VOLUME CI NUMBER SIX

THE NATIONAL GEOGRAPHIC MAGAZINE

JUNE, 1952

New Map of Southwest Asia
37½ by 27 Inches, in 10 Colors

Sixty-four Pages of Illustrations in Color

PUBLISHED BY THE
NATIONAL GEOGRAPHIC SOCIETY
WASHINGTON, D. C.

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NATIONAL GEOGRAPHIC SOCIETY

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ORGANIZED FOR "THE INCREASE AND DIFFUSION OF GEOGRAPHIC KNOWLEDGE"

To carry out the purposes for which it was founded sixty-four years ago, the National Geographic Society publishes the National Geographic Magazine monthly. All receipts are invested in The Magazine itself or expended directly to promote geographic knowledge.

Articles and photographs are desired. For material The Magazine uses, generous remuneration is made.

In addition to the editorial and photographic surveys constantly being made, The Society has sponsored more than 100 scientific expeditions, some of which required years of field work to achieve their objectives.

The Society's notable expeditions have pushed back the historic horizons of the southwestern United States to a period nearly eight centuries before Columbus crossed the Atlantic. By dating the ruins of the vast communal dwellings in that region, The Society's researches solved secrets that had puzzled historians for three hundred years.

In Mexico The Society and the Smithsonian Institution, January 16, 1939, discovered the oldest work of man in the Americas for which we have a date. This slab of stone is engraved in Mayan characters with a date which means November 4, 291 B. C. (Spinden Correlation). It antedates by 200 years anything heretofore dated in America, and reveals a great center of early American culture, previously unknown.

On November 11, 1935, in a flight sponsored jointly by the National Geographic Society and the U. S. Army Air Corps, the world's largest balloon, *Explorer II*, ascended to the world altitude record of 72,395 feet. Capt. Albert W. Stevens and Capt. Orvil A. Anderson took aloft in the gondola nearly a ton of scientific instruments and obtained results of extraordinary value.

A notable undertaking in the history of astronomy was launched in 1949 by The Society in cooperation with the Palomar Observatory of the California Institute of Technology. This project will require four years to photomap the vast reaches of space, and will provide the first sky atlas for observatories all over the world.

In 1948 The Society sent out seven expeditions to study the eclipse of the sun along a 5,320-mile arc from Burma to the Aleutians. The fruitful results helped link geodetic surveys of North America and Asia.

The Society granted $23,000, and in addition $25,000 was contributed by individual members, to help preserve for the American people the finest of the giant sequoia trees in the Giant Forest of Sequoia National Park of California.

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Priced from $2,000 to $6,000

including furnishings, these new TCMA trailer coaches offer attractive, mobile and low-priced homes, ideal for retired couples' needs. Make the TCMA emblem your guide to quality and satisfaction, for the members of TCMA are the *leaders of the industry*, pioneering improved designs, building dependably to high standards.

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RELAXED IN THEIR COMFORTABLE LIVING ROOM, the Kennedys talk golf. Evenings Mr. Kennedy pursues his hobby of making wood models (example, the stagecoach on shelf). Thoroughly converted to trailer life, both say, "We love this freedom to roam the country or stay in a beautiful place like this. We never want to go back to living in apartments or conventional homes".

THE CENTER CIRCLE BARBECUE PIT is a favorite spot where trailerist friends gather for good times. With mobile homes at Solana y Sombra they have found the perfect way to retire.

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THE GOLDEN ANNIVERSARY

Cadillac

STANDARD OF THE WORLD!

YOUR CADILLAC DEALER

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What is more, when a Sonotone Consultant has brought your hearing back to normal as nearly as possible, his job is far from done.

It is a Sonotone practice to KEEP your hearing that way. In fact, wherever you go, Sonotone help is available. There are over 400 Sonotone offices throughout the country. They are listed in phone directories under "Sonotone."

Your hearing problem will receive careful and confidential attention in the privacy of any Sonotone office, or in your own home. A consultation will cost you nothing, nor obligate you.

Why don't you phone the nearest Sonotone office for an appointment?

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- *Now with automatic noise suppressor to guard against sudden noise-shock*
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- *Inconspicuous on men; may be worn invisibly by women*
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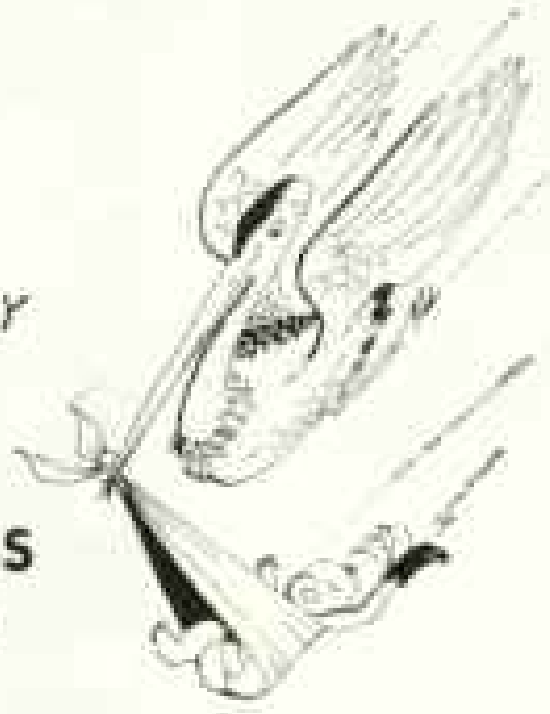

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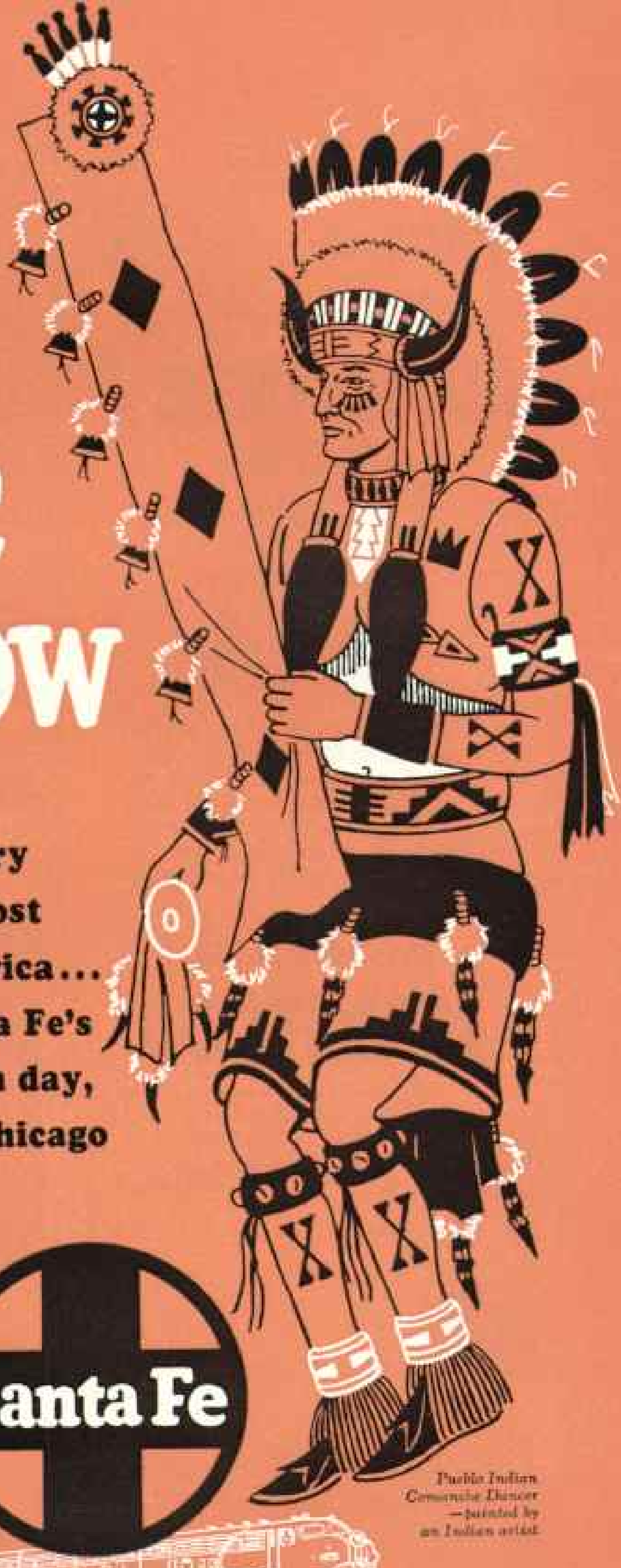

Super Chief
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Canada

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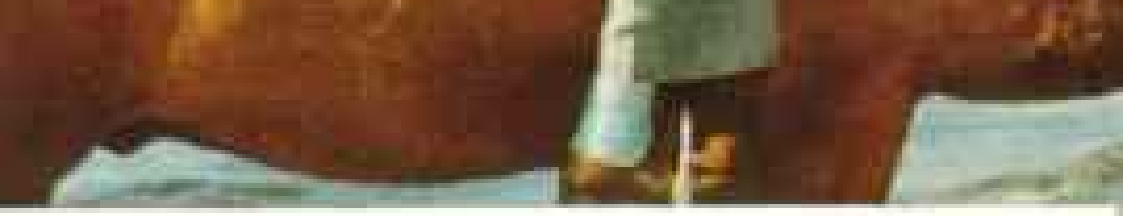

Sportsmen rate Canada's lakes and rivers tops for trout, bass, musky, salmon, other prized game fish.

