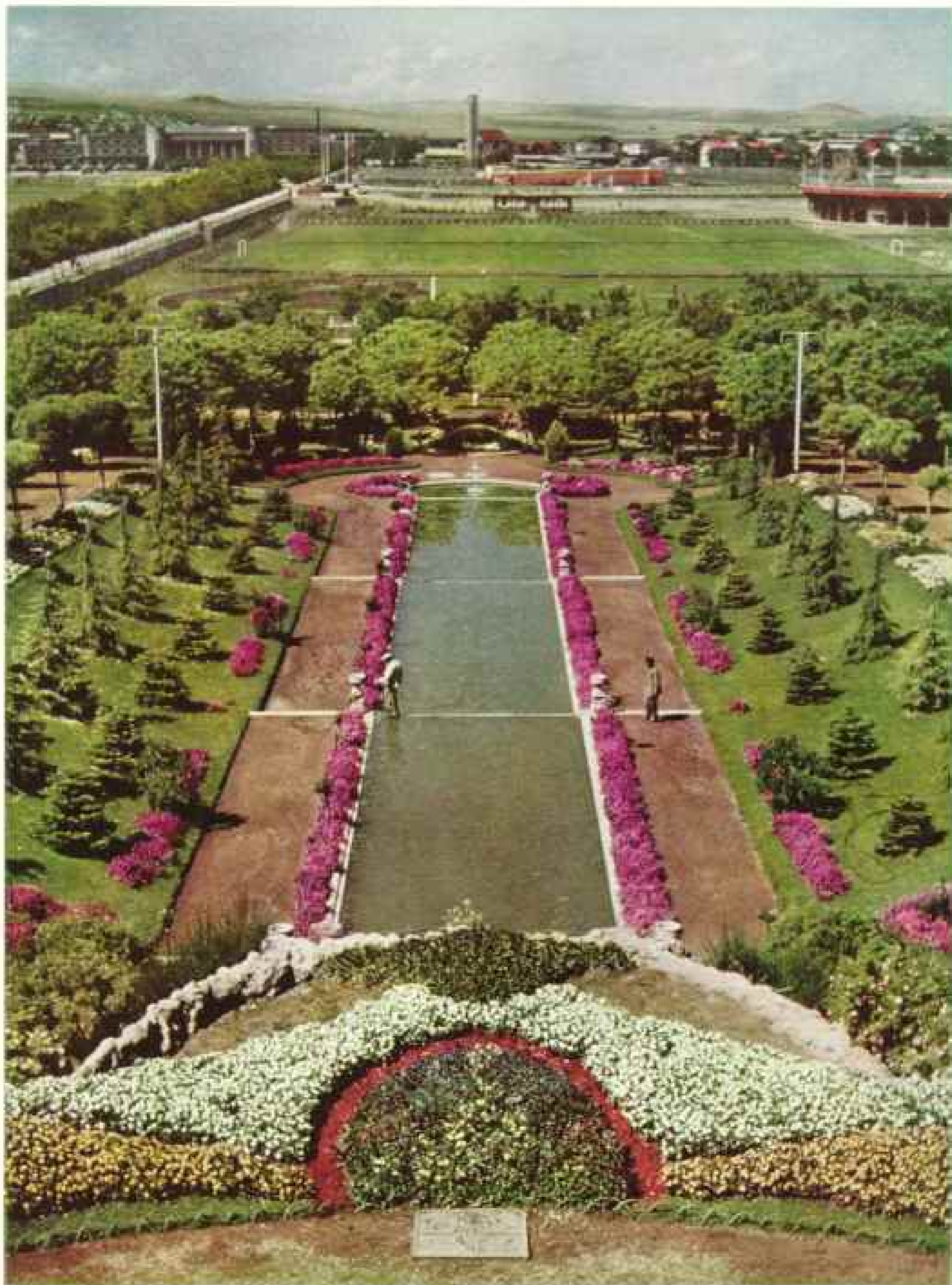
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Finlay Photograph by Bernard F. Rogers, Jr.

SLENDER MINARETS FRAME THE SPOT WHERE BOSPHORUS MEETS GOLDEN HORN

At the extreme left, villas line the Asiatic shore where Florence Nightingale helped comfort the sick. In the distance the Princes' Islands (Kizil Adalar) float in the Sea of Marmara. At the right, green terraces descend from the Palace of the Sultans to Seraglio Point. The Nusrétiyeh (Victorious) Mosque commemorates the extermination of the Janissaries in 1826 (Plate IV). Between its dome and the parked terraces of Istanbul, ships lie anchored at the entrance of the Golden Horn. Napoleon called this former capital "the Empire of the World." The late Kemal Atatürk moved the government to Ankara to escape European politics.





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Finlay Photograph by Bernard F. Rogers, Jr.

TOIL-WON WATER SMILES DEFIANCE TO ANATOLIA'S ARID PLATEAU

In the early days of his Presidency Kemal Atatürk urged that not one drop of Anatolian water reach the sea. Flowers, trees, and pools of water now grace the capital. Beyond the sports field the new Ankara station rises in the upper left, terminus of the railroad line to Istanbul.

shy they appeared, these intrepid, white-uniformed young women. I felt a pang of sympathy for their best beaux, doomed to wait five years before marriage while their sweethearts serve the State as instructors.

The laughing-eyed director of Bluebird, after showing us the hangars and rows of dainty practice planes, jumped into one and circled over our heads as our automobile headed for Camp İnönü, a dozen miles away. Upon arrival, he was waiting to receive us. From a barren dome, star-and-crescent-marked gliders sprang into brief animation (page 15).

Turkey has nine glider schools. Five hundred and fifty girls and 550 boys took the three months' course last year. Parachute jumping is included. The most capable are selected for training in the Aviation School.

#### A FEMININE LEGISLATOR

"I am only the tail to our domestic kite nowadays," lamented the husband of a chic and witty congresswoman with mock solemnity. "After practicing my profession for nearly twenty years in one of our coastal cities, I arrive home one evening to find that my wife has been elected to Parliament. And I have to pack up, move to the capital and begin life anew! Isn't that an anomaly for Turkey?"

Archeological work now going on in Turkey should yield important contributions to historical knowledge. A number of expeditions have been digging in various portions of the land: American, French, Swedish, English, German, and Turkish (page 27).

I spent many interesting hours with Dr. H. H. von der Osten, German archeologist, now active on the staff of Ankara University, whose *Researches in Anatolia*, and other archeological material on this region, have been published by the Oriental Institute of the University of Chicago.

Together we tramped up to the summit of the Citadel, with its bewildering mixture of civilizations. Five minutes after passing the People's House,\* perched on a mound above Atatürk Boulevard, one plunges from today into the Turkey of former centuries.

We mount through the street of the artisans. Coppersmiths whack at their ruddy wares with staccato hammer stroke; ironworkers' anvils yield a glowing harvest of plowshares. The fezmakers of former days have found other jobs.

There is garlic-breathed haggling, bartering, in the grain market. Hand-in-hand in pairs wander lonely-eyed hillsmen, shod with rawhide, oblivious to the changes taking place in the new city at their feet.

Storks, with feather brakes set, wheel slowly in search of an evening meal. Off to the south stretches a range of hills, trademarked as Turkish with gleaming crescents where unmelted snow hides in curving scars of their purple sides.

#### MARATHONS OF DISCOURSE

Whether it be the stimulation of Ankara's winelike air or an aversion to wasting time in sleep, I cannot guess, but this city likes to stay up all night.

"I have sat as President Atatürk's dinner guest from nine in the evening until seven next morning, with hardly a break in the conversation," a foreign ambassador told me.

"Were you not exhausted?" I inquired, incredulous of such a feat.

"Not at all! The magnetism of that extraordinary man was such that he could animate a whole tableful of guests to marathons of discourse."

The Karpıç Restaurant is a sort of unofficial department of the State. High officials stage many of their dinners here.

White-aproned, a sardonic smile on his clever, handsome old face, Karpıç circulates about the hall, seeing all, hearing all, knowing every whim of his guests. In the midst of a course arrives a waiter with some delicious and extravagant item not printed on the menu.

"I am not content with the dish you are eating," announces Karpıç. Plates are whisked away and the new concoction takes its place. No additional charge! So overgenerous is he that at intervals come economic difficulties; but new capital from some mysterious source rescues him and he carries on anew.

I saw a characteristic gesture of this beloved buffoon. The room was hot. A group in the corner wished the multipaned window by their table opened. Waiters could not budge it. Karpıç floated into the picture, wrapped a large napkin about his

\*The People's Houses, established all over Turkey by the People's Republican Party, are cultural establishments designed to supplement the work of the schools. They are centers of activity for sports, rural welfare, fine arts, theatrical performances and concerts, libraries and museums, and studies in various fields of knowledge.



© Kurt and Margot Lubinski

WEARING A TIME-HONORED HEADDRESS, HE TRACHES THE NEW  
TURKISH ALPHABET

In many localities it was the young who taught the old. Children, reading the modern script, mystified their parents. But night schools and use of Latin characters in periodicals rapidly increased reading.

fist, and, mounting a chair, punched out all the offending panes with stiff right jabs. Bowing with his gallant grin, he declaimed, "Gentlemen, you now have your fresh air!"

With genuine regret I bade good-bye to cheerful Ankara and stepped aboard the Taurus Express for the next lap of my journey.

INTO THE LAND OF CAVE DWELLERS

Early rising is the lot of the wayfarer to Kayseri (Caesarea Mazaca). At daybreak I set foot on the junction platform of Boğazköprü. Even at a later hour the name

defies pronounciation.

A few miles of puffing down a side spur brought us to my goal. As "Mozaki" it was once the capital city of Cappadocian kings.

The police read through my six-line Turkish letter of credential, by dint of wrinkled brows and whispered conferences, in something less than half an hour, a speed record compared with some of my later experiences.

Installed in a hack pulled by nervous little horses, I saw my baggage dash off in charge of another driver. Protests did not avail. I sat in a hotel hall, drank thimblefuls of bitter-sweet coffee, and threatened war in several languages until my vanished property finally reappeared.

Almost every hotel in Turkey

calls itself "Palas." This one made troglodyte lairs seem like home sweet home. Next year there will be a really proper "Yeni (new) Palas." I set out in a rattletrap taxi for the American College (former mission school), nine miles away.

The Nilson family, sixteen years directing genius of the college, made an extra place at their breakfast table.

Afterward I addressed a halfful of earnest peasant students. Mr. Nilson pointed with a stick to a wall map. They wanted to hear about the Baltic and Norway's coast; seemed to think that whale meat would be

better food than *bulgur* or *pekmez*.

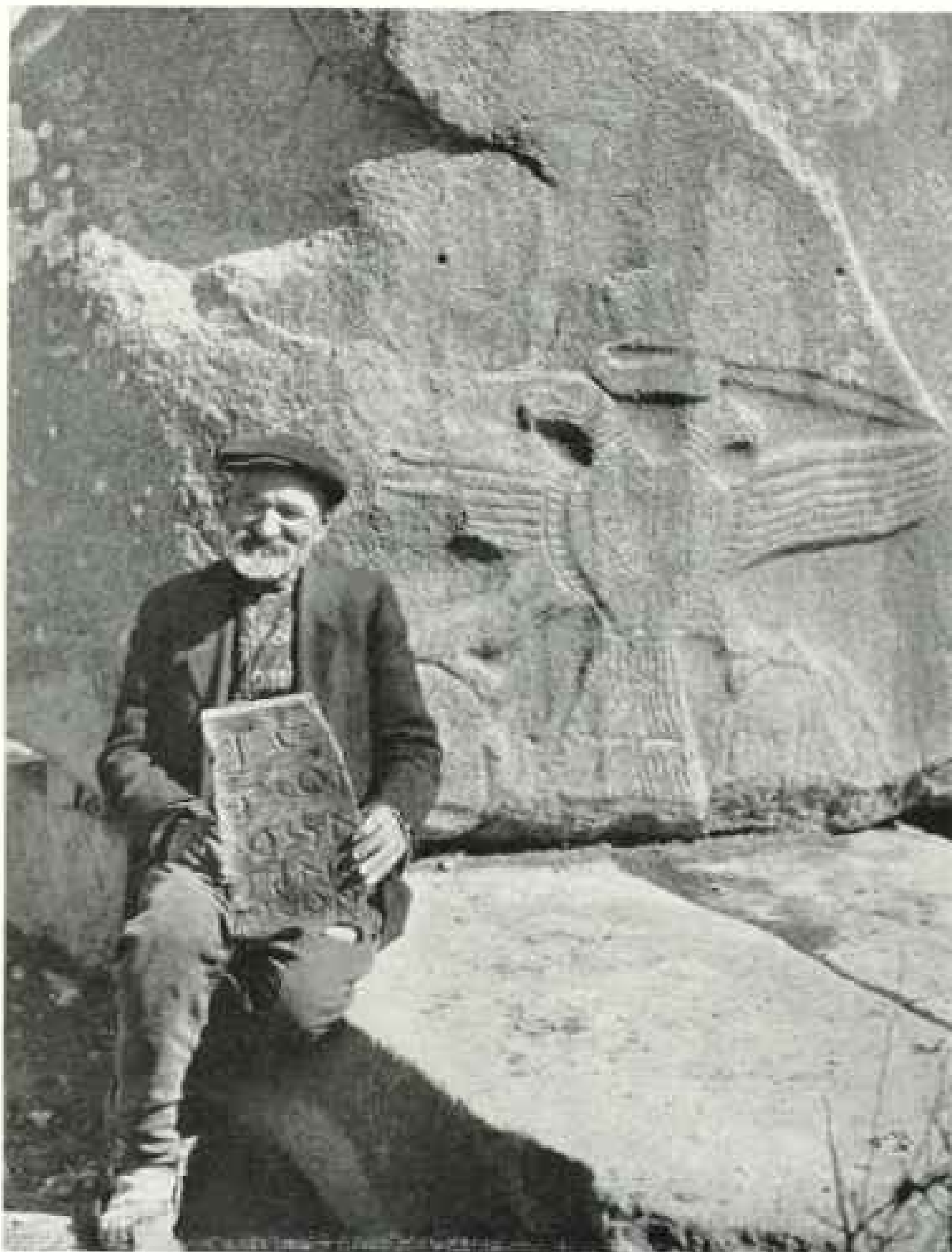
Bulgur is the national cereal, homemade, unadvertised. It is wheat, cracked up, dried on the roof, again cracked, toasted in the oven, and finally used as the basis for sundry dishes, after the fashion of Italy's ever-present *polenta*. *Pekmez* is syrup of the grape, boiled down to a sticky residual essence and smeared on bread or made into sauce (page 32). Children thrive on it; the old grow younger.

COLLEGE BOYS  
BRING THEIR  
OWN BEDDING  
AND FOOD

One group of boys in this school bring their own bedding and food. The Turkish Government furnishes tuition, one suit of clothes, and books. The State also pays for one teacher and a cook. So there are two cooks in the Nilsons' kitchen, one for the family, the other to prepare the bulgur and other products brought by these students from their fathers' steep acres. For the other students who pay, tuition costs \$40 a year; board is \$165.

Kayseri is being rebuilt to match its new industrial plants, a cotton mill and an airplane factory. Modern concrete buildings and paved streets already are appearing among the time-eroded ruins.

Here at the foot of majestic Erciyas Dağı (Mount Argæus), capped, in Turkey,



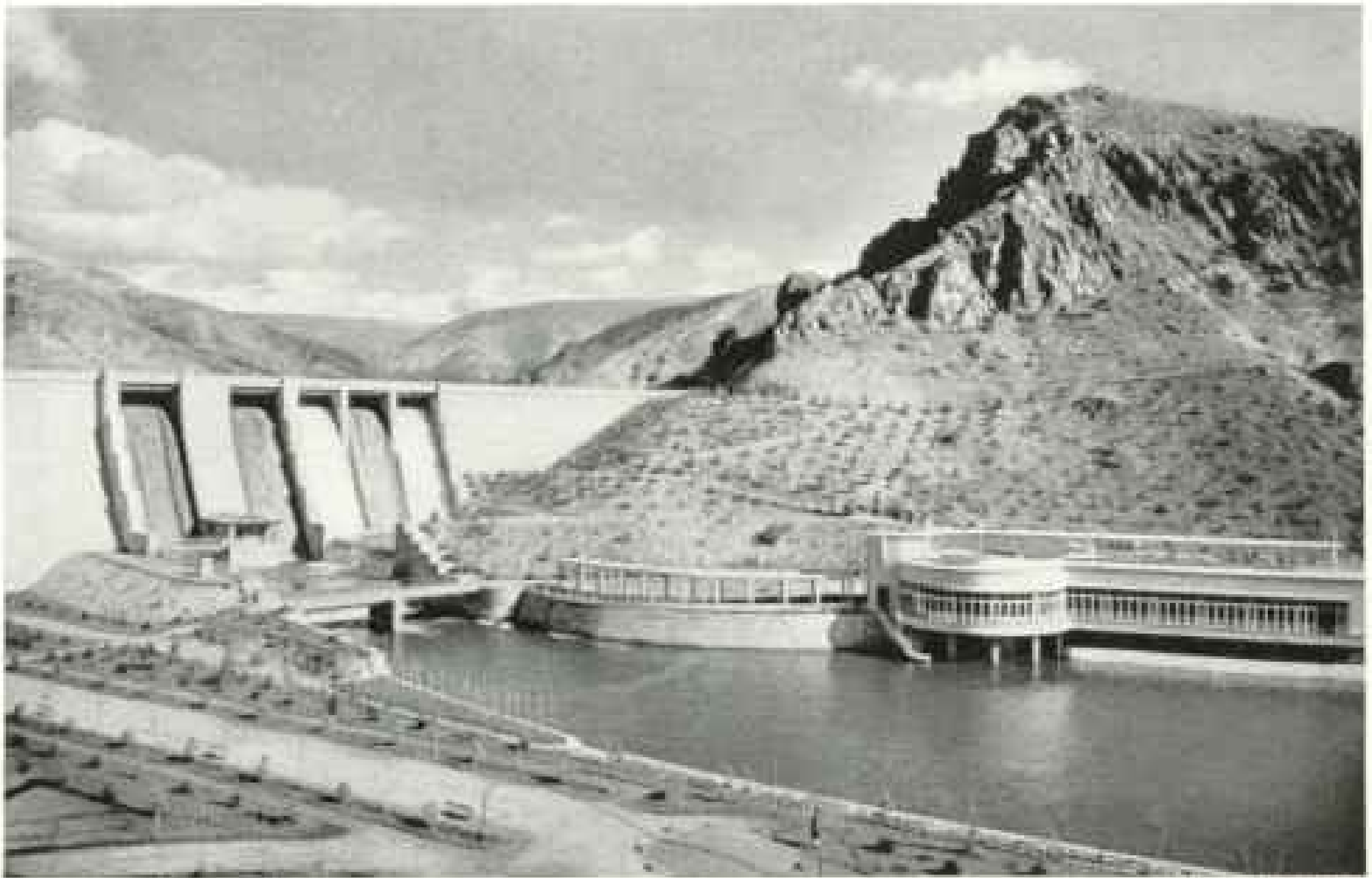
Photograph by Maynard Owen Williams

THE HITTITE ANCESTOR OF THE COIN EAGLE HAD TWO HEADS

Carved in the bull-headed Sphinx at Hüyük (Euyuk), a spread eagle has been standing on two rabbits for 3,500 years. Russia and Austria, inheriting the Hittite religious emblem, kept the two heads, but en route to the quarter and half-dollar, one head was lost.

by Ararat, where Noah beached, and a few other peaks, wave after wave of aggressive might has hurled its strength: Romans under Tiberius, Tigranes (Dikran), of Armenia, Shapur (Sapor) the Persian, and Justinian, whose building mania caused it to be revamped as a fortress.

"Our simple agricultural folk are learning new living standards through the establishment of industries," remarked the Governor of the province. "The purpose of the Government in industrializing these isolated centers is to provide an outlet for native products of the soil and to spread culture."



© Douglas Chandler

NEW DAM AND LAKE GIVE ANKARA WATER AND COAX THE DESERT INTO BLOOM

Eight miles from the capital, at Çubuk, Turkish engineers completed the huge reservoir in 1935. Favored by three and a half years of pleasant climate and encouraged by constant watering, thousands of acacia saplings flourish on the once-barren slopes around the lake and below the dam. On hillsides holes were blasted out of solid rock and filled with dirt to support the roots of the young trees. So popular is the project with visitors that the restaurant (right center) has been outgrown and an addition soon will be erected. The basin at the foot of the dam will be the swimming pool.



© Kurt and Marget Lubinski

TO HELP HIM THINK LIKE A EUROPEAN, THE TURK DRESSES LIKE ONE

Even at a morning function in Ankara, full dress and a silk hat are official, but black vests are worn in daytime. Turkish deputies here leave the Grand National Assembly after an afternoon reception.

Those graceful airplanes I had seen stunting at Bluebird headquarters (page 16), were fabricated in the Kayseri plant.

Thirty-two thousand spindles whirl in the Russian-built cotton plant; 1,024 looms turn the baled bolls of Adana's hot plain into almost 32 million yards of goods per year.

Up from the mines of Zonguldak, on the Black Sea, from Amasya, Kütahya, Gemerek, and Soma crawl trains of lignite and soft coal, which, mixed together, pour at the rate of 40 tons a day into hungry furnace mouths to supply power for this factory. Of the 2,500 employees, a large proportion are recruited from the local peasantry. The plant is keyed for 4,000 workers.

"THE TERRIBLE TURK" GROWS HOMESICK  
FOR GEORGIA, U. S. A.

I was shown the works by a young Izmir-born Turkish textile engineer. "Where did you get your Southern accent?" I inquired. "Oh, three years in North Carolina University and another three in Georgia Tech. They usedta call me 'the Terrible Turk' down theah. Ah'm homesick right now for some good Georgia cawn liquor. And, oh boy, those Atlanta gals!"

Occasional devout Mohammedan workers knelt on their prayer rugs in corners of the mill rooms, seemingly unconscious of the clatter and movement about them.

To be housed as guest in the visitors' quarter of the Kayseri mill was a novel and pleasant experience. Every comfort was provided. Bath water gushed steaming from a heater. The beds were without the *Keil*, that wedge-shaped backbone bender of extra mattress imported from central Europe, prevalent in most Turkish hotels.

The company restaurant rang with cheery commercial voices of dye salesmen from England and Germany. The Balkan representative of an American reckoning machine company was settling the problems of the world.

My Turkish Georgia cracker swallows his nostalgia with his soup and talks shop. "The new labor board went into effect this year. It works as friendly intermediary between employer and employee, straightening out snags. Strikes are prohibited in this man's land. We recently reduced work hours from ten to eight. What do you suppose the effect on production has been? An increase of 25 per cent!"

Under a midnight full moon we strolled through the company grounds. Vibration of looms and acrid cotton-mill smell seemed fantastic anachronisms in this Cappadocian air, chilled by downdrafts from Mount Erciyas' glaciers and snow crests.

Had I arrived two weeks earlier, I could have felt the effect of Jovian wrath upon the puny earth. Kayseri lies only 100 miles from the center of the earthquake of April, 1938, which took some scores of lives. That mighty tremor left a crack in the earth estimated to be forty miles long, one yard wide, and in places a mile deep. An hour's journey from Kayseri entire cliffs plunged from mountainsides into valleys.

A sweet soup, cucumbers stuffed with rice, tongue-pricking goulash smothered under a whitecap of yoghurt—these were just a few of the light-lunch dishes placed before us at midday.

In the forenoon we had visited the school, where 1,300 boys and 100 girls were intensively studying the three R's, Turkish (the new-old speech, chemically purified by the Language Commission), biology, history, nature, civics, drawing, handwork, music, gymnastics, and domestic science. We had heard "do, re, mi, fa," sung by youngsters whose ears must be trained to a new musical scale, and individual reading aloud of Western classics, a striking contrast to the mechanical babbling of Koran group intoning, which obtained in the Caliphate days.

"The parents of these children—tell me of them. Are they keeping step with the youngsters?" I asked.

"They have many lectures and access to the reading rooms of the People's House," replied the superintendent. "The older ones are still clinging to some of their standpat traditions. But in the main they are marching with the times. You have seen that all wear modern dress."

To my sorrow as photographer, I had observed it!

"How did they take to the dress reform in inner Anatolia?" I inquired.

"The fez was snatched overnight from our heads. The veil went out by gradual degrees. First the officers' and the school teachers' wives set the example; finally a zero hour was set beyond which no veil could be worn. The die-hards went into a three weeks' hiding to habituate themselves to the dreadful ordeal of showing naked faces on the street."



Photograph by Bernard F. Rogers, Jr.

GIRLS AND BOYS OF NEW TURKEY PERFORM MASSED GYMNASICS IN THE STADIUM

Athletics have been fully accepted by the Turks. Favorite joke of old-timers is that in which an effendi, seeing gentlemen playing tennis, asked, "Can't they hire someone to do that for them?" Prominent feature of Ankara is this well-equipped stadium in which sports events are frequently held and Turkey's youth parades. In the foreground, the flags of Turkey and the People's Party hang side by side. In the distance is the Citadel, rock-founded nucleus for a city dating back to the Phrygians and the Gauls (page 49).

Again at earliest light after my Cappadocian sojourn I found myself at Boğazköprü. At noon, after a spectacular climb over the sugar-crystal angles of the Taurus Mountains (Toros Dağları), and descent to sea level where tropic warmth prevailed, we came to Adana.

OVER THE TAURUS RANGE AND DOWN  
TO THE COTTON PATCH

I had expected to find in this city, fourth largest in Turkey, a generous sprinkling of Eastern atmosphere. Alas, there was little to differentiate it from any Balkan or Levantine town. Where were the camels which I had read were to be seen lurching through the streets? What of the peddlers? To be sure, here was the donkey, not ostra-

cized as in Istanbul (page 9). The café radios blared forth the wild Turkish melodies which are no longer forbidden as they were in the earlier days of the Kemal régime. But I felt that Adana had somehow let me down.

"Justinian is supposed to have built part of this bridge," my hotel oracle informed me as our auto rolled over the many-arched stone structure which spans the Seyhan River.

In ten minutes we drew up before the Cotton Institute in its green setting of trees. Since 1931 the director has been employed by the Turkish Government to improve the quality of its cotton.

"When I arrived, about 90 per cent of the cotton raised was *Yerli*, a closed-boll type which legend says was brought here by Alex-



Photograph from "Fotoğrafı Türkiye"

#### JASON'S ARGONAUTS PASSED ÇORUH SEEKING THE GOLDEN FLEECE

Because colonists from the Ionian cities long preceded the Ottomans, Greek is the history of this Black Sea coast. Near by is Trabzon, where Xenophon, Greek soldier and travel writer, reached the Black Sea. Beyond lay Colchis, where the crew of the *Argo* secured the prize. Some scholars think it was not a fleece but a fertilizing rain cloud brought back from Batumi's rainy shores to sun-parched Hellas, or Greece.

under the Great. The remaining 10 per cent was a mixture of degenerated open boll imported a few score years ago from Egypt and America.

"A Government-operated farm of 3,200 acres was established here. Purpose? To produce pure open-boll seed for distribution to the farmers. On it we planted a variety called 'Cleveland,' imported from South Carolina. Our program called for a minimum of 1,000 tons of the new planting seed per year. But by 1938 the increase in production of the new variety had become so great that 6,000 additional acres were planted by private farmers under our control to fill the pure-seed demand.

"Yerli, though of short fiber, fills a definite need in the spinning industry, and, as it does not cross-pollinate with the open-

boll variety, its production is continued."

Here was a man whose smiling face had reason to shine with zest of accomplishment. We drove to some of the small, individual farms where primitive methods of cultivation still prevail; saw land being plowed with a moldboard plow and later stirred with a steel-shod wooden plow pulled by oxen. "These chaps will gradually learn to improve their methods by the example and education offered at our model farm," predicted the cotton chief.

Driving back into the city, he pointed out groups of pleasure seekers in a grove. Some had brought gramophones and were listening to Turkish records. "That is a novel sight for Turkey. Family picnics were unheard of under the old régime. Now Mr. and Mrs., children, and assorted rela-





Photograph by Herman H. Kreider.

#### HE SKIMS OFF IMPURITIES IN GRAPE-JUICE MOLASSES

A thick syrup made from grapes is common sweetening among Turkish peasants. First the grapes are treading down in a wine press. From long wooden troughs the juice drains through holes at different levels to hold back the dregs. The syrup maker then skims off the scum from the boiling liquid (page 27).

tives swarm over the countryside on holidays, for all the world like a nature-loving American family."

#### BY RAIL TO ST. PAUL'S TARSUS

From Adana a branch railroad line takes you fifty miles over the teeming Adana flatland through St. Paul's Tarsus to the port town of Mersin. Much of the cotton which was formerly shipped from its shallow harbor now climbs over the snowy Taurus Mountains to Kayseri and Konya.

I lingered only long enough, before returning to Tarsus, to visit the Tower of the

Virgin, a ruin on a rocky islet near the coast; to eat my fill of fresh-picked oranges, and to attend a lecture on "The Duties of Nationalism" at the People's House.

In St. Paul's day the Cydnus River (now Tarsus) flowed into a lagoon from the Mediterranean. Cleopatra came here to visit Mark Antony. Justinian changed the course of the Cydnus to avoid flooding the city when the rains came down.

Until the World War all overland traffic came through Tarsus. Now it is a forgotten patch of green with relics of dead civilizations rubbing elbows with new schools and public buildings. Two workshops fabricate hand-made felt materials, their proprietors asserting descent from

tentmakers of Paul's day.

On the campus of Tarsus American College are remains of Attic, Doric, and Ionic columns; in the cellar is a cubicle known as "St. Paul's room," authenticity doubtful. St. Paul's Gate, at the edge of the town, is another quite harmless concession to visitors' demands for historical relics.

Tarsus Park is the show place of the entire district. I sat with a young Swiss teacher from the American College. Mid-day sun could scarcely penetrate the thick shade of the orange and grapefruit trees. About us flocked wild doves. A waiter

brought glasses of *airan*, a thirst quencher peculiar to this region, consisting of yoghurt (thick fermented milk) and water, churned to a frothy head and salted.

The grapefruit from these trees, the first to be grown in Turkey, were sent to President Atatürk as a gift. People come from all over the country to see the park.

I spent a night as guest in the American College and gleaned much from the director.

Census day in Turkey is a day of rest. Everybody but the census takers is required by law to spend the entire day at home! There is the incident of a Tarsus man who sat in his doorway with his feet on the pavement. Police made him pull them in, on the theory that he was technically on the street!

Hygiene regulations have their anomalies. All meatshops are legally required to be screened. Duty-conscious, the butcher wiremeshes his front door, but the back door and all windows are left open to the vagaries of flying things.

The Red Crescent, which is Turkey's Red Cross, has just celebrated its 61st birthday. It derives its revenue from the monopoly of mineral waters and from that of certain imported drugs, holds tag days, and sells stamps—one week per year every letter sent through the post must carry a



Photograph by Herman H. Kridler.

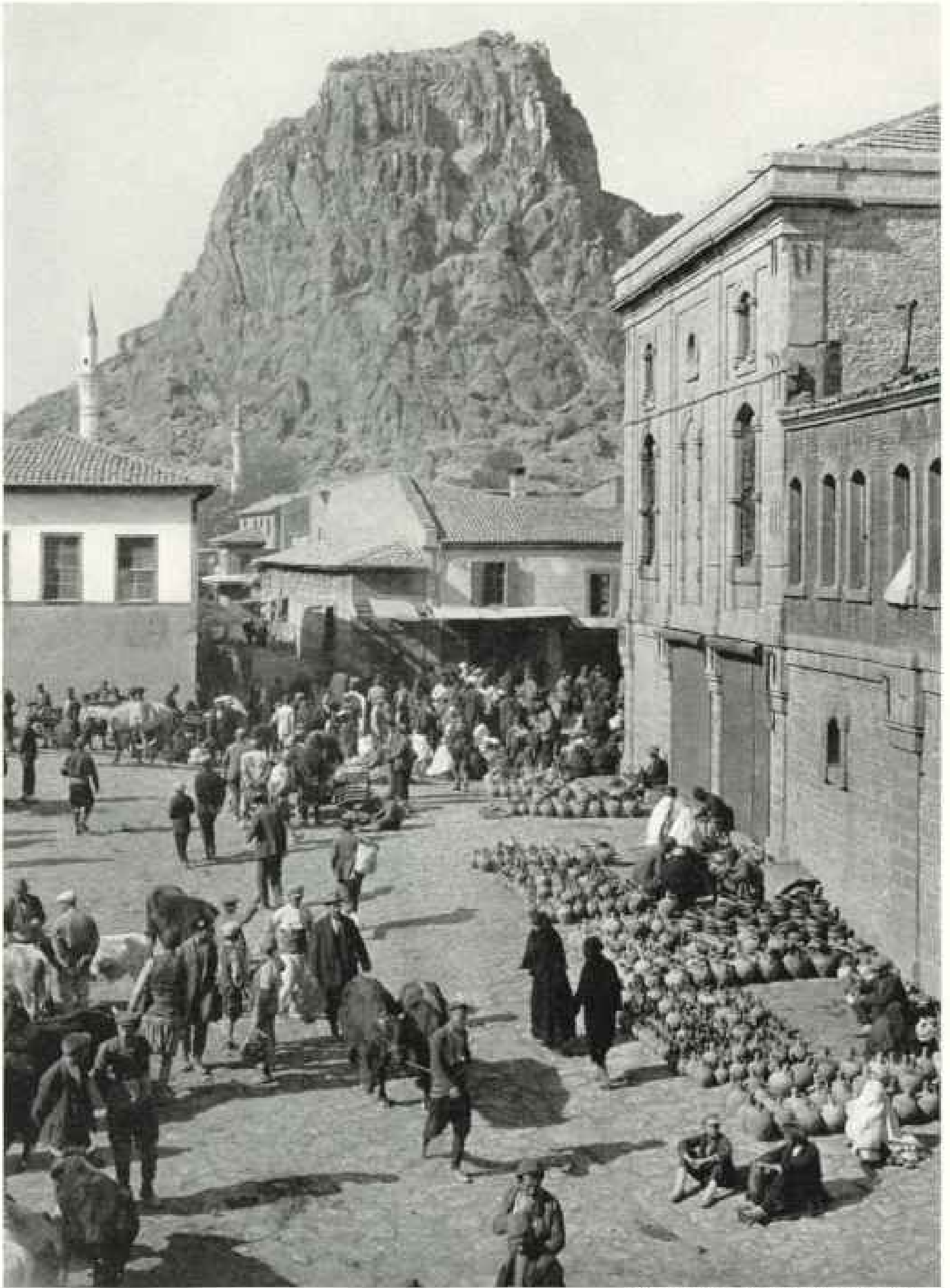
#### OLD BROADCASTING AND NEW RECEPTION ON A MINARET

The local Teachers' Club has anchored its wireless aerial to this spire at Akşehir. "Twelve o'clock; courtesy of Ankara Broadcasting Station," says the radio. "Noon. Come to prayer," cries the muezzin.

Red Crescent stamp. It also raises funds by benefit balls and entertainments.

"What of superstitions? What of the Evil Eye?" I asked my host. "Look at the horses and donkeys," he answered. "Are they not wearing, as of old, blue beads and bits of red cloth on their bridles? Religions may come and go, but superstition remains with us."

Traveling from Tarsus to Konya, Afyon Karahisar, and Izmir, one remounts the Taurus Mountains. At a junction on the summit the western line leads off from the Ankara-Istanbul line. The plain of Konya, intensively cultivated in wheat, could feed



Photograph by Maynard Owen Williams

LIKE A PIPE DREAM IS THE HIGH ACROPOLIS OF BLACK OPIUM CASTLE

When railway followed road from Istanbul to Konya, its rails led, as the wagon ruts had, to the bazaar below this rock-perched medieval Turkish fortress. Afyon Karahisar formerly had a large Armenian population and a group of dancing dervishes. Local residents speak of the town as Afyon (opium), omitting the Kara (black) and Hisar (castle). (Page 29.)

an entire country. As yet it is the domain of vast herds of cattle and sheep tended by shepherds in sheepskin capes.

Their rangy, cream-colored dogs, wearing long-spiked, wolfproof collars, play a daily game with the train. Briefly leaving their woolly charges, they race madly on a parallel course until the last car has outdistanced them. Then, acknowledging defeat with optimistic tail, as much as to say, "Next trip I'll beat you," they return to the job.

#### RAILROADS NOW ALL-TURKISH

The express trains on this line carry no regular diner, but have a "Vagon Büfé," remodeled from a wooden boxcar with a sort of caboose lookout at the rear.

This crude conning tower, reached by a short inside stairway, is fitted with a small table and two seats. I was permitted to make it my special eyrie throughout the trip. The smoke from the laboring engine, streaming back in dense clouds against the forward window, lent mystery to the glimpses of backward-rushing rock, cliff, and rolling steppe.

An inspector of the railroad, chance companion over this route, cheerfully furnished me with details of the development of Turkish rail systems under the Republic.

"At the time of the Lausanne Treaty we had no roads of our own. There was a total of about 2,000 miles of detached lines belonging to France, England, and Germany. Over these we ran our trains. Many were short stretches leading from ports into near-by agricultural regions, without connection from one to the other.

"After the Republic, our Government bought all lines from their original owners. Today there is, in all Turkey, not one mile in foreign hands. We have built since then, with Turkish materials and Turkish engineers, about 2,500 miles of railroad. Work is still going on. When another 2,000 miles have been added, the country will have a completely adequate network."

Near villages and towns the fields were being cultivated. Peasant women wearing baggy trousers of brightly printed cotton cloth worked beside their men; babies played contentedly on the ground under the shade of an occasional bush. Water buffalo, swaying on clumsy splayfeet, pulled primitive handmade plows through stubborn earth.

Third-class compartments of the train

were jammed by passengers without visible sign of baggage, migrating westward to sections of seasonal occupation. One was the owner of a crooked-necked lute; his stubby fingers flew over the strings, providing a jangling accompaniment to high-pitched singing. At every stop all swarmed out like grasshoppers and drank water at the public fountains.

Anatolian railroad stations are a welter of life at train time. Small children labor under baskets of eggs, which they proffer in grubby hands to perspiring travelers in the windows. Vendors sell spring water from bright ceramic jars, milk, peanuts, hazelnuts, figs, bottles of raki (potent aperitif), neat squares of white cheese, bread rings studded with sesame seed, olive-wood trays, boxes, porcelain wares, and great platters of baked lambs' heads, crisp, brown, and repulsive.

Obsequious mongrel dogs, apparently knowing the schedule to the minute, meet each train. The conductor opens a newspaper parcel and feeds them with admirable impartiality.

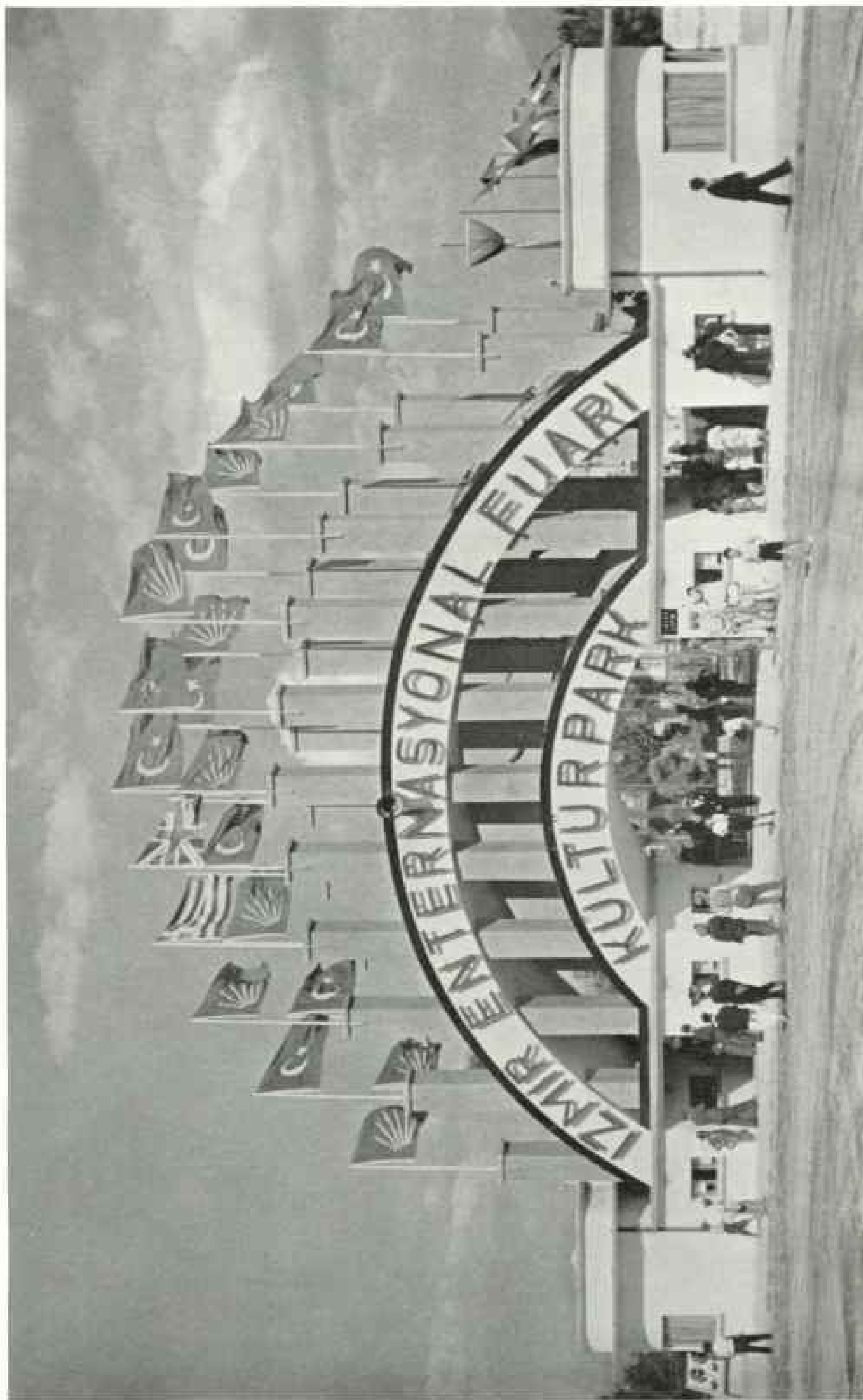
#### A SIX-POUND TAX FOR A ONE-POUND SQUIRREL

At one stop I had been sorely tempted to buy a tame squirrel with a wee leather collar and aluminum chain, all for the bargain-counter price of 80 cents (one Turkish pound). Another passenger acquired the beguiling creature. Upon arrival of the conductor, the unfortunate owner learned that he would have to pay a \$5 tax for transporting an uncaged wild animal in the train or abandon his purchase. At the next halt he detached collar and chain, ruefully pocketed them, and consigned his pet to liberty.

The cotton mills of Konya and Ereğli were running on day and night shifts. Like every Anatolian town I visited, these two had their new schools, People's House, and verdant parks watched over by a bronze statue of the Ghazi. In vain I searched for scenes reminiscent of the picturesque Ottoman Turkey.

Today no dervishes in pointed hats whirl in fanatic ecstasy. Since the disbanding of their sects, some have been absorbed into useful occupations; others live as harmless mendicants.

Lying between Konya (the Iconium of the ancients) and Ankara is the great salt lake of Tuz, near Koçhisar. It has a surface



Photograph by Bernard F. Rogers, Jr.

**FLAGS OF TURKEY'S FORMER ENEMIES, GREECE AND BRITAIN, FLY OVER SMYRNA'S INTERNATIONAL FAIR**

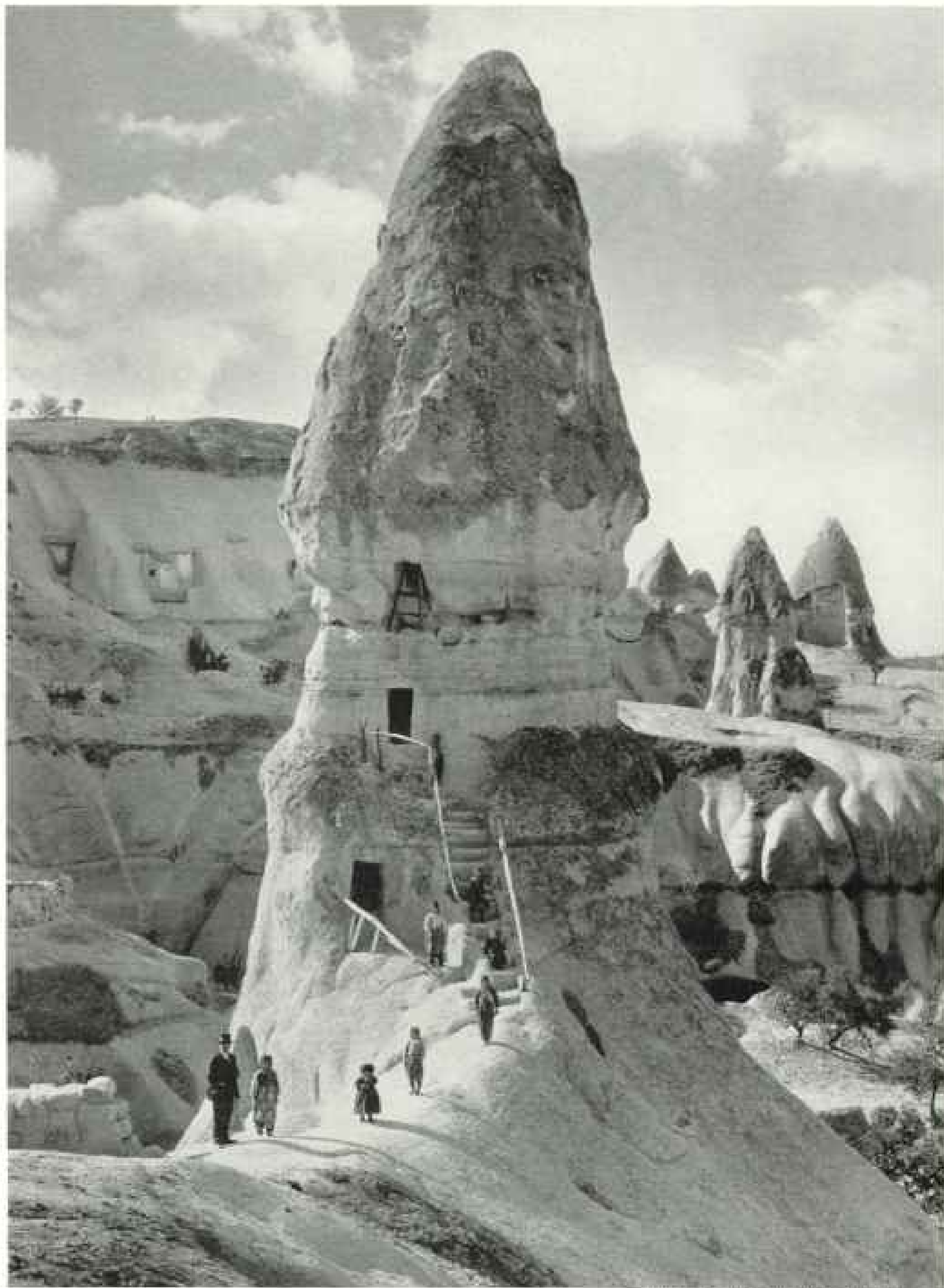
Eleven of the banners are the scarlet national flag, with its white star and crescent. Nine others bear the six arrows of the People's Party. But significant, too, are the flags of the Kingdom of Hellas and of the British Commonwealth of Nations, for it was a British-supported Greek offensive based at Izmir (Smyrna) which united the Turks and brought Mustafa Kemal to power. The International Fair, held annually since 1953, introduces foreign machinery and motors to the awakening Republic.



Photograph by Eisenstadt from Pix

THE CITY IS NOW CALLED İZMİR, BUT THE FRUITS ARE STILL SMYRNA FIGS

Metropolis of Anatolia, Izmir has long been a busy port for figs, raisins, tobacco, opium, and carpets. It is the "eye of Asia Minor," famous as the home of the sweet and tender Levantine figs (page 40). The white headcloth worn by the sorters is not counted as a veil, but can, when modesty or confusion demands, be used as one. Outside the cities such headdress, sometimes colored or black, is almost universal.



Photograph by Maynard Owen Williams

VOLCANO AND RIVER, RAIN AND WIND, SHAPED THIS TROGLODYTE STOREHOUSE

First Mount Argæus erupted, covering the region with lava and pumice. Then the Kizil River eroded the valley floor, leaving isolated columns with capstones of hard lava. When these protecting capstones dropped from the pinnacles, rain and wind pointed the cones. Then the Cappadocian troglodytes (hole creepers or cave men) carved out living rooms, storerooms, and chapels, now partly displaced by above-ground buildings. No man knows the age of this cone at Matsan, near Urgüp, still used for storage.



Photograph by Eisenstaedt from *Life*

#### CIGARETTE GIRLS IN SMYRNA PREPARE TOBACCO RATHER THAN SELL IT

Small-leaf Turkish tobacco is the Republic's chief export, 65,000 tons in a good year. These neat, agile handworkers are paid on a piecework basis and for a day's work earn about as much as three meals cost in a popular restaurant. The principal tobacco district now remaining to Turkey is on the humid slopes along the Black Sea. Although unveiled, the girls do not like to show their faces before a camera. (Plates XV and XVI).

of a thousand square miles—yet a greatest depth in winter of about sixty inches! In summer it evaporates, leaving a layer of salt a few inches thick. Very primitive is the present exploitation. Just as they have done for centuries, laborers scrape up the residue and place it in sacks. Thus to the market it goes on camel back. Present production is some 30,000,000 pounds per year; modern equipment will shortly be installed.

So the camel still has a job in Anatolia. His price, however, has dropped since the advent of the railroad. Actually, in all my thousands of miles of Turkish travel, I saw but one caravan, and only twice noticed camels grazing in small herds. In vain I looked for those solid-wheeled, groaning carts described by Melville Chater in his article "East of Constantinople."<sup>4</sup>

Pressure of time forbade my visiting the tomb of Nasr-ed-Din Hodja, Turkish equivalent of Germany's rustic 14th-century jester, Tyll Eulenspiegel. Nasr-ed-Din lived five hundred years ago; his whimsical

<sup>4</sup>See NATIONAL GEOGRAPHIC MAGAZINE, May, 1923.

anecdotes are still to be heard wherever merry tales are told. Before his tomb at Akşehir stands a high gate, heavily padlocked. There is no fence or wall about the grave, and the gate stands detached and useless; a burial jest for the undying jester.

#### A BLACK TOWER IN WHITE POPPY FIELDS

Afyon Karahisar is the principal center of Turkey's opium production. Round about the town are fields white with poppies. Karahisar, "the black tower," was in olden days added to Afyon's name (meaning "opium") in order to distinguish it from another Afyon. Its black tower is a bold, Gibraltar-shaped pinnacle of rock surmounted by an ancient fortress (page 34).

Famous for ages have been the healing waters of Afyon. Bottled, they are sold as table water throughout all Turkey. To Afyon's modern sanatoriums come health seekers from Mediterranean and Black Sea towns.

"Telegram for you, sir." A boy poked a folded slip of paper into my hand as I sat in one of Izmir's movie palaces. It was



my first introduction to the *yilderim* telegram of Turkey. *Yilderim* means "lightning," and well deserved is the name, for messages are usually delivered in about ten minutes from their point of origin. All lines are cleared. The cost is five times that of regular service.

"How did you find me here?" I asked. "Oh, your hotel clerk gave the hint. Sometimes it's not so simple, but we *have* to locate the recipient if humanly possible."

Turkey's post knows no special delivery for letters, and its big centers have no pneumatic telegraph, as do Paris and some other cities.

For three days I scoured Izmir and its surrounding country with a guide assigned me by the governor because of his command of French, a command which probably encompassed all of a hundred words! Like many men of few words, he used them often.

It was not the season for activity in the large fig-packing establishments. I regretted that I could not see this sight and hear the mild bickerings and chatter of the thousands of men, women, and girls who perform the work.

In from the Big and Little Menderes Valleys come the figs, sun-dried, packed in camel's-hair sacks. At the Bourse they are bought by the exporting houses and taken to the packing plants. Here they are fumigated, hand-graded according to size and quality, and manipulated into four classes: lokums, pulled, layers, and natural. Lokums are worked into cubes. The pulled are pulled out and rounded into plump fruit shape. Layers are split, opened in crescent form, and packed in boxes. Naturals are simply packed in linen bags (page 37).

Workers are obliged to wear spotless white overalls and to cover the hair with linen caps. Thorough hand-washing with permanganate of potash solution is compulsory before handling the figs—a comforting thought to the ultimate consumer.

Plants are today equipped with loudspeakers; between radio programs, gossip drones locustlike through the busy rooms. Tales of Nasr-ed-Din Hodja are retold as they have been for half a thousand years.

Though the fig-growing valleys lie fifty miles or more from Izmir, the figs are commercially known by the name of the port from which they are shipped.

Cuttings from Aydin trees, planted in San Joaquin Valley, California, produce

figs sold in America under the name "Calimyrna."

Sun-dried raisins, the famous Smyrna sultanas, are, like the figs, sold at the Bourse and taken to the packing plants. Up-to-date machinery does the cleaning, removal of stalks, bleaching, and packing. At the end of August the season starts; the finished product is swallowed by the iron maws of freighters which plow with salt-caked smokestacks through the Seven Seas to the world's markets. Phylloxera has done much damage to the Turkish crop.

Turkey has not until now produced wine intensively. The wine, under Government monopoly, is of good quality, but lacking in variety of types. Plants for increasing the output are now being built at Manisa and Izmir.

Izmir's water-front area, destroyed by fire in 1922, is now growing into a new model city. Here is situated the permanent show ground of the yearly International Fair (page 36). As in Ankara, there is a tower for parachute-jumping practice.

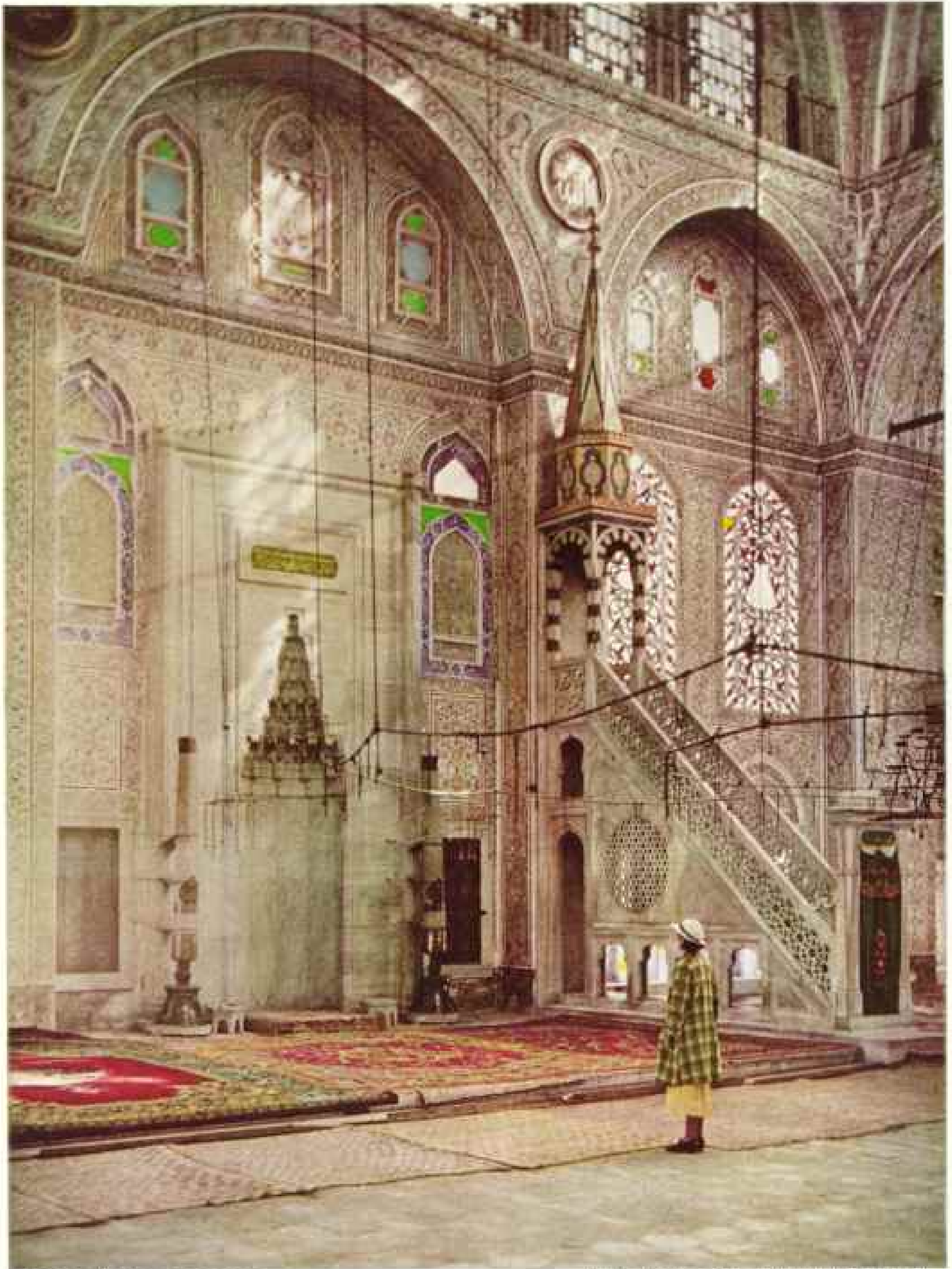
#### A COLLECTOR OF RUGS TURNS BOAR HUNTER

I had a rendezvous with an amateur collector of rugs. He expatiated ruefully on the decline and fall of Turkish handicraft under the impact of machine-age mentality.

"Aniline dyes, mixing their harsh pigments with the new philosophy, have killed this industry pro tem. Connoisseurs have cleaned the markets of treasures dyed with vegetable colors, which were woven in Kula, Gördes, Bergama, Lâdik, and Konya a century or more past. Those of mixed vegetable and aniline colors, made a generation ago, are not uncommon.

"The chemically pigmented articles coming from the village weavers of today would cause their great-grandfathers to weep. Will they take the time and trouble to search the forests and fields for the hidden plants? No. Forty years ago the Persian Shah ordained that anyone using anything but vegetable dyes should suffer severe penalties (Plate II).

"I have given up rug hunting now and employ my spare time in the more exciting sport of shooting wild boar. These beasts, fleet and tusky, are so common hereabouts that, after they are killed, we merely cut off the hams and leave the rest of the body. They are also plentiful around Bursa

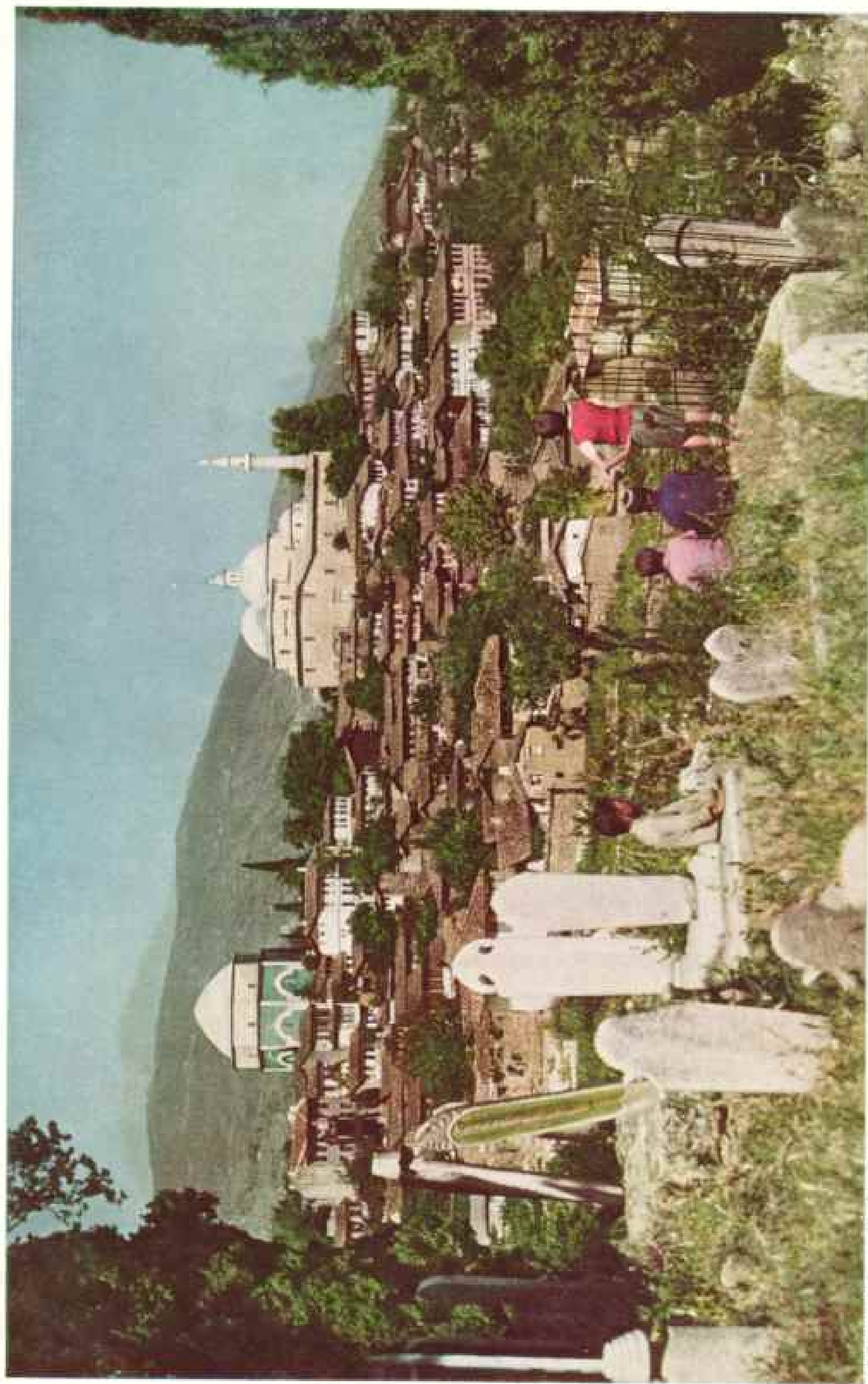


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Friday Photograph by Bernard E. Rogers, Jr.

"LET ME FEEL AS FREE IN MY MOSQUE AS IF OUT OF DOORS," SAID MIHRIMA TO HER FATHER'S "MICHELANGELO"

Sinan, the Armenian mosque builder, carried out the wishes of Soliman the Magnificent's daughter in this Mihrima mosque, noted for its many windows and flood of light. It stands on the highest hill in Istanbul, near the Adrianople Gate, through which Mohammed the Conqueror's troops entered the city. Pointing to Mecca, the prayer niche between the candlesticks occupies the site of a Christian monastery. From the pulpit, or *minbar* (right), Moslem leaders recite the profession of Faith each Friday.



© National Geographic Society

Friday Photograph by Bernard E. Rogers, Jr.

**TURKEY'S FIRST SIX SULTANS ARE BURIED IN BURSA AT THE FOOT OF THE BITHYNIAN OLYMPUS**

Under the white dome of the Green Turbeh (left), surrounded by lustrous Kütahya tiles, lies 'Muhammed the Gentleman' (Plate VI). The most striking part of the Green Mosque (right) is its gate, on which is inscribed the first chapter of the Koran. Bursa once was a center of silk weaving. Romana, Byzantines, Seljuks, Crusaders, and Latins all preceded the early Ottoman rulers, who made it a center for artists and poets, students, and dervishes.



Finley Photographs by Bernard P. Rogers, Jr.

**CLOGS: EASILY REMOVED, NEVER ENTER HOME OR MOSQUE.**

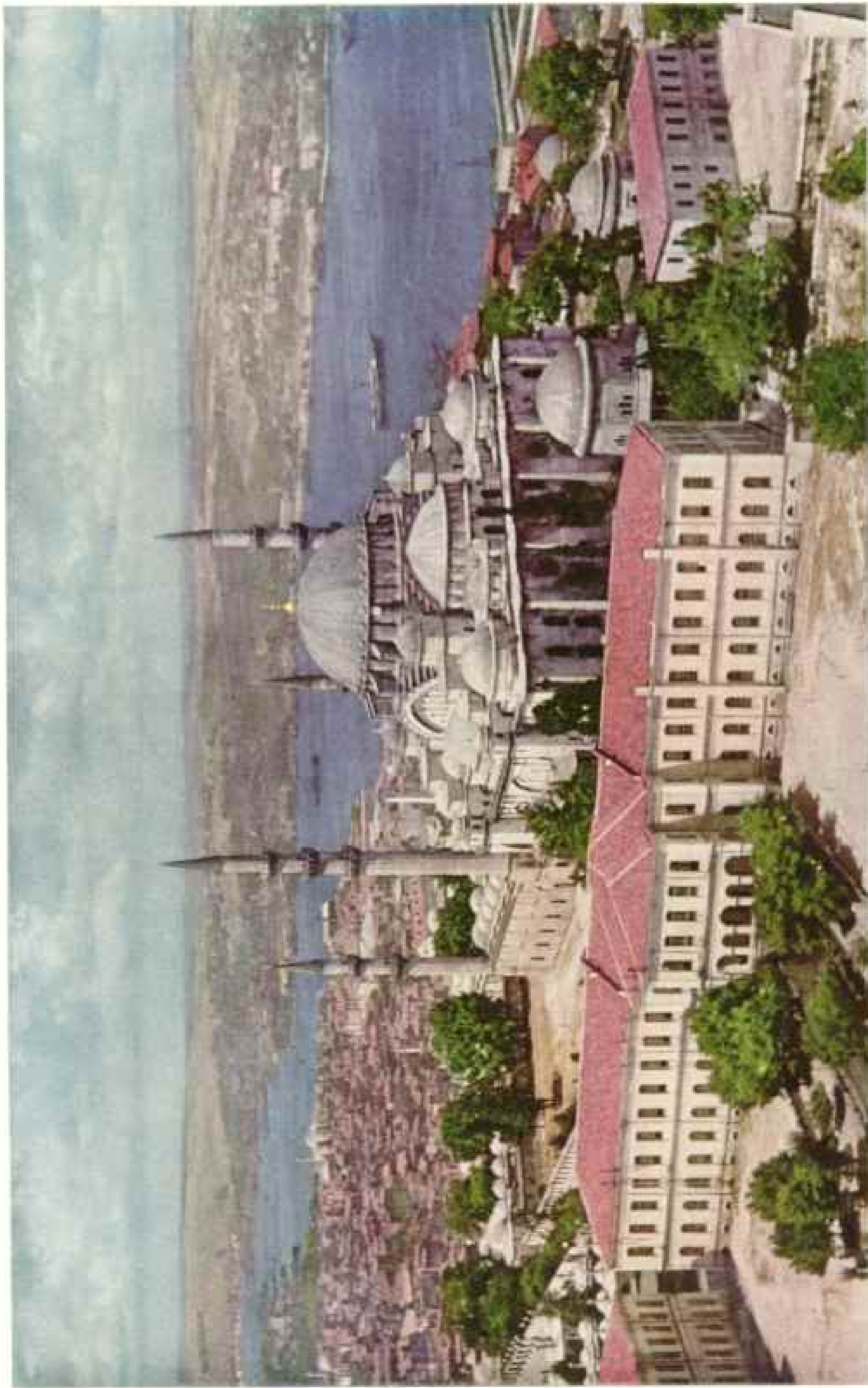
Wooden shoes are worn in the Turkish bath, during religious ablutions, and on muddy days. This Bursa cobbler, Hajji Elaba, makes the soles of his sabots of wood, the straps of leather.



© National Geographic Society

**A PIGEON TELLS CHILDREN'S FORTUNES**

For centuries Turkey lay under the spell of "kismet," or fate. Such superstitions are now discouraged, but as an amusement this bird is still allowed to choose from hundreds of slips of paper an omen for children.

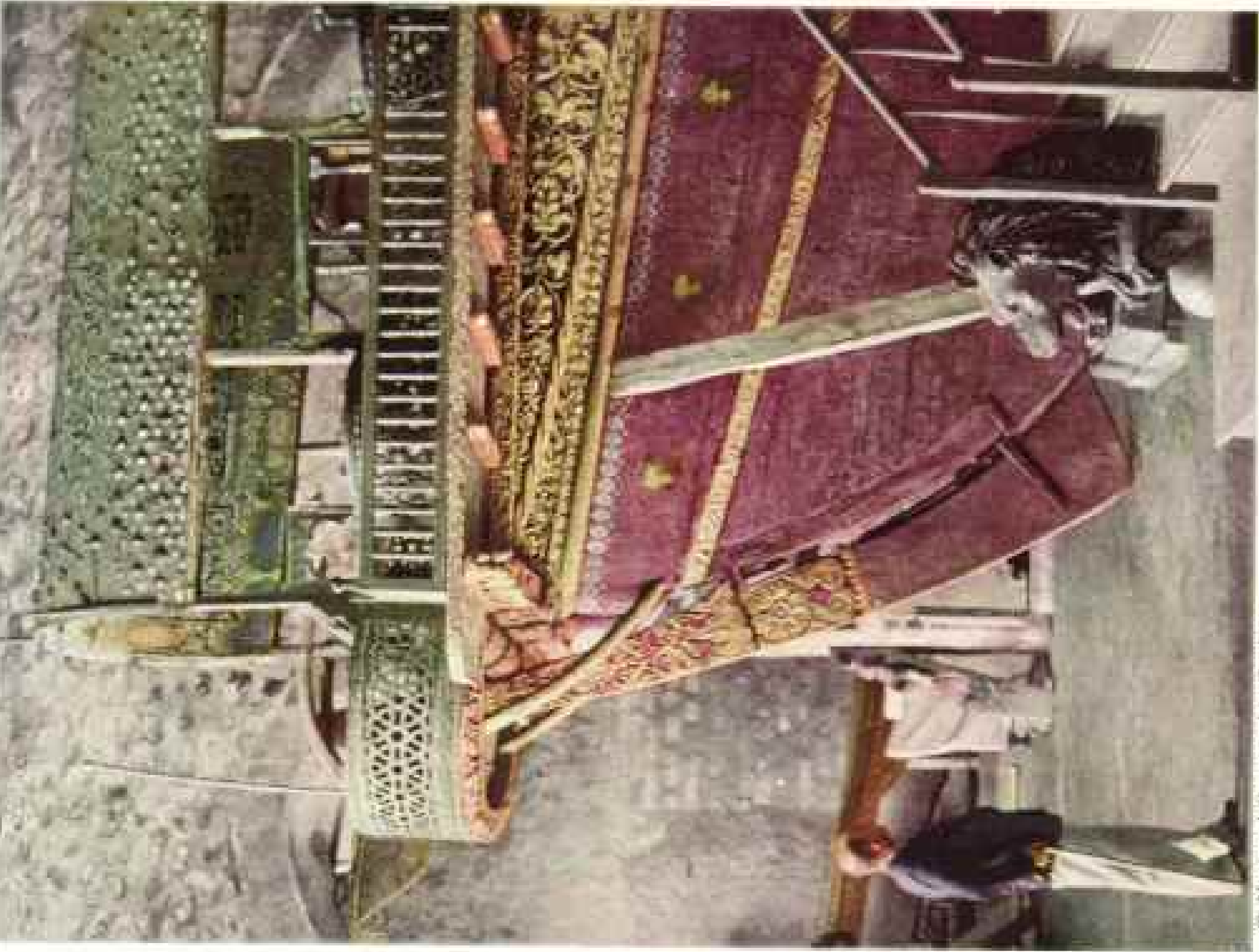


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Finlay Photograph by Bernard F. Rogers, Jr.

NOT A TRIUMPHAL ARCH, BUT THIS MOSQUE DOME MARKED THE VICTORIES OF SOLIMAN AT BELGRADE, RIDGES, AND BAGHDAD

Below the unequal minarets, whose ten galleries indicate that Soliman was the tenth in line from Osman, lies the Golden Horn. The mosque has two lustrous stained-glass windows which were brought from Persia as spoils. Contemporary of Henry VIII of England and Charles V of Germany, Soliman the Magnificent extended his empire to the gates of Vienna and across North Africa. Beneath the University (foreground) lay the Forum of Theodosius I. The Golden Age of Byzantium and that of the Ottomans had their monuments on this, the third of Constantinople's seven hills.



© National Geographic Society

**IVORY AND MOTHER-OF-PEARL DECORATED THE PLEASURE BOAT OF A NERGI-ECTFUL SULTAN**

Mohammed IV rode in this barge while his mother and grandmother fought for power and the famous Kaprullu viziers ruled the Ottoman Empire. Modeled after ships of Venice and Spain, the vessel had 144 oarsmen.



Finlay Photographs by Bernard P. Rogers, Jr.

**IN THIS LUXURIOUS KAICK, ABDUL AZIZ FLOATED IDLY TOWARD FAILURE**

Handsome and promising, Sultan Abdul Aziz soon disappointed his friends. He was deposed on May 29, 1876, for incapacity and extravagance. At a cost of \$50,000,000 he built a palace in which he slept only one night.



© National Geographic Society

Flower Photograph by Bernard F. Roques, Jr.

FLOWERS AND FRUIT BRIGHTEN A STREET IN BURSA, THE FIRST CAPITAL OF THE OTTOMANS

This hillside resort is famed for its silk culture and thermal baths. Despite chill winds from the Black Sea and snowy Olympus, the old fields of which bring new life to the abandoned capital, many of its houses are firm, unlike Ankara's ultramodern apartments. Bursa resisted a ten-year siege before it became the residence of the early sultans and their artists, poets, holy men, and historians.



© National Geographic Society

**THESE TURKISH GIRLS SPEAK ONLY BULGARIAN!**

They were transplanted in 1926 to Etimesut from Europe, where their ancestors had lived for centuries. Although this is the homeland of the silky-haired Angora goat, they hold sheep.



Finler Photographs by Bernard F. Rogers, Jr.