It's so easy to flavour your holiday to taste in Canada . . . You can combine a fishing trip with big-city sightseeing, a motor trip with camera shots in National Parks . . . See your travel or transportation agent; meanwhile mail the coupon.

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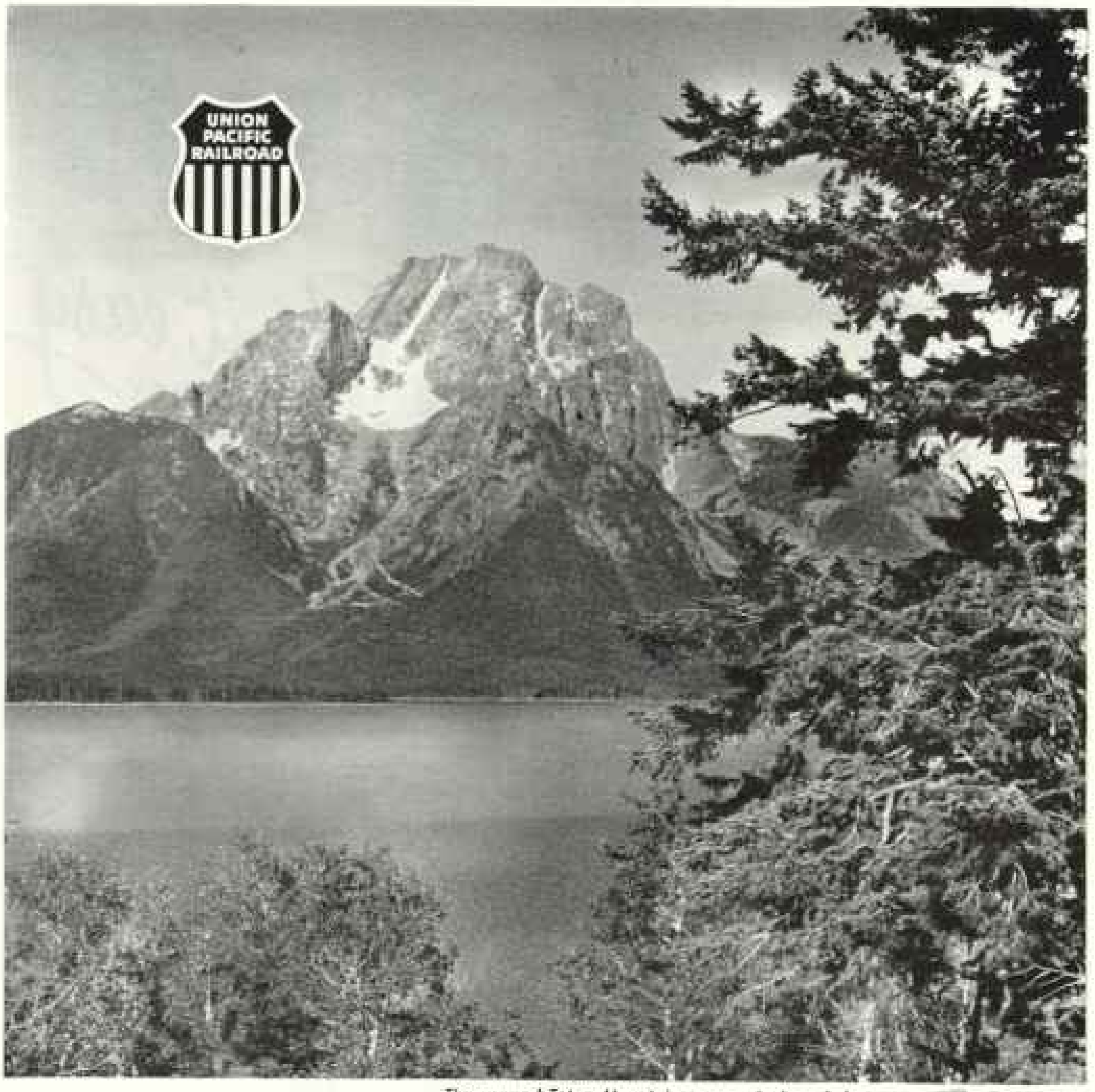

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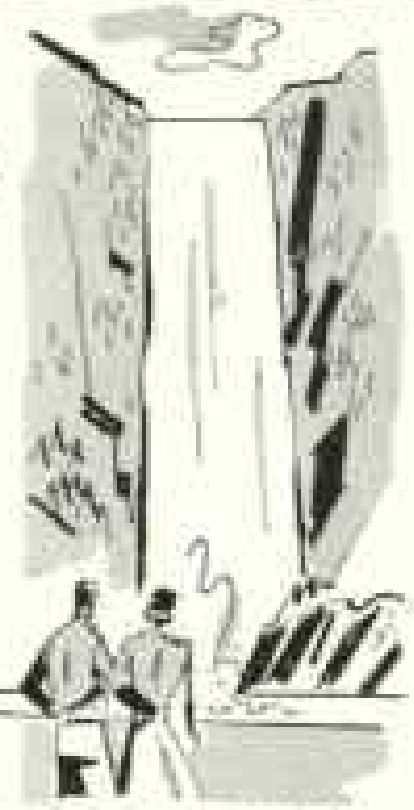

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ROAD OF THE *Daily* STREAMLINERS

TIPS ON TRAVEL

by BRADLEY WESTON
World Traveler, Author and Travel Columnist

A heart-to-heart talk with Commodore Isaac Hull who commanded the U. S. Frigate Constitution in 1812

I would be willing without further ado to turn in my badge in the Sea Scouts if I could have a look at Commodore Isaac Hull having a look at the new liner, Constitution. The name "Constitution" is no strange one to the Commodore. He commanded the U. S. Frigate Constitution in the War of 1812, and knocked off the Guerrière in a famous scrimmage that took place off the Grand Banks.

Kennels for Cannons

I suspect you're up there, Commodore, on a large and commodious cloud bank reserved for naval officers, saying to yourself, "This is a strange way, indeed, to go to sea." Well, sir, *this* Constitution is built more for comfort than combat. Instead of 24-pounders and carronades, it carries two swimming pools, one soda fountain, three barber shops, an auditorium and an air conditioned kennel.

Six Days to Gibraltar

In the records I see where they gave you $2017.60 for being a skipper, and the sailmaker was content with $444.40. Believe me, the payroll is higher today, even though we've dropped the sailmaker. The new Constitution carries a staff of 577 to get 1000 passengers back and forth across the Atlantic in style.

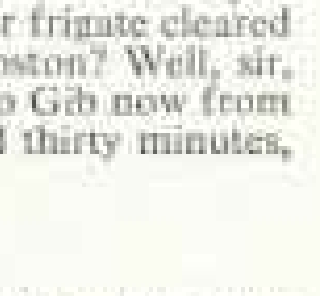
Remember once in 1803, when your frigate cleared Gibraltar twenty-nine days out of Boston? Well, sir, the Constitution and Independence do Gib now from New York in six days, two hours and thirty minutes, without even puffing hard.

Keeping Cool

These days, it's hard to imagine the steaming summer of 1804, when you stood off the Barbary shore and let them have it with the cannon. For one thing, this new Constitution is ventilated with cool air by machines that make as much cool air every day as a block of ice that would weigh 1,600,000 pounds.

With these new icemakers, the old salt pork and dried beef days have disappeared. For lunch, the new Constitution and Independence offer nine kinds of appetizers, three kinds of soup, two kinds of fish, eight different entrees, seven cold dishes, four kinds of salads and six different desserts. Take one or all.

Floating Resort



Well, sir, things have changed some, haven't they? Going to sea these days is rather like basking on a floating resort. Perhaps you will join us in the Mediterranean one day, Commodore, and sail home along the gentle Sun-Lane route that you knew so well. We'll look for you in the wheel house and keep a chair for you in the Barbary Tavern on *our* Constitution. Fair breeze, sir.

For more about these great new Sun-Liners serving all Europe via the Mediterranean . . .

See your Travel Agent or

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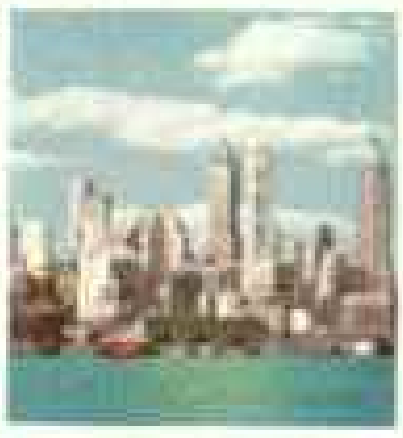

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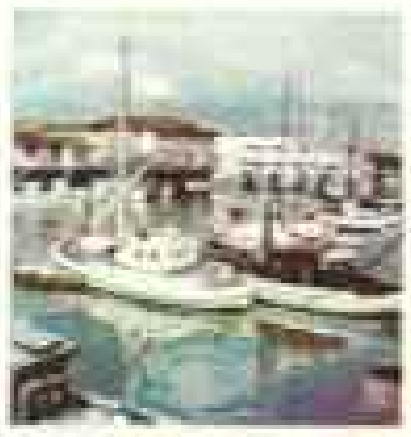

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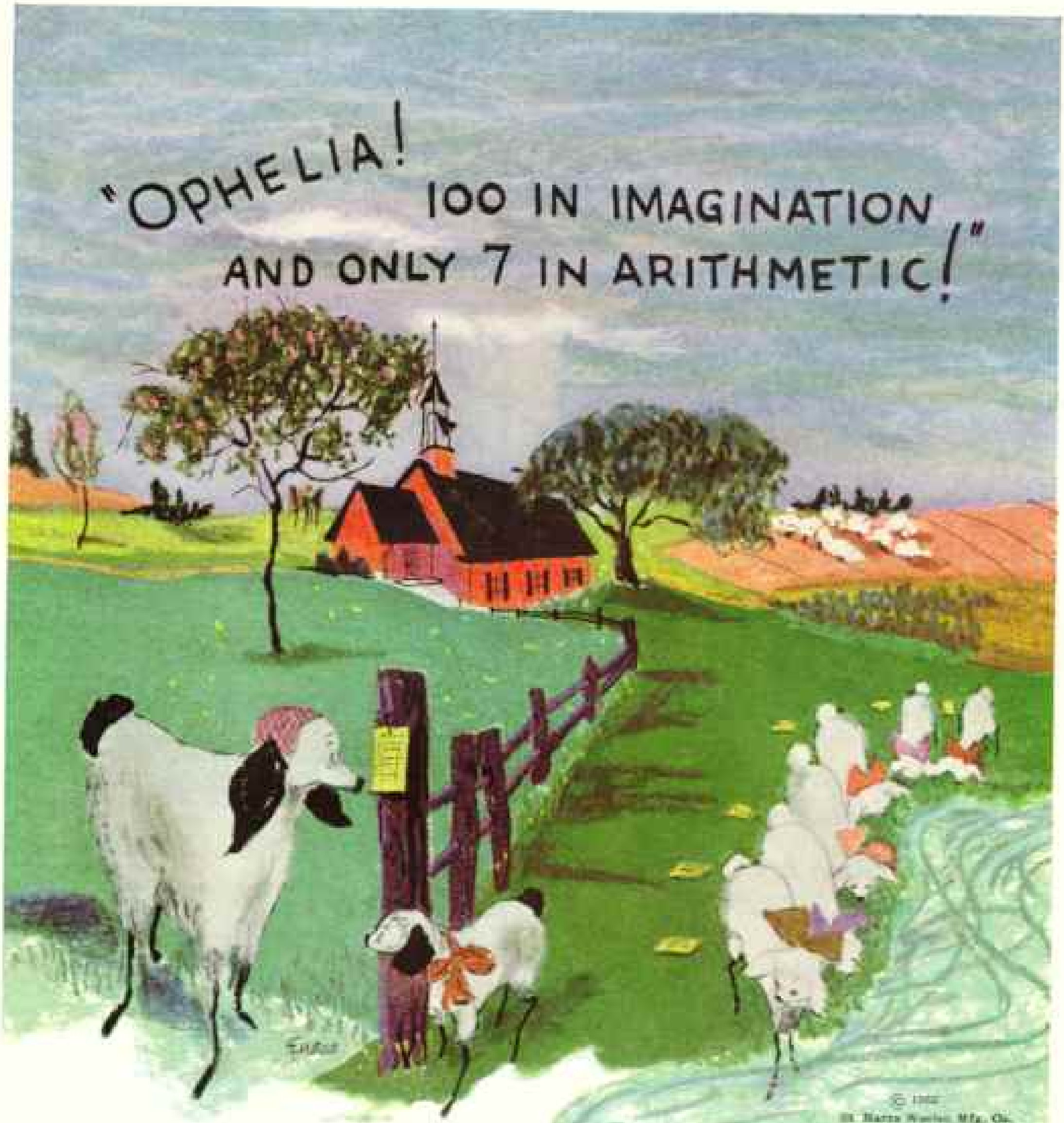

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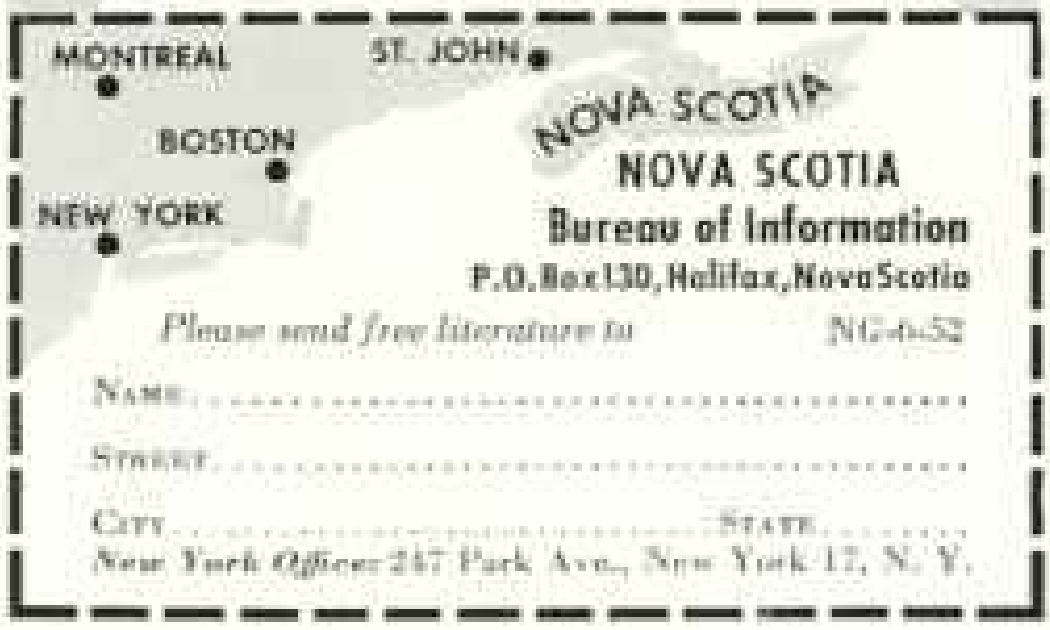

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In addition, methods of treatment for many other illnesses have been improved so much that the years of childhood are safer today than ever before.

As a result of these advances, doctors and other specialists are now working toward a new goal—to bring *all-round health* to every child. This means more than protection against disease and correction of physical defects. It includes equal recognition of all the factors that will help the child achieve a healthy emotional life.

In order to give the child every opportunity to develop and maintain *all-round health*, authorities stress the importance of the suggestions given below.

For the child's physical well-being

During the early years, good health habits can be developed that may be of benefit throughout life.

Doctors believe that if the child is taught to eat the essential foods, and if plenty of sleep, rest, relaxation, and exercise are included in the daily routine, the child will be more resistant to certain illnesses that occur during the growing years.

Specialists also say that safeguards against communicable diseases must not be relaxed. Fortunately, most of the common childhood diseases are under control—thanks to various immunizations. However, since certain inoculations must be repeated at intervals, it is wise for parents to keep in touch with the doctor. In this way, the child's protection can be kept up to date.

For the child's emotional well-being

Specialists generally agree that a healthy adjustment to life often depends on how the child's emotional needs are met. They say that if the usual anxieties and conflicts of early life are dealt with patiently and sympathetically, the child will be better prepared to meet troublesome situations in later years in a mature way.

Of course, all children experience some of the emotional problems of growth. If, however, a *persistent* behavior problem develops, the help of a specialist may be advisable.

Periodic medical check-ups are also important in maintaining *all-round health* among very young children. These give the doctor a chance to detect both physical and emotional difficulties early, and to give treatment or advice when it will be most effective.

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VOL. CI, No. 6 WASHINGTON JUNE, 1952

THE NATIONAL GEOGRAPHIC MAGAZINE

Roaming the West's Fantastic Four Corners

BY JACK BREED

With Illustrations from Photographs by the Author

WITH no great eye for beauty, a Mormon newspaper in September, 1861, described southeastern Utah as "one vast 'contiguity of waste' and measurably valueless, excepting for nomadic purposes, hunting grounds for Indians, and to hold the world together."

The labyrinthine canyons, soaring mountains, natural bridges, barren flats, and towering pinnacles of this maligned country still do a fair job of holding the world together. But they are far from "valueless," at least to those who will brave the rigors of travel for the thrill of a forbidding but fantastic spectacle.

Utah's Gems Have a Rough Setting

This 20,000-square-mile quarter of Utah comprises, in fact, a priceless portion of our scenic heritage, and one that is little known. In it are to be found, among other gems, the forgotten Shangri-la of Chesler Park, the silent stone cities of Devil's Lane and Cyclone Canyon, the surrealist sculpture of the Valley of the Goblins, the great 500-foot pillars of Monument Canyon.

Their setting is the Four Corners Country, that gaunt, erosion-gutted sector where boundaries of four States meet: Utah, Colorado, Arizona, and New Mexico.*

One of the largest roadless areas in the United States, the region has always defied exploration by any but the hardiest and most persistent (map, page 711).