**SMYRNA (IZMIR) CARMENS ENJOY TEA SERVICE**

In this tobacco factory the worker has a choice of sweet but stimulating coffee or cold lemonade. A small cube of "Turkish delight," or fruit paste, served with a glass of water, is a Levantine refreshment.





CLOSE TO ULTRAMODERN ANKARA, DRY WEEDS HEAT PRIMITIVE OVENS

This Turkish woman, whose family had resided in Bulgaria for generations, has returned to Anatolia and settled at Etimesut. She wears trousers, abandoned in most of the republic.



© National Geographic Society

Finlay Photographs by Bernard F. Rogers, Jr.

NOONDAY ABLUTIONS, FOSTERED BY RELIGION, NOW SERVE AN INDUSTRIAL AGE

Before eating their lunches, women factory workers are washing their hands at a basin in the factory courtyard, which resembles the fountains in the mosques. Although the veil is discouraged, the white headcloth can be used to hide the face.

and through the wild country of the Dardanelles."

Because Moslems won't eat wild boar, it is a cheap and common food among the Christians of Istanbul.

Having spent interesting hours in the fine new schools of Izmir, I set off across the gulf (Nice's Bay of Angels is no more gracious in its theatrical blue curve) to visit the Normal College.

The sun was setting back of the garden wall. After photographing groups of black-eyed maidens, we held a soirée there in the green garden, the kind, elderly director aiding me to interview the girls about their hopes and purposes in the profession for which they were preparing.

"Marriage? No, not for at least the next eight years. Turkey needs teachers. We've got to carry on the battle for enlightenment among the poor, backward people in our provincial areas."

"You are invited to stay with us to supper," the director announced.

In the large dining hall, he and I were two masculine islands in a sea of brown femininity. When the omelet, yoghurt, and compote were finished, the 180 young ladies gave a concert. They sang ancient and modern Turkish folk songs, ending with the Hymn of Youth and the Republican National Anthem.

#### A TRIP WITH TOBACCO BUYERS

From Izmir I journeyed by rail ten hours to Bandırma in a compartment with four Turkish tobacco buyers. At evening they opened hampers and spread out, on an improvised buffet of suitcases, a cold supper of baked chicken, salads, hard-boiled eggs, long-shaped heads of sweet green lettuce, and the inevitable bottles of potent raki which, when mixed with water, turns milky-white.

The night boat from Bandırma, Sea of Marmara outlet for the products of the rich valleys of this region, was a floating sheep pen, chicken crate, and cow stall. Decks were piled high with ribby, red sides of beef. Everything that had not gone the way of barnyard flesh was bleating, cackling, crowing or mooing. Other available deck space was littered with sprawling families of handsome Anatolian peasants.

Two weeks after I made this run, a new ship, to take the place of this ancient craft, was brought into service. German shipyards are just completing two more passen-

ger boats for delivery to Turkey. The journey between Istanbul and Bandırma may now be made in comfort.

A second stay in Istanbul, and I was off again to the hinterland, by way of Bursa, Turkey's first capital until Murad I removed the government to Edirne (Adrianople). (Page 50 and Plates VI, X, and XIV.)

Today these Bursa uplands are the playground of winter-sports enthusiasts from all the eastern Mediterranean regions.

Silkworms toil in mulberry trees through Bursa's luxuriant countryside. A recently established artificial-silk factory offers competition to Bursa's silk mills.

Ailing emperors and commoners of Bithynian, Byzantine, and Ottoman epochs knew the thermal springs of Bursa. Today modernly equipped, luxurious baths serve Turk and Balkan visitors.

#### FLATS OF STRENGTH IN THE STADIUM

To see the May 19th celebration, I made my way from Bursa by autobus, six hours of dust-choked bumping, to a junction, and thence by rail once more to the capital.

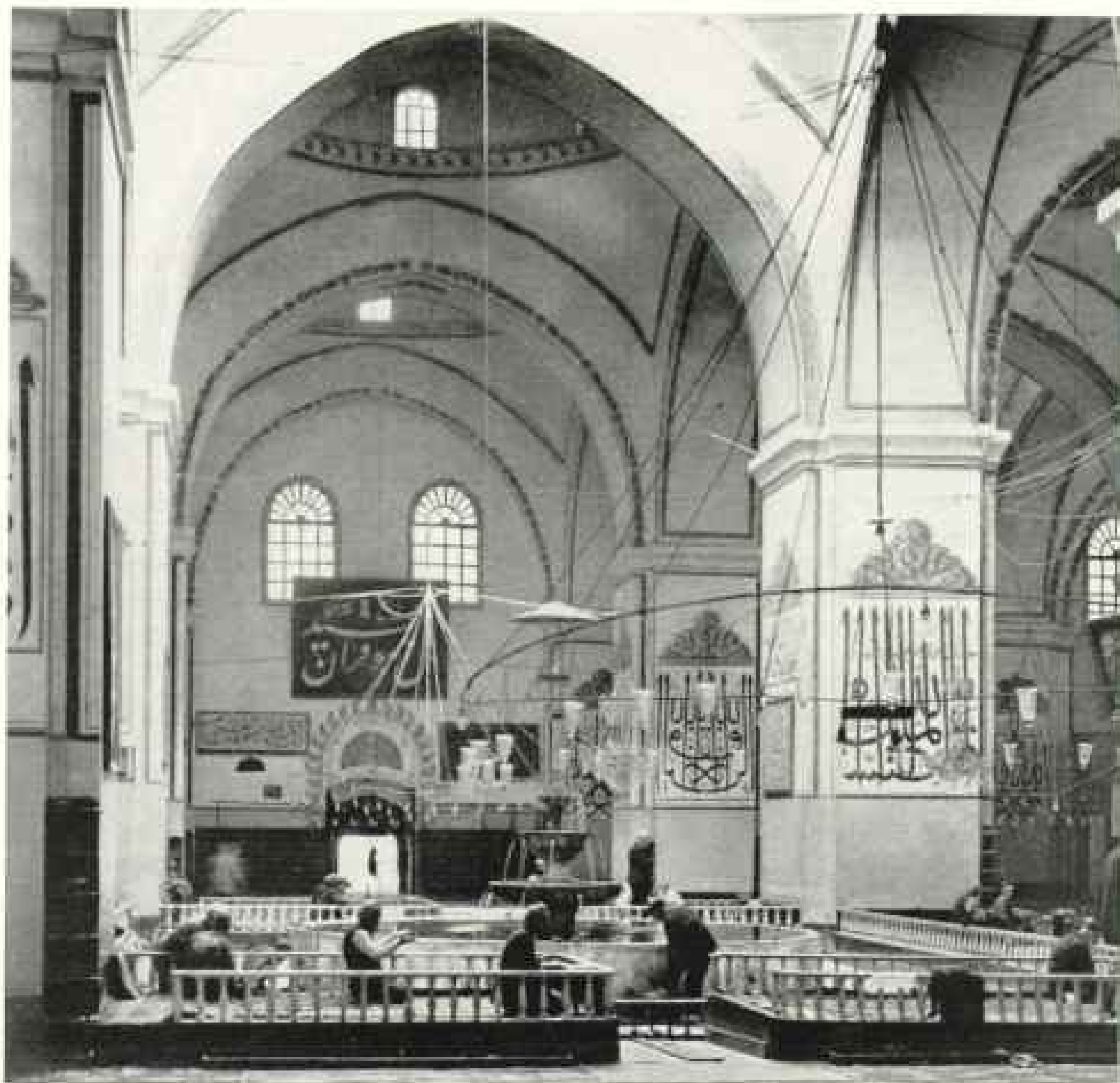
This yearly athletic meet in the stadium of Ankara commemorates Kemal Atatürk's departure from Istanbul to Anatolia in 1919, first step toward the freeing of Turkey from its Caliphate shackles.

Upon the circular sports field several thousand well-trained athletes of both sexes went through a program of drills and contests (page 30). The Bluebird chief (page 16) spiraled and looped in the sky above. A sudden lull in the midst of the exercises, followed by prolonged cheering, announced the appearance of Kemal Atatürk.

An afternoon at Çubuk Dam and the great artificial reservoir completed in 1935 (page 28), a farewell dinner at Karpıcı's, and my Anatolian adventures were ended. Returning to Istanbul, I bade adieu to its slender spires and re-entered Europe by autobus through Thrace to Edirne, near the Bulgarian frontier.

From early morning to midafternoon we lumbered over a treeless, uninviting expanse of rolling hills. Avoiding the road, often too deeply rutted for use, we ran a haphazard course along the edges of vast fields of wheat and tobacco. Whole hamlets of peasantry worked shoulder to shoulder at their planting—men, women, and half-grown children together.

On a straightaway stretch came a sudden



Photograph by Bernard F. Rogers, Jr.

THE SOUND OF RUNNING WATER MINGLES WITH MOSLEM PRAYERS AT BURSA  
 Fish swim in the basin as sun and rain come through the open roof of the Great Mosque.

twisting, grating lurch of our crowded vehicle, and merrily off through a wheatfield raced our two left rear wheels.

An hour's sweltering pause for repairs plunged me into friendly discourse with an inspector of the Tobacco Monopoly.

Together we visited one of the new model villages in which the Turkish Government is resettling colonies of its people. Since 1923, some 712,000 such Turks have been re-established within the boundaries of the Republic and put to self-sustaining work (Plates XV and XVI).

In the factory of the Tobacco Monopoly, cigarettes were being spewed out of ma-

chines with uncanny speed. Samsun and Izmir are the two chief centers of tobacco growing. The United States imports millions of pounds of the Turkish crop (page 39 and Plate XV).

"Will you come back and visit us again?" called an acquaintance from the platform as the train rolled out shortly before dawn.

"Of course!" I shouted back. "*Elbette!*"—echoing the most-repeated word I had heard in this forward-marching land. Can such a thing be done? Can we win in this complicated game of life? Of course!

In my memories of Atatürk's republic I inscribe it beside the star-and-crescent.

#### INDEX FOR JULY-DECEMBER, 1938 VOLUME READY

Index for Volume LXXIV (July-December, 1938) of the NATIONAL GEOGRAPHIC MAGAZINE will be mailed upon request to members who bind their copies as works of reference.

# THE TEXAS DELTA OF AN AMERICAN NILE

## Orchards and Gardens Replace Thorny Jungle in the Southmost Tip of the Lone Star State

BY MCFALL KERBEY

AS I stepped from a train at Brownsville, Texas, in late winter, to be met by a gentle breeze that was ruffling the great leaves of banana trees and the fronds of palms, I realized that I was dealing with a very special frontier—the country's last semitropical frontier. Rushes to California and Florida both started earlier.

Here the initial streams of incoming population began to flow in the first decade of the twentieth century, ran deeper and wider after the World War, and swelled to a flood during the days of hectic prosperity in the late twenties. Momentum kept the stream running even into 1931, despite depression in the rest of the country.

Then the inward movement dwindled away; but it never came to a stop. As I went about the region during the weeks of my stay, I passed crammed trailer camps, slept in crowded hotels, and was greeted during daylight hours by the noise of hammers—sights and sounds that told unmistakably that the inward flow is increasing again.

### ENTHUSIASTS SUGGEST "FORTY-NINTH" STATE

The Rio Grande Delta is really "a tight little empire," made so by its special geographic conditions. Enthusiasts arise every little while to insist that the region be sliced off from Texas and made into a forty-ninth State. Theoretically this could be done, for when Texas joined the United States she reserved the right to divide her area into as many as five States. As to the practicability of the plan, opinions differ both in the Delta and in the rest of Texas.

The Delta is farther south than all the rest of the United States except the last 45 miles of the tip of Florida. It has a typical delta form, a soil which in large areas is almost as rich as a natural soil can be, and water for irrigation (map, page 54).

Climate permits the region to grow citrus fruits—makes it one of the few regions in the United States where this can be done on an extensive commercial scale. And finally, the Delta's climate permits the growth of some other commercial crop in

every month of the year, making it possible to keep the soil continually busy.

The climate is not ideal; and, surprisingly, residents do not even claim that it is.

"We have here the minor tragedy of all good citrus belts, whether they be in the United States, Europe, or the Holy Land," one of the leading horticulturists of the region told me.

"Citrus trees," he explained, "thrive best in a sort of 'no man's land' of temperature on the edge of the frost zone, toward the Tropics. To remain healthy and bear heavily, they need each winter temperatures just above freezing. Every now and then in all the best citrus regions the frost belt swings a little too far south, and there is injury from cold."

Some years are frost-free; in winter months of other years three or four frosts may invade the region to nip such delicate growing things as banana trees and young tomato plants. Much less frequently there are freezes which injure the citrus fruits.

Rarest of the weather tragedies are hurricanes that now and then cross the Gulf of Mexico from the West Indies. After the destructive hurricane of 1867 the region did not suffer major damage again from wind until 1886. The latest of the destructive storms was in 1933.

### WINTER OF "SHIRT-SLEEVE" WEATHER

Normally the Rio Grande Delta goes its subtropical way with winter temperatures perhaps 10 to 15 degrees higher than those of central Texas, and from 30 to 50 degrees higher than simultaneous temperatures in northern portions of the Middle West. Because of nearness to the Gulf of Mexico, summer temperatures are often not so high as those in the interior of the United States farther north.

Through most of the days of winter the region has "shirt-sleeve weather." As I went about the Delta in late January and early February, almost every man and boy whom I encountered on farm, in school, or on city streets was coatless. I found, in fact, that the wearing of a coat was almost inevitably the badge of a first-time tourist



Photograph from A. Rogers Studio

OVER THE LOOPING RIO GRANDE AND ITS FLAT DELTA A BIG TRANSPORT ROARS,  
BOUND FOR MEXICO CITY

In 1939 an important industry literally swooped down on Brownsville from the air. Pan American Airways established one of its two superstations for conditioning the flying ships that cross oceans and girdle continents. Engines for the trans-Pacific Clippers and planes in the Alaska service arrive in packing cases by freight from San Francisco; others are taken out of ships which have flown in. At the airport, four miles from the city, 150 mechanics are constantly tearing down, rebuilding, testing and reinstalling these powerful motors. The airport is the northern terminus of service which extends through the Mexican capital and Panama to all parts of South America.

or of a visitor like myself on some business mission from the North.

JUNGLE BLANKETS RICH SOIL

Westward-faring pioneers in the early days of the United States had to chop down forests of sizable trees to earn their land. Later comers, on the wide prairies, had it for the taking. Here on the semitropical frontier there was work again, and lots of it, before the land could be put to use. Like most newly arrived outlanders, I was amazed when I saw for the first time the dense tangle of virgin jungle growth that still covers parts of the region. The sight of it gave me a healthy respect for the early comers who had imagination and energy enough to peel off this ugly and tenacious "rind" to get to the rich, productive earth beneath.

Left to itself the Rio Grande, even a few decades ago, fanned out in flood times, pouring its waters into the lagunas of the Gulf of Mexico through several widely separated streams, and covering with a shallow, slow-moving, chocolate-brown flood vast areas of the delta lands as well. It was the fertile delta soil, aided by these periodical silt-bearing overflows, that made possible the heavy growth of jungle; but because of the limited rainfall between floods—and sometimes actual drought for considerable periods—only plants adapted to semidry conditions could survive.

How long the Rio Grande Delta soil lay sleeping beneath its mantle of semitropical jungle, no one knows definitely. Few of the mesquite and ebony trees appear to have lived for more than a century.



Photograph by R. Anthony Stewart

#### EMPTY CHRISTMAS BASKETS FROM MEXICO LINE UP FOR CUSTOMS INSPECTION

The woven containers, decorated with bands of holiday red and green, will carry oranges and grapefruit northward as Yuletide gifts. Imports at Brownsville also include hides, ore, parrots, wild animals, fruit, pottery, rugs, blankets, embroidery, and other fancy work.

Men and capital needed to clear away the brush and to irrigate the sleeping soil came less than a generation ago.

The transformation has been amazing. Development of the former wilderness into farmland began in a small way with the coming of the first standard-gauge railroad, the St. Louis, Brownsville & Mexico, in 1904. But the winning of this new Southwest gained momentum as it went along, and most of the outstanding changes have taken place in the last 20 years, since the end of the World War.

#### FROM GRAZING GOATS TO SPEEDING TRUCKS

Where, two decades ago, goats (page 59) and a few cattle pushed along tortuous, thorn-bordered paths to munch meager grass that fought for existence against crowding brush, trucks bearing tons of grapefruit and garden vegetables now bowl along straight concrete highways at 40 miles an hour; glossy-leaved citrus trees cover square mile after square mile; little

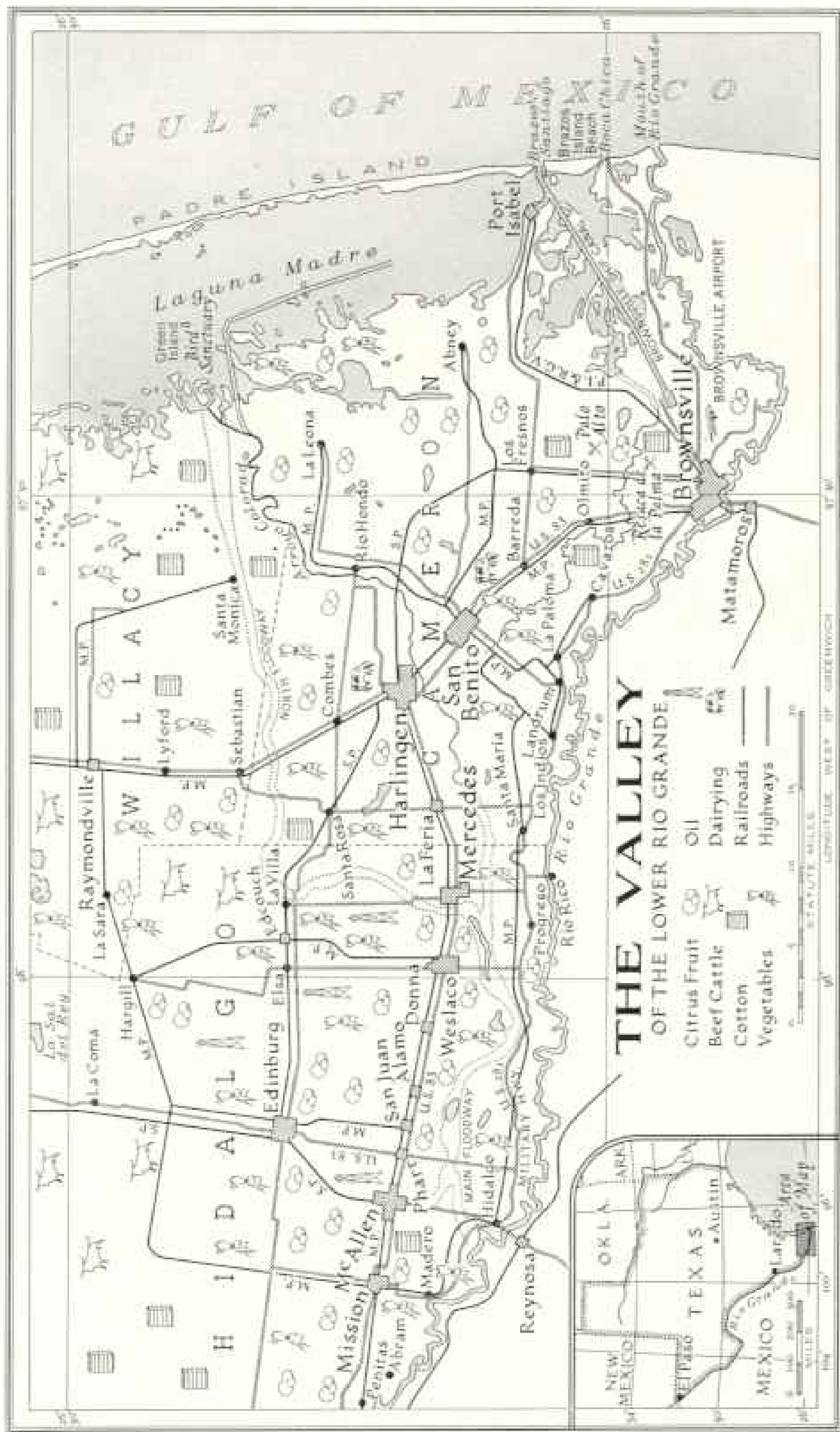
armies of field hands pull carrots from 400-acre fields, set out young cabbages by the tens of thousands, or tie exotic salad plants into neat bundles.

There is hardly a mile along the main highways without its railway sidings and packing sheds for fruit and vegetables. In some localities there are half a dozen of them in a row.

All night long during the fall and winter months switch engines chug up and down, herding up loaded refrigerator cars from these packing centers and making them into the half-mile-long trains that rush northward every morning with ripe fruits and crisp vegetables for the breakfast tables and dinner tables of the Middle West, the Northwest, and the East.

#### PROSPECTORS BY THE TRAINLOAD

But this picture of the Rio Grande Delta's rapid growth and flowering is far too simple, as thumbnail sketches usually are. The sailing has not always been easy. Fabulous



Drawn by Newman Barnstead and Ralph E. McClintock

THE RIO GRANDE DELTA, AN AREA AS LARGE AS DELAWARE, IS A FERTILE FRAGMENT OF VAST TEXAS

A sparsely inhabited jungle only 40 years ago, the Rio Grande Delta of Texas is now flecked with towns and crisscrossed by highways and railways. Irrigation canals, filled by pumps from the once-destructive river, water this semitropical region producing citrus fruits and winter vegetables. Off the shores of the Delta and in its streams and lakes many fish are caught. Winter warmth makes the region a haven for birds. Green Island is a bird sanctuary which has helped save the reddish egret from extinction. Nesting on the island are also other thousands of snowy and American egrets, Louisiana and Ward's herons, and black-crowned night herons.



Photograph courtesy Caterpillar Tractor Co.

WHEN THE FOLLOWERS OF DANIEL BOONE CLEAR LAND TODAY, THEY "SWING" TRACTORS INSTEAD OF AXES

Since the beginning of the twentieth century nearly half a million acres of mesquite, brambles, and cacti have been cleared with axes and picks. Now heavy tractor-driven "clearing machines" crunch through the remaining patches of jungle, as here near La Villa, preparing the ground for orchards and gardens. A heavy arm, or bumper, extending in front, pushes trees over. A gigantic plow, like a locomotive's cowcatcher, noses under and through the straining roots and scrapes away the smaller plants, leaving clear ground behind. Such a machine can strip the brush from two acres each hour (page 74).





Photograph by B. Anthony Stewart

#### JUICING PLANTS GULP GRAPEFRUIT BY THE TRUCKLOAD

Factories for pressing juice from surplus fruit prevented glutting of markets when thousands of acres of new groves came into bearing a few years ago. Pasteurizing the juice does not injure its food value nor alter its taste. From the washing vat fruit is taken into the factory on conveyers.



Photograph by Charles F. Hallbrook

#### A VAST SAFETY VALVE IS THIS DIKED CANAL IN FLOOD TIME

To prevent the mighty Rio Grande from overflowing its Delta in early summer and autumn, when melting snows and September rains in the mountains send far more water than the stream bed can carry, U. S. engineers have constructed this walled North Floodway near La Villa. It "short-circuits" the swollen river and conducts part of the floodwaters across country to the Gulf.



Photograph by B. Anthony Stewart

#### ASSEMBLY LINES SPEED PACKING OF VEGETABLES

Shaved ice cascades from metal chutes at the touch of a worker's toe and each basket or package becomes a many-decked sandwich of ice and a vegetable. Such technique, developed within the past five years, delivers products at distant markets fresh and crisp (page 58).

dreams have come true for some newcomers; for others there has been disappointment.

As the brush was stripped off and water applied, and men accustomed to the ordinary farming of regions farther north saw orchards of golden fruit spring into being as if by magic, and watched vegetables grow almost rankly in the dead of winter, there was much enthusiasm. Some of it was level-headed; some of it was over-enthusiasm; and some of it was almost beyond the borders of sanity.

Great land companies were formed to build comprehensive irrigation systems, to clear square mile after square mile of brush, and to plant grapefruit and orange orchards by the thousands of acres. Their agents toured the Middle West advertising "the Magic Valley" and brought, first carloads, and then trainloads of prospective settlers.

Residents of ten and twelve years ago tell how these parties were met by scores of automobiles and how the long motorcades streamed through the country visiting selected orchards and hearing, from the lips of each orchard owner, as they stood in a

group beneath his laden trees, the story of his success.

Orchard after orchard was visited; and in most cases the conductors kept the members of their parties always together and guarded them jealously against outside contacts. Independent agents, who had no part in bringing the "prospects" south, lay in wait on street corners and in hotel lobbies, looking for opportunities to sell the visitors "better and cheaper" property.

#### SALES TALKS IN CLUBHOUSES

Most of the land companies had guest cottages and commodious clubhouses on their properties, and the land-hunters slept as comfortably as if they were guests at week-end parties. Meals were served in the clubhouses, and in the evenings the visitors gathered in large, cheerfully furnished lounges and listened to more sales talks by eloquent speakers. Then, of course, the chance was presented to the "prospects" to sign sales contracts for the companies' orchard tracts, or for raw land, before they started back to their homes.

At its best this system of personally con-



Photograph by B. Anthony Stewart.

"A BLIZZARD IN A FREIGHT CAR" SOLVES THIS SHIPPING PROBLEM

After the ice-and-vegetable "sandwiches" are piled in the cars, shaved ice is blown from a nozzle between and over the baskets. Armored thus in cold, the shipments can move as far as Boston or Seattle or Canada without stopping, as under the old practice, at re-icing stations. This system, together with improvements in railroading, has reduced surprisingly the time between the winter harvesting of vegetables in their south Texas fields and their appearance on dinner tables of the North, Northwest, and Northeast (page 73).

ducted mass sales tours worked out pretty well. Thousands of people bought good land and became enthusiastic citizens of the country. At its worst, the system undoubtedly resulted in hardships and losses. Some of the excursionists, excited by the fanfare and the showmanship, invested far more money than they could afford. Others got poor land. When hard times came, some of these purchasers were unable to keep up payments and a number of orchard tracts were abandoned.

At any rate, the trainload method of selling land is probably a closed chapter in the history of this region—a chapter that could be written only under the influences of the hectic "boom psychology" of the whole country during the late nineteen-twenties.

Conducted parties are still brought in. I was continually encountering them at pumping plants, in orchards, in canning factories, and at seaside resorts. But they are smaller now; and they stay longer and see more of the country. Homeseekers are coming on their own initiative in their own automobiles to combine a vacation in a mild winter climate with leisurely land hunting. The more careful members of this group are obtaining expert advice on soils, titles, water rights, fruit varieties, and marketing possibilities before they buy.

"VALLEY" IN REALITY A DELTA

"Why does everyone insist on calling this delta a valley?" I asked a geologist friend, soon after I reached the Rio Grande.



Photograph by B. Anthony Stewart

#### TEXAS GOATS EMULATE GIRAFFES

By standing on their hind feet and stretching, goats browse on the tender shoots of mesquite. Typical of native delta lands not yet made ready for irrigation is this scene. Rich soil permits a heavy growth, but limited rainfall confines it to tough, drought-resistant plants. Ebony trees, thorny shrubs, sharp-spiked yuccas, and prickly pear cacti thrive with the mesquite.

Dozens of times I had received the greeting, "Welcome to the Valley." In the streets delivery trucks had painted on them such signs as "Valley Bakery," "Valley Laundry," "Valley Hardware Company." Across the State hosts and hostesses had told me in slightly varying phraseology that I was "a lucky dog to be going to the Valley in winter."

"Probably because the early settlers didn't know the difference," my friend replied.

"Anyway, the name stuck and has been firmly established for years. This is 'the Valley' to six million Texans, and you might as well fall into line yourself."

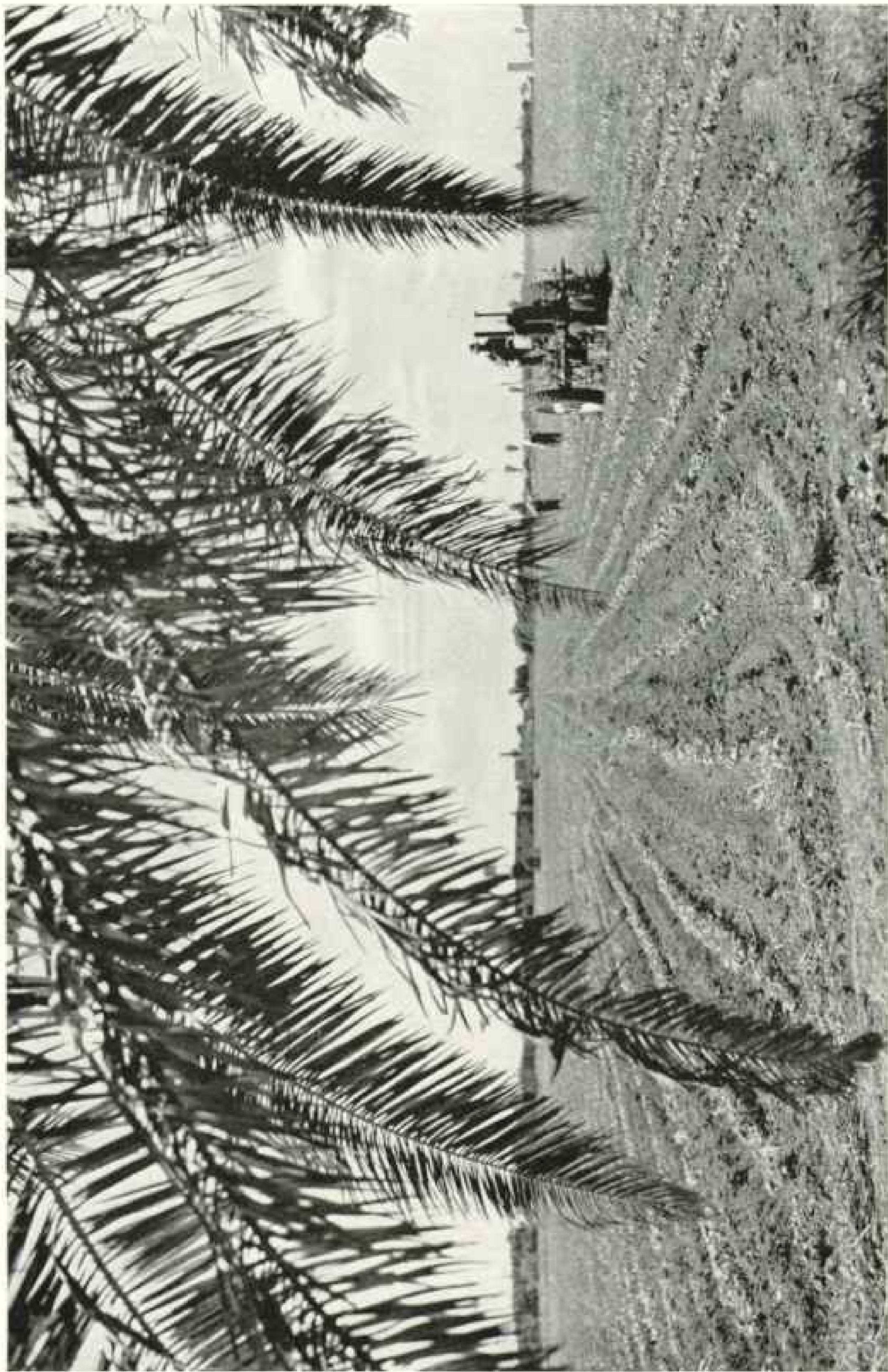
And so "the Valley" it shall be, but after the setting down of a few geographic facts.

This southern tip of Texas is exactly the

reverse of a valley. It is as truly a delta as are those of the Nile and the Euphrates; and if the delta-dwelling subjects of King Cheops could return to earth here they would feel thoroughly at home. A river like their Nile, flooding at least once a year, and often twice, has been building a deep, rich bed of silt for scores of thousands of years.

#### DELTA AREA LARGER THAN DELAWARE

Although this delta region on the United States side of the Rio Grande is only a small fragment of the vast State of Texas, it has a land area larger than that of Delaware—more than 2,000 square miles, most of it capable of intensive cultivation. It is in the form of a rough triangle, beginning at a sharp point just west of Mission, 75



Photograph by B. Anthony Stewart.

"AWAY DOWN SOUTH IN DIXIE"—"IN DE LAND OF COTTON"

A mild climate in south Texas, which permits date palms to flourish, makes it possible for cotton plants to grow while soil throughout most of Dixie is still too cold for seeding. For years the Lower Rio Grande Valley has produced the country's much publicized "first bale."



Photograph by B. Anthony Stewart

"WHAT AM I BID—WHAT AM I BID—FOR A FINE OIL STOVE?"

Such a gathering may include Valley residents from a dozen States or more. One sees the "ten-gallon" hats of Texas, the smaller felts and caps of the Middle West and North, and collegate hare-heads of all sections. Most of the region's 200,000 people have come in since the first standard-gauge railway was built in 1924 (page 53).



Photograph by B. Anthony Stewart

FLASHLIGHT CATCHES CHARRO AND POBLANA REVELERS UNAWARES

For a week Brownsville celebrates by harking back to costumes and customs of the days when Spanish settlers occupied the Rio Grande Valley and northern Mexico. In the daytime many citizens go about their business in costume. Balls, parades, and informal street dancing, carry the festivities into the night (Color Plates II, IV, VI, and XVI, and pages 78, 79).

miles above the mouth of the Rio Grande (where the river's *valley* comes to an end), and widening to 35 or 40 miles near the coast of the Gulf of Mexico (map, page 54). The strip immediately along the coast, however, is too "young" for cultivation; much of it is cut up by lakes and marshes.

25,000 CARLOADS OF GRAPEFRUIT

Dominating everything else in the lower Rio Grande Valley, at least on the surface, is citrus fruit. Orchards extend along the main highways for miles, almost always edged by tall, slender *Washingtonia* palms, or bushier, darker, ornamental date palms. And among the citrus fruits, far out in front is grapefruit.

Horticulturists say the soil has just the texture and plant food the roots demand, and that the air and sunshine and other climatic factors, plus irrigation, seem almost exactly to meet the needs of this particular

type of tree (Plates I and XI and pages 76 and 77).

Men were quick to learn that this is a favored grapefruit land. More than five and a quarter million grapefruit trees are growing today in the Rio Grande Delta; nearly all of them planted less than 15 years ago. This huge block of trees is concentrated in a relatively small area. Hidalgo County, Texas, has more than twice as many grapefruit trees as any other county in the United States, and Cameron County, adjoining Hidalgo, ranks third.

The yearly production of Texas grapefruit, although all the trees have not reached bearing age, is tremendous. In the season from October, 1937, through April, 1938, more than 29,000 carloads of fruit were produced. Of this number, approximately 16,000 carloads moved as fresh fruit to outside markets; the rest, mostly in the form of juice, went into cans and barrels in Valley factories.



Photograph by B. Anthony Stewart

#### OLD CANNON MARK THE BATTLEFIELDS OF TAYLOR'S TRIUMPH

In the flat country between Brownsville and the coastal lagoons, General Zachary Taylor's troops in 1846 fought and won the battles of Palo Alto and Resaca de la Palma. These victories led to the capture of Matamoros and the penetration of the United States Army into northern Mexico. The marker is mounted beside the Brownsville-Port Isabel Highway.

Grapefruit has had a rapid climb. Men have labored over some plants for centuries, crossbreeding or selecting occasional "sports" or spontaneous changes to produce improved varieties. The grapefruit tree has met man more than halfway. Because it is new to cultivation and its type is not fixed, it frequently puts out "experimental" branches. Some of these are better, some worse, than the mother tree. Then man makes his contribution: he selects buds from the improved branches, and so better and better strains of fruit are developed.

A few centuries ago there was only the uncouth, shabby ancestor, the shaddock, brought to the West Indies, the story goes, by a grizzled sea captain of that name, from Africa or the Far East. Its skin was wrinkled; it was seedy; its white-and-pink flesh was coarse; its bitter-sour flavor was far from pleasing. Then some shaddock tree put forth a limb of better fruit—smoother, with more tender flesh. It was still seedy,

but of its extreme bitterness there was left now only a pleasant tang.

Grapefruit had been born; its seed was planted and its strain preserved. The fruit was introduced into Florida and continued in its new home to put forth sports. Man knew more about preserving varieties now, and the new forms were perpetuated by budding—"planting" their buds in other growing citrus wood.

#### MOST PINK-FLESHED GRAPEFRUIT COMES FROM TEXAS

First of the improved forms was a seeded white fruit; then came a seedless white; then a fruit, still seedy, with beautiful pink meat. Later came the first seedless, pink-fleshed fruit; and, surprisingly, at least to the layman, it sprang from the seedless white form.

The Rio Grande Valley was fortunate in that these newer fruits were developed before plantings were heavy there. When



grapefruit trees were planted on a large scale the new forms were used widely. Now most of the pink-fleshed grapefruit which enters the markets comes from Texas.

Probably the most important horticultural development that has taken place in the Rio Grande Valley itself was the sudden appearance a few years ago of a grapefruit with a deep rich-red flesh—a sport from a pink type. The color shows on the outside of the fruit as well as inside, giving it the appearance of a gigantic, rosy-cheeked peach.