Now new roads, spurred by discoveries of oil, natural gas, and uranium, are thrusting inquisitive fingers into the back country. Already a 270-mile route bisects it from Torrey, Utah, on the west to Cortez, Colorado, on the east.

These roads are no boulevards, but they are passable. As more are added, they will present the touring motorist with an opportunity and the Nation with a responsibility. The opportunity will be to tap a treasure-trove of spectacular, unspoiled beauty. The responsibility will be to ensure that this asset is preserved intact for the enjoyment of generations yet to come.

Where Indians Speak German

By jeep and horse and station wagon I traveled some 3,000 miles in this area, often jouncing over rangeland, deserts, and scarps where a dirt track was a highway and a rocky stream bed an avenue.

The long trek started at Cortez, Colorado. Picking up my guide, Rollin Usher, there, I headed south for the Consolidated Ute Agency, 11 miles away.

"Not many people know anything about these Utes," said Usher. "Maybe you can get some pictures."

"All right with me, so long as they don't smash my camera."

Under the suspicious gaze of the assembled leaders, I tried through an interpreter to explain our mission. I was making heavy going of it until I tackled the problem frontally.

"What I would like most," I said, "is to take a color picture of the council itself. And I promise to send prints to each member just as soon as I can."

That did it. Solemnly, the council members filed out of the chamber and lined up in front of our station wagon for their portrait. The ceremony completed, we all trooped over to the local trading post for a Coca-Cola.

* See "Flaming Cliffs of Monument Valley," by Jack Breed, NATIONAL GEOGRAPHIC MAGAZINE, October, 1945.

Stone Pillars Capped Like Mushrooms Dwarf Two Explorers in "Goblin Gulch"

The Four Corners Country, where Utah, Colorado, Arizona, and New Mexico meet, is a geological museum. Rock strata lie exposed in towering buttes, deep canyons, and lonely monoliths. Visitors to the Valley of the Goblins, near Hanksville, Utah, find themselves in a Hallowe'en fantasy (page 726). Lateral erosion has whittled a mushroom forest in the gulch. Hard umbrella caps give protection to these formations.

As I handed the last Ute his bottle, he sang out cheerfully, "*Danke schön!*"

The trader laughed at my astonishment. "Manager of the post here used to be a German," he said. "The Utes got so they did a lot of their trading in *Deutsch*."

Outside the post, dozens of Ute women and curious youngsters had gathered (page 728). The minute I produced a camera, however, they scattered like quail.

To entice them out again, we set up a lure, a jug full of green collared lizards I had caught out on the desert with a fishing rod and a noose. Shyly, the Utes reappeared and clustered about the bottle (page 739). But when I started to pull out a lizard for a close-up, Utes of all ages vanished.

This puzzled us. The Utes are accustomed to the desert and its creatures. Surely they must have known that this little green lizard, *Crotaphytus collaris*, is harmless. We could put down their fear only to superstition—perhaps some notion like that of the Zuñi and other southwestern tribes, who believe that the breath, not the bite, of the lizard is evil and poisonous.

Exploration, however, and not conversion, was our mission. For years I had wanted to make a pack trip into the spectacular and rarely visited Needles country to the northwest. Ross Musselman, I knew, was the man to get me there. We pushed on to his 4-M Ranch, 16 miles southeast of Moab, Utah.*

In Search of the Needles

Though born and brought up in Pennsylvania, Ross knows the Needles like a dog-eared book. In 1933 he and his brother took a two-months' saddle trip into this section after a pack of wolves. So impressed was Ross that he bought a ranch and moved his whole family out to Utah.

From Ross's ranch our party backtracked for 40 miles toward Monticello at the base

* See "Utah's Arches of Stone," by Jack Breed, NATIONAL GEOGRAPHIC MAGAZINE, August, 1947.

Men and Horses Inch Their Way down the Rock-strewn Lip of a Cliff

Descending from Grand View Point to the lower rim of Monument Canyon (page 725), the author's party followed a narrow shelf overlooking dizzy depths. Several animals slipped and hung on the brink until men pulled them to safety (page 712). Here guide Roy Holyoak leads his horse over loose rubble. Earl Worthington, safely across, watches on the right.

of the Abajo Mountains, then turned west to Dugout Ranch, headquarters for the Indian Creek Cattle Company (page 714).

Hidden in a remote canyon, accessible by an unmarked road that is passable only when dry, Dugout has one of the most dramatic locations I have ever seen. The entrance trail twists down through Indian Creek until the canyon itself widens into a flat-bottomed oasis half a mile wide and perhaps ten miles long. Fields of grass and alfalfa, bordered by gently swaying cottonwoods, surround the ranch, while in the background rise ruddy sandstone cliffs a thousand feet high.

Herds of the little-known Indian Creek Cattle Company graze nearly a million and a half acres of publicly and privately owned land. Its wealthy owner, J. A. Scorup, now 79, started at 18 with two horses, a grubstake, and five dollars.

At Dugout we refueled our cars, filled our water tanks, bought last-minute supplies, and headed out through the corral gates. The trail picked up the thread of Indian Creek and followed it through beautiful open areas of grassy rangeland. Ahead of us, North and South Sixshooter Peaks pointed the way.

Bucking a Three-mile Sand Trap

A few miles beyond the ranch we came to the bank of Salt Creek. It was dry as a bleached bone, but beyond it lay three miles of soft, deep sand and many embankments.

"The jeep might get through," said Ross, "but that station wagon won't get 10 feet!"

I looked at the delicate photographic equipment resting safely atop the bed in the rear of the car, and at the other 2,000 pounds of field equipment we had packed in the station wagon (page 730). It would be a tremendous job to take it all out and repack it on restive horses; the jeep itself was already fully loaded.

"I think I'll try it anyway," I called to Ross. "Ben, you and Mac stick as close to me as you can with the jeep—just in case."

I let some air out of the tires and started.

708

Sandstone Pillars Cling to the Timeworn Face of a Butte in Cathedral Valley

Massive formations shaped like Gothic churches gave the valley its name (page 734). Wind and rain may eventually detach these columns from the cliff, forming pinnacles like those on pages 720 and 721.

209

Seamed Walls Frown upon a Dwarf Station Wagon and a Pygmy Driver

Erosion, eating away at ancient fault lines, cuts deep vertical fissures. Horizontal cracks and ridges mark various strata deposited here eons ago when this area was completely ocean.

Scornful of Sagebrush, a Pilot Takes Off from Monument Canyon's Inner Rim

Residents of Moab, Utah, were surprised when they learned that supplies were being flown to the Four Corners explorers (page 722). Never before, so far as the author could learn, had planes attempted a landing on the canyon's rugged lower rim. Here the area looks expansive and flat. Actually, a rock ledge marking the canyon's brink lies only 500 feet in front of the plane (page 729).

The station wagon plunged over a five-foot drop into the creek bed, smashing the springs down onto the axles and sending a wave of sand over the car roof.

Jamming the hydramatic transmission into low, I gunned the engine. Like a frightened jack rabbit, the car shot forward, bowling over brush and six-foot junipers and leaping dunes and embankments with all four wheels off the ground.

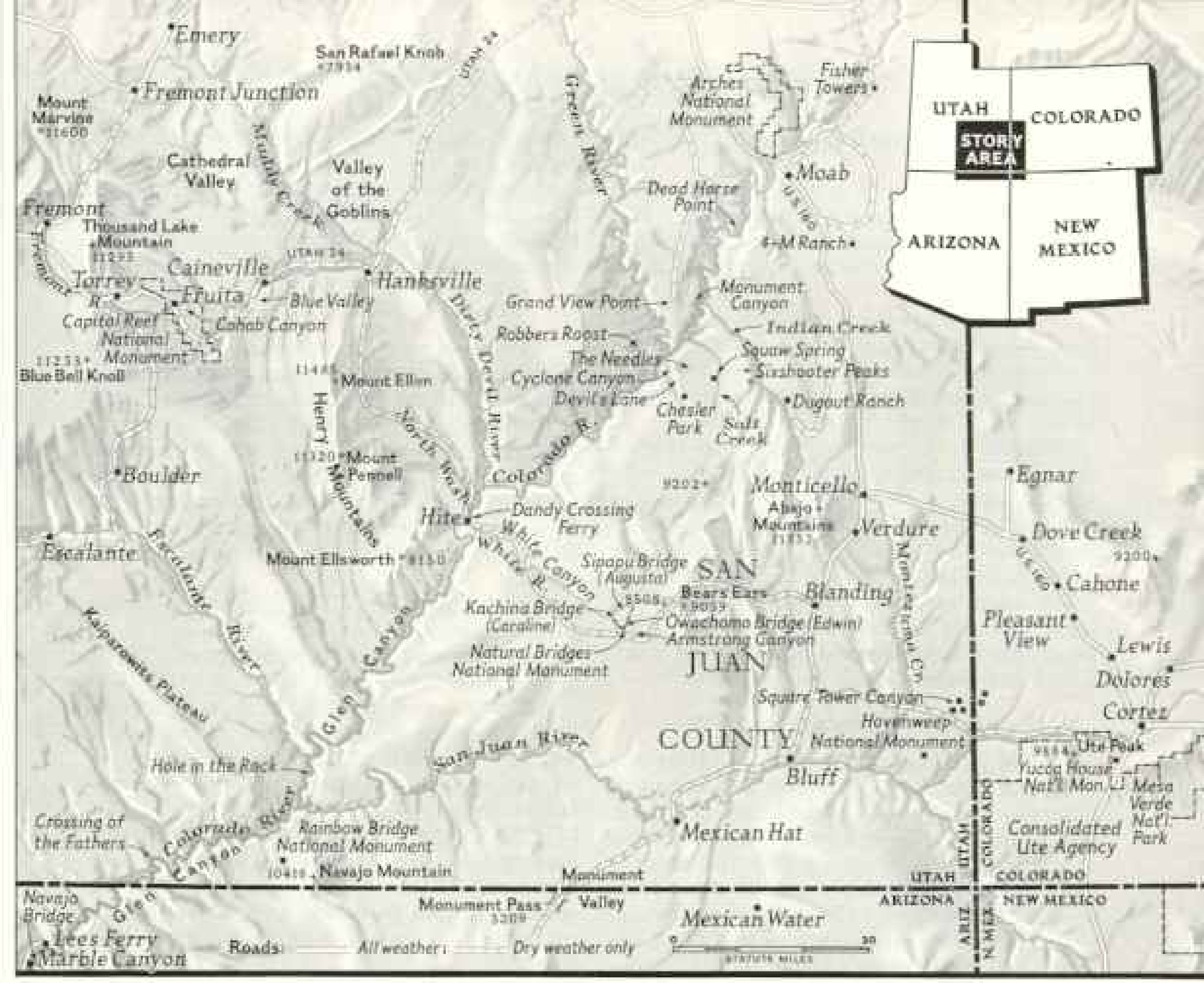
Chaotic Landscape "Reverses" Compass

My one fear in that hub-deep sand was stopping. But I needn't have worried. The first mile zipped by so fast that it was all I could do to follow the vague and twisting trail. In less time than anyone had believed possible, we had barreled in to Squaw Spring, the site we had chosen for a camp.

We awoke the next morning to make a significant discovery—the sun was coming up just where we thought it had gone down the night before. We weren't exactly original. Ross told us that a New York lawyer he had guided to the Needles one summer swore that "the sun rose in the east only once the whole time I was down there!"

We were, in short, in country as confusing as a Coney Island fun house. For thousands of square miles the land was gouged into a maze of canyons and mesas, split by innumerable fingerlike reefs. In the clear, dry air, some 5,000 feet above sea level, cliffs miles away appeared to be within arrow shot. Completely mixed up, one could be sure of neither distance nor direction.

To add to the unreal, lunar quality of the landscape, we saw no sign of human habitation and scarcely any wildlife. An occasional range rider from Indian Creek passed this way, looking for strays. Ross asserted that coyotes, ringtail cats, lynx, bighorn sheep, and deer had been seen, but the only "native residents" we saw were snakes, lizards, and a few insects.



Drawn by Herbert E. Eastwood and Irvin E. Alleman

Southeastern Utah Is a Maze of Deep Canyons and Sun-bleached Mesas

Approximately one-fourth of Utah, some 20,000 square miles, lies in Four Corners Country, where the Beehive State touches Colorado, Arizona, and New Mexico. Here Nature has created a strange landscape. Much of the region is roadless and seldom visited. Exploring Monument Canyon, Chesler Park, and the Needles country, the author and his companions penetrated areas far from human habitation.

Yet, if the terrain seemed relatively barren of animate life, it was rich in geologic history. As the stubbornly meandering streams have cut downward and sidewise against hundreds of layers of rock, they have encountered sections which resisted their erosive action. These became the isolated buttes and mesas now dotting the Southwest's horizon. Where whole ridges stood fast against the water's assault, knifelike reefs were left.

Great Needles, Nature-made

From such reefs developed the weird skyline of the Needles country. Water freezing in the fissures of these ridges broke off great chunks of rock, carved the remaining sandstone into rough fingers; then, aided by dripping rains and wind-blown sand, into sharp pinnacles and sharper "needles."

To see these sights close up, we branched out from Squaw Spring by jeep, horseback, and on foot. Two of our most rewarding spectacles were Cyclone Canyon and Devil's Lane—sheer-walled corridors 14 miles long and half a mile wide.

Usually, in such canyons, the bottoms are a jumble of rocks and debris rolled down by the streams which first cut their way through. Yet at Cyclone and Devil's Lane we found flat grassy avenues unmarred by rubble (pages 716-17). The canyons, without any visible inlet for water, simply dropped off steeply at either end, like skyscrapered streets at the brink of a gulf.

Even more beautiful was Chesler Park. We approached it by jeep over a 300-foot escarpment, thence down Devil's Lane, and finally through a well-masked passageway in the park's ring of stone towers.

Chesler, named for a rancher who drove cattle into it in 1885, is little more than three miles square but as lovely a spot as the West affords (page 715). Its warmly colored walls rise 600 feet, shutting it off from everything but the clear, blue sky. On its floor lies a blanket of thick grass, patched with acres

of yellow wild mustard; a spring provides fresh water.

We pitched camp in a giant cave hollowed from a stone island in the park's center. This reef was a lovely place. Perhaps half a mile long, it built up to a cluster of pinnacles about 400 feet high.

The cave we used was one of several carved from the island's base. Cowpunchers for half a century or more have used them for camp sites and, by building fences across the mouths of the larger ones, for corrals as well.

Relaxing in our particular niche, we studied the delicate coloring of the park walls—the salmon, gray, pink, beige, and tan shades which gave the little valley such a serene and harmonious feeling. Here was a good place to forget all the problems of the outside world.

Yet even paradise can pall, and we had other sights to see. Packing back to Moab, we dropped in at Howard Shields' Red Rock Lodge and contemplated our next step.

Peering over Grand View Point

Several years before I had stood at the end of Grand View Point, between the Green and Colorado Rivers, and looked straight down into a strange side canyon of the Colorado. It was not a large or even a beautiful canyon, but it had some gigantic pinnacles rising from its floor that looked well worth investigating.

In Moab little was known of this place beyond its local name, Monument Canyon. Situated in wild country, it was thought to have been probed by no more than a dozen individuals at most.

Climbing into a little plane owned by my friend Puge Stocks, I set out one morning to reconnoiter. Puge bounced the craft off the cow pasture behind his house and spiraled upward above the scarps surrounding Moab.

In a few minutes we covered the 25 miles downstream to Grand View Point. Puge, at my request, circled the cliff, then zoomed down into Monument Canyon itself (page 723).

It was an impressive but discouraging sight. The cliff itself was as straight and sheer as the Empire State Building, and twice as high (page 725). Nor did it look possible to climb from the Colorado's deep-cut bed up to the bench, or plateau, on which Monument Canyon sat—a canyon above a canyon. We flew back to Moab.

A trip out to the point by car left us as perplexed as before. Then Roy Holyoak, Moab rancher, told us he had taken horses over Monument's rim once before and knew he could do it again.

Quickly we organized a pack trip. Russ Mahan and Earl Worthington of the National Park Service got time off to join us. Puge Stocks and Glen McFall agreed to shepherd us from the air and to drop supplies as soon as we located our camp.

By noon of one May morning we were ready. The pack mules and saddle ponies had been trucked to Grand View Point (page 731). All we needed was a trail down over the rim.

Moving a Tree Reveals the Trail

"Where do we go from here?" I asked Roy.

"Just walk over to the edge, move that dead juniper out of the way, and you'll find a trail."

Russ and I had passed that spot several times and had never seen a sign of a break in the rim. I moved the dead tree. Sure enough, there was a two-foot gap leading down to a narrow shelf notched against the cliff. Below lay more than 2,500 feet of very empty space.

I turned to Roy. "You mean we're going to take horses down *that*?"

"We sure are," he said with a grin. "Let's go!"

All went well for the first two switchbacks down the sheer cliff face. By then Roy was on the fifth level, and the rest of us were on successive rungs above, as if on a stepladder (page 707).

Suddenly Earl's pack mule became frightened, cut inside his horse, and shoved it halfway over the precipice. The other animals, panicky, began to bunch and to let loose a rockslide that forced Roy to duck under a ledge.