Strangely enough, this new form flared up almost simultaneously in half a dozen or more widely separated places in the Valley. Most of these strains have been preserved by budding and one strain has been patented. Young trees from the various strains of this newest of grapefruits are being used to replace trees that have died and in planting new orchards. In one orchard are more than a thousand bearing trees of the new red variety. There should be enough of the new fruit in a very few years to ship in carload lots.

Excellent oranges and lemons and limes are grown in the Rio Grande Valley, but none of these fruits has yet become as important commercially as grapefruit. Fewer trees have been planted. Less than 25 per cent of the total citrus trees are oranges, about one per cent lemons, and only a fraction of one per cent limes.

Then, too, horticulturists told me, they were not as fortunate in finding, in the early days of the Valley's development, varieties of oranges that fit soil and climatic conditions as happily as the grapefruit varieties fit them. However, promising new orange varieties have been established recently (page 78).

Finding answers to marketing problems has been among the Valley's difficulties. As large acreages of orchards came into bearing, a few years ago, fruit growers found themselves in an awkward predicament. There was a chance that the grapefruit market might be demoralized as the supply increased year by year. Then came factories for the canning of grapefruit juice, making it possible to save the surplus portion of the crop.

Co-operative movements among growers have been attempted at intervals. In 1935 the project got a fresh start and has now reached a healthy development. The Valley-wide association, the Rio Grande Valley

Citrus Exchange, controls between 40 and 45 per cent of the fruit produced and has erected two huge canning plants to take care of its members' surplus fruit.

#### SEASON'S CANNED JUICE "WOULD FLOAT A SHIP"

Last season the two factories, one at Mission at the west end of the Valley, and one at Weslaco near the middle, canned two million cases of grapefruit juice; and the thirty or more privately owned plants canned as much (page 56). Altogether, more than four million cases, or nearly twelve million gallons of grapefruit juice, were preserved during the year. It was literally "enough to float a ship": if dumped into one of the great locks of the Panama Canal it would form a body of liquid in that 1,000-by-110-foot receptacle more than 14½ feet deep!

Last year a usable product was made for the first time from the thousands of tons of peel and pulp that are left when fruit passes through the juicing plants. Disposing of this material has been a nuisance and an expense, just as "getting rid" of now-valuable cottonseed was in the Old South 70 years ago. The fruit refuse had to be buried or dumped in out-of-the-way places.

Now, in an annex to the huge co-operative juicing plant at Weslaco, peel and pulp from the home factory and several of the other plants in the Valley are ground, and the resulting meal, after being pressed to remove oil and juice, is dried into cattle feed in huge rotating heated drums.

Grapefruit wine is another product coming into production. One winery is turning out small quantities, and another is installing machinery and vats. Four kinds of wine are made; a sweet and a dry sauterne type, and a sweet and a dry sherry type.

#### LABORATORY WIZARDRY

The commercial possibilities of grapefruit products have by no means been exhausted, technical men say. At the Food Products Laboratory of the U. S. Department of Agriculture near Weslaco, I was shown dozens of bottles and boxes containing substances that grinders and presses and ferments and physical and chemical wizardry have coaxed out of grapefruit.

There were juices and other nonalcoholic beverages, vinegar, syrups, dried juice, pectin, waxes, oils, preserves, marmalades and "butter," wines and brandy; and a

RIO GRANDE CORNUCOPIA UNDER A WINTER SUN



© National Geographic Society

Dufaysolor Photograph by B. Anthony Stewart

LIKE THE SCALES OF A GOLDEN MERMAID, GRAPEFRUIT PEELS MAKE  
THE GOWN OF THIS TEXAS MISS

Deep red, orange, and yellow diamond trim is cut from beets, carrots, and turnips, samples of which the young lady carries in her basket. Each autumn at Weslaco, near the heart of the fertile Rio Grande Delta, girls dressed in such costumes take part in a festival ushering in the busy six months' harvest of grapefruit, oranges, and winter vegetables.



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SPANISH COLONIAL COSTUMES LINGER IN TEXAS

During the "Charro Days" celebration in Brownsville, men wear sombreros, embroidered blouses, tight-fitting trousers, and blanketlike shawls called "serapes"; but the señora wears an original gown from Panama.



Delavador Photographs by H. Anthony Stewart

TÊTE-À-TÊTE IN TEXAS PATIO

This brightly colored gown, the "China Poblana," was supposedly patterned after Cathay styles (Plate VI). Charro garb of the man is that of the gentleman ranch owner of Spanish days.



© National Geographic Society

Color Photograph by B. Anthony Stewart

DWELLERS IN THE RIO GRANDE DELTA ARE FIRST TO GREET THE BLUEBONNET, THE STATE FLOWER OF TEXAS

This field of blossoms, a few miles from the Mexican border, blooms in February when the northern Panhandle of Texas is still in the grip of winter. By early April hundreds of acres in central Texas are covered with the flowers, and a few weeks later the blue wave has swept nearly to the northern borders of the State. The bluebonnet is a lupine—*Lupinus texensis*.



Dufaycolor Photograph by D. Anthony Stewart

FRIENDS FROM ACROSS THE BORDER LEND A HAND IN BROWNSVILLE FIESTAS

The headdress of these girls from Matamoros, Mexico, is part of the Tehuantepec costume. This strange garment, evolved from a baby's frilly dress, owes its origin, according to one tradition, to a case of infants' frocks washed ashore from a shipwreck.



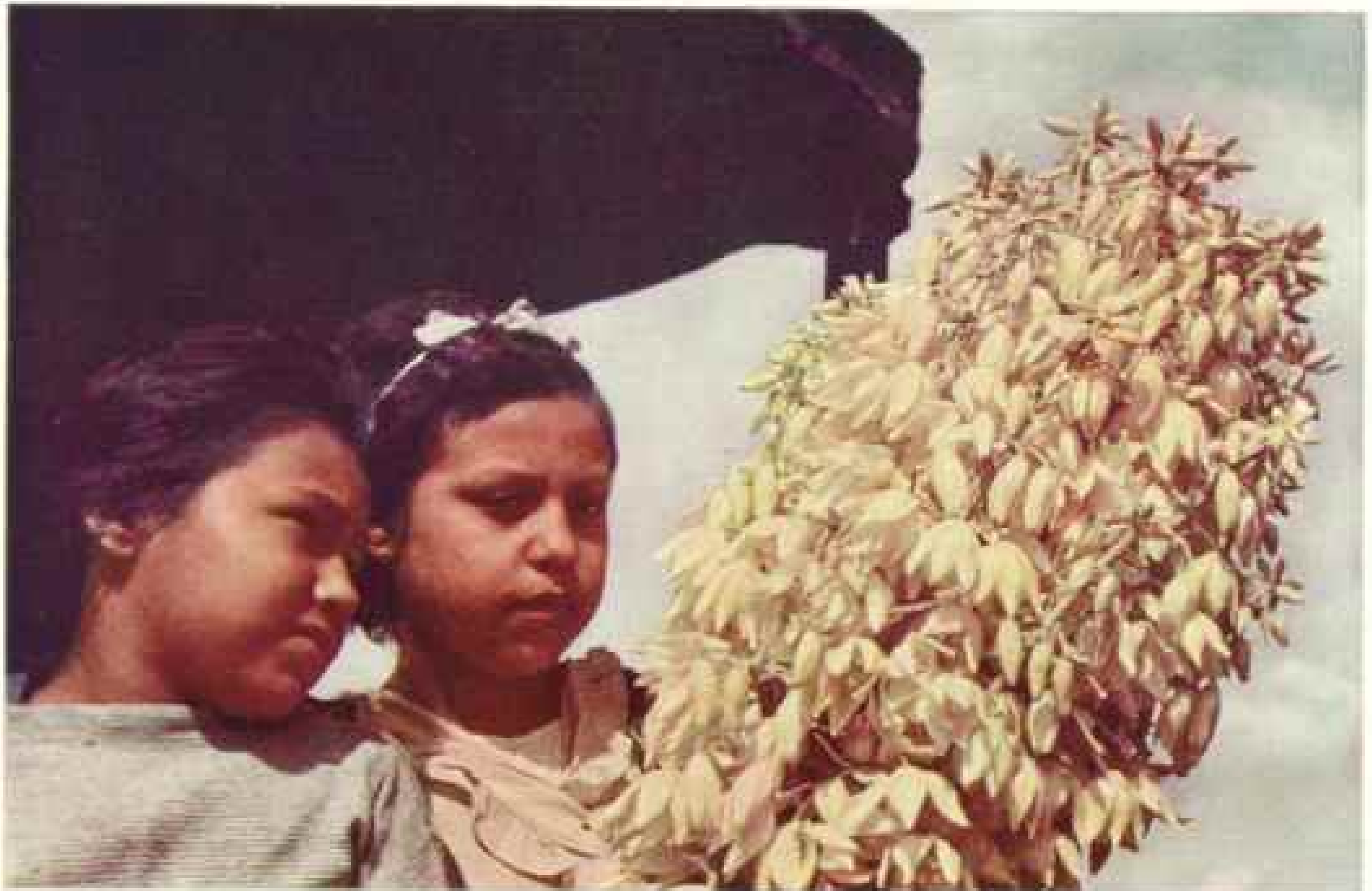
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Dufaycolor Photograph by D. Anthony Stewart

POINSETTIAS IMPART A SCARLET TINGE TO DELTA GARDENS

A greenhouse and indoor plant in much of the United States, the poinsettia grows luxuriantly in the open in the Rio Grande Delta. Like many of the other plants of southernmost Texas, this Christmas shrub is a native of Mexico.

RIO GRANDE CORNUCOPIA UNDER A WINTER SUN



Kodachrome Photograph by R. Anthony Stewart

SPANISH BAYONET—PICKED FOR FOOD, NOT FOR ITS BEAUTY

This handsome floral cluster of *Yucca treculeana* was cut from a roadside plant by the father of the girls, to be served as his favorite dish. Separate petals are plucked from the spike, soaked in brine, rinsed, and cooked in a batter.

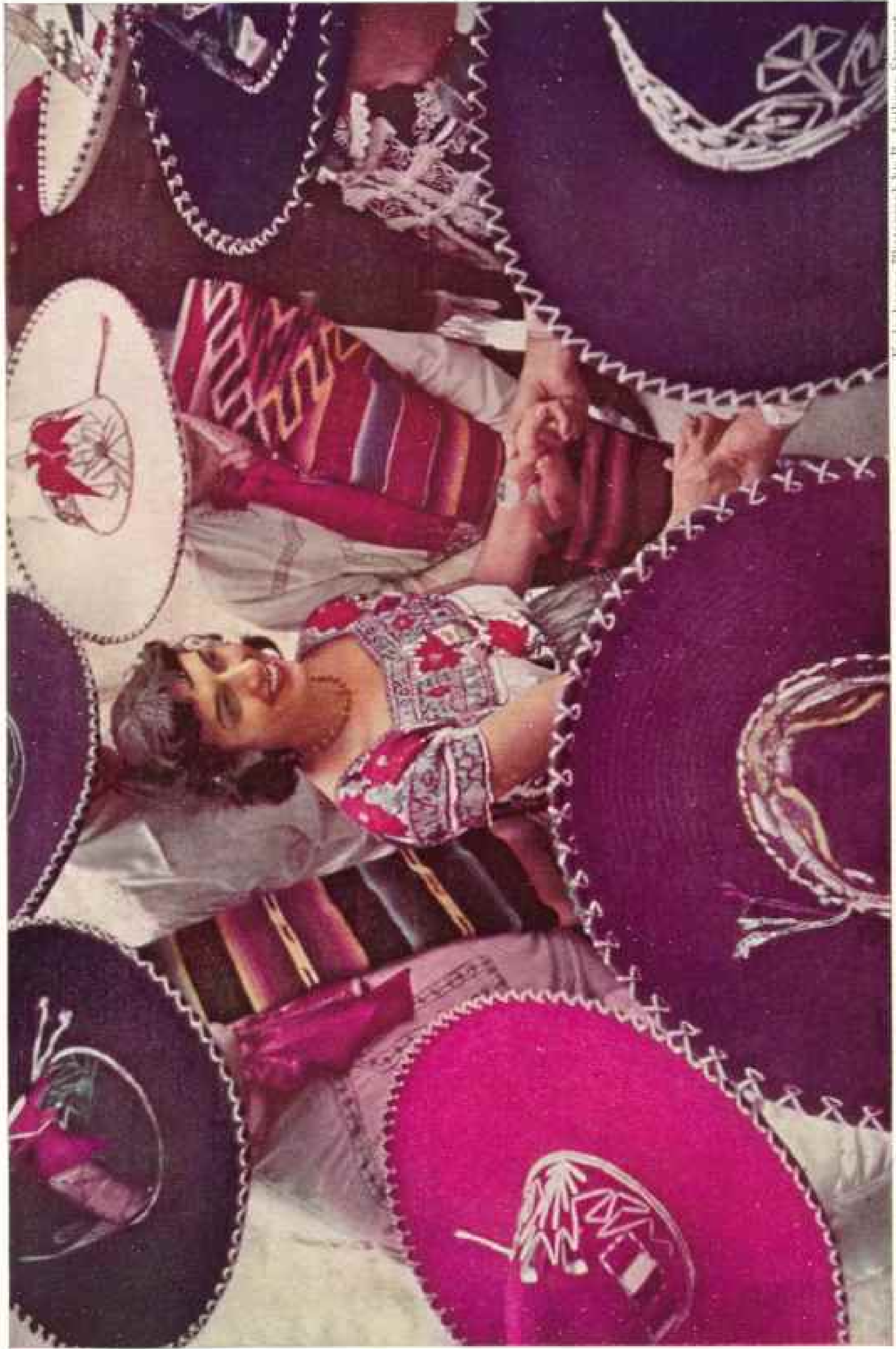


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Dufaycolor Photograph by R. Anthony Stewart

"WEAR 'EM AND WEEP" MIGHT BE HER SLOGAN

Ornaments hanging from the brim of this jaunty hat are onions; the chin strap is made of their plaited leaves. The costume was worn during a festival at Raymondville, one of the leading onion-producing regions in the United States.



Kodachrome Photograph by B. Anthony Stewart

A "CHINA POBLANA" SMILES FROM A FRAME OF HER CAPTORS' SOMBREROS

Years ago a Chinese princess, legend tells, was rescued from a pirate ship by a vessel bound for Mexico. Homesick in the strange land, she embroidered costumes of her birthplace (Plate II). She was known as "China Poblana"—Chinese woman of Puebla. The term is now used for this popular folk dress. With thick brim, high crown, and silver ornaments, handsome sombreros may cost \$500.



© National Geographic Society

**HE SOWS AND REAPS A WINTER HARVEST**

The cultivation of vegetables for northern tables is carried on by field hands of Mexican blood in the broad, flat acres of the Rio Grande Delta.



Dallas-based Photographs by D. Anthony Stewart

**EVEN IN JANUARY A SOUTH TEXAS SUN IS HOT**

Women fieldworkers, also of Mexican ancestry, wear old-fashioned sun-bonnets with "skirts" that protect the neck and shoulders.





© National Geographic Society

Dufaycolor Photograph by B. Anthony Stewart

PRICKLY PEAR CACTI BECOME FLOWERING TREES IN THE DELTA'S RICH SOIL.

This huge plant with its hundreds of reddish fruits (*Opuntia ficus-indica*) grows in a cactus garden near San Juan. The collection includes scores of varieties, from tiny ground-hugging plants to great barrel cacti five feet or more in circumference. Such thorny tangles overran much of the Delta region until twenty years ago, when large areas were cleared and irrigation transformed a jungle into the groves and fields of today.

product called "naringen," the bitter principle in grapefruit. Some of these have not advanced beyond the laboratory stage; others have.

One continuing waste that struck me forcibly is that of oil. In one room of the Weslaco plant, where peel is being ground and squeezed before it passes into the driers, the air is filled with the pleasant, aromatic odor of grapefruit oil as scores of gallons of the liquid are allowed each day to run off into the sewers. The world, it seems, is well supplied with orange and lemon oils, and as yet there is little demand for oil from grapefruit.

#### WINTER VEGETABLES GROW WHILE SNOW FLIES IN THE NORTH

Less spectacular than the growing of citrus fruit, but almost as valuable, is the Delta's winter vegetable industry. Nine million dollars' worth of climate is what this region really sells when it ships its vegetable harvest northward. Because it lies so far south, most vegetables wanted on the dinner tables of the United States can grow in its soil while much of the rest of the country is in the grip of winter.

When leaves are turning yellow and brown in the Northern States and fields are being left to stubble or cover crops, seeds are going into the still-warm ground down here to provide such fresh winter vegetables as radishes, broccoli, peas, spinach, and a dozen others. And when crowds in college stadiums in the North are drawing blankets about them, Mexican laborers in sunny fields here are beginning to harvest fall tomatoes and beans and squash.

By the time Christmas festivities are in the air, the Valley's vegetable harvest is getting into its stride and 200 carloads a week are rolling into the frosty North.

By the middle of January the movement has grown to 700 cars a week; and in the period from February through April the average is close to 1,000. The peak of the shipments, about 1,200 cars a week, is reached in mid-April when such short-season specialties as new potatoes, onions, and beans are added to the winter-long staples, cabbage, carrots, and beets. Kansas City and St. Louis are important diversion points. From both centers the laden cars scatter to reach all sections of the northern portion of the United States.

In its ability to produce the earliest outdoor vegetables, the area has only a few

important competitors in the United States: notably southern Florida and the Imperial Valley of California. With some vegetables one competitor makes the goal first; with others, it is beaten.

The industry depends on the most accurate timing in getting seed into the ground, harvesting and packing crops, and rushing them off to market. One day near the end of a season may mark the difference between a handsome profit on a shipment and a loss.

By the end of June the vegetable movement is about over; and seldom does a single carload move out after the first week in July.

The huge acreages of out-of-the-way vegetables astound visitors to the Valley. I visited a 200-acre field of dandelions, and across an irrigation ditch was nearly a hundred acres of parsley. Near by were escarole, chicory, and endive in 75- and 80-acre "plots." Many fields of the more usual broccoli, cabbage, carrots, and potatoes are several hundred acres in extent (Plates X and XIII).

When I followed loaded trucks from the fields, I came to a vast packing building where men and machinery were handling mountains of vegetables, preparing them for their long journey northward. Automatic washing machines sent the vegetables bobbing through tank after tank of water. Then they were dumped on conveyer belts which moved them between rows of workers, for grading and packing (Plate XIII and pages 57, 58).

#### SHIPPING TIME TO MARKETS CUT TO ONE-THIRD

In his office in Brownsville, I talked with a man who sent the first carloads of winter vegetables rolling out of the lower Rio Grande Valley, in 1905.

"When I started my business, it took 9 or 10 days for cars to reach St. Louis, 14 days to reach Chicago, and 16 to reach New York City," he told me. "Now, thanks to greatly improved railroad facilities and to better refrigerating procedure, the time has been cut to a third or less all along the line; the food specials arrive in St. Louis on the third morning, in Chicago on the fourth, and in New York on the sixth."

The solid trains of vegetables actually have the right of way over some passenger trains, which must wait on sidings while the freights go thundering by.



Photograph by H. Anthony Stewart

EDINBURG'S SCIENCE BUILDING IS A FAR CRY FROM THE  
"LITTLE RED SCHOOLHOUSE."

This consolidated county school with its commodious campus, numerous well-designed buildings, and up-to-date equipment, might be mistaken for a State educational institution. Under its roofs study 4,000 pupils from kindergarten to second year of junior college. Some are rural commuters who must travel an hour or more by bus, covering 30 miles between their homes and classrooms.

Clearing land in the Rio Grande Delta, and thereby transmuting virtually worthless wilderness areas into valuable farms on which citrus fruits and vegetables can be grown, has been a slow and expensive process. Since a little after the turn of the century, about 450,000 acres have been cleared.

The job, performed laboriously by hand by cheap Mexican labor, is estimated to have cost more than \$9,000,000, and between 50,000 and 100,000 acres of good

irrigable land still remain to be cleared.

MACHINE-AGE  
LAND CLEARING

Within the last year and a half the Machine Age has caught up with the land-clearing problem down here (page 55). As a result, the jungle growths are being ripped off ten to twenty times as rapidly as heretofore and at probably a third the cost.

I had heard of the lumbering, mechanical juggernauts, driven by powerful Diesel engines, that are revolutionizing the clearing of "the brush," and was eager to see one at work. A newly made friend, it turned out, owned one of the machines and offered to drive me out to see it in operation.

My friend is one of scores of men in the Rio Grande Delta who farm in the grand manner. As we drove along between palm-bordered grapefruit and orange orchards one balmy February day, he spoke of the 5,600 acres of land that he and his little group of

associates were clearing and getting ready for cultivation as casually as an Iowa farmer might speak of plowing the "northwest forty."

We turned off on a minor road and soon were within sound and sight of crashing trees. Before long, the juggernaut itself was opposite us. When it approached a sizable tree, the operator would raise his "pusher" and strike the trunk about a yard above the ground. The biggest trees



THIS "OLD-TIMER" ONCE CONNECTED BROWNSVILLE WITH THE SEA.

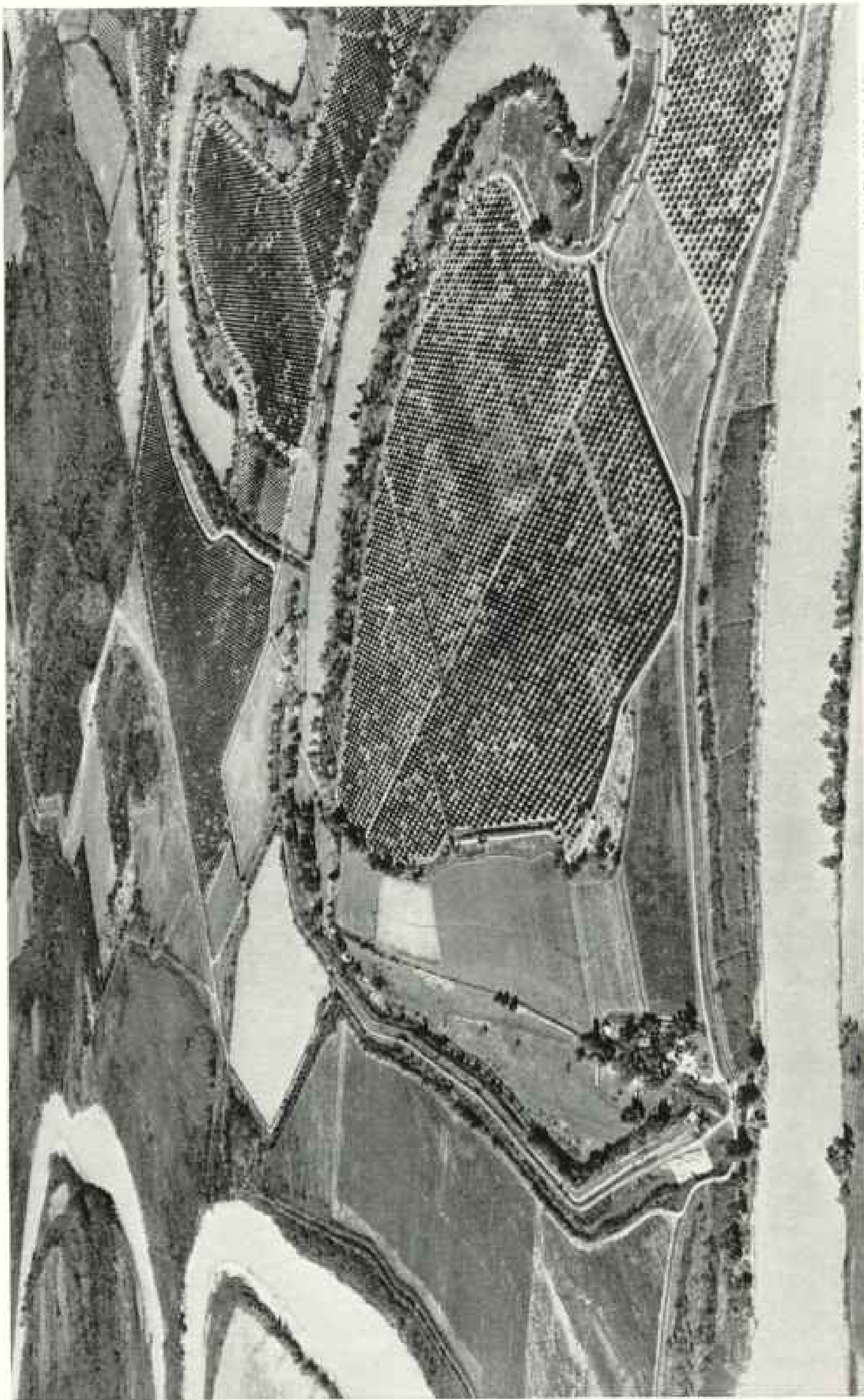
For many years the little locomotive hauled supplies brought by ships to Point Isabel, over 27 miles of narrow-gauge line laid down in 1871. It was retired from service in 1924 and has since been in a park at Brownsville. Light-draft, stern-wheel steamboats plied the Rio Grande in competition with the railway. An anchor from one of these old vessels is also preserved in the park (left).



Photographs by B. Anthony Stewart

USING "POWDER PUFFS," MEN DUST TENDER CABBAGE PLANTS.

Muslin bags filled with a finely ground insecticide are given a jolt over each plant. This sends the dust directly among the top leaves where the young head is forming and kills looper worms.



Photograph by Fairchild Aerial Surveys

**THE OWNER OF THIS GROVE COULD TOSS AN ORANGE OR A GRAPEFRUIT INTO MEXICO ACROSS THE RIO GRANDE (LOWER)**

This citrus orchard in the Progreso district, south of Weslaco, is one of the few that extend to the river's bank. Usually a wide strip of land along the stream is left to natural growth or to open fields because of the danger of overflow. Here the improved area is protected by high levees. In the left foreground at the water's edge is a powerful pumping station which lifts water to the irrigation canals. The crescent lakes are sections of former river beds cut off by floods.



Photograph by B. Anthony Stewart

IRRIGATION MAGIC PRODUCED THIS TREE OF LUSCIOUS GOLDEN SPHERES THRIVING WHERE BRAMBLES RULED BEFORE

Best known of Valley products is the grapefruit, so called because the fruits often hang in clusters like bunches of grapes. The annual crop now is more than eleven million boxes—enough to serve the traditional half of a grapefruit to every inhabitant of the United States for ten breakfasts.



SCIENCE, "GILDS THE ORANGE BLOSSOM"

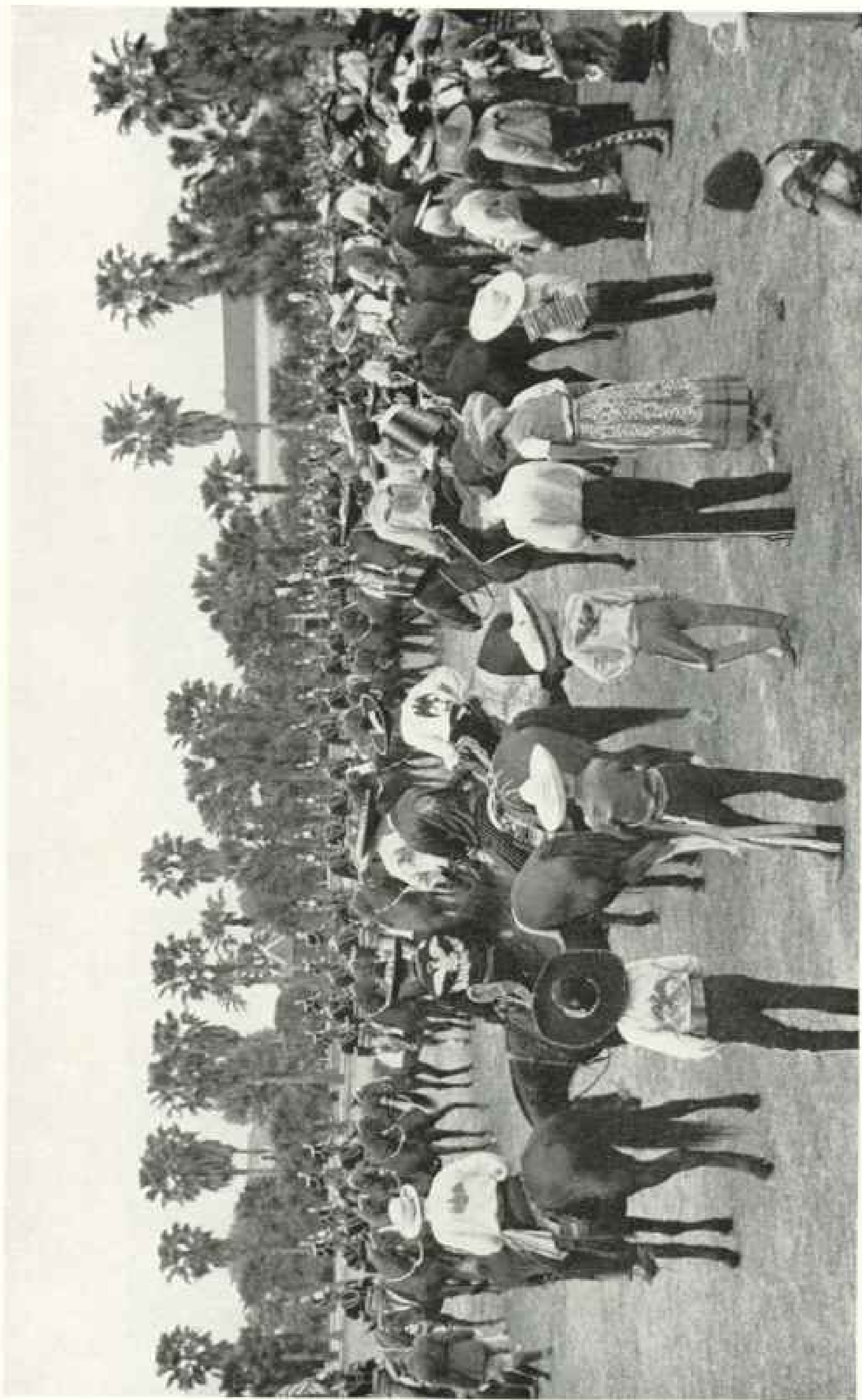
Texas Agricultural Experiment Station near Weslaco has introduced and developed citrus and other fruits for the Delta. Having brushed on to the blossoms of the Chamouti orange tree pollen from other varieties, W. H. Friend, superintendent of the station, is "bagging" them for protection. An immigrant from Palestine, the Chamouti fruit is the standard of perfection, but it must be "blended" with other types to bear prolifically here.



Photographs by B. Anthony Stewart

A BALCONY SEAT AT THE RODEO

Both mounted sight-seers and knothole peekers are watching an exhibition staged as a part of the midwinter "Charro Days" festival at Brownsville. The performers and their four-footed assistants were imported, for with the development of fruit growing and vegetable farming the Delta ceased to be a "cow country." Just outside the irrigated region cattle raising, with its large ranches is still the number one industry.

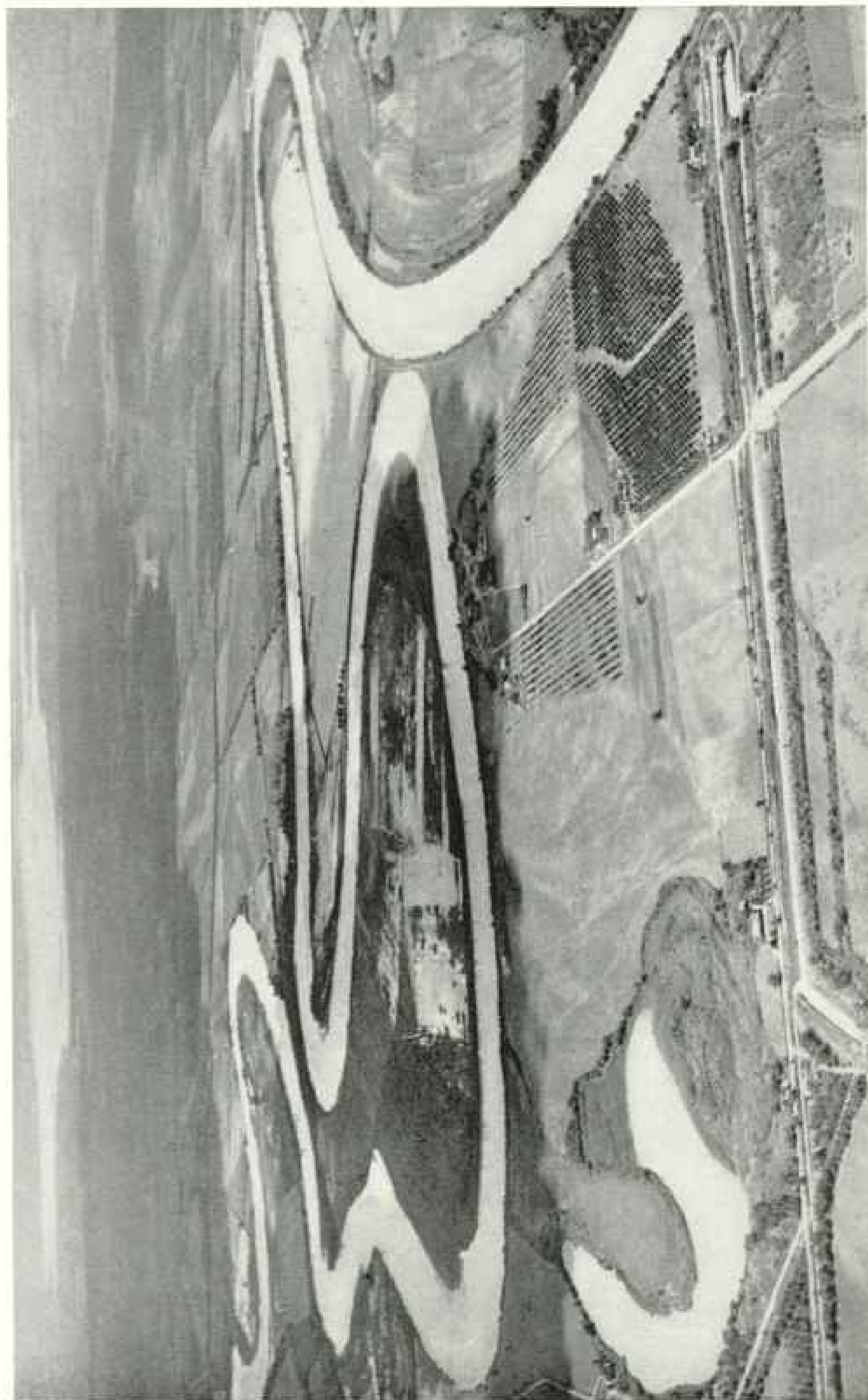


Photograph by B. Anthony Stewart

12TH U. S. CAVALRY DRESSED IN UNIFORMS OF THE MEXICAN WAR ERA PARADE AT THE FORT THAT TAYLOR FOUNDED

Two companies of the famous Second Dragoon Regiment, whose uniform these troopers wear, were stationed at Fort Brown, Brownsville, in 1848 (page 86). Watching the soldiers of Brownsville attired as Chirres (Plates II, IV, VI, XII, XVI, XVII, and pages 62, 78). This costume, a favorite one with Mexican men, had its origin on haciendas or ranches of colonial times. Tight-legged trousers were fitting attire for the saddle, like the jodhpurs of today. Broad-brimmed hats protected wearers from a near-tropical sun.





Photograph by Charles F. Hallbrook

**A WILLFUL RIVER, NOT MARCHING ARMIES, CONSTANTLY CHANGES THE INTERNATIONAL BOUNDARY HERE**

Before settlers came in large numbers, the Rio Grande, wriggling like a restless serpent, changed its course with every flood. Now engineers of the American Section of the International Boundary Commission have the United States bank well defined by levees, while Mexican engineers have similarly outlined their side. Minor changes still occur. This air photograph, made during a flood in October, 1938, shows United States territory in the foreground, Mexican beyond the river. It also indicates how close the river came to taking a short cut through the narrow levee (right) and presenting to Mexico the land inside the loop.



Photograph by Fairchild Aerial Survey

**BROWNSVILLE IS NEVER ON GUARD AGAINST ITS "OLD MAN RIVER," WHICH NUDGES A WET ELBOW INTO ITS RIBS**

Like New Orleans, Brownsville lives behind leveers. Evidence of past wanderings of the Rio Grande is the bend (right), long ago cut off by a flood from the main stream. For nearly a century it has served as a lake for Fort Brown, Uncle Sam's southernmost mainland army post, surrounding a parade ground. The peninsula in the immediate foreground is a bit of Mexico. Leading from it to the United States is one of two international bridges here.



Photograph by Luis Mardim

**BELIEVE IT OR NOT, THEY ARE SHRIMPS—NOT BABY LOBSTERS!**

Each large enough to be served as a cocktail, these jumbo shrimps were taken from the shallow waters of the Gulf of Mexico. A fleet of a score or more shrimping boats operates from Port Isabel, where the catch is iced and sent to inland dinner tables.

stopped the machine, but only for a moment. The first collision would push the tree over slightly. Then the tractor would back off and lunge again.

After two or three encounters the tree would crash to the ground, the roots toward the machine would be pulled upward, and the big blade forming the machine's front would nose under and either pull loose the other roots or shear them off. All the uprooted plants slid off the prow and into windrows, leaving a cleared swath 12 feet wide.