Traffic Jam on a Precipice

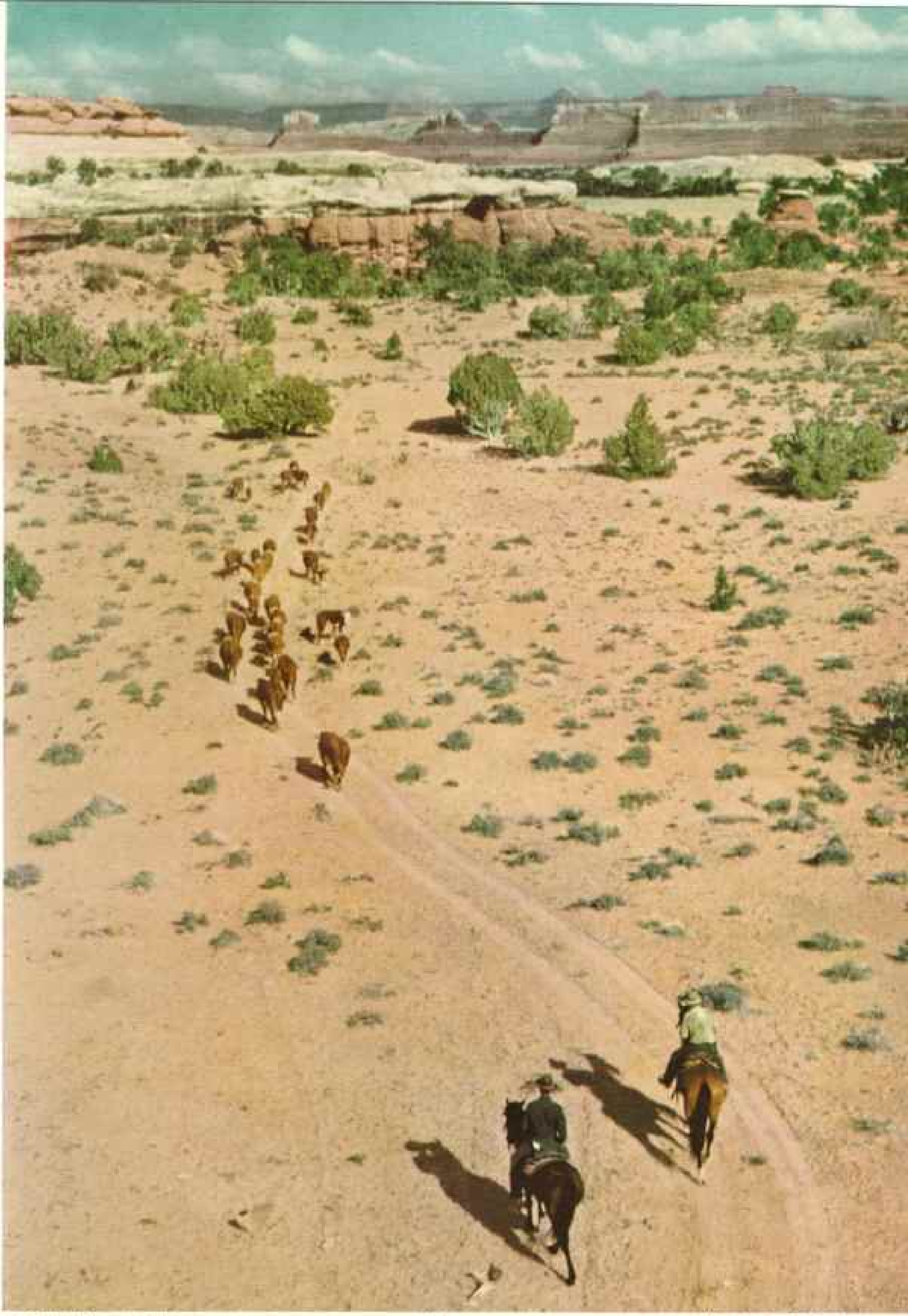
Where the horses and mules had huddled, the trail was less than three feet wide. Earl's mare was sitting on her haunches, her back to the cliff, pawing desperately at the ledge for some kind of foothold. We thought she was a goner, that she would slip off to her death on the rocks far below.

In perhaps half a minute, which seemed like half an hour, she managed to catch one front hoof in a tiny crack and to regain, momentarily, her balance. But now all the pack mules decided to turn around. In no time, three of them had their rumps to the rock wall, their forequarters hanging over the abyss, while the fourth animal tried to jam itself behind the others.

Earl took a chance. He picked up a rock and heaved it at the fourth mule. It worked. The animal backed away and stood still.

As Roy led his own horse and mule down to the bottom and slowly climbed back himself, we all froze where we were, and the animals, luckily, followed suit. Soon Roy and Earl, inching up the trail, managed to reach the bunched beasts, disentangle them, and lead them, one by one, to safety.

Letting out a great sigh of relief, we made



Kodachrome by Jack Breed

Utah Cowboys Round Up Strays in a Wilderness of Gaunt Buttes and Hidden Canyons

Travelers Who Pass This Gate Leave Comfort Behind

Beyond the tree-lined entrance to Dugout Ranch lies a pitted, tortuous trail leading to Utah's beautiful and little-known Needles section, one of America's last frontiers.

From here the Breed party began an arduous pack trip, one of several sorties into the remote Four Corners Country northwest of the junction of Utah, Colorado, Arizona, and New Mexico. The author logged 3,000 miles in this area during a summer's travel.

Dugout Ranch, owned by the Indian Creek Cattle Company, is tucked into a remote canyon walled by russet cliffs. No roads lie beyond the ranch gate.

Fresh water is obtained from an occasional spring or rain-filled pothole; gasoline must be carried in.

To those who venture into the Needles area, weather is the all-important factor. Sudden rainstorms, flooding narrow canyons, can spell disaster.

Kodachrome by Jack Breed

Chesler Park's Eroded Spires Ring a Green Oasis. In This Southeastern Utah Setting a Jeep Looks Like a Discarded Toy

Water, wind, and frost shaped these sandstone battlements. They enclose three square miles of verdant parkland in the heart of the Needles region. The jeep bumped its way into the meadow through a hidden passage between rock towers. The park was named for a pioneer Utah rancher.

Kodachrome by Jack Breed

Stone Peaks Rise Like Cathedral Spires Above the Jagged Walls Lining Devil's Lane

Unmarred by rubble, Devil's Lane winds like a grassy promenade for 14 miles between these frowning cliffs. Chesler Park (page 715) lies at one end of the canyon.

717 Kodachrome by Jack Breed

Utah's Wild Four Corners Country Is One of the Largest Roadless Areas in the United States

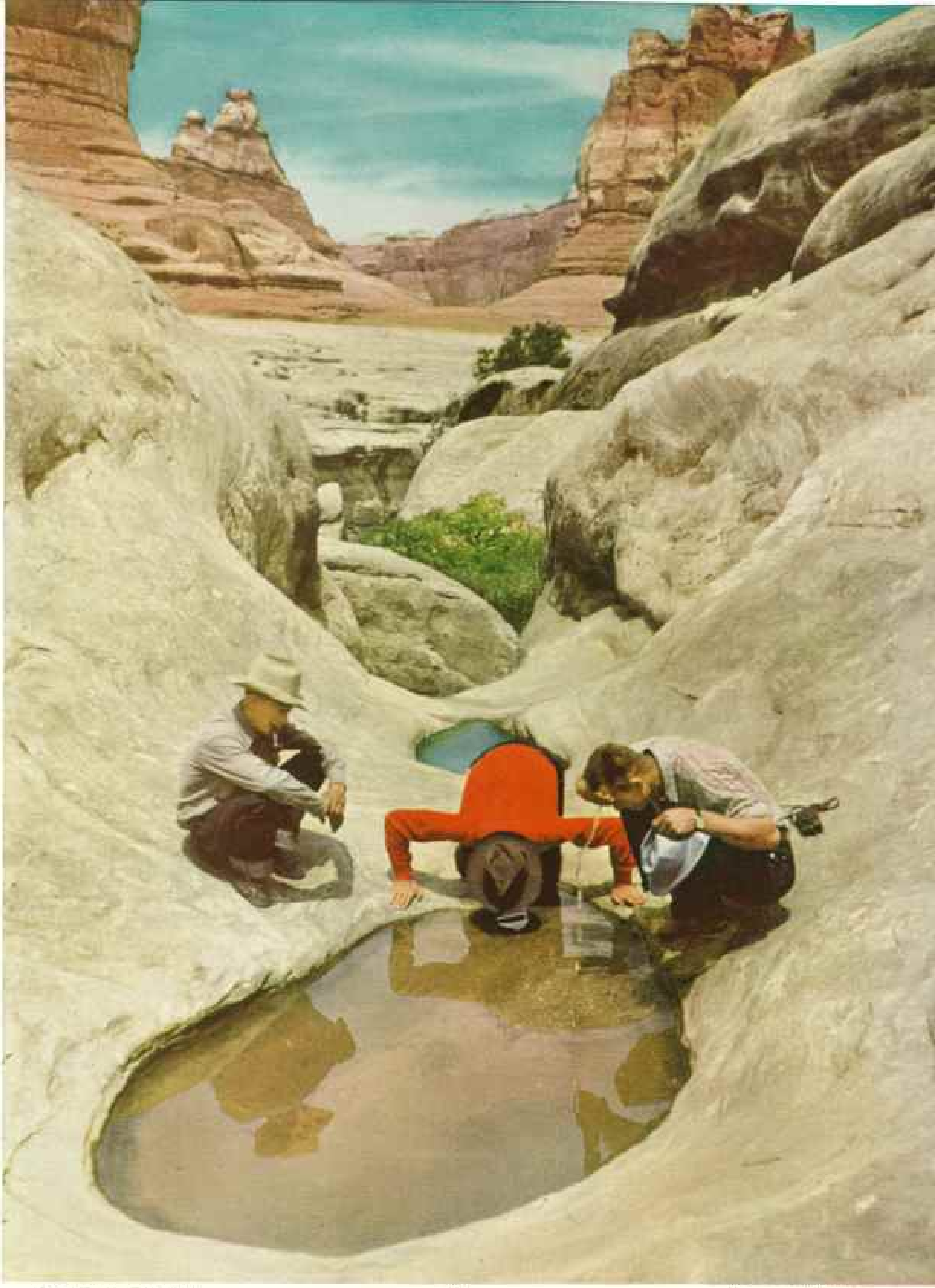
Travelers often become hopelessly confused in the maze of canyons. Said one visitor, "The sun rose in the east only once the whole time I was down there!"