A little farther on we saw the second operation in this Machine-Age clearing of land. It is "hay-making" such as the Titans might have practiced. After the windrows

of brush and trees have dried for several days, they are pushed into piles as high as two-story houses by another tractor, on the front of which is mounted a rake whose teeth are 6-foot lengths of railway rails. The piles of dried brush are then burned.

This country, which has sprung from rough brush to tidy orchards, huge, neatly cultivated vegetable fields, and busy canning factories in three decades, could not have made its remarkable progress but for millions of dollars of capital poured in from outside. Here again the sailing has not always been easy.

At times it must have seemed to harassed taxpayers and bondholders that the Val-

ley's public and semipublic financial structure was as tangled a jungle as the brush that once covered all its fertile soil. Inexperienced private irrigation companies went bankrupt and were replaced by municipal irrigation districts. Practically all of these districts, in turn, fell into difficulties.

In recent years Government loans have made possible the refunding of their bonds for longer periods and at lower interest rates, thus easing the financial pressure. But, inevitably, thousands of bondholders have suffered losses.

At the same time the two counties which cover most of the developed portion of the Rio Grande Delta, or their road and school districts, put out large bond issues; and when the depression of the early thirties came, these, too, went into default. Negotiations in progress for several years have scaled down some of these bonds, and have reduced interest rates in other cases.

#### "CLIMATE FOR SALE"

Much of the counties' bond money was put into physical improvements: bridges, hundreds of miles of hard-surfaced roads, and exceptionally fine school buildings. Chief solace during the years of financial difficulties has been the thought that the region has obtained in a decade physical improvements that normally would not have come in less than a third of a century (page 74).

Tens of thousands of visitors come to the Lower Rio Grande Valley in search of sunshine and warmth in fall and winter and spring, but so far the travel stream does not flow here in anything like the volume in which it pours to Florida and California. This is one of the last regions of the country to have semitropical climate for sale to vacationists; and its people, busy growing and marketing fruits and vegetables, have not yet thoroughly mastered the technique of climate selling. They have yet to build large resort hotels with golf links and swimming pools, tennis courts, and stables of saddle horses.

There is boating at the eastern end of the Delta in an island-protected lagoon and in the Gulf of Mexico itself. Fish abound in all of the waters of the Delta country, in rivers, lakes, resacas (former river courses), canals, lagunas, and the Gulf.

There are excellent sun-bathed beaches 20 miles east of Brownsville with water of a comfortable temperature the year round;

but adequate bath- and clubhouses and hotels and life guards are missing.

A considerable proportion of the people who have built up the population of the Valley in the last 30 years have bought orchard plots, large and small, and have retired from other business activities to live on their land or in towns near by. I talked with orchard owners who were formerly judges, architects, barbers, physicians, auctioneers, lecturers, bond salesmen, farmers, concert singers, army officers, merchants, mechanics, and preachers. A former lumberman, who owns some of the finest citrus trees in the Valley, told me smilingly of the complete reversal in his way of life.

"I spent 30 years cutting trees down," he said, "and now I get the keenest pleasure from growing them."

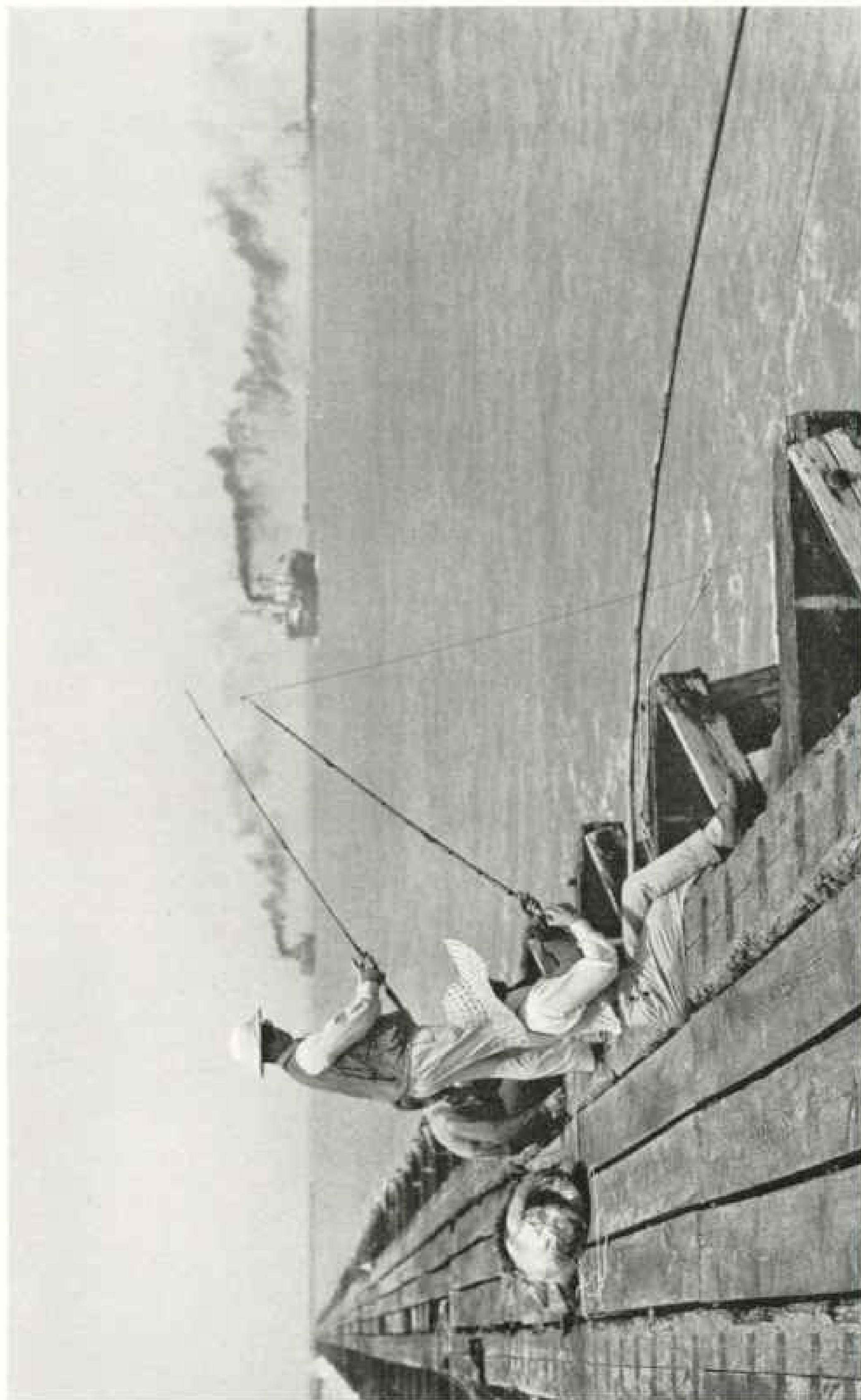
One newcomer is a former oil driller who struck it rich and has bought a thousand acres of bearing citrus trees and several hundred acres of land on which he grows vegetables. On a spur railroad recently extended to his land he has built a fruit-packing station of his own, and adjoining it has started an entirely new Valley industry—the extraction and canning of carrot juice and other vegetable juices.

#### ZACHARY TAYLOR GAVE BROWNSVILLE ITS START

When I wanted to learn something of early days in the Rio Grande Delta, I went naturally to Brownsville, patriarch of its communities (page 81). The town is a little less than a century old; but in a region in which every other work of man is obviously new, a hundred years is a long time. The community had its start when Zachary Taylor, in command of American soldiers, came down in 1846 to fight the United States-Mexican War, and established his camp on the bank of the Rio Grande.

Although 20 miles inland, Brownsville really owes its birth and early development to the sea as truly as if the Gulf of Mexico's warm waves beat on its shore. Transportation through the brush-covered hinterland was almost impossible. Taylor brought all supplies for his fort and for his Mexican campaign by ship through Brazos Santiago Pass, one of the few openings in the chain of sand islands that fringe the Texas coast.

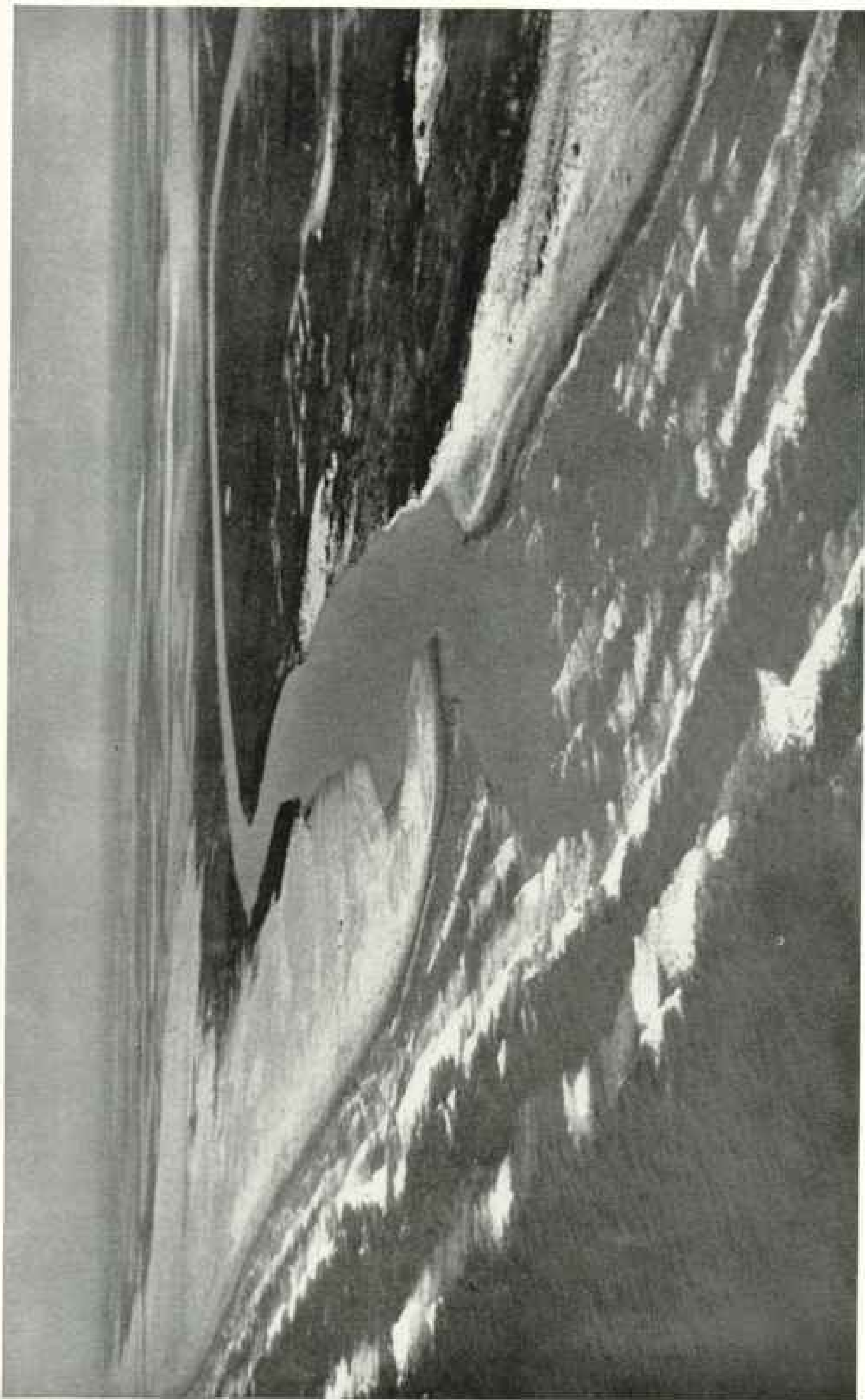
From the pass the ships sailed across Laguna Madre to the relatively high ground at Point Isabel (now Port Isabel) on the mainland, eight or ten miles up the coast



Photograph by Lala Marden

**JETTY ANGLING IN LAGUNA MADRE HAS MANY OF THE THRILLS OF DEEP SEA FISHING WITHOUT THE SEASICKNESS.**

Behind the fishermen is a 450-pound jewfish which they have just landed (page 86). In the protected salt waters are caught "trout" (weakfish), redfish, flounder, and red snapper. This long breakwater and the one in the distance (upper right) outline the dredged channel leading from the Gulf, across the Laguna to Port Isabel, and by way of a ship canal to Brownsville. The latter city's harbor is gouged from the flat prairie.



Photograph by Luis Marden

**AVIATORS SOARING ABOVE THE RIO GRANDE'S MOUTH SEE THE MUDDY WATERS FLOWING FAR OUT INTO THE BLUE GULF**

For hundreds of centuries the stream has been tearing away soil from the Rocky Mountain region. Such material, ground into silt, has created the orchard-and-field-covered Delta and is constantly adding to these mud flats and sand spits. Lines of breakers disclose the shallows in the Gulf of Mexico where the river is pushing the coast line seaward. In the last half of the 19th century light-draft, stern-wheel steamboats plied the 60 miles of looping river between the Gulf and Brownsville. During the War Between the States scores of foreign ships anchored near here in Mexican waters (left) to take on cotton ferried across the river from the Confederacy.



Photograph by Luis Marden

## A BIG ONE THAT DIDN'T GET AWAY!

Fishermen on the Laguna Madre jetty hooked the Jewfish, a member of the sea bass family (page 84). The beamy monster is not much of a fighter, yet it makes an exciting catch for novices who like poundage. Outside the barrier islands, in the Gulf of Mexico, tarpon, sailfish, kingfish, mackerel, and jackfish are hooked. In August each year anglers gather from all parts of the United States to take part in the Delta's "fishing rodeo."

from the mouth of the Rio Grande. At first goods were hauled overland from Point Isabel to Fort Brown; but later, when Taylor had captured Matamoros, shallow-draft stern-wheel steamboats brought supplies up the river from ocean-going ships anchored either at Point Isabel or at Brazos Santiago.

Although water traffic to the mouth of the Rio Grande was always badly hampered by sand bars, Brownsville continued to make use of this international outlet to the sea for nearly sixty years.

## BOUNDARY ALMOST IGNORED

After the end of the War between the States, Brownsville settled down as a port of entry, by way of sea and river, for the materials which a developing portion of northern Mexico demanded. But in 1882 a railroad between Corpus Christi, on the Texas coast, and Laredo, on the Rio Grande, nearly 200 miles up the river from Browns-

ville, short-circuited Brownsville's trade.

Ships seldom put in at Brazos Santiago or Point Isabel. The Delta region was effectively cut off from the rest of the United States, and existed for the next two decades almost like a separate little republic buried in the brush.

Closest contacts were with Mexico. People moved back and forth across the river with freedom and gave slight consideration to customs and immigration restrictions. Porfirio Diaz ruled Mexico then, and his "Rurales" (mounted Federal police) kept complete order along the border.

A friend who grew up on a plantation on the bank of the Rio Grande told me how, in those days, her mother would send Pablo or Juan in a rowboat to the opposite shore to borrow beans or peppers. During this period Mexican money was really the "coin of the realm" on both sides of the river. The few United States coins received in



Photograph by H. Anthony Stewart

AT THIS GROCERY "AQUARIUM" FISH "SWIM" ON A BRICK WALL

Kinds that can be caught in Gulf coastal waters a hundred feet or a few miles away are exhibited in this collection on a store front in Port Isabel, Texas. They were painted years ago, the story goes, by a peg-legged fisherman out of a job. In addition to salt-water denizens, dozens of species may be caught in the Delta's fresh waters—river, resacas, and lakes (page 83).

change were hoarded by families for payment of taxes, almost the only thing for which domestic money was needed.

This somewhat idyllic life in the Delta was ended after the fall of Diaz in 1911 and the crumbling of authority in Mexico. By 1915 raids by Mexican bandits across the border were frequent, and by the summer of 1916 President Wilson ordered practically the entire militia organization of the United States to the Mexican border, many thousands of them to the Rio Grande Delta.

After United States soldiers pursued one roving band across the river and well into Mexican territory, Mexican officials put a stop to the raids. Today, with much of the brush country on the United States side replaced by fields and orchards, with a network of modern highways and a heavy population, and with a constant patrol of the border, a repetition of the raids of thirty years ago is practically impossible.

The picturesque river traffic on the lower

Rio Grande, ailing for many years, received its death blow in 1904 when rails came to connect the Delta with the rest of the United States. The old contacts with the sea were all but severed; only a trickle of goods continued to come in by way of Point Isabel. But with the development of the last three decades, and with a growing freight bill, Brownsville has turned again to the sea.

This time, like Houston, 300 miles up the Texas coast, Brownsville has brought the sea to her door by means of a ship canal. A deep, straight channel has been dredged from the Gulf of Mexico at Brazos Santiago for 17 miles across the laguna, tidal flats, and coastal plain to a 30-acre turning basin and port 5 miles from the city.

Into this port, gouged from a prairie, come large ocean freighters flying the flags of a dozen nations, as well as American coastal ships, to load up with cotton, canned goods, cattle feed, fruit, and vegetables from the Valley, and with miscel-



laneous products from northern Mexico.

Brownsville's most unusual industry is the animal farm of "Snake King" at the edge of town. "King" has probably the greatest hoard of crystallized rattlesnake venom in existence—nearly twenty pounds of it, packed in glass jars.

Saucers of the fresh venom look like honey. It is allowed to dry in the air of a screened room, and after a day or so it thickens and "checks," finally appearing like grains of hardened glue or fragments of resin. Small quantities of the crystallized venom are sent to laboratories in various parts of the world where research work in the production of antivenins is carried on.

Brownsville has a virtual monopoly of the few historic structures in the Delta, including two churches built in 1854, and the house in which Porfirio Diaz lived in 1876 and in which he made plans for the crossing into Mexico which led to his long rule as president. At Point Isabel is a lighthouse built in 1853.

#### "HIGHWAY CITY" IN THE MAKING

In contrast, the dozen or more little cities that have sprung up along the railroad and the highway that split the American portion of the Delta are almost glaringly new. Not a house or store building existed in any of these towns before the laying of rails in 1904; now each of them shelters from 5,000 to 15,000 people.

Flying up the Delta over the large and small clumps of buildings that make up these towns, I was struck by their closeness. My plane would barely leave the outskirts of one before it was over another. Steadily these communities have been growing toward one another in recent years, and they seem destined to form virtually one "highway city" more than fifty miles long.

The Delta's new towns—San Benito, Harlingen, Weslaco, McAllen, Mission, and a dozen others—testify eloquently that the country's economics is based chiefly on agriculture and horticulture. In each, grouped near the railway tracks, are fruit and vegetable packing plants, canning factories, cotton gins, and in some cases cottonseed-oil mills. And running through or near each town is a main-line canal carrying the region's lifeblood: muddy, silt-laden irrigation water from the Rio Grande.

If you linger in the Rio Grande Delta, you will begin to wonder about the Indians who were the original human inhabitants

of the area. Little is known about them, for there are no caves, convenient catchalls for the anthropologist, in the fine silt. But remnants of objects used many centuries ago, which throw some light on the region's "first families," have been found in a few graves and along the wind- and tide-washed mud flats of the coast.

Those who try to piece together a picture of conditions here before the coming of Europeans believe that the fruit of the prickly pear, in its season, was almost the only vegetable food available to the local Indians. Shell arrowheads show that small game, such as the rabbit, was hunted. But the Indians could not have been well fed and they could not have found the Delta a satisfactory place for permanent homes, because the surface of the ground, away from the Rio Grande, is without running streams and springs of fresh water.

This picture of a jungle, often arid, and all but unpeopled, is sure to set you musing on the revolutionary changes and amazing contrasts that a few years and a few of man's devices have brought to this patch of the earth's surface.

Such thoughts came as I flew over the Delta country shortly before the end of my visit. I looked down upon hundreds of thousands of glossy green citrus trees extending in ordered rows to the horizon, and upon green rectangles where the earth is yielding countless tons of food, month in and month out.

And here, three and four—perhaps ten—centuries ago men eked out a miserable existence because of the scarcity of food!

None of the fundamentals have changed in this region since those days. There is the same soil, built by the annual floods of millenniums; there is the same warm, semi-tropic sun.

What has brought the astounding transformation?

Dollars, saved elsewhere, and men with vision to spend them for the things that Nature did not furnish: parallel tracks of shiny steel that lead to other lands; pumping plants set on the river's brink; and channels through which the greatest lack of all, water, flows to thirsty plants.

Paradoxically, the bone-dry Delta in which a handful of primitive men thirsted and hungered, watered now, supports its population of 200,000, and ships out besides an important fraction of a nation's food.

RIO GRANDE CORNUCOPIA UNDER A WINTER SUN



© National Geographic Society

Dufaycolor Photograph by R. Anthony Stewart

PAPAYA AND BOUGAINVILLEA ARE TROPIC IMMIGRANTS IN THE TEXAS "MELTING POT"

Plants native to the Rio Grande Delta can survive with little rainfall, but under irrigation the region has welcomed many foreign varieties. Tall papaya trees, with their melonlike fruits, were at home in Mexico, and the handsome bougainvillea vine comes from South America. Plant immigrants of economic value are oranges from Brazil, Palestine, and California; grapefruit from the West Indies and Florida; vegetables from the north; and tropical fruits from the south.



Photographer Photograph by B. Anthony Stewart

© National Geographic Society  
"ASSEMBLY LINE" OF A HUGE FOOD FACTORY—VEGETABLES GREET A FEBRUARY SUN IN SOUTHWEST TEXAS

When snow flies throughout most of the United States, alluvial soil, irrigation water, and warm sunshine in the Rio Grande Delta keep vast fields of vegetables flourishing. Trucks are busy hauling hundreds of tons of carrots (foreground), beets, broccoli, cabbage, spinach, turnips, and salad plants to shipping centers. They are washed (Plate XIII), packed in shaved ice, loaded into refrigerator cars, and sent rattling to northern cities.



© National Geographic Society

**LAST YEAR'S FRUIT LINGERS AS A NEW CROP IS BORN**

This single tree bearing both ripe oranges and blossoms was photographed in February near Brownsville. Passenger trains often must wait on sidings while fruit and vegetable specials rush to northern markets.



Kodachrome Photographs by B. Anthony Stewart

**GRAPEFRUIT IS THE DELTA'S "FIRST FRUIT"**

Because soil and climate of the lower Rio Grande Valley are especially well suited to grapefruit, trees have been planted by the millions. In a normal year 24,000 carloads of the golden spheres are harvested.



Dufaycolor Photograph by B. Anthony Stewart

RIPE ORANGES MAY BE "STORED ON THE TREE" FOR MONTHS WITHOUT SPOILING. Unlike apples, citrus fruit is seldom put in cold storage. Texas produces oranges of both the Florida and the California types. Most of the trees are irrigated.



© National Geographic Society

Kodachrome Photograph by B. Anthony Stewart

ORCHARDS AND FIELDS REPLACE CATTLE, YET BROWNSVILLE STAGES A RODEO

RIO GRANDE CORNUCOPIA UNDER A WINTER SUN



Dufaycolor Photograph by D. Anthony Stewart

DEFT FINGERS TIE THOUSANDS OF BUNCHES OF DANDELION GREENS.

Surrounding these workers is growing a third of a square mile of salad plants; adjoining is a 100-acre "plot" of parsley—enough sprigs to garnish millions of lamb chops.



© National Geographic Society

Dufaycolor Photograph by D. Anthony Stewart

A SHOWER FOR THE CARROTS BEFORE THEIR LONG JOURNEY NORTHWARD.



© National Geographic Society

Kodachrome Photograph by H. Anthony Stewart

THEIR WORK IS LONG AND TEDIOUS, BUT THEY FACE IT CHEERFULLY

Most women field laborers are paid on a piecework basis; so much for each basket or each hundred bunches. More than seven thousand men and women labor as field hands in the Delta. They live in villages and are hauled to and from the fields in trucks by their employers.



© National Geographic Society

**DENIM CLOTHING CANNOT DIM THE SPARKLE OF HER SMILE**  
 Straw hats and coarse denim are worn in the fields, but the younger set blossoms out on Saturday nights in feminine finery and store clothes to visit the motion picture theaters and dance pavilions in the towns.



Kodachrome Photographs by B. Anthony Stewart

**HE IS A THUMBNAIL LESSON IN ECONOMIC GEOGRAPHY**  
 The hat was made in St. Louis of straw from the Netherlands. Indies; dungarees were woven in Texas, and the bunches are tied with Madagascar raffia. Even the beet seeds were brought from California and Washington.





© National Geographic Society

Dufaycolor Photograph by B. Anthony Stewart

MINIATURE "CHARROS" AND "CHINAS" PLAY THEIR PARTS

These youngsters help make up a "troupe" of thousands of Texans who, during fiesta week, re-enact the life of colonial Mexico, of which their State was a part (Plates II and VI). To become convincing "Charros," Brownsville business men grow beards for weeks before the festival season, then turn them into Vandykes, "mutton chops," and other styles popular a century ago.

# I KEPT HOUSE IN A JUNGLE

## The Spell of Primeval Tropics in Venezuela, Riotous With Strange Plants, Animals, and Snakes, Enthralls a Young American Woman

BY ANNE RAINEY LANGLEY

**I**N AN expanse of steaming jungle, which stretches savagely devoid of habitation to the Caribbean, Quiriquire sprawls like a large spider in the northeast of Venezuela. The small clearing in the matted tropical growth, 250 miles east of modern and sophisticated Caracas, occupies less than a square mile. Within this space is a self-sustaining colony born of the quest for oil and strangely at odds with the surrounding primitive country.

To the west, the low blue fingers of the gigantic Andes are visible—here, only 4,000 feet; but as they climb farther westward they soon reach the imposing height of 16,000 feet. To the south, a rolling savanna stretches toward the town of Maturin, capital of the State of Monagas, some 23 miles distant (map, page 100).

It is a country of sharp contrasts, where day descends into the darkness of night without any interlude of twilight.

With the people it is much the same. Wide-eyed little girls bloom into womanhood with a swiftness which ignores adolescence.

There are purple shadows where the mountains meet the sky—shadows that stand like sentinels beyond a row of square frame houses whose peaked red roofs loom up as starkly as tents in the desert. One is sharply aware of utter isolation, yet quite unlonely. For like a living breath comes the sense and the smell of the jungle. The mystery of a thousand unseen living things mingles with the scent of as many flowers, to season the air with magic.

### RED-ROOFED HOUSES ON STILTS

To this lotus land I came with my husband, an American oil company representative.

At the top of scarlet hibiscus hedges, our houses are set on 10-foot stilts, high off the ground, to combat the heat. In the space underneath, the family wash blows gaily, free of daily rains (page 102).

Native cooks and nursemaids for the American colony are seen slap-slap-slapping

down the sun-baked road in their woven sandals, minus shape or heel. Over their heads they fling a towel to escape the tropic sun; this is replaced by a black veil when they attend Sunday mass.

As servants, they are amusing, but aggravating. They work only when whim dictates, and no bribe of more money will induce dependability. When their mood rebels at work, they invariably come to the door, their arms laden with bright poinsettias, chanting a long lament, "that they are filled with sorrow to leave the good lady for the short space of a day."

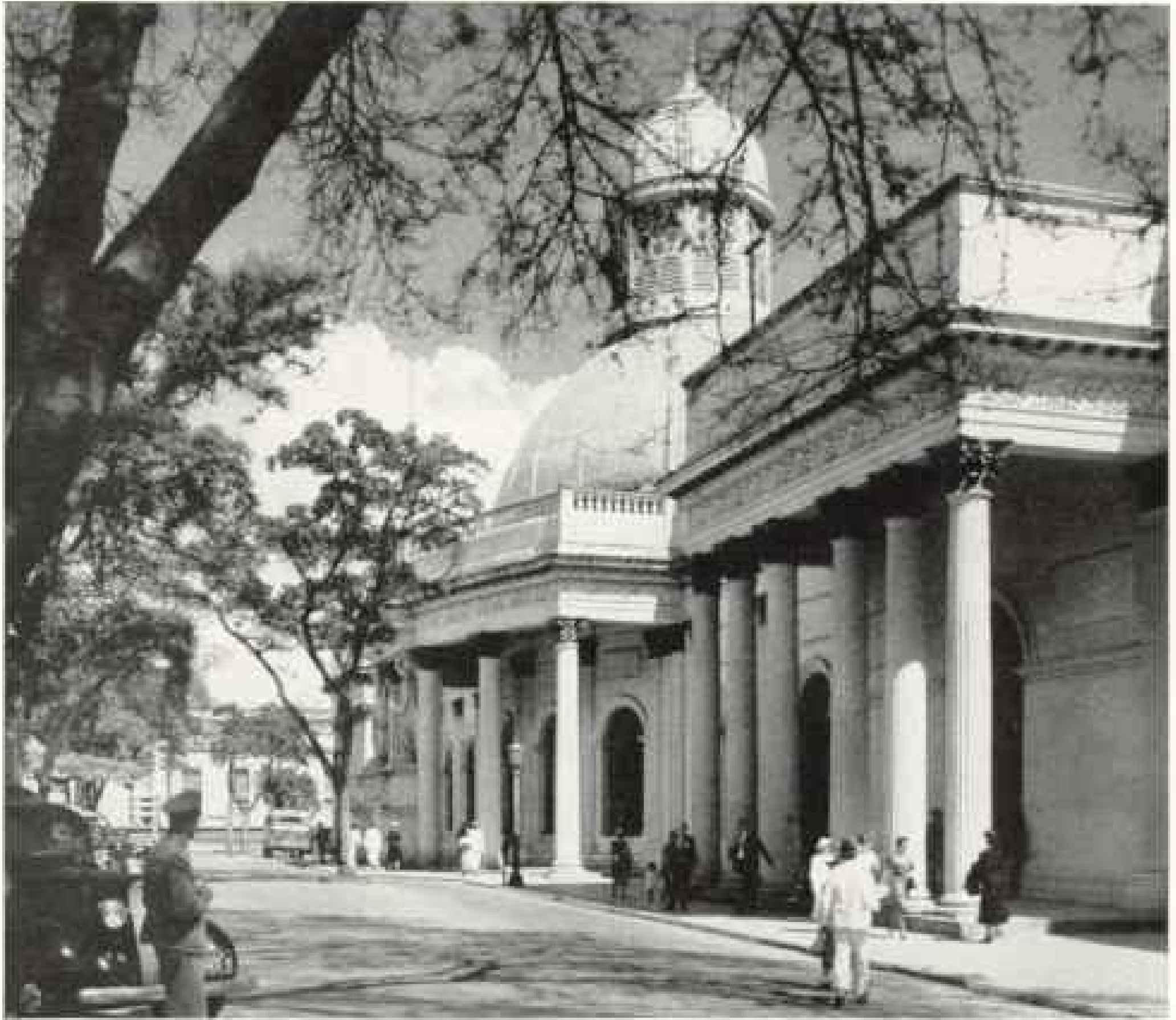
Throughout the jungle, which borders us on all sides, lies a constant crisscross of shallow rivers. Here the people of the plains take their baths. Certain hours are reserved in each area for men, and other hours for women. These hours are never violated.

### SNAKES SHARE THE SHOWER

Within the camp we have a commissary containing imported canned goods from the United States. Our own chlorinating system safeguards us against the typhoid and dysentery germs that formerly took heavy toll among Venezuelans in this section. As an additional precaution all fresh fruits, vegetables, and eggs must be washed before eating. A company power plant provides electricity and running water for the entire camp. The latest movies arrive by plane twice each week.

It is a strange sort of civilization we enjoy in the midst of this primeval jungle. For, while we escape the steaming heat in our baths, we are not immune to a snake sharing our shower. It never fails to fascinate me that my husband's shoes and our small shower room should prove such a foil for small snakes (page 107). The first time I came upon a mapanare coiled in the corner of the clothes closet, I was so faint with fright that I could only scream feebly for the cook to come and kill it, which she did with amazing nonchalance.

Now, after several years, I have learned



© Charles d'Emery

CARACAS HOLDS BRILLIANT STATE RECEPTIONS IN THE FEDERAL PALACE

Guests in gay uniforms and Parisian frocks gather on important holidays beneath the dome of the famous Salon Elíptico. Overhead a stirring fresco by a Venezuelan artist, Tovar y Tovar, recalls the Battle of Carabobo, turning point in the Nation's fight for independence under Simón Bolívar. The palace forms part of the Capitol, built around a garden court (page 131). Government offices are housed in the wing in the foreground.

to detect the slight, almost soundless rustle which precedes a snake's advance. I have learned, too, that scorpions travel in pairs; so, when one is found, we must immediately search for the other. Also, when entering a dark room and immediately turning on the light, I find my eyes riveted in a quick, complete survey of the floor. These and other anticipations become as instinctive as breathing, and nearly as important.

But above and beyond this sense of the sinister is a surface beauty so compelling that it seeps through the senses like a drug. In every varying phase of color, form, and fragrance, this same beauty overshadows the more menacing side of jungle life.

This morning, beside the fragile white orchid swaying under the eaves of my bedroom window, I saw a round black

shadow on the screen. It was a tarantula, a terrifying thing with long legs springing from a fat, furred body, and measuring about eight inches in diameter over all. The tarantula was quickly killed and forgotten. The orchid still blooms on—a significant symbol which makes the Tropics a mecca for beauty lovers the world over.

EXCITEMENT OVER AN APPLE

I had supposed, until living down here, that all excitement over an apple died out with Adam; but that was because I had never lived on canned foods for weeks, counting the days until the next boat would bring us fresh vegetables from the States.

Now, when my laundress comes running to the door, shouting: "Madame, madame, apples at the commissary!" I snatch my



Photograph courtesy Grace Line

"TODAY—CIRCUS IS IN TOWN!" SIGNS PROCLAIM

Boys parade through the streets of Caracas with posters announcing the big event. "Great reduction in prices," the placards promise for both afternoon and evening performances.

dark glasses and dash down the sun-baked road with as much fervor as I took to my first circus.

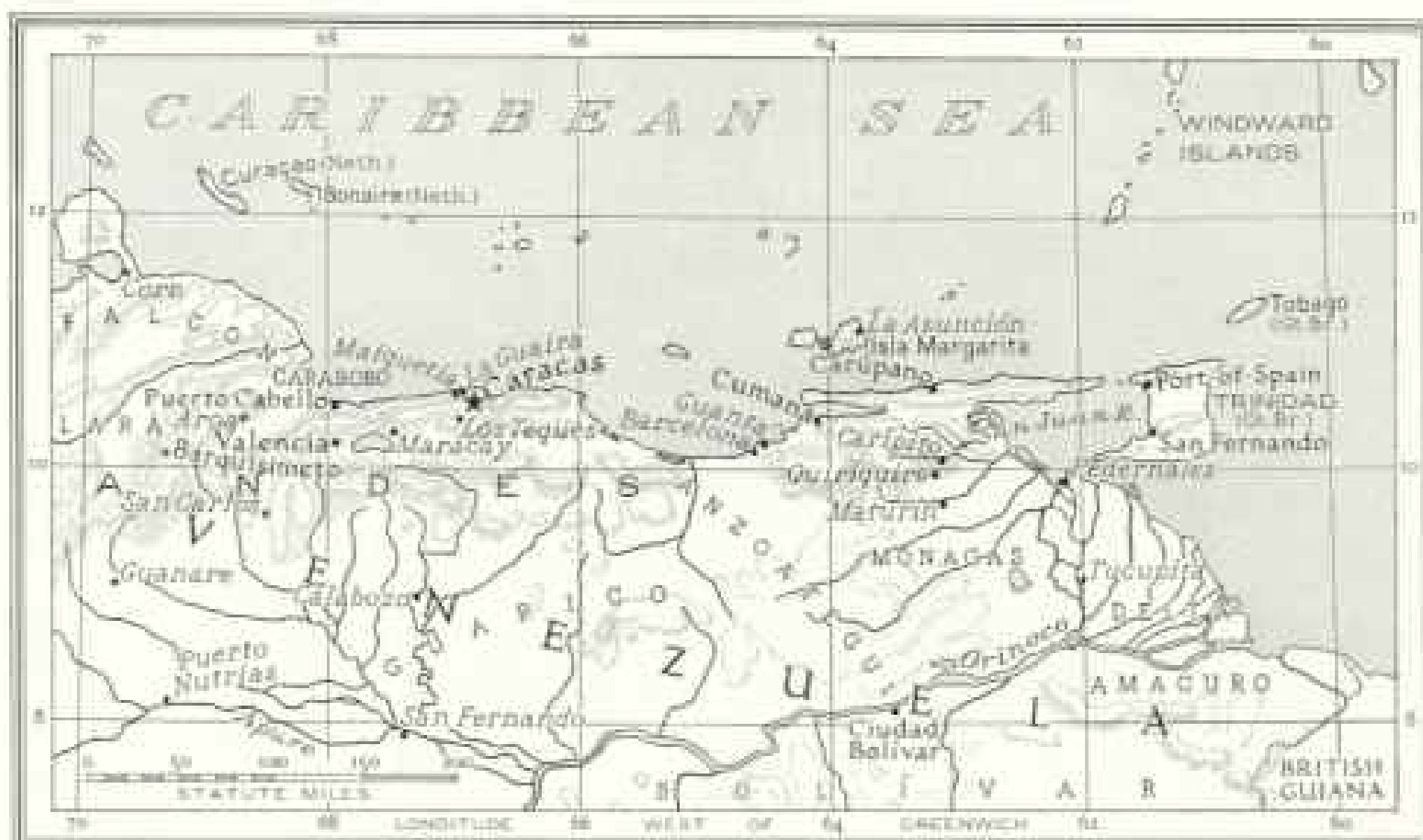
Perhaps half a dozen times a year apples are shipped down from the United States, along with celery, nuts, lettuce, and oranges—big, glowing, golden oranges which put the native fruit of that name to shame. Then, indeed, recklessness runs riot. What would be an ordinary Saturday morning marketing at home assumes the proportions of a jealously guarded gold mine. Incidentally, the transaction also involves plenty of gold. Such delicacies must be eked out for weeks.