↑ Switchback Trails Force Jeeps to Zig in Low, Zag in Reverse

On the Four Corners range, a cowboy's best friend is often his jeep. Backing up, then edging forward, he negotiates winding trails which cattlemen have hacked in the sandstone hillsides. Conical buttes (background) are called the "Coke Ovens."

↓ Horse and Man Seem to Agree: It's Tough Going

Jeeps and station wagon jolted and pitched into all but the most remote crannies of the Needles country, then the men took to horseback and shanks' mare. Saddle-sore Ben Cornwall relaxes on a jeep seat; gun-toting guide Ross Musselman squats on boot heels.



Kodachrome by Jack Breed

By Desert Code, a Man May Drink and Cool His Brow but Never Bathe in a Pothole

Even at 6,000 feet in early May, the sun parches those who thread the Needles. Water is too precious to pollute. The expedition often timed its forays to follow heavy rains that would pack sandy trails and fill the pools.

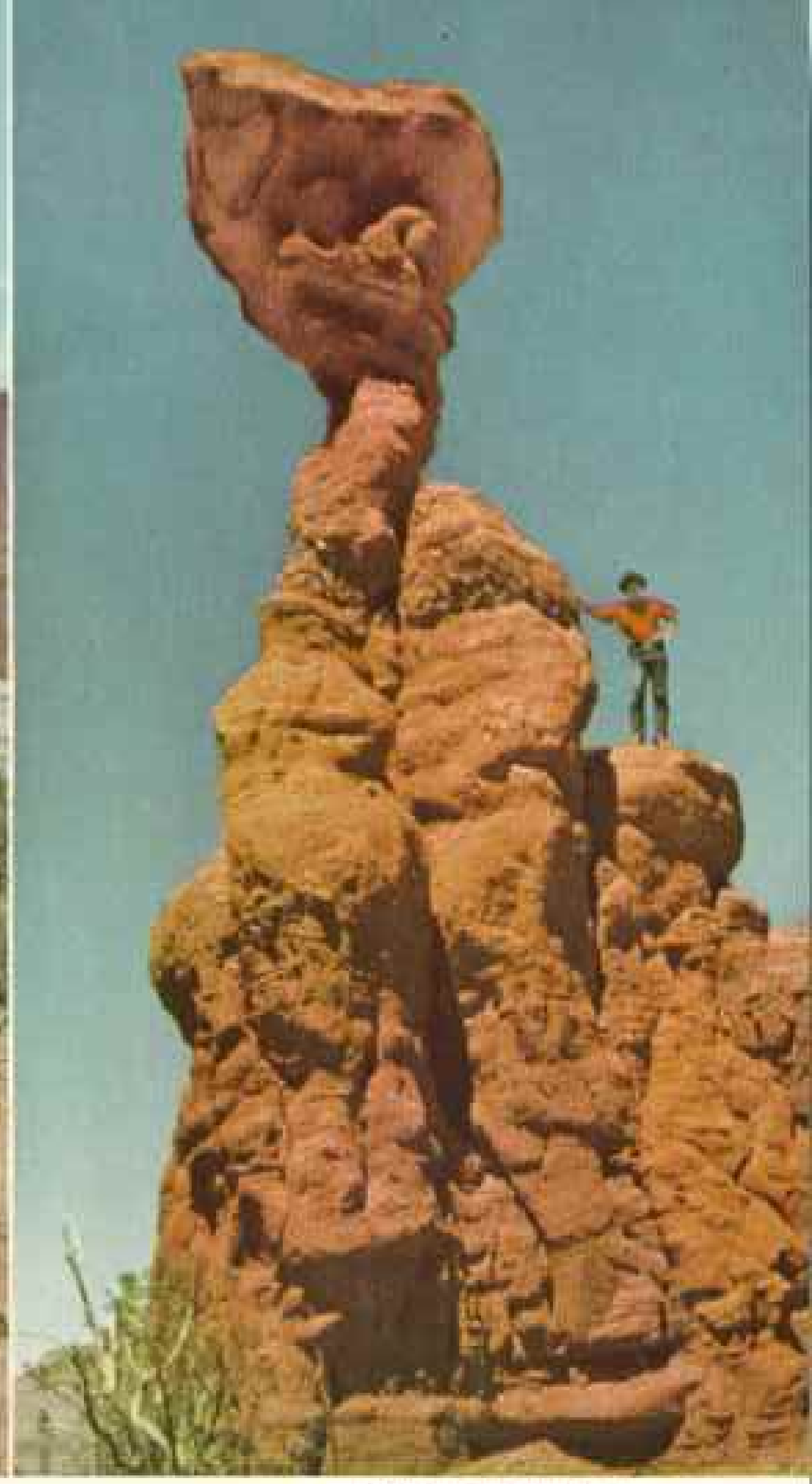
From Monument Canyon's Brink, Pylons Hundreds of Feet Tall Appear Like Toothpicks

Down this almost perpendicular cliff, the party on horseback rode a dangerous trail to reach the canyon's lower rim. Near by they cleared an airstrip and landed planes. Afoot they explored this scarred pit and its lonely pillars.

Kodachrome by Jack Breed

Nearly as High as Washington Monument Rears This Geologic Yardstick

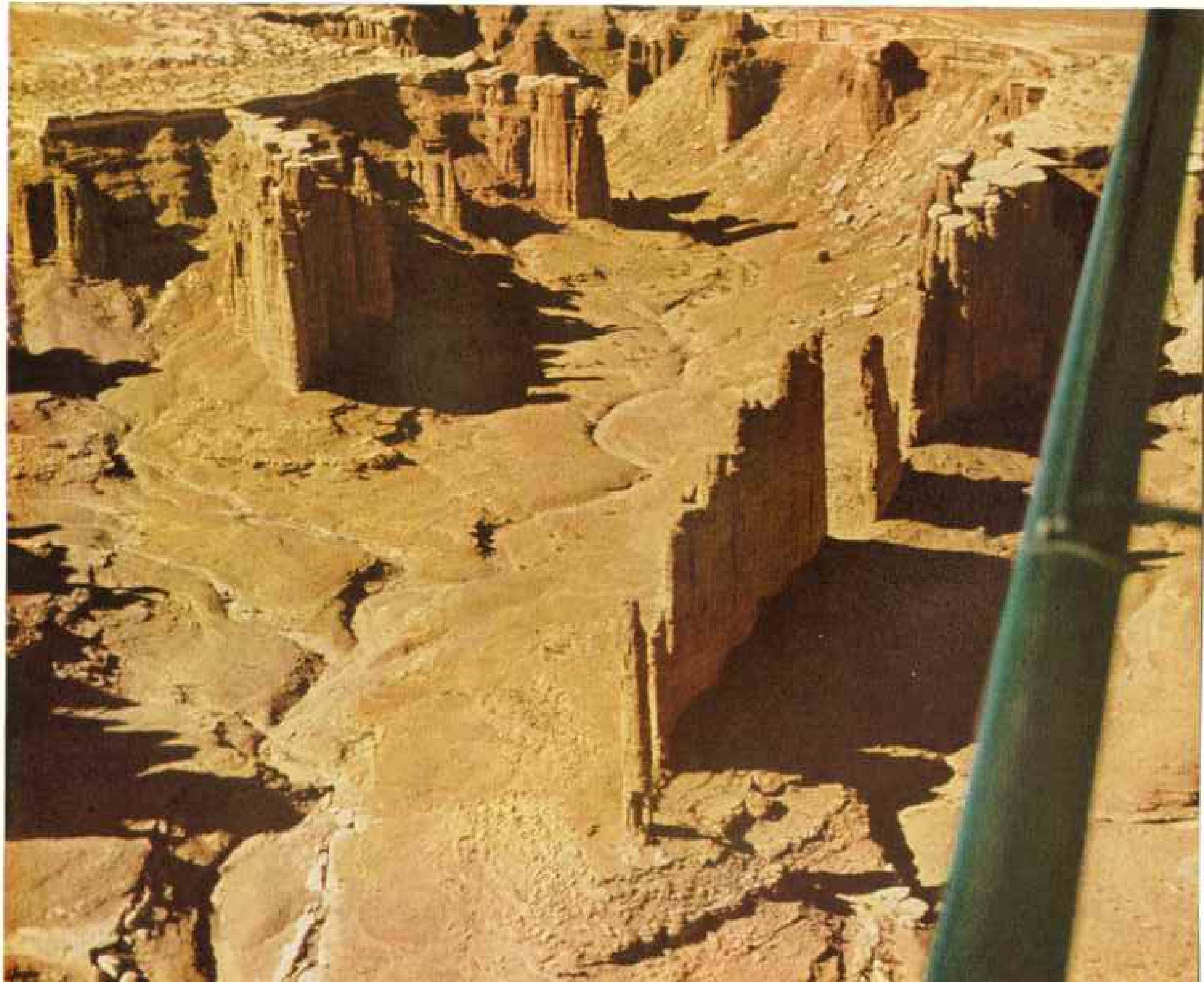
Buttes and columns were formed when layers of hard rock resisted time's assault. Hat-waving men emphasize the monolith's height, estimated at 500 feet. This monument appears in the upper center of the opposite page.