GIFTS FROM THE JUNGLE

So, if at any time you should happen to call on a woman in eastern Venezuela and she offers you an apple, be assured you have made a favorable impression.

On the other hand, we have constant gifts from the jungle, which at home are rather rare treats. Heart of palm, for example, grows in the tops of tall, naked trees. The exterior looks like sugar cane. When the outer bark is removed, the tender white stalks make a tempting salad; they provide keen competition for the ever-growing avocado, which peons gather from the forest for one and a half cents each.

Papayas, plentiful as palms, play a proud part in forming the foliage around our house. If eaten at the psychological moment of ripening, these melons add zest to the breakfast hour. Papaya trees must be planted in pairs; without the pollen from the male tree, the female bears no fruit. Mangoes, too, grow profusely throughout the forest; likewise *plátanos* (plantains), the great oversized bananas which are eaten daily by the peon class.



Drawn by Ralph E. McAloer

SPANISH EXPLORERS CALLED THIS CARIBBEAN DIADEM "VENEZUELA"—LITTLE VENICE

Lake dwellings of the Indians reminded them of the old European city of gondolas and canals. Visitors today find little similarity. Modern cities, paved roads, and thriving industries dot the country, yet in the tropical forests primitive life goes on. Deep in the jungle, the author and her husband lived at Quiriquire, a small colony of United States oil representatives. Streams are infested with caymans, snakes abound in water and on land, but above, in the trees, coconuts grow and wild orchids bloom in profusion.

For the rest, the native produce is disappointing. The potato is about the size of a large lime. Lettuce is an inferior type of the leaf variety, better for decorative purposes than for eating. Oranges, as stated, are small, green, and sour. Fresh vegetables, such as peas and string beans, are obtainable only on incoming boats.

#### BEANS TO CHALLENGE BOSTON

But the beans! Here, indeed, is the Venezuelan staff of life. Red beans, black beans, and white beans come in scores of various flavors and sizes. When soaked overnight and baked for five hours with bacon and jalapeños, a Mexican pepper, the round red beans make a delicious dish. I could really wax eloquent on the subject of beans.

The people of Venezuela reflect the gaiety that is so integral a part of their country. They have the happy hearts of children and a love of life which has proved itself unquenchable.

Along the river's edge the laundresses laugh and sing together as they beat their bright-colored clothes upon the flat stones (page 130). Naked brown babies are merry children of chance, who have no dread of

tomorrow as they eat their breadfruit and bananas. And why not! For have they not a hammock which swings them to sleep like a lullaby, a roof of moriche palm, and the fragrance of starflowers to woo them into dreamland?

The tavern is peopled with pink-shirted peons who shout in abandon as they place their bets on the fighting cocks. From the *tiple*, a stringed instrument resembling a ukulele, the strains of *La Cucaracha* spice the soft summer air.

#### HOSPITALITY OF PLAINS DWELLERS

The plains dwellers never cease to be a source of wonder and delight to me. Their hospitality exceeds anything I have encountered. They are, in a material sense, incredibly poor. They live in one-room mud huts with thatched roof, whose sole furnishing is the hammock in which they sleep. They have never seen a stove, nor even heard about bread and butter. They cook by means of a crude charcoal arrangement in an old iron pot which is upheld by stones. Rice, plátanos, breadfruit, and *casabe* (cassava) form their daily fare.

They have no clothes, except the garment they happen to be wearing at the mo-



Photograph by William Langley

THE AUTHOR MEETS WAYFARERS PREPARED FOR SUDDEN RAINS

As Mrs. Langley poses with the travelers, they keep hood and umbrella ready for action. Caught in a sudden heavy shower, they will be utterly nonchalant. The wet season extends from April to October, but downpours are frequent throughout the dry period.

ment. But they will not let you pass their home without running into the path with some gift. Perhaps it is a bunch of lady-fingers, bananas about three inches long, of a mouth-watering sweetness. It may be a cluster of creamy gardenias which grow luxuriantly in the plains, or again it may be only a great white disk of cassava, the Venezuelan substitute for bread (page 111). Whatever their offering, the spirit which prompts it comes from a friendly heart.

One morning, while riding through the forest, we came upon a scene which caused even my horse to slacken his pace. In a cool grove of tall trees and tangled lianas stood a small thatched hut. Beyond the grove a giant tree sliced the sky, naked save for

the most exquisite orchid plant I have ever seen. There it hung, like a rare jewel, with six or seven enormous white blooms. The sun spilled a thousand splinters of bright white light over the little bamboo hut.

Myriad gleams flirted from the bold brilliance of bougainvillea bushes to the green mango trees which framed the doorway. From a crude charcoal stove the scent of cooking mingled with the heady fragrance of gardenias. The place presented such an inviting air that we were tempted to stop and rest our horses.

No sooner had we dismounted, some twenty feet from the house, than a brown-skinned, calico-clad native woman came running to greet us.



Photograph from Mrs. W. C. Langley

**"AIR-CONDITIONING" IN QUIRIQUIRE MEANS 10-FOOT CONCRETE STILTS**

The author's red-roofed brick home is cooler and drier in this elevated position than it would be if built on the ground. The "open-air basement" serves a useful purpose—washing dangles gaily there, protected from the daily rains (page 97). Just before a downpour, the author writes, "We are warned by a whispering that blows across the jungle. By the time we have raced through the house to let down the shutters, all the clouds in the heavens have burst their burden."



Photograph by Carlos Ordóñez

**LARGEST OF THE BOAS, THE ANACONDA DWELLS IN SWAMPS AND RIVERS**

This 22-foot specimen, killed while stealing into the Caripito commissary, is of medium size. Anacondas usually submerge in streams to await animals which come to drink. Like lightning they coil around the prey and crush it. The tough skin is iridescent dark green, with round black spots. Smaller snakes are frequent intruders in Quiriquire homes. Whenever the author entered a room, her first act was to glance hastily about in search of poisonous visitors.



Photograph by William Sumner

#### QUIRIQUIRE BUILDERS ERECT A COOL HOME OF WATTLE AND DAUB

No nails or tools of any sort are required. Nearly all these comfortable dwellings have earthen floors. Sometimes the buildings are whitewashed. Such a mud home rises quickly when rains are frequent.

When we had returned her greeting and begged permission to rest, her enthusiasm was flattering. While she tied our horses, she explained that they were making cassava bread, that they had steaming coffee, and, as an additional incentive, there was a new baby!

#### THE MAKING OF CASSAVA BREAD

Now, the making of cassava bread had long intrigued me. I had watched it being made in a mill, where all the crude implements were handwork of the miller himself.

But at last we were to see actually practiced at home one of the oldest and most primitive of Venezuelan customs. Inside the hut we found only one large room; each corner held a hammock; and above one of the larger ones, bunk fashion, hung the tiniest hammock I had ever seen. Obviously, the new baby!

Asking if I might look, I pulled back the mosquito netting and was amazed to find a whimpering red baby, as new as the day!

"Where is the mother?" asked my friend.

"Graciella, come here and speak with the ladies." The woman beckoned her daughter, who was vigorously peeling the yuca root which was to supply the meal for cassava.

"Yes, yes, madame," she murmured, "only this morning, with the sun, came the little one."

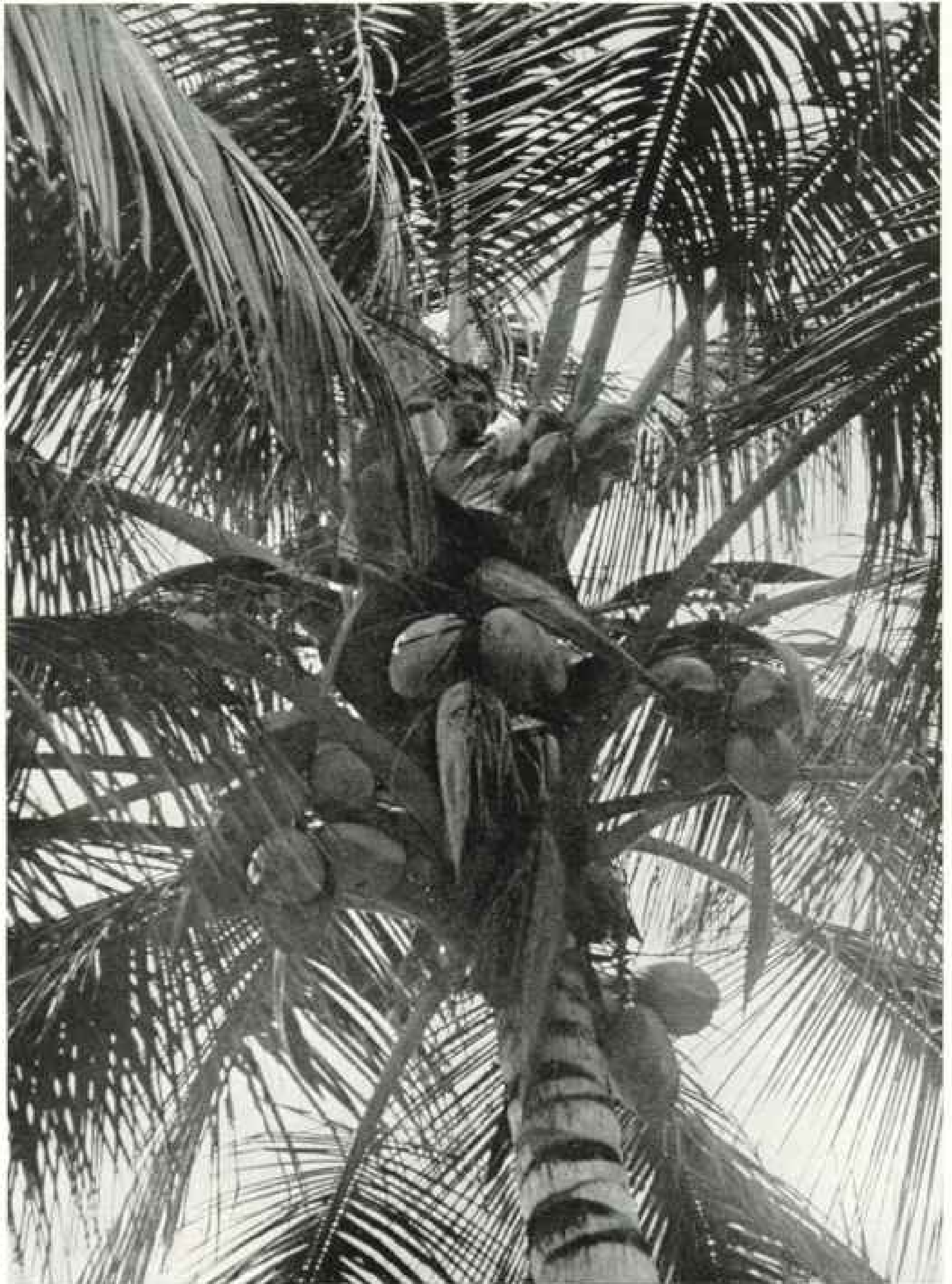
"But you!" I protested. "Shouldn't you be resting in the hammock?"

The mother's smile held a hint of condescension, as she proudly replied, "Ah, you Americans, in truth you must lie abed with much pain, and have the doctor. But not my Graciella. For her the making of a baby is so simple as to make bread."

And so it seemed, to our speechless admiration!

On an old piece of tin, through which holes had been punched, Graciella grated the yuca. When this was finished, the pulp was put into a long woven fiber cone, pulled lengthwise to squeeze out the juice (pages 105, 109). During this process two little naked children ran about waving long sticks

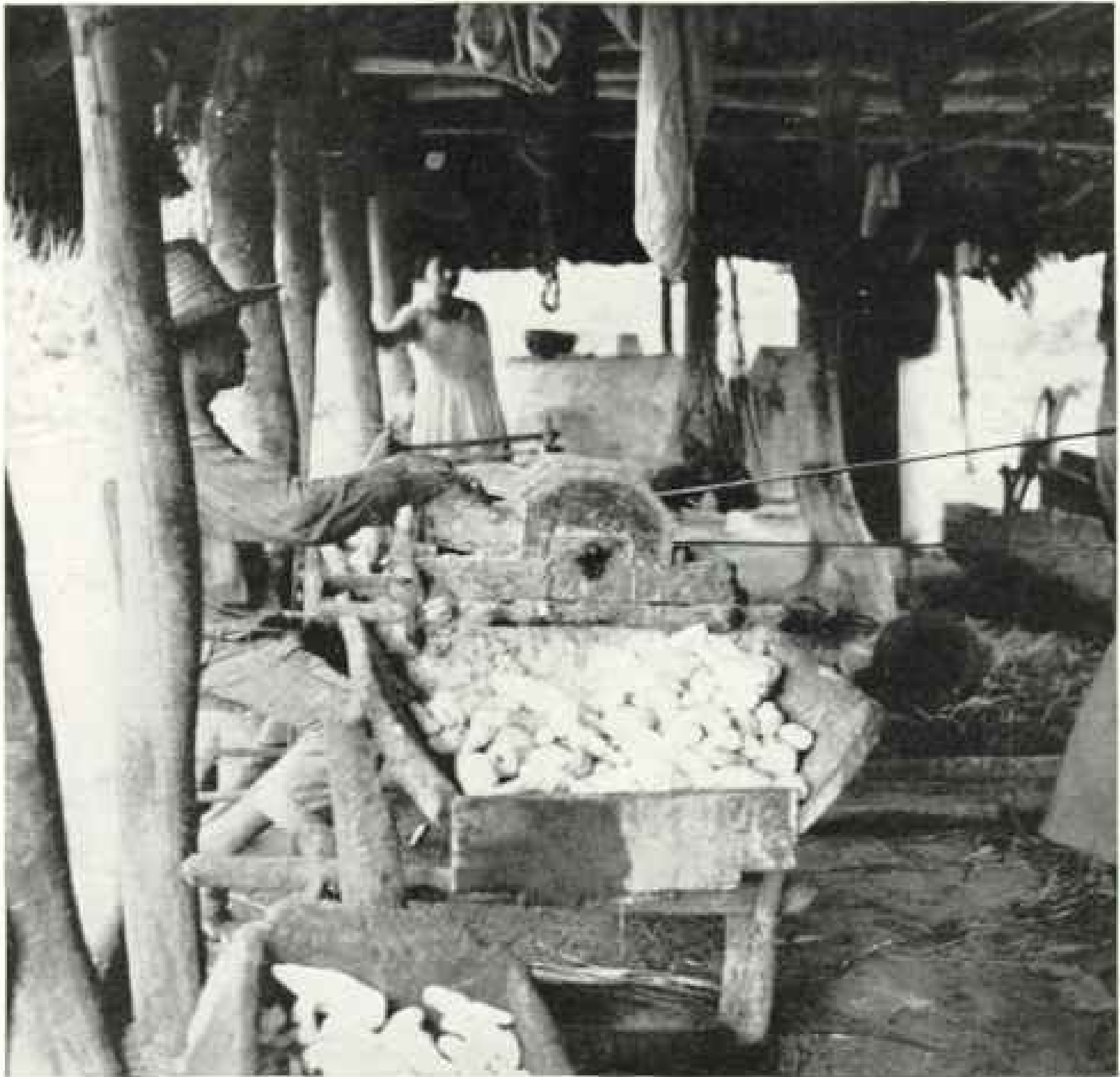




Photograph by Loran Kahle

#### COCONUTS LURE JUAN TO THE TOP OF A TALL PALM TREE

Quiriquire's camp gardener spends much of his time in the treetops, but usually he is gathering orchids, which he sells in the United States colony for one bolivar (32 cents) apiece. He scales the trunk as easily as he would walk upstairs. Orchids, often incorrectly called parasites, are really epiphytes which obtain their moisture and nourishment from the air. While they thrive in profusion high in tropical trees, they do not live at the expense of their arboreal hosts.



Photograph by Lucan Kallie

HOMEMADE MACHINERY TRANSFORMS CASSAVA INTO COARSE FLOUR AT A VILLAGE MILL

Fleshy, cylindrical, tapering roots, sometimes three feet long and filled with milky juice, are cut from cassava plants, plentiful in Venezuelan forests. Here the miller is slicing the tubers to free the fluid, which contains highly poisonous hydrocyanic acid (page 103). To eliminate more of the juice, the roots are grated into a pulp and squeezed in the container hanging from the ceiling. Even then, the dry lumps are still poisonous. Kneaded into large, thin cakes, they are baked thoroughly on a metal plate, and then may be safely eaten.

to frighten away chickens, pigs, and dogs, lest they swallow a drop of the yuca juice, which is poisonous.

The pulp was then removed, shaped into cylinders, and allowed to dry in the sun until brittle enough to break into pieces. These pieces were sifted through a screen to form a meal.

"What seasoning do you use with your meal?" I asked, curiously.

Blank stares from Graciella and her mother.

"This is all."

Dubiously I watched as they patted the

meal into large disks, about 28 inches in diameter and thin as a dollar. They then placed these disks on a huge sheet of iron over the coal fire. It was fascinating to watch Graciella flip them as easily as we would a pancake. In place of a cake turner, however, she used only two small sticks, slightly the worse for wear.

In less time than it takes to tell, they turned out a pile of cassava disks, one of which they smilingly offered us.

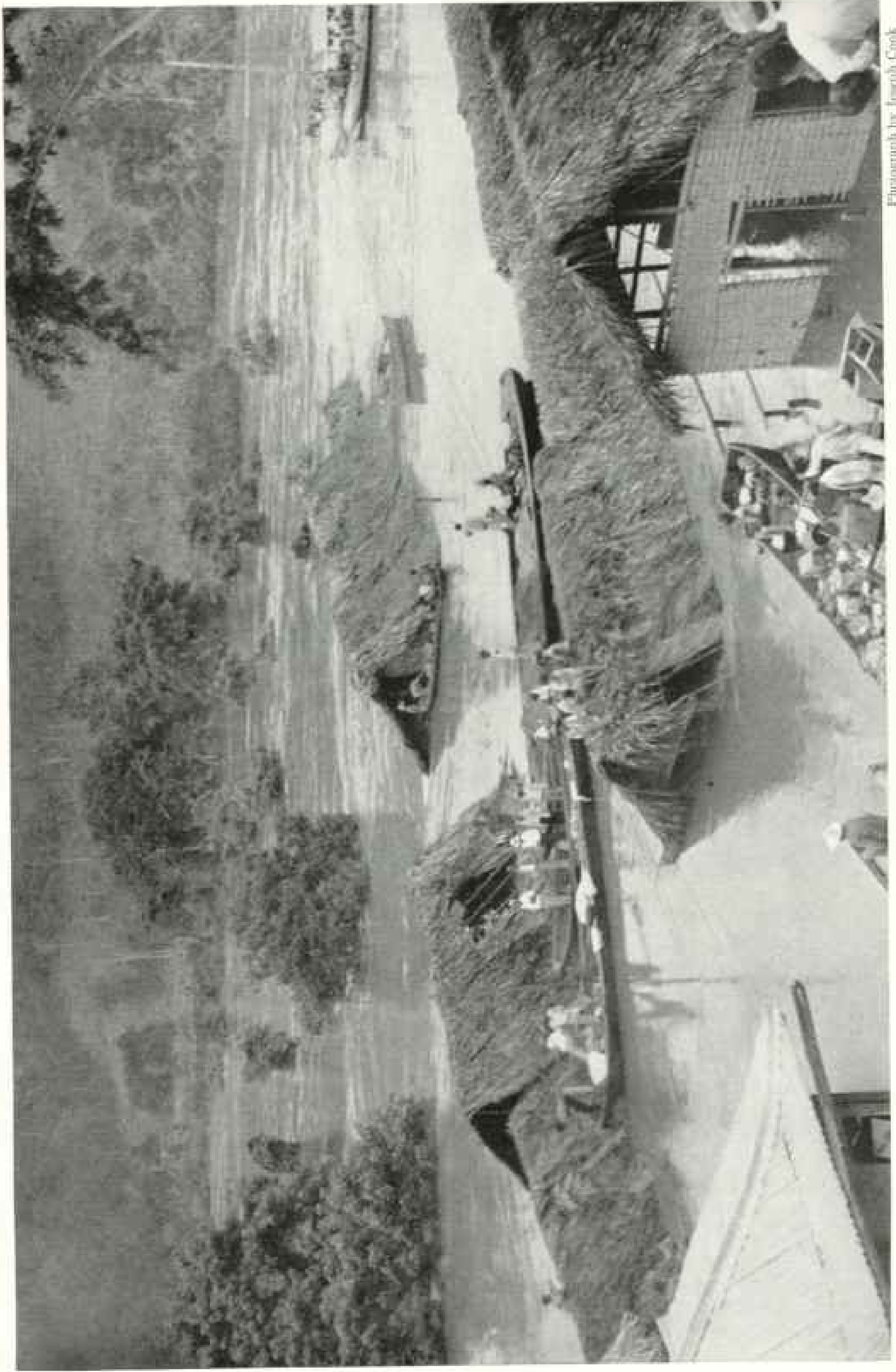
"It is called the 'sun of Monagas,'" said the old lady. To me, it tasted more like dried-out straw!



Photograph by William Sumner

THATCHED COTTAGES OF OUTRIGUIRE HUDDLE TOGETHER IN A CLEARING, HEMMED IN BY ENCROACHING JUNGLE

Completely the inhabitants of this self-sustaining colony in northeastern Venezuela fight off the matted growth. Less than a square mile in area in the settlement, which lies north of Maturín, capital of the State of Monagas (page 97). Scarlet bougainvillea flanks the whitewashed clay walls of the houses and reaches almost to the mirribe palm roofs.



Photograph by Joseph Cook

AT THE HEIGHT OF THE RAINY SEASON THE SAN JUAN RIVER GOES ON A RAMPAGE

So low is the ground near Caripito, north of Quiriquire, that the swollen stream spreads for miles across the countryside. Natives in boats are removing all their belongings from the huts, which may be completely submerged. After the waters recede, and the homes dry out, the villagers return.



Photograph by Alfred T. Palmer

#### CARACAS HONORS HER NATIVE SON, SIMÓN BOLÍVAR

Dominating the Plaza Bolívar, in the heart of the city, rises the memorial statue of the Liberator. Hero of more than 200 battles, this soldier and statesman led the revolutions against Spain that brought independence to Venezuela, Colombia, Ecuador, Panama, Peru, and Bolivia. Caracas claims him as its own, for he was born here about the time the United States gained independence.

However, upon our return home we discovered that, toasted with butter and topped by a bit of plátano that has been baked in cinnamon, it has rather a piquant taste.

#### EGGS WRAPPED IN BANANA LEAVES

My egg man is a gay caballero named Jesús (pronounced Hay-soos, the most common of all male names in this section of Venezuela). Jesús comes riding through the rain wearing his red poncho as insolently as a toreador. He sits his saddle

of wood as if it were a throne and the plodding burros his faithful subjects. For Jesús is very rich! He comes on not one burro, but two! The one he rides; the other carries two huge baskets dangling on either side like fat, grotesque legs.

One basket contains fresh eggs, wrapped in banana leaves to keep them cool and protect them from breakage. The other contains squawking chickens. Sometimes there is a third basket, with green lemons the size of an orange and deliciously flavored.

Yesterday Jesús swept off his straw sombrero with a flourish:

"For you, madame, I have one inveetayshun . . ."

His liquid black eyes flashed a fire, unusual in their sleepy depths.

"That is nice, Jesús," I answered. "What is the occasion?"

"For ze mos famos of cockfight, madame. Jesús bet mucho dinero, bolívars, one hundred, verdad." Jesús mixes his English and Spanish piquantly.

So at four o'clock my husband and I rode down to the village to watch this sport so beloved of Venezuelans. In front of the shop stood a gala group. Jesús had discarded his poncho for a bright pink shirt.

Upon seeing Bill, he ran forward, thrust-

ing his cock high in the air with the eager pride of a child. A jovial bartender hurried forth with a glass of *cocuy* for Bill and red wine for me. *Cocuy* is a native drink, distilled from the juice of a cactus; it looks as harmless as water, but tastes like nothing so much as liquid fire.

Beyond the store the cockpit ring resembled a miniature football bowl. Benches were arranged in circular tiers. The cockpit itself was approximately ten feet in diameter, with a three-foot circular enclosure. The two fighting cocks looked more grotesque than belligerent. Their wattles and combs had been cut off; their necks and legs were plucked bare. Only a few remaining tail feathers waved triumphantly like a battle flag.

Finally, the fight was on. The two cocks, with spurs tied to their legs, seemed slightly bewildered as to procedure; but after a fierce prodding by their backer, they soon flew at each other with fiendish ferocity.

There is no spirit of compromise in a fighting cock. He wins or dies, in less than five minutes of battle. It is an ugly thing to watch. With a whirring of wings, the two cocks leap into the air and fly at each other like evil spirits. A quick stroke of the spur aimed at a strategic spot in the neck, and it was over, the stricken cock lying in a pool of his own blood.



Photograph by Carlos Ordóñez

#### INDIANS PADDLE HOME WITH MANNA FROM THE WILDERNESS

Guaranos load their canoe with a cargo of cassava roots cut in the forest. From the tubers they will make their bread. Forest and stream supply nearly all the wants of northeastern Venezuelan tribesmen. Moriche palms furnish thatch and poles for huts, fibers for weaving, and fruit, sap, and pulp for food. Fish and turtles abound in the rivers and game is plentiful in the jungle.

Bill had placed his bet with Jesús, goading the cock on with lusty cries. Now he reveled in the victory as if it were his own.

I was thankful to see it end. We looked for Jesús to congratulate him; but he was busily squeezing the juice of a lime into the wounds of his victorious cock.

Do you remember, many years ago when your parents took you to charity bazaars, the mysterious curtained-off partition called the "fish pond"? How thrilling it was to throw your pole over the top and breathlessly await the wonders it would yield. It might be a singing top, or a fat little angel carved from white wood. Once, on



Photograph by Laura Kettle

EVEN IN QUIRIQUIRE, SATURDAY NIGHT MEANS A BATH!

After a thorough shower, which deluges hair, bracelets, and results in an occasional unwelcome mouthful of water, the little señorita will be ready for her hammock of mariche palm. Ropes, fastening her couch to the roof poles, will squeak a lullaby.

the end of his dangling hook my little brother brought back a fantastic frog that could be wound up and made to hop and croak!

A MAN-EATING FISH

So it is with fishing in the big lagoons. When you toss in your line for a 23-inch bass, you may pull out a man-eating caribe.

That is what happened to us the first time we fished there. Seated in the bottom of our boat, we were trolling with a spoon for bass, when suddenly my husband's line was nearly jerked from his hand. The

sleepy-eyed native at the paddle was instantly alive with excitement.

"Watch out, sir, it is a caribe!"

I was fairly frozen with fear. For the name "caribe" brought back one of the worst experiences we had heard about during our residence in Venezuela (page 123).

A short time ago, a young geologist conducted a party up the Apure River. He halted at the little village of Puerto Nutrias to hire runners. Finding the place utterly deserted, he was about to turn back to his plane when he noticed the town's entire



Photograph by William Langley

STACKED CASSAVA LOAVES RESEMBLE GIANT PANCAKES

Palm leaves protect edges of the pile of thin disks from the binding cord. Ready for delivery, two bundles are hoisted aboard a donkey. One dangles on each side, and the vender perches between. Packets of six sheets are safely transported long distances.

population gathered at the river's edge. He ran down and found a group of excited natives crowding about what must recently have been the body of a woman. Now it was reduced to a bleeding, bony structure from which the flesh had been almost entirely eaten away.

In answer to his questions, he received but one frenzied phrase.

"My God, caribes, caribes!"

Knowing the caribe to be seldom more than 20 inches long, our friend couldn't conceive of one killing an adult. When he said as much, it was explained to him that

these cannibal fish travel in schools of a hundred or more; and that at the smell of blood they become menacing and quick as lightning.

It seems that while the woman had been beating her clothes on the stones at the river's edge, she had scratched her hand, causing it to bleed. No sooner had she stepped into the deeper water to rinse her hand, than hundreds of these small fish surrounded her. With vicious bites, they plucked the flesh from her body with the rapidity of flame.

Her first piercing screams brought the



surrounding natives in less than three minutes. But by the time they reached the water's edge she was dead—and the caribes only a dark line in the disappearing stream.

So now, at my look of horror, when our boatmen shouted "Caribe!" Bill hastened to reassure me that there was no danger singly.

After a good bit of fight, they landed him in the boat. The peon slipped his machete in the fish's mouth, while Bill removed the hook. For the caribe has pointed teeth and bites viciously. They say, however, that danger is involved only when the fish smells blood.

#### A PARADISE FOR BIRD LOVERS

Bird life in eastern Venezuela presents a paradise for ornithologists.\* According to a recent guest of ours, Gladys Gordon Fry, the "bird lady" from the American Museum of Natural History, New York, the surrounding jungle offers an unrivaled opportunity for naturalists to spend years of intensive and profitable study.

As yet, this section of Venezuela has been little visited. There are hundreds of specimens which so far have scarcely been touched upon.

Multitudes of parrots and brilliantly plumed macaws brighten the sky like scattered jewels in moving phantasy. From the pet point of view, however, I prefer the troupial, a gay gold-and-black oriole whose lilting song is like a human whistle. So wonderfully clear and musical it sounds that just listening to it lends a lift to one's spirit.

My troupial loves the bright things of life; so we call him "Gem." Anything that shines, even to the raindrops in my hand, Gem pecks at with a vehemence surprising in one of his size. As yet quite young, he is about the size of a catbird, and incredibly tame.

Irrespective of friend or stranger, Gem will perch on any hand that is held out to him. Woe to the fingers that tease him, though, for he will start straight for the owner's eyes with a series of staccato clucks that sound more like those of an angry hen than his usual liquid call.

\*See "In Humboldt's Wake" and "Journey by Jungle Rivers to the Home of the Cock-of-the-Rock," by Ernest G. Holt, in the NATIONAL GEOGRAPHIC MAGAZINE, November, 1931, and November, 1933, respectively.

The *oropendolas* (or great-crested caciques) are also abundant in this section. There is a large colony of them; their hanging nests swing from the branches of a tall tree which faces the gorge in front of our house (page 125).

This flamboyant tree, more than 80 feet in height, flings a shower of brilliant yellow blossoms to the sky like a giant golden goddess. There are two distinct colonies of caciques nesting there, neighbored by wasps' nests for protection!

Hanging from the branches on one side are nine pendent nests of the great-crested caciques; about 40 feet apart, on the branches of the other half of the tree, hang the nests of the yellow-backed caciques.

I was lamenting that I could not obtain a pair of them, when Juan, the camp gardener, broke into smiles: "Yes, yes, madame, them I shall bring to you."

So away he ran, and soon returned carrying a thick rope. Making a long loop of the rope which encompassed the tree trunk as well as his own body, Juan started the slow ascent. Bracing himself against the tree, he took a few flat-footed steps, then gave the rope a quick flip upward and repeated the performance. He was soon up the tree, crawling cautiously out on the branch above the nests. Quickly he detached two of them with his machete, and slid down the tree a great deal more rapidly than he went up.

There was a great fluttering of wings in the air and a series of sharp protesting calls, but Juan dropped safely to the ground with a nest containing three baby *oropendolas*. His ankles were slightly the worse for wear.

#### THE FOOLISH BIRDS

The bird which amuses me most in our jungle is the hoatzin, often called the "foolish bird," and known as the missing link between the bird and animal kingdom. The young hoatzin has prehistoric hands with claws on the "fingers." These birds hover so awkwardly in flying that one wonders why they were equipped with wings.

Among nocturnal birds—and there are many—the guacharos and owls seem the noisiest. The guacharo is distant cousin to the whippoorwill which calls in summer from northern woods. Although the body is like a nighthawk, its weird, disklike eyes are decidedly owl-like. From the depths of the jungle the guacharo comes to perch in



*Photograph by Hume Tschira from European*

**CATHEDRAL-LIKE CARACAS UNIVERSITY IS SIX YEARS OLDER THAN HARVARD**

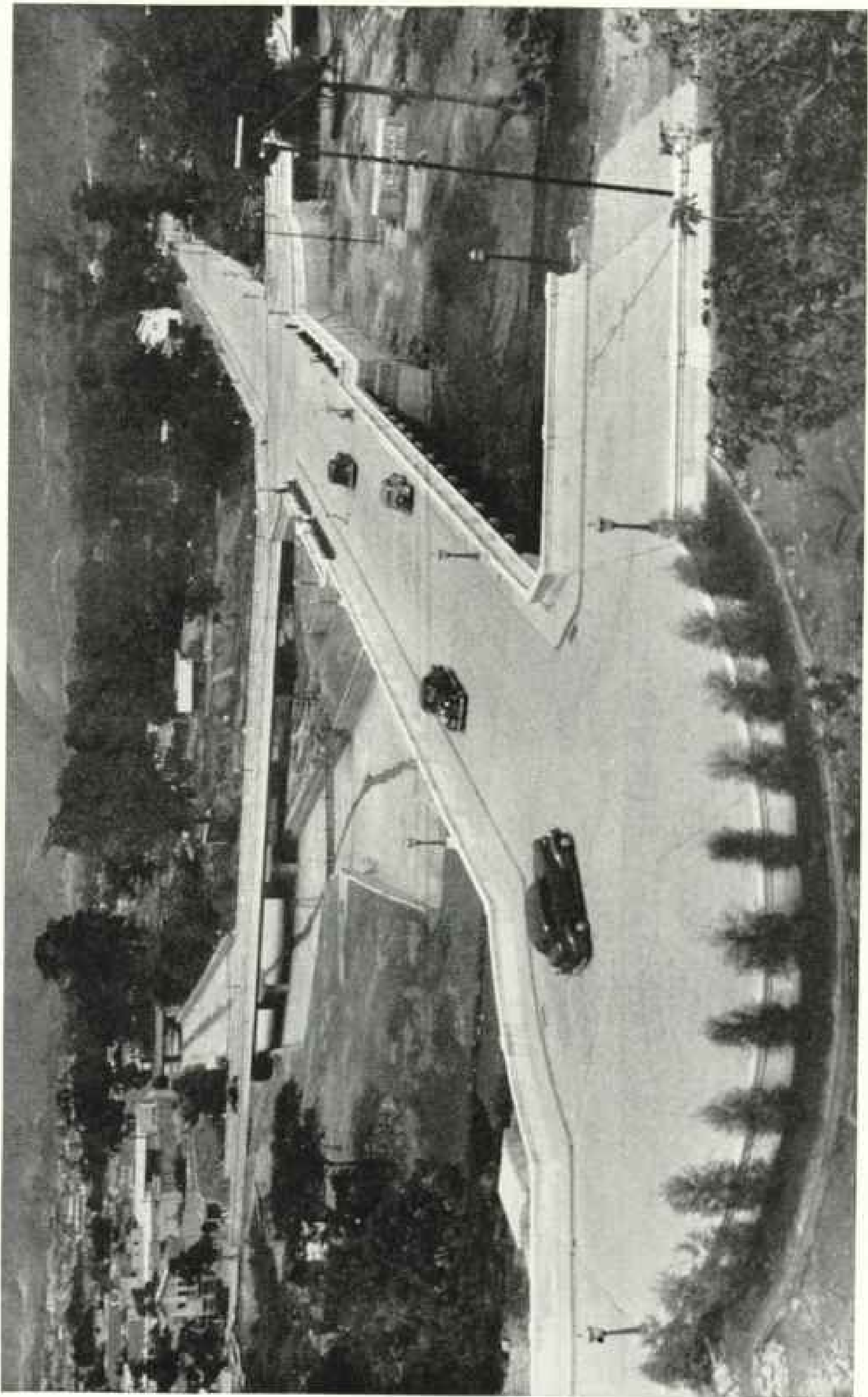
Spanish priests founded the institution as a theological seminary in 1630. A petition for its establishment had been signed nearly forty years before that. Here in Venezuela's capital, where old and new mingle, horse-drawn vehicles still compete with automobiles.



Photograph by Ernest G. Hult

LA GUAYRA, SEAPORT FOR CARACAS, SNUGGLES AT THE FOOT OF THE EASTERN ANDES.

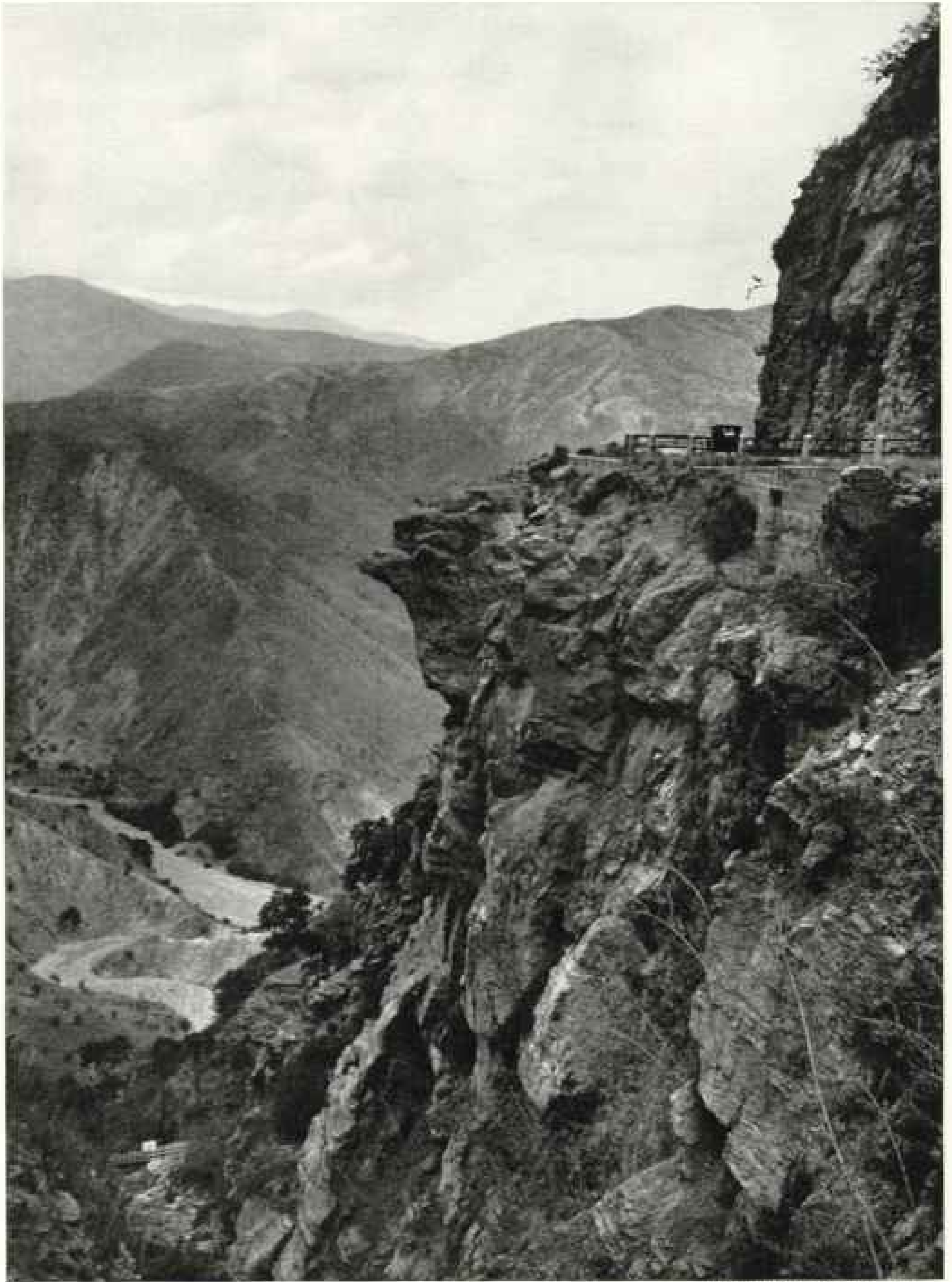
Open to the sea is the harbor, where a merchantman rides at a mooring. Almost always a heavy ground swell rolls in, on which bob ships' boats bound for shore. Behind the town a concrete highway to Caracas winds up the slopes (pages 116 and 126). High on the mountainside stands the old Spanish fort that once protected the town. Today it is merely a signal station for ships.



Photograph from Fix.

**SUBURBAN DWELLERS DRIVE TO CARACAS OVER MOHEDANO BRIDGE, ON A SUPER-HIGHWAY**

This modern span is named for the Spanish priest who first brought the coffee plant to Venezuela from Martinique in 1784. Today coffee is the Nation's foremost crop. The bridge lies between the city and newly developed areas dotted with palatial villages. Near by is Los Caobos Avenue (page 132), named for the long rows of mahogany trees that flank it on each side.



Photograph by Ernest G. Hall

SERPENTINE ROADS WITH HAIRPIN CURVES LINK CARACAS AND THE SEA

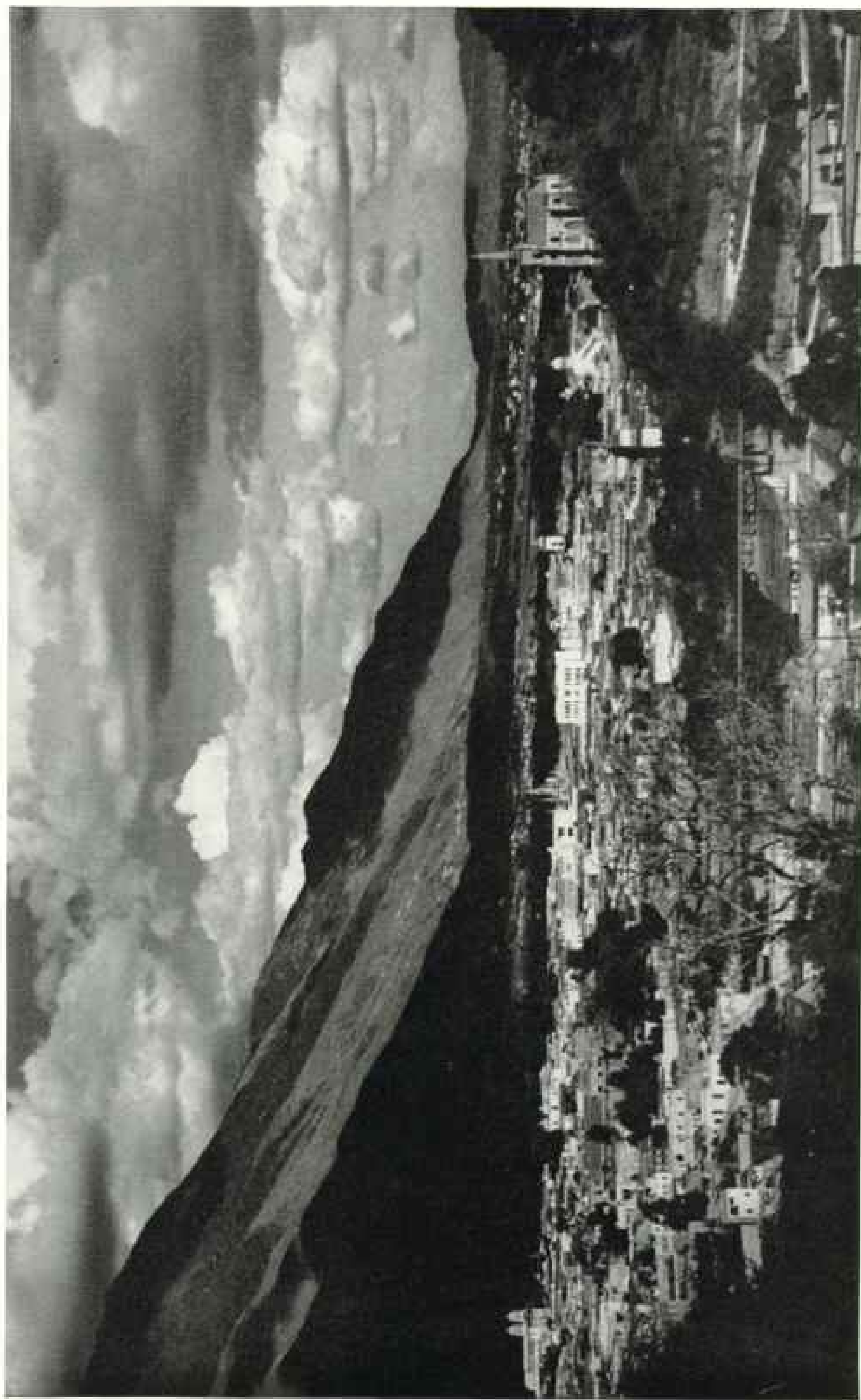
Motor highway and railroad zigzag sharply up the steep sides of a rocky gorge, twisting 23 miles between the port of La Guaira and the capital. As the crow flies, the distance between the two cities is less than seven miles (pages 114 and 125). Here, from the vantage point of Mora's Rock, most of narrow Tacagua Valley is revealed, with the railroad bridge far below spanning the river bed, dry in summer months.



Photograph from Publishers' Photo Service

IN VENEZUELA'S "WESTMINSTER," THE PANTHEON, REST HER NATIONAL HEROES

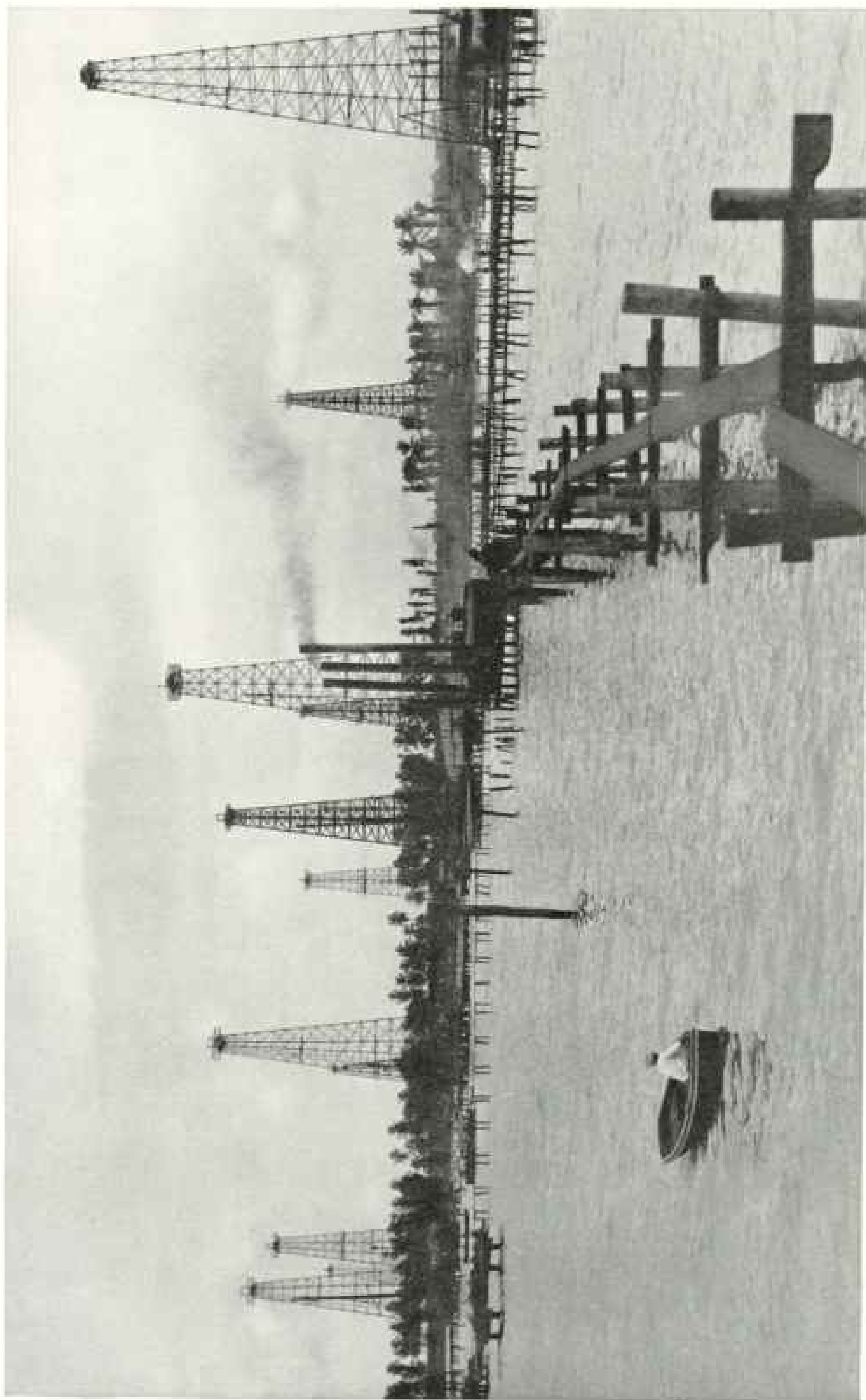
Simón Bolívar's ashes are at the foot of a marble memorial to the Liberator, in the center of the cathedral-like structure. His heart is buried at Santa Marta, Colombia, where he died. Surmounting his tomb is a statue of South America's "George Washington," carved by Tenerani, Italian sculptor. Other notables are buried nearby. The building, facing on the Plaza Miranda, originally was designed and built as a church (page 131).



Photograph from Globe

AT THE FOOT OF MASSIVE MOUNT AVILA, CARACAS SPRAWLS ACROSS A PLATEAU 3,025 FEET ABOVE THE SEA

Spires and steeples of the capital's many churches rise above red-tiled roofs. In the northwestern section of the city (left), La Pastora Church stands on an eminence. At right, where garden-covered Calvary Hill begins its ascent, Calvary Chapel overlooks busy streets. The large white building (center) is the new home of the Ministry of Education, not yet completed, and to its right the round tower of the Cathedral looms above Plaza Bolívar. White villas fleck the landscape in the background.



Photograph by Philip D. Gendreau

**DERRICKS RISE ABOVE THE PALMS, BOOM TOWNS MUSHROOM AT THEIR FEET, IN THE BASIN OF LAKE MARACAIBO**

Tall towers dot the Santa María landscape, driving water hoas and caymans from their haunts. Throughout northwestern Venezuela oil is king. The port of Maracaibo, headquarters of many operating companies, has grown in a few years from a jungle town to a thriving city, exporting nearly 150,000,000 barrels of oil annually.





HERE VENEZUELA'S LAWMAKERS MEET IN CARACAS

The columned façade graces the south face of the Capitol, with legislative halls for Chamber of Deputies and Senate. Relic of old colonial days is the centuries-old ceiba (silk cotton) tree. Within the shade of its boughs, at San Francisco Place in the background, stockbrokers gather on weekdays at a curb market, chief financial exchange of the country.



Photographs by Ernest G. Holt

GRACEFUL ARCHES LEAD TO THE PATIO OF THE CAPITOL AND PALACE

These all-purpose government buildings, occupying a whole city square, surround a garden. Through the archway, and across the street, a modern building houses shops.

our papaya trees and screech in constant competition with the yodeling toucan.

The most prolific of our bird colonies are the lovely little puff birds, which build in the sandbanks and gladden the still summer air with a soft sweet song. The "God birds," as the peons call wrens, do their daily duty in awakening us each morning.

#### THE BELLBIRDS' SILLY SYMPHONY

But the most whimsical of all, both in song and movement, are the bellbirds. They flit about in the branches of our spreading ceiba trees in a manner that would endear them to Walt Disney for his Silly Symphonies. They are about the size of a large robin, but so elusive I have never been able to get close enough to see whether they are brown or black. They call "dong-rong, dong-rong" with the metallic clarity of a silver bell.

They always seem to fly in pairs. When one calls, the other answers, so there is a duality of song, which on a clear day may be heard over a mile away.

#### A BUSHMASTER IN CAMP

No one warned me two years ago that I would ever run for a month-old newspaper with the avidity of a child after candy. But that was long before I had learned to depend upon the radio for my one contact with the outside world.

News in Quiriquire takes two forms—that which we receive by radio, bringing us flashes from a world of action, and that other form of "news" which has to do with daily life in the jungle. The latter lends constant color to what might otherwise prove a monotonous existence.

Scarcely an hour ago Bill rushed in with the news that a 7-foot bushmaster had just been killed in front of the labor office. We lost no time in loading our camera and dashing down to catch a picture of it, still warm and half-coiled.

Although mapanares, fer-de-lance, and boas are common enough in this part of Venezuela, during two years we have seen but three bushmasters killed in our forest.

While we are on the subject, I must tell a most dramatic snake story. The event occurred during a trip down the Orinoco Delta upon which I accompanied my husband. It is a thrilling tale of a vicious water battle between a cayman and a water boa, or anaconda; so unusual was it, not

only to me, during my three years' stay in the country, but to our Venezuelan neighbors, that had we not taken photographs for proof, I shouldn't blame anyone for raising an eyebrow in skepticism.

Taking the Stanocoven launch from Caripito wharf, we soon left the San Juan and entered one of the many branches of the Orinoco.

Along this stream there is much to gladden the eye. Snow-white egrets wing their way in colorful contrast with scarlet ibis. Red howler monkeys swing themselves by their tails from tree to tree, bruising the soft summer air with savage screams.\* Orchids bloom in profusion from many derelict treetops.

#### INDIANS WADE IN RIVER TO CATCH THEIR DAILY MEAL

Dotting the gunmetal waters of the mighty river are occasional clusters of squat, potbellied Indians wading out from shore to catch their daily meal of fish. Drifting past hillside pueblos of abandoned charm, we finally reached our destination on the Orinoco Delta, the houseboat of an American oil company. It was piloted by Stanley Simmons, a young geophysical prospector.

With a crew of twenty natives he worked up and down the side streams, searching the creepy, matted undergrowth for oil structures.

Simmons had penetrated places where no white man had ever entered. He had cut his way through the tangled jungle with a machete. He had thirsted in the jungle until his sole source of water was to slash a slender stalk of vine.

For five years his only home had been this dilapidated houseboat which his native crew had named the *Ark*. When we pulled up beside his boat, his pleasure at seeing us was significant of a man who has too long been deprived of speaking his own language.

From the deck of the *Ark* we watched a kaleidoscopic scene flash from the banks of the river. Beauty runs rampant along the Orinoco. Proud palms spike the sky with gay green blades. From the luxuriant undergrowth of the jungle flame thousands of tropical flowers. Our eyes followed a group of macaws, flying ever in pairs, scattering their brilliant plumage like miniature

\*See "Monkey Folk," by William M. Mann, NATIONAL GEOGRAPHIC MAGAZINE, May, 1938.



Photograph by Lutan Kable

FOR HIS PORTRAIT, JESÚS DONS A PINK SHIRT!

With ever-present machete he slashes his way through the jungle. Every native carries one of the big broad knives, manufactured in Connecticut.

rainbows amid the dazzling tropic sunshine.

I envied the bright birds their facility of movement, wishing I could transport myself back, for a brief instant, to a land where skyscrapers break the sky line with brittle modernity. But suddenly I was startled out of my dreaming by a native crying, "Snake, snake!"

We all sprang forward to look. There, in the center of some matted vegetation, lay an enormous water boa enjoying a full-bellied siesta. It was immediately evident that this was no ordinary boa. For there was a big bulge, extending about seven feet through his stomach, outmeasuring the snake many times in diameter. Because of the boa's semidormant condition after eating, it was but a matter of moments before a peon with a few swift strokes of his machete severed his head and life.

#### SNAKE SWALLOWS CAYMAN

Now, snakes are common enough to Simmons and his crew. But they instantly realized that here was something most extraordinary. So they tied the big, bulging boa to the back of the boat and towed him to the nearest encampment, about 18 miles downstream. There they stretched him out on the bottom of a small fishing boat. He measured approximately 19 feet in length.

Then Simmons, breathless with curiosity as to the nature of that bulge, slit the snake's stomach and disclosed the slightly decomposed body of a 6-foot cayman.

What a jungle battle that must have been! There, upon one among hundreds of floating islands which dot that lovely, lonely stretch of water, ensued a struggle to thrill even Frank Buck.

To us laymen, the mystery remains that a snake whose mouth measured not more than three inches in diameter could have swallowed a crocodilian whose body measured more than ten inches in diameter, notwithstanding the fact that a snake's mouth can stretch incredibly.

Furthermore, what was the cayman doing to permit himself to be swallowed headfirst? For caymans can deal a death blow with their tails. That the snake took some punishment was evident from the marred condition of its skin. But how it ever escaped this Orinoco bully is just another jungle mystery. The most likely explanation is that the snake found the cayman asleep on the matted vegetation,



Photograph by Charles Jackson

**DEADLY IS THE STRIKE OF THE CARIBE, FRENZIED AT THE SMELL OF BLOOD**

Traveling in schools of a hundred or more in South America's tropical streams, these fish are capable of reducing human beings to a skeleton in a few minutes (page 110). A drop of blood from a cut suffered by a bather, laundress, or fisherman attracts them instantly. When they charge en masse the water is lashed into a whirlpool as they voraciously swallow every shred of flesh.



Photograph by Thomas F. Lee

**LUSTY BRAYS HERALD THE PRESENCE OF THE CARACAS BAKER BOY**

As he delivers bread and rolls to a housewife, the burro expresses vocal resentment at the wait. Between the containers, atop the animal's back, the deliveryman rides from house to house.



WHAT DID THIS BIG BOA SWALLOW, TO BULGE ITS BELLY SO?

Semidormant after a jungle battle, the 19-foot anaconda was enjoying a siesta on a lonely island in the Orinoco Delta. A native discovered and killed it (page 121).



Photographs by Stanley Simons

SLIT OPEN, THE WATER BOA REVEALS A 6-FOOT ALLIGATOR

The snake's mouth, measuring not more than three inches across, had expanded enormously to admit a cayman ten inches in diameter. Slowly and painstakingly it had swallowed its victim headforemost. The author believes the snake coiled itself around the alligator while it slept.

and, fastening his coils around him, crushed him before he fully regained consciousness.

Leaving the snake at Pedernales, we pushed on up Delta Amacuro, where we came upon the remnants of a camp of Guarauno Indians (page 109). The deserted huts along the river bank were eloquent evidence of a late tragedy. We turned the boat toward the shore and came upon the last rites of an Indian burial.

#### INDIANS' SURFACE CEMETERIES

Following the Guarauno custom, each member of the tribe is buried in his own boat, called a *cayuco*. The body is first covered with mud, leaving the feet exposed, and wrapped tightly in palm leaves. The *cayuco* is then lifted high in the air, supported by two stout poles which are planted firmly in the ground.

The Guaraunos are an ingenious race, living in palm-roofed huts along the banks of the Orinoco. From the swampland they extract rubber, gold, and tannic acid, which they exchange for food and clothes.

Returning to the boat, we watched the night fall suddenly. A vague nostalgia crept over me for the sun-drenched twilights of Washington. But, as if in answer to a nameless wish, there came an alien rushing sound in the waters; and with one accord the men caught their searchlights and spears.



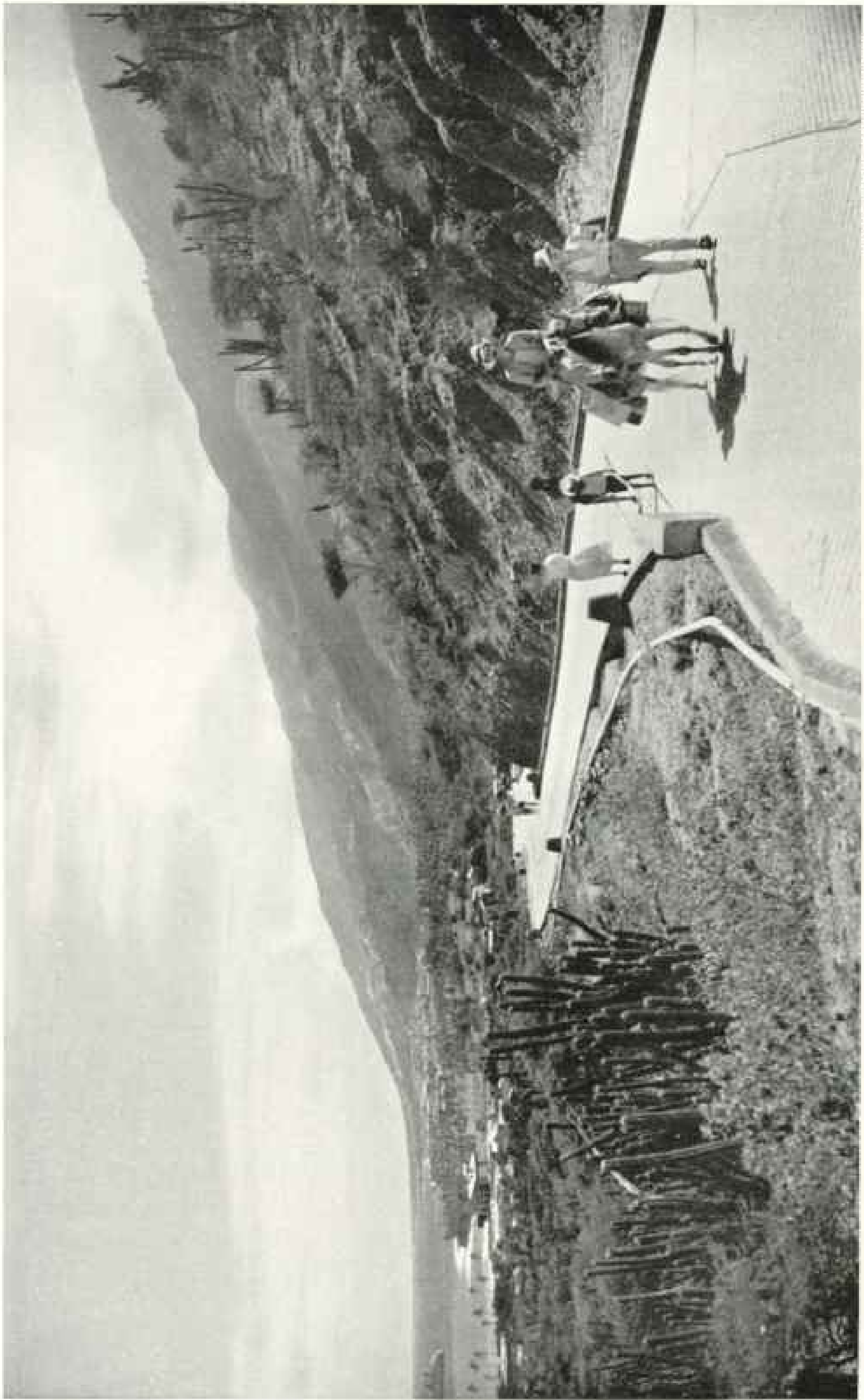
Photograph by Oswald Latorre

#### BREEZES ROCK YOUNG CACIQUES IN THEIR PENDULOUS NESTS

From the branches of a tall tree, which faces a gorge in front of the author's house, dangle the homes of two colonies. Usually they build close to wasps' nests for protection against predatory prowlers. Some of the shelters belong to great-crested caciques; others to their yellow-backed cousins, both of which are related to the North American orioles (page 112).

Following the light cast by Bill's flashlight, I looked into what seemed dozens of bright bits of glass on the surface of the water. Then, with the aid of half a dozen lamps playing about, I saw them—scores of caymans churning the water in angry protest.

Spearing them was amazingly quick



Photograph by Alfred T. Palmer

STEEPLY RISES THE ROAD TO CARACAS AS CARIBBEAN AND LA GUAYRA FADE INTO THE DISTANCE

Through the little fishing village of Maiquetía, the highway ascends from the capital's airport (background). Tall cacti, simulating sentinels, rise from the slopes on either side. Originally built by the Spaniards, the road was widened and paved as a motor highway about fifteen years ago. It was the forerunner of Venezuela's network of modern roads, one of which stretches from Caracas to the Colombian border and beyond (page 116).



HOLLYWOOD STARS MIGHT TRY THIS TO GAIN POISE!

Screen actresses ruefully balance books on their heads to acquire the graceful carriage that everyday chores give to the Venezuelan water girl. Household tasks begin in childhood.



Photographs by Lutan-Kabala

"I KNOW THEY'RE GOOD—I SAMPLED 'EM!"

The happy pastry and candy vender is one of a large army of boys who stroll through the cities and pueblos of Venezuela, carrying their sweets on wooden trays. Often the delicacies are made by their mothers.





Photograph by Philip Andrews

AT A SQUARE TURN ON A MOUNTAIN HIGHWAY STANDS A MONUMENTAL WRECK

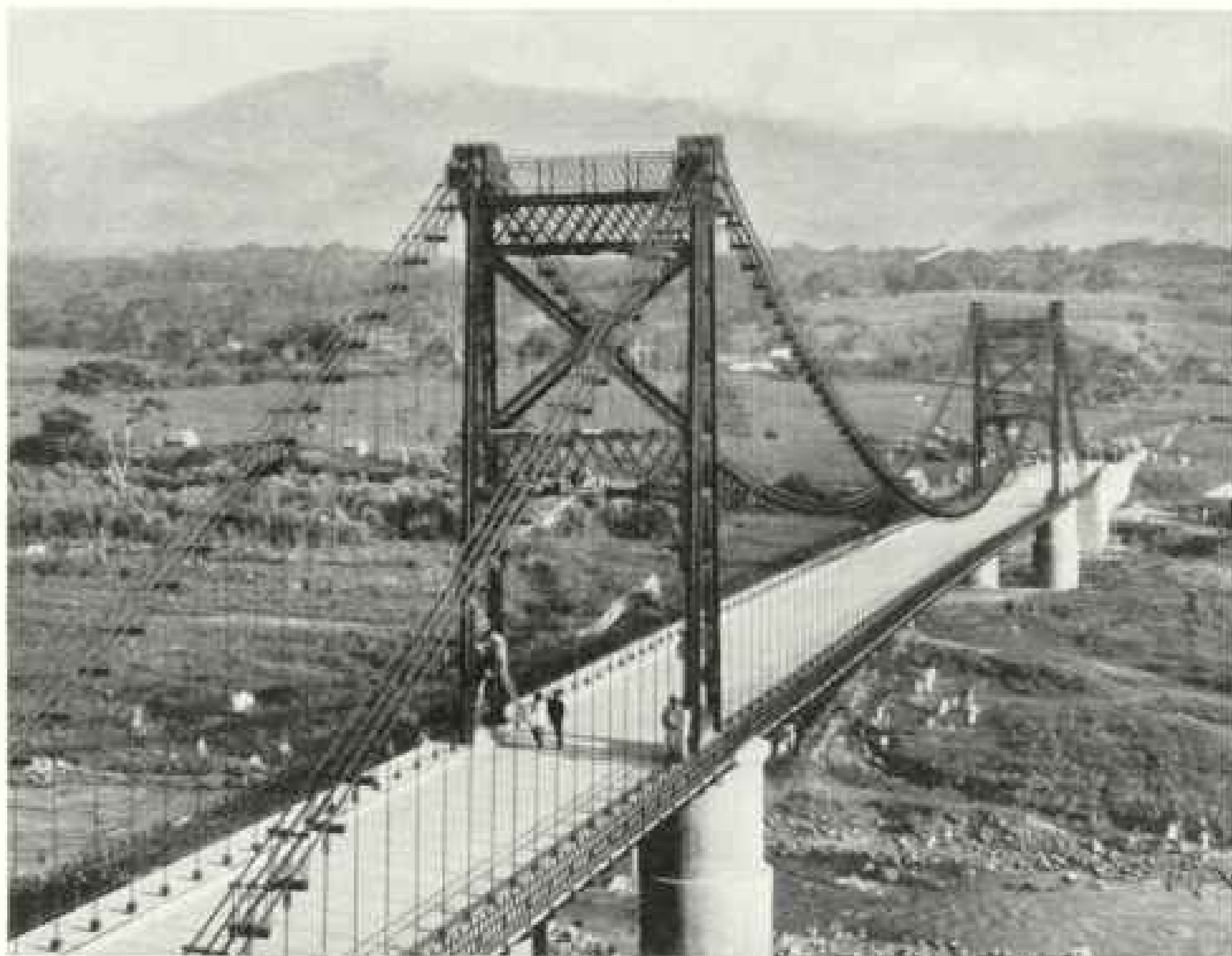
Motorists, speeding along the serpentine road that leads from La Guaira to Venezuela's gay capital of Caracas, pass this grim warning halfway to the top (pages 126 and 130). On its pedestal is an inscription, "Slowly One Goes Far." Broken guardrails elsewhere along the route give evidence that all do not heed the warning.



Photograph by Loren Kalle

THIS VENEZUELAN DAVID ADDS A GAS-PIPE BARREL TO HIS SLINGSHOT

In the savanna country, where rifles are an expensive luxury, substitutes are invented. Stock and trigger are of wood. Twisted rubber bands, suddenly released, hurl pebble "bullets" with surprising force and speed at birds and small game.



Photograph from Pix

LINK OF FRIENDSHIP IS THE LIBERATOR BRIDGE BETWEEN VENEZUELA AND  
COLOMBIA

Spanning the Tachira River in the southwestern corner of Venezuela, this suspension span is named for Bolivar (pages 108 and 131). It is part of the motor thoroughfare that stretches nearly 800 miles from Caracas to Cúcuta, Colombia. This unit in the Trans-Andean Highway passes through San Cristóbal and cuts across the Andes at an altitude of 14,000 feet.

work. Only two out of the group were caught. Now their skins are dried and rolled in salt to be carried to the States and there be made into sport shoes and handbags.

FLYING TO CARACAS

From where we live, Caracas is a thrilling trip by air; flying up, up over the coastal range of the Andes, we looked down on slope after slope of brilliant green mountains.

There are no ribboned highways to whiten the surface of the earth, only a network of ever-interlacing rivers that look like so many twisting snakes. Higher and still higher we flew, until the coastal spur of the Andes resembled the wrinkled face of an old crone who squinted her eyes against the bright, white light of fleecy clouds.

So the plane climbed up the green stair-

steps that followed peak upon peak until suddenly we swooped down between two tall peaks to glide out over the island-studded waters that form a pretty prelude to Guanta's harbor.

Guanta is like a Gauguin canvas. It is a pueblo by the sea—and such a sea! Water with the true blue clarity of a sapphire turns to clearest emerald along the shore line. Cool groves of coconut trees along the water's edge shadow white-washed adobe huts. A Venezuelan gunboat lay at anchor. From somewhere on deck a tiple made merry Spanish tunes.

Dozens of men carrying coal on their heads kept step to the music as they mounted the long gangplank. Children driving their goats along the water's edge stopped to smile as we clapped our hands to the music.

To the right of the harbor loomed the island of Margarita, famous for pearl fish-



Photograph by William Langley

#### CLOTHESPIN MERCHANTS WOULD STARVE IN QUIRIQUIRE

At the river's edge the laundress lustily pounds her washing upon flat stones, then spreads the clothes along the bank to dry. Three or four good washday sessions bleach a pair of khaki trousers as white as bed linen. Buttons suffer severely.

eries. When the plane shrilled the "all aboard" signal, I was sorry to leave Guanta.

The last stop was La Guaira, landing port for Caracas (page 114). From there we went by motor to the gay capital city; and I am willing to wager that even climbing the Alps holds no more palpitations than that ride up and down the mountain.

Near the modern concrete highway runs one of the most picturesque mountain railways in the world. It connects La Guaira, the chief port of Venezuela, with Caracas, the capital. The distance between the two cities, in a straight line, is less than 7 miles; but the road twists in and out over the mountains, covering about 23 miles.

#### GRIM REMINDERS TO MOTORISTS

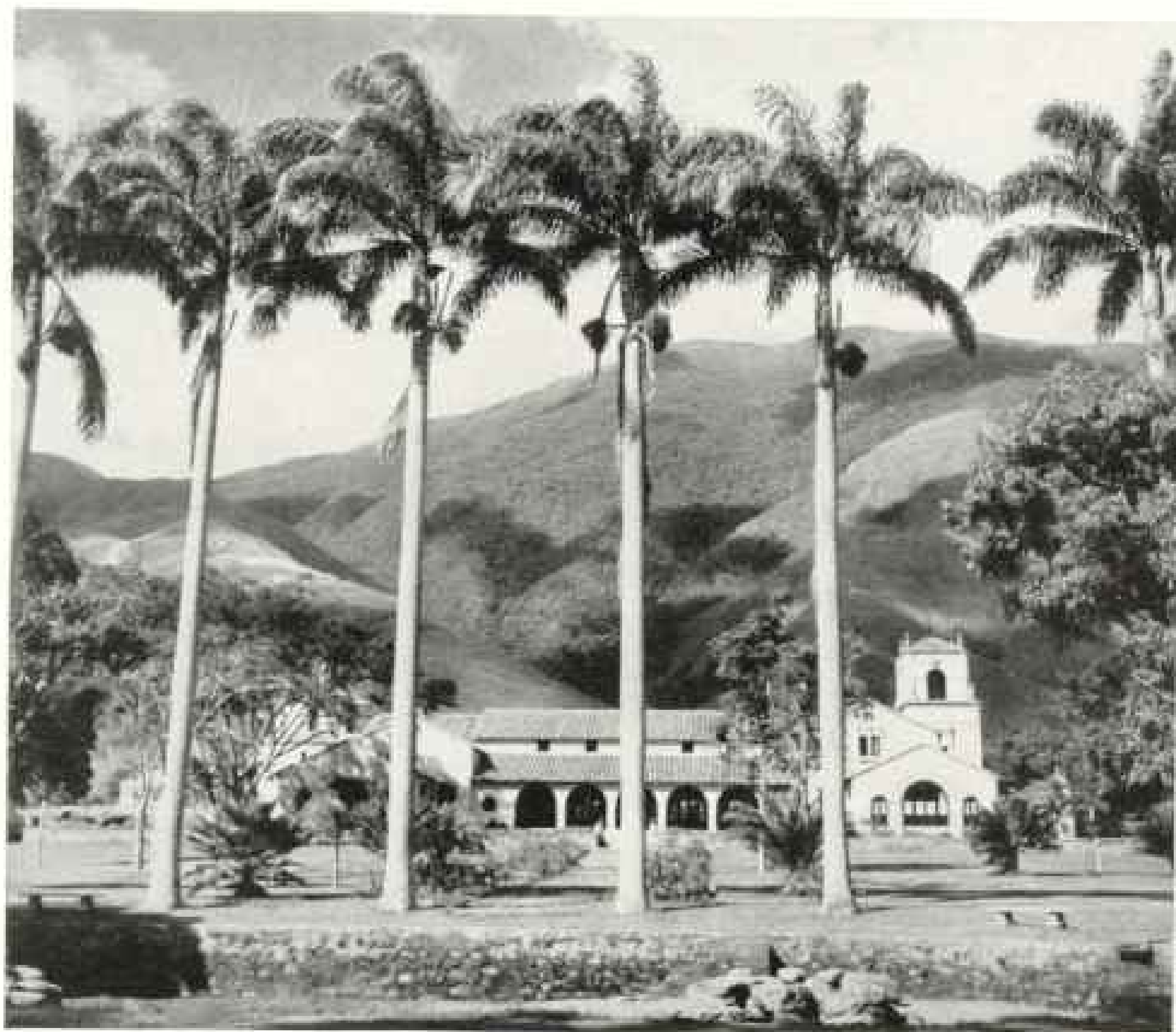
Like a spiral staircase, the road winds up, up, and up, until one fairly feels the

sky. Cars whiz by like rockets, careening around curves in a glad, mad rush to reach the gayest of Venezuelan cities. On one side the mountain rises abruptly; the other is sheer nothing—a drop of some 2,000 feet to level land (pages 116 and 126).

Halfway to the top an effigy hints a warning to reckless drivers. It is a demolished car that had been salvaged after it had hurled its occupants over the mountain.

There are other warnings. At intermittent places along the road we noticed blank spots in the guardrail—mute evidence of other catastrophes (page 128). But even these grim reminders failed to dim our eager anticipation of the city.

At the summit we stopped for coffee and looked down on a colorful panorama spread out hundreds of feet below. Then off again! Circling down, down, and down,



Photograph courtesy Geico Line

ROYAL PALMS TOWER OVER RED TILE ROOFS OF THE CARACAS COUNTRY CLUB

Formal gardens, an 18-hole golf course, and a swimming pool fed by springs on the club grounds surround this social center. Caracas also maintains four other country clubs.

we finally reached the red-roofed city that is the pride of all Venezuelans (pages 98, 99, 113, 115, 118, 120, 123).

A CITY OF CONTRASTS

Narrow winding streets invested the entrance with the aspect of Montmartre. Here again, what contrasts! Modern structures stand beside adobe houses that look as if they began with time. Cars, as thick as trees in the jungle, represent the finest of American and foreign makes. At an intersection the line of luxurious motors halted, and, like a pause from a past century, two lazy oxen meandered across the street pulling a cart piled high with sugar cane. The peon who drove them held an old iron cowbell in his hand, which he tinkled as proudly as his neighbor sounded the horn of his Packard.

Down in the heart of the city, like a

lovely surprise, we came upon Plaza Bolívar. It is a great sunken square with spreading ceibas whose cool shadows are like a benediction to passing people.

Although there is a conventional, and quite splendid, statue of Bolívar in the center of the square, Plaza Bolívar is decidedly not just another city park (p. 108). It embodies a natural beauty as untouched by civilization as a remote corner of the jungle. In the four corners orchids bloom from the treetops. Little boys with wood trays strapped over their shoulders stroll through the park selling lollipops and fruit (p. 127).

Other shrines where the memory of the Liberator is honored are the duplicate of the home in which he was born, which houses an art gallery and museum, and his tomb, beneath the cupola of the Pantheon, Venezuela's Westminster Abbey (p. 117).

Facing the plaza are the most modern

shops, sandwiched in between buildings that look as if they might date from the Conquistadores. Lottery venders besiege every passer-by, flinging promised riches in the air with their long paper banners. Old women, wearing short black mantillas, squat on the sidewalk with trays of wares that boast everything from rosaries and sparkling bits of costume jewelry to pictures of favorite saints.

No one hurries through the streets. The leisurely manner of movement characterizes Caracas as truly Latin.

This city of 248,000 souls was founded by Diego de Losada in 1567. It remained under Spanish rule until the revolt under its native son, Simón Bolívar, when independence was established at the Battle of Carabobo in 1821.

#### ALONG MAHOGANY DRIVE

Driving from the heart of the city, one passes through Avenida de Los Caobos, known among the English-speaking colony as Mahogany Drive. It is a long arched driveway of mahogany trees bordered by gardens of indescribable beauty. Coming from the blinding glare of a Caracas noon-day sun, its shadowed shelter lends a cool cloak of charm to carry you from the city.

Once again, the contrasts, so characteristic of Venezuela, are sharply drawn in the picture presented by the Caracas Country Club (page 131). The interior is enhanced by fine mosaic floors and exquisite wrought-iron grillwork. There you find the epitome of skilled architecture; but in the surrounding grounds you catch your breath at a beauty that speaks of God's work rather than man's.

Every bit of natural beauty has been skillfully utilized. Majestic jungle trees stand in careless clusters, a triumph over the artifice of having been planted by man.

Looking beyond the club one sees a silvery waterfall cascading between two tall peaks of the lower mountain range. That foamy veil of water, so fragile in appearance as to seem only decorative, is in reality the sole source of water supply of the entire community.

Going back through the city, we passed Government House, a cream-colored, sprawling Spanish building with enormous inner courts and gardens. Then we turned in to El Paraíso, the hibiscus-bordered winding avenue that boasts many of the

most imposing residences of the old Caraqueños. It extends along the low hills on the immediate outskirts of the city, topped by an arch of spreading chaparro trees.

All of the houses on El Paraíso have names which seem to have been acquired through some sentimental source, such as the favorite daughter of the house, a significant flower, or even a fancied phrase. They are melodious names, in perfect harmony with this mellowed avenue. Quinta Azul, Las Carretas, Villa Themis, La Parra, and many more, equally inviting, add to the zest of an invitation within their proud portals.

A book could be written on the churches of Caracas. As in Paris, nearly every third or fourth street corner holds one. They are beautiful buildings, the stained-glass windows and statuary of which frequently vie with those in some of the cathedrals of old Europe. From an architectural standpoint, the University also is interesting.

We who came from the jungle were filled with wonder at Club La Suiza, where one is transported in the whisk of an eyelash to the sophistication of New York. It boasts a cosmopolitan crowd and a Cuban rumba band that renders American swing music incomparably!

#### THE CHARM OF MODERN CARACAS IN CONTRAST TO THE LURE OF THE JUNGLE

But it is not in Caracas that I would paint my picture of Venezuela. For us it held the momentary magic of a good cinema—watching jai alai in the annex of the Club La Suiza, dancing on the roof of the Madrid where the floor felt like glass under our feet, eating hayacas (similar to tamales, but several times as large) at the home of a Venezuelan friend, and finishing dinner with Fundador (a fine Spanish brandy) in our coffee.

All that was but a brief glimpse into an orbit of civilization which stands apart from the Venezuela which we have learned to know and to love.

So I would take you back to our jungle for your last look. Back, where our night life is embodied in the Southern Cross above whispering palms. I would take you back to a sky whose brilliance is strange and awesome to northern eyes—back to a land where a thousand small sounds, seeping through the jungle, mingle with the fragrance of as many flowers to lure you into dreams.

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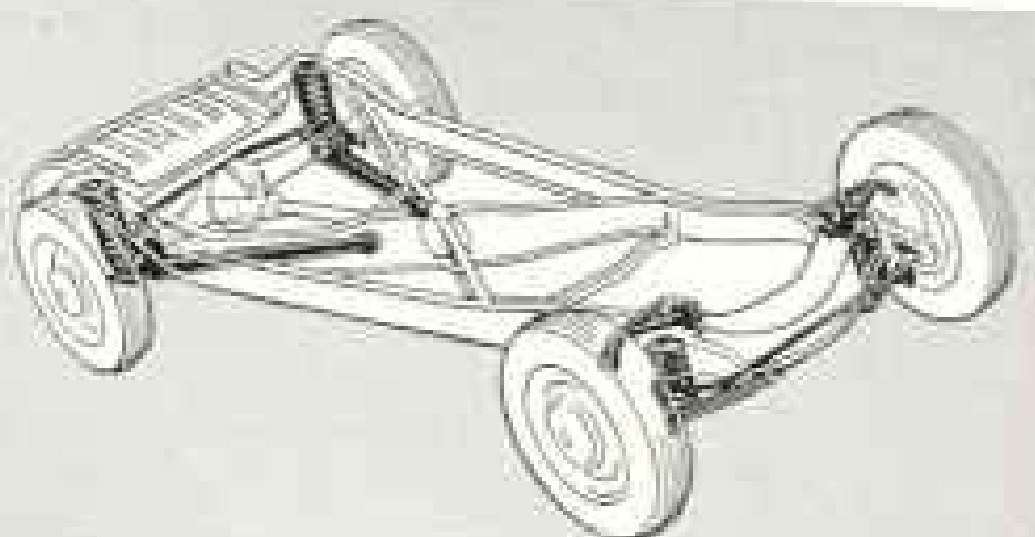
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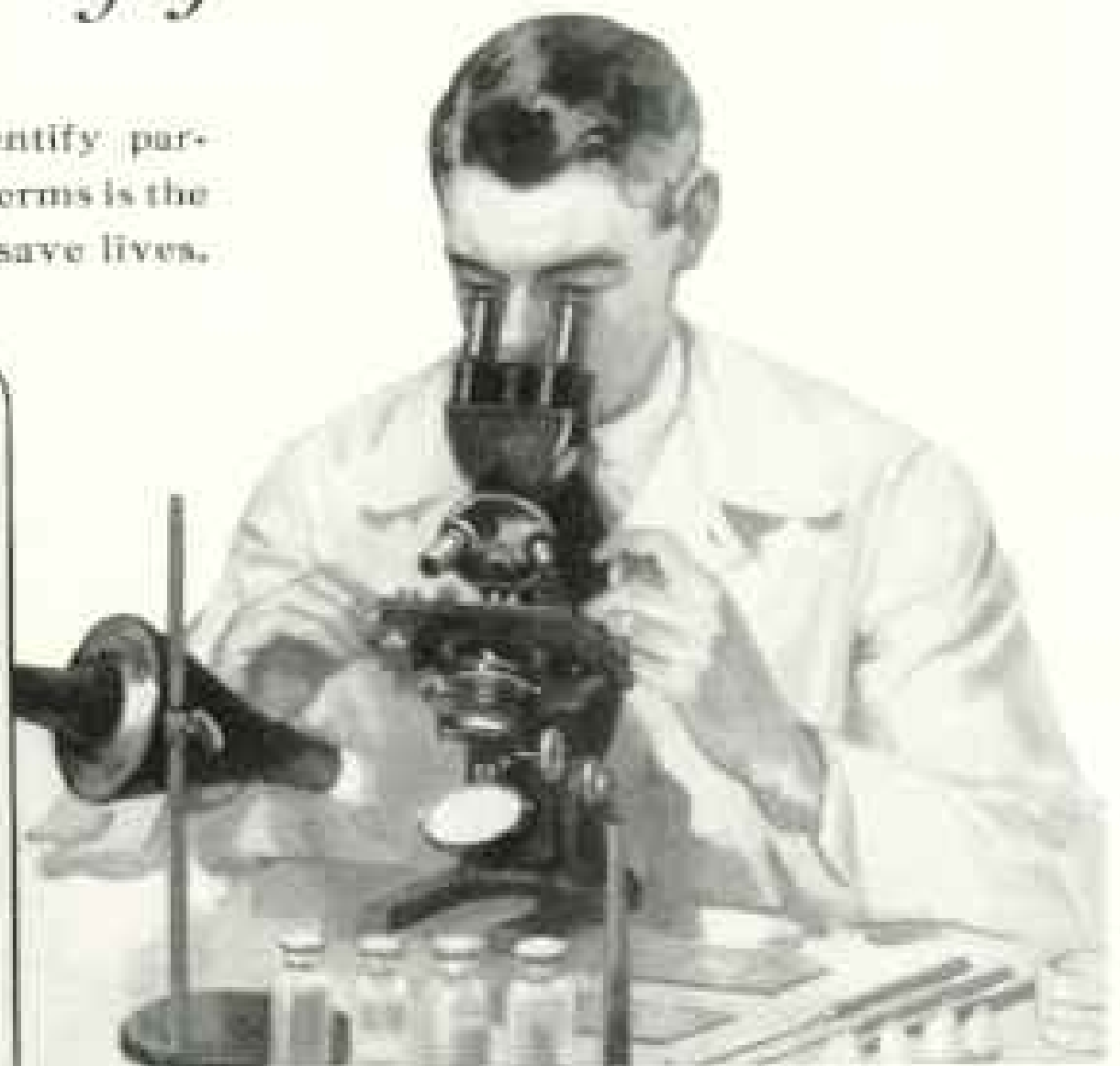
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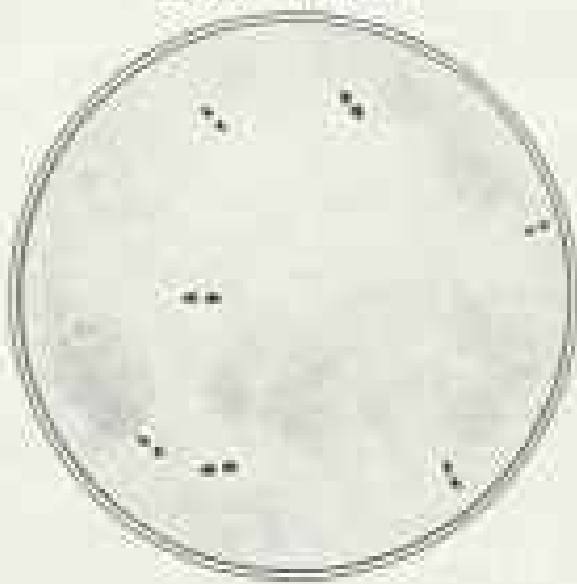


# "Typing" to fight Pneumonia

A laboratory equipped to identify particular "types" of pneumonia germs is the physician's ally in helping to save lives.

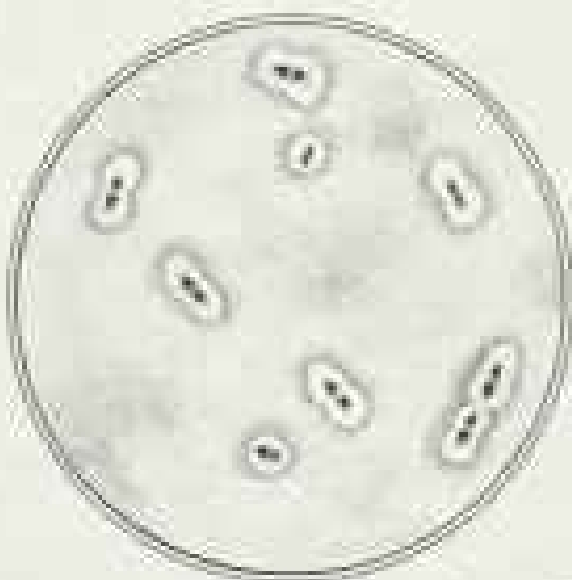


Pneumonia Germs Under Microscope  
*Before Typing*



Microscopic view of pneumococcus germs — principal cause of pneumonia. More than 30 types of such germs—identical in appearance—may cause pneumonia. Patient's germ-laden sputum is tested with "typing" serums, one for each type of pneumococcus.

*After Typing*



When the "typing" serum corresponds to the type of pneumococcus in the sputum, the capsule (or covering) of the germ swells—a positive identification that tells the doctor which type of treatment serum to give the patient.

**D**RAMATIC progress has been made in "typing" pneumonia germs. Medical research has developed individual treatment serums for many of the "types" of pneumonia which these germs cause.

It is exceedingly important to discover pneumonia early so that sputum may be "typed" and proper serum administered promptly. If given properly and in time, these serums are highly effective in combatting the disease.

Medical and public health officials are bending every effort to make these serums generally avail-

able all over the country. In many cities and states they are provided at community expense to those unable to afford them.

Not all cases of pneumonia should or can have serum treatment. But all cases need prompt medical care and competent nursing. After an examination of the patient's sputum and blood, the doctor will determine the particular treatment needed.

Pneumonia may strike an apparently healthy person without warning, but usually it follows a cold or grippy infection or some unusual exposure or exhaustion.

The first symptoms of pneumonia are frequently a chill, followed by a fever, with pain in the side or the chest and coughing. Any one or any combination of these symptoms indicates illness and may be pneumonia. A doctor should be called at once. Pneumonia often works fast, and the physician must work faster to check the disease.

Winter and early spring are the months when colds and pneumonia are most frequent. If you have a severe cold, influenza, or grippe, take the precaution of resting and stay away from other people as much as possible.

Keep your vitality high with adequate nourishment and sleep. The Metropolitan booklet "Colds, Influenza, Pneumonia" gives further essential information about these diseases and their prevention and treatment. It also gives many suggestions for safeguarding winter health. Send a post card today for your free copy. Address Booklet Department 139-N.



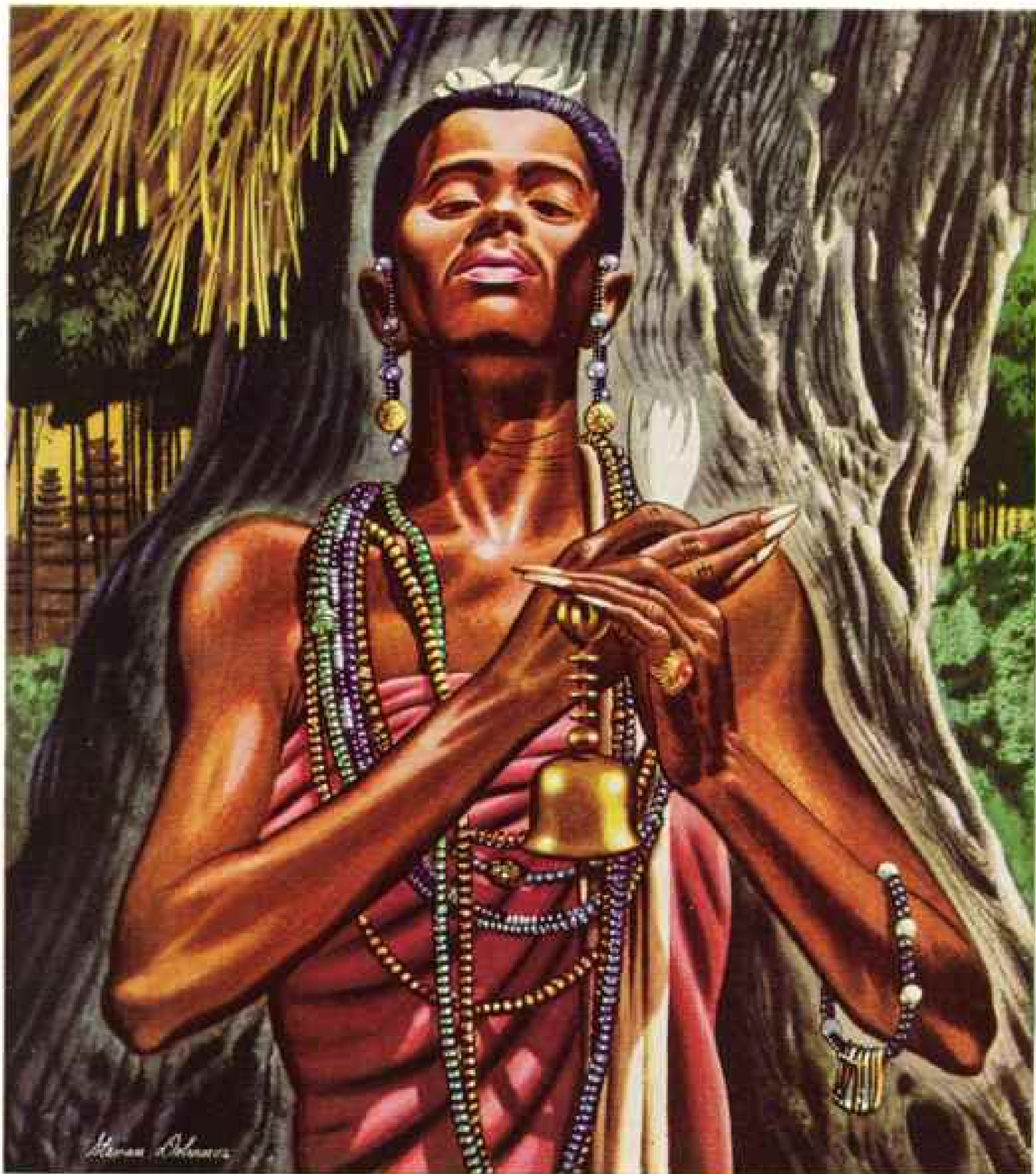
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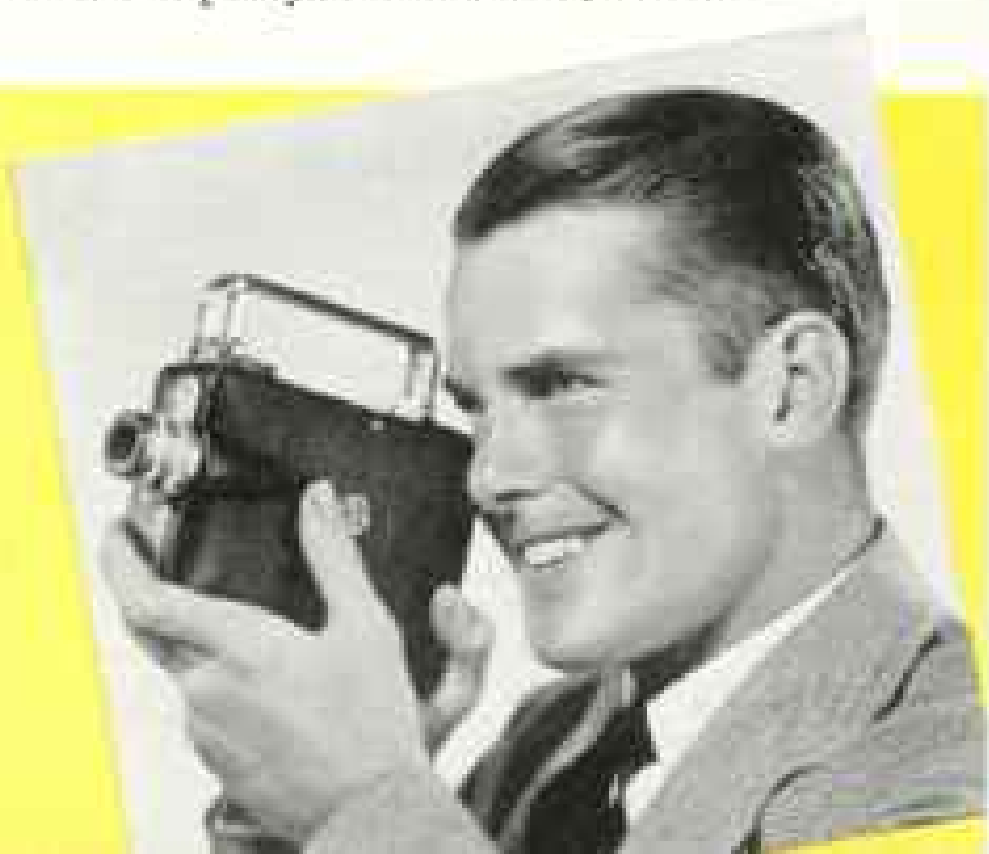
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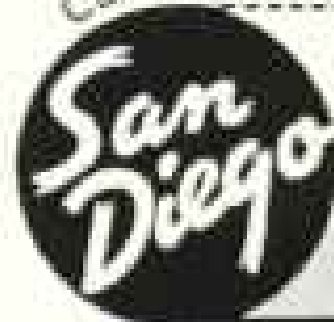
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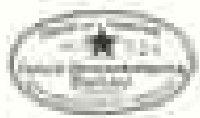
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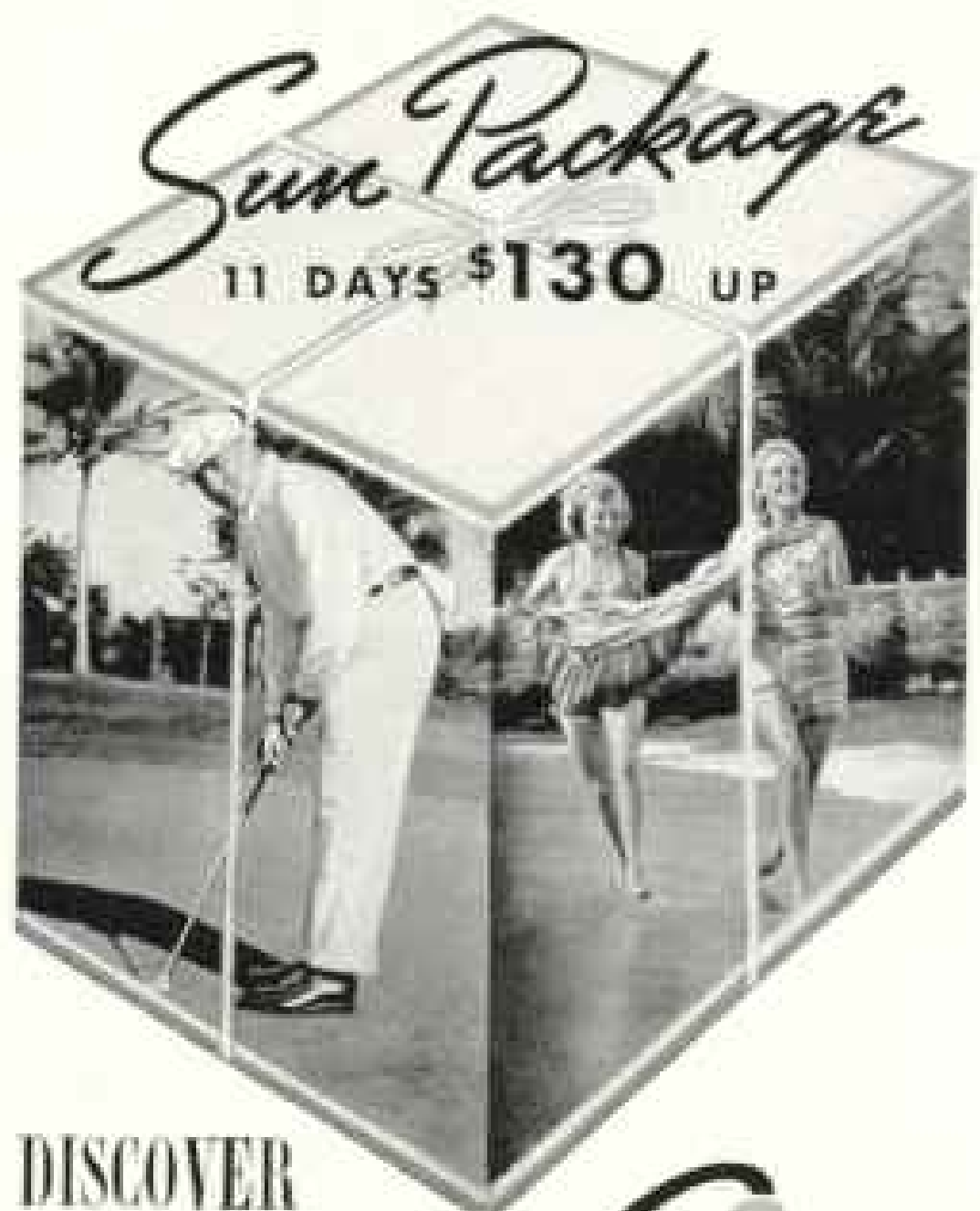
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# "Where shall we stay?"

NATIONAL GEOGRAPHIC MAGAZINE'S HOTEL SECTION

## ARIZONA

### Chandler

**San Marcos Hotel and Individual Bungalows.** 250 acres of interlocking desert playground. Golf, swimming, tennis, riding, other sports. Robert F. Fehl, Mgr.

### Litchfield

**The Wigwam.** Distinguished winter resort hotel and bungalows in glorious desert setting near Phoenix. Famous cuisine. Golf, ride, swim, sunbath. Dick.

### Phoenix

**Hotel Westward Ho.** Premier Hotel of the Southwest, in world-famous Valley of the Sun. Motels with desert resort atmosphere. Am. & E. Plans. Dick.

### Tucson

**Pioneer Hotel.** Southern Arizona's Finest. 250 Rooms with bath. Europ. Coffee Shop. Dining Room. Roof Garden. Sun Deck. Scientific Rates. Booklet.

## ARKANSAS

### Hot Springs National Park

**Arlington Hotel and Baths.** Arthritis, circulatory benefits. Waters owned and recommended by U. S. Govt. Golf. Hinesbark. Write for folder.

**Majestic Hotel and Baths.** Government controlled Bath House under same roof. All sports. 60 rooms and apartments—moderate prices.

## CALIFORNIA

### Los Angeles

**The Ambassador.** Twenty-two acre playground in heart of City. All sports. Plunge, Beach, Lido, Coconut Grove for Dancing. European. \$2.50 up.

**The Arcady.** Exclusive apartment-hotel on famed Wilshire Blvd. Close to airport shops. European Dining Room. Luxurious surroundings. Rates from \$2.50.

### Palm Springs

**Desert Inn.** Luxurious hotel and bungalow accommodations. All sports. Season, October 15 to May 15. American Plan \$12 up. Write for folder.

### Riverside

**Mission Inn.** California's historic hotel. In lovely Riverside. Art treasures. All sports. American or European Plan. Rooms \$2.50 up. Write for Folder.

### Santa Monica

**Miramar Hotel.** Mid beautiful gardens, atop the Palms on the Pacific. Hotel rooms, bungalows and apartments with hotel service. A. or E. plan.

## DISTRICT OF COLUMBIA

### Washington

**Continental Hotel.** Facing the beautiful Capitol Plaza opp. Union Station. All outside rooms, some air-conditioned. Garage. Coffee Shop. From \$2.50.

**The Dodge Hotel.** On Capitol Hill opposite Union Station Plaza. Celebrated cuisine. Non-tipping. Single from \$2.50, double from \$4.50. Direction K. P. Alboort.

**Hay-Adams House.** 16th St. Opposite the White House. Consistently air conditioned. Single with bath from \$2. Double from \$4.50. Free Parking.

**Wardman Park Hotel.** Washington's largest. 1000 outside rooms. Ample parking. Avoid traffic to all highways. Write for maps. Rates from \$4.

## FLORIDA

### Daytona Beach

**Princess Isama. The Inn and Cottages.** A delightful hotel in a perfect setting catering to a selected clientele. Now open. Harry W. Haynes, Prop.

### Fort Lauderdale



Lauderdale Beach Hotel

New, modern—ocean front between Miami and Palm Beach. 100 rooms with bath, steam heat. Spacious lounge, sun decks, beach walk, patio. Homelike, friendly—ownership management. American Plan, superior cuisine. Intimate, quiet, yet just around the corner from all that's going on. Clientele carefully restricted. Booklet, reservations: Arthur H. Ogil, Managing Director.

### Jacksonville

**Hotel Windsor.** Heart of city facing beautiful Hammock Park. Large rms.; unique parlors; terrace dining room; wide porches. Lobby entrance to garage.

### Miami

**Hotel Alcazar.** "On The Bay Front." One of Miami's finest. Steam heat. Two banquet rooms. Dining Room, Coffee Shop, Roof Garden and Solarium.

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### Miami Beach

**The Flamingo.** Exclusive Bay Front Location. Endorsed by Those Who Seek the Best. Restricted. University Fair Rates. Bungalows. C. S. Kram, Mgr.

**The Nautilus Hotel.** A resort hotel with a country club atmosphere. Convenient to all recreation activities. Restricted clientele. F. L. Abel, Manager.

### Miami Beach



The Surfside Hotel

One of the largest private beaches of any Miami Beach hotel reserved for guests. 125 Rooms—all waterfront, ocean or lake—all with private bath and shower. Extensive improvements this season. New ownership management. European Plan, reasonable rates. Excellent Dining Room. All sports. Separate bathers' elevator. Fireproof. Steam heat. Early reservations. Write for booklet.

### Palm Beach

**Villa Atlantique.** American Plan \$10 week up. Hotel. European Plan. Europ. \$5 week up. Restricted. Private lunch. Golf. Arthur L. Roberts. Director. DRG.

### St. Petersburg

**Deermeat Hotel.** Overlooking Williams Park. Close to Tampa Bay and all points of interest. Steam heat, elevators. Amer. plan. Angus C. Craft, Mgr.

**The Huntington.** A resort hotel of merit in beautiful and exclusive surroundings. Close to all activities. American Plan. Booklet. Paul Barnes, Mgr.

**Jungle Hotel.** Country Club atmosphere. Golf at the door. Riding, Fishing, Tennis. Famed for food, service and fair rates. John F. Hyman, Mgr.

**Princess Martha Hotel.** In the heart of St. Petersburg. Modern, fireproof. 250 rooms each with bath. European plan. Dining room. Booklet.

**Sorens Hotel.** On Tampa Bay. Modern, fireproof. 310 rooms each with bath. First service and cuisine. American plan. Every sport attraction. Booklet.

**Suwannee Hotel.** Close to everything of interest. 26 rooms, each with tub and shower bath. European plan. Dining room. Paul Brown, Manager.

**Viney Park Hotel.** On Glorious Tampa Bay. 225 Rooms, all with Bath. Every recreational feature. Booklet. Clement Kennedy, Managing Director.

### Winter Park

**The Alabama.** Amid beautiful lakes, orange groves. Diversified cultural, recreational activity. Select clientele. Delightful climate. Nov.-Mag.

## GEORGIA

### Sea Island

**The Clavier.** Almost in sports the year 'round. N. Y. 500 10th Av., FE 4-3600; Chi. 84 Trade Bldg., HA 1-066; Montreal—Bell Tel. Bldg., RA 1-116.

### Thomasville

**Three Toms Inn.** A charming winter resort hotel; splendid golf, swimming pool, fishing, hunting. Ideal climate. Booklet. Direction of Gen. C. Kerwick, Jr.

## MASSACHUSETTS

### Boston

**The Copley-Plaza** faces beautiful Copley Square. Single rooms from \$2.00; double from \$3.00; Suites from \$10.00. Arthur L. Bass, Managing Director.

## MISSISSIPPI

### Pass Christian

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## NEW JERSEY

### Atlantic City

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## NEW MEXICO

### Carlsbad

**La Caverna Hotel.** Carlsbad Caverns National Park is open every day in the year. La Caverna is best in Southern New Mexico. Write or wire.

## NEW YORK

### New York City

**Barbizon-Plaza.** New skyscraper hotel overlooking Central Park at 4th Ave. Rooms from \$1 single, \$2 double. Continental breakfast included. HA 1-111.

**The Biltmore.** Madison Avenue and 42d St. All that is best in atmosphere, appointments, cuisine, service. Time-saving location. Illustrated Brochure.

**The Plaza.** New York Facing Central Park. Perfection marks every detail of appointments, service and cuisine. Harry A. Root, President.

**The Ritz-Carlton.** Madison at 48th. World-Class service, comfort, cuisine, conveniences. Rodeo-ward rooms. Single from \$1; Double from \$2.

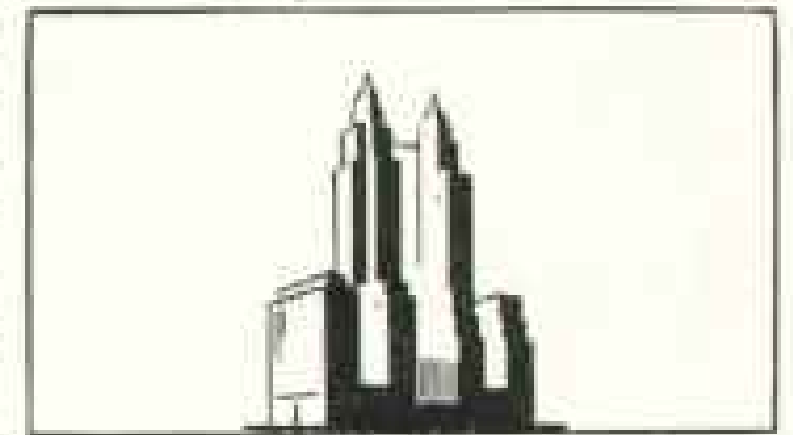
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## PENNSYLVANIA

### Philadelphia

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## VIRGINIA

### Richmond

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### Virginia Beach

**Cavalier Hotel and Country Club.** Open all year. Golf, tennis, riding, fishing, swimming pool. Basil Karon, Managing Director. Write for Folder 41.

## WEST VIRGINIA

### White Sulphur Springs

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### Havana

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"Where shall we stay?"

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