Ansco Color by Jack Breed 722
Kodachrome by Jack Breed

Beans for Breakfast? No, These Monument Canyon Explorers Start the Day with Airlifted Ice-cream Sundaes

Bush pilots bounced to a landing on an improvised airstrip near this flagpole. They brought newspapers, mail, milk, and sundaes. The Explorers Club flag curls around the staff; National Geographic's banner drapes a bush. Right: Donald Duck Rock stands in the Fisher Towers area. Erosion may soon behead poor Donald.



Like Roman Columns, Monument Canyon's Stupendous Spires March in Line

The slim shafts are the remains of vertical pillars of sandstone from which centuries of wind and rain have worn away less resistant material.

Surface water, penetrating cracks in the once unbroken, rock-covered tableland, washed away supporting earth. Parts of the mesa collapsed, leaving these fragments to be sculptured into reefs and columns by the action of wind and weather.

As erosion whittled the fluted pinnacles, they were protected at the top by their little caps of tough white sandstone (page 720). Those at upper right still have their caps and their full height; those in the foreground have lost theirs and are beginning to disintegrate.

The creek bed is littered here and there with capitals of columns long since tumbled and swept away.

This air view shows how swift and powerful flash floods keep the tower bases swept clear of rubble.

Kodachrome by Jack Breed

Kodachrome by Jack Breed

Cattle and Horseman Plod Through the Sagebrush of Utah's Lonely Needles Range, "Land of Room Enough and Time Enough"

Only an occasional cowhand for the Indian Creek Cattle Company disturbs the silence. Other transients who sometimes drift across this tangled tableland include coyotes, lynx, ringtail cats, and deer.

Tired Horses Enjoy a Well-earned Drink after a 2,500-foot Climb down Grand View Point (Background)

Men and mounts descended a ribbon-thin trail to reach this pothole on the rim of Monument Canyon. To make sure that water would be available after the rough ride down the cliff, the party waited until after a rainstorm to begin the trip.

Meet "The King's Men," Three Stone Goblins Guarding a Gulch

Nature posted these sandstone sentinels at the entrance to the Valley of the Goblins, 10 miles north of Hanksville, Utah. Here the forces of erosion have cut a labyrinth of small canyons, each with its own surrealist sculpture—grotesque golf balls, birds' heads, dumbbells, tanks, and turtles.

One weird column of marching figures has been dubbed "The Parade of the Bed Bugs"; another is called "The Four Sisters." There is a nightmare formation entitled "The Whatnot," and a nameless pinnacle with a sandstone "cloud" at its peak.

In recent years "Goblin Gulch" has become a popular attraction. Geologists, fearful of vandalism, have recommended that the area be placed under National Park Service protection. Erosion will topple many formations. Careless visitors could decapitate many more.

Kodachrome by Jack Breed

From These Forts a Vanished Race Defied Intruders

Prehistoric Hovenweep Indian structures such as these at Square Tower Canyon in Utah have no counterpart in modern pueblo architecture. Defensive in design, they were placed along the rimrock at the heads of boxed-in canyons, near springs.

As a rule each tower had one door, protected by rampart or parapet. Peepholes at strategic points permitted unobstructed arrow shots at foes. The largest building, Hovenweep Castle, has walls 60 feet long and 20 feet high.

Near-by cliff dwellings and pueblos show evidence of a civilization like that of the Mesa Verde Indians, 35 miles to the east. But whether the Hovenweep people preceded, followed, or were contemporaries of their relatives at Mesa Verde, and what caused them to abandon their tower-towns, is unknown. Ruins and mounds still unexcavated may hold the answers.

Kodachrome by Jack Breed

Ute Mothers Display Sleepy Papooses Tucked Away in Snug Cradleboards

Before the white man's coming, Ute Indians roamed over most of the territory now included in Colorado's boundaries. Trappers, miners, and settlers gradually drove the tribesmen into the State's barren southwestern corner, where their descendants live today. Nomadic Wiminuche and other Ute tribes are under the jurisdiction of the Consolidated Ute Agency, Ignacio, Colorado. These women belong to the Wiminuche branch. Their men discourage visitors, but the tribal council voted the author special permission to make pictures. Mothers strap infants on their backs; each cradleboard has its sunshade.

a quick resolution. For the rest of the descent we would allow only one group at a time to go down the scarp; the rest could wait at the top for their turn.

This system prevented any further mishaps until we were nearly at the bottom. Then, on the steepest part of the trail, the rear cinch on one of the mules broke. At once the 300-pound pack began to slide up over the animal's head. Blinded, the mule swayed, slipped, and hung pawing the rock, half over the brink.

This time we were ready to write off the mule as a casualty for sure, but we reckoned without its will to live and without Roy's alertness. Somehow the mule held its footing; somehow Roy got up the trail in time to grasp its reins and yank it back to life.

Once on the lower rim, we found the route to the canyon's edge an easy ride. From its lip we stared out across rocky and barren country, awed as much by the sheer size and knifelike abruptness of these cliffs and canyons as by their coloring (page 720).

When we had drunk our fill of this stupendous sight, Roy led the way back to a sandy grove of junipers. Here we set up camp and raised the flags of the National Geographic Society and the Explorers Club of New York (page 722). Sleeping bags were rolled out on the sand, a fire started, and a rich mulligan stew set bubbling in the Dutch oven.

Visitors Drop In, the Easy Way

At sunrise we arose for a vigorous day with the cameras, only to be greeted with rain and a heavy overcast. "No pictures today," I sighed.

Saddling up, we set out to explore the base of the cliff anyway when suddenly, down over the end of Grand View Point, appeared two airplanes—Puge Stocks and Glen McFall.

Galloping down to a small, sandy slope about two miles from camp, we waved frantically, and wings dipped in recognition.

"I think he's going to land!" yelled Russ in amazement, pointing at Stocks' plane.

He was. Swooping low over the rim, scornful of rocks, cacti, scrub, and potholes, Puge plunked his craft down on the little slope. His landing gear vibrated like a banjo, but didn't snap. Soon Mac brought his Taylorcraft right down beside Puge's.

Roy Holyoak, who had ridden pack trains all over this terrain, seemed unable to believe his eyes. "An airplane on the rim of Monument Canyon! And not one, but two. The folks back in Moab just aren't going to believe this."

Puge shrugged off such talk. "Here's your milk, the mail, and the morning paper," he said briskly. "Now let's clean up this airstrip a bit."

We sat and stared at him. That hair-raising trip by pack horse down the cliff face, the tedious trekking, the careful planning—had all that work been unnecessary? Wryly, Roy Holyoak summed it up: "Well, I guess those two-wheeled buzzards have finally replaced the horse for this country."

Down into Monument Canyon

We had still to essay the depths of Monument Canyon on foot. From the rim it didn't look too difficult. Closer inspection, however, showed that the rim had a bad overhang with a 50-foot drop to the closest talus slope. With a long rope we might have slid over, but it would have been quite a job to get back up.

Roy, as usual, came to the rescue. Poking around, he revealed a hidden break in the rock which let us squeeze under the overhang and then, by a series of switchbacks, descend to the slopes of rubble slanting down to the canyon floor.

In 15 minutes we were on the bottom and studying the fantastic 500-foot monoliths (page 721). From a distance their fluted sides resembled the windowed walls of skyscrapers. On their topmost floors some of them wore, like little observation platforms, a protective cap of white sandstone. Standing on it—if one could scale that height—one would be nearly as high as tourists at the top of the Washington Monument and blessed with as striking a view.

The feeling I had had when skimming over the canyon by plane was reinforced by acquaintance with its pillars from below. They were not so much beautiful as overwhelming. I was reminded of a brilliant passage from Wallace Stegner's book, *Mormon Country*, in which he describes such great strata as "two or three petrified minutes of eternity."

To face them, he asserted, is "worse, in some ways, than facing eternity itself, because eternity is a shadow without substance. Here is the residue of a few moments, geologically speaking. Here are thousands of feet of rock patiently deposited over millions of years, buckled up into the air with the slow finality of an express engine backing into an orange crate, and as patiently being worn away over other millions."*

Canyon a Box-within-a-box

We found the canyon floor virtually barren of vegetation except for a few clumps of bunch grass studded along the talus slopes. But, though rough and trailless, it was open and not hard to explore.

The canyon itself was a kind of box-within-

The Author Surveys a Wagonful of Equipment. What a Repacking Job He Faces!

Among the items are tools, extra parts for the engine, first-aid kit, double bed, gas stove, fishing tackle, seven cameras, and more than $1,000 worth of film.

a-box. The outer box was the main rim of the Colorado gorge, some 2,500 feet above the rim of Monument Canyon. This rim, where we made our camp, forms the inner box. Set within that inner box is Monument Canyon, its floor some 600 feet below the rim.

Perhaps just because it was a relatively small canyon, Monument's great reefs of pinnacles seemed all the more impressive. Even more striking, however, was something that wasn't there—noise. The canyon was silent with a silence that was almost tangible.

The cry of a hawk echoed the full length of the canyon, and even the beat of its wings could be heard for nearly a mile. Then all would be as still as if Nature herself were holding her breath, until a big chunk of capstone would break away from its pinnacle top and crash to the floor with the roar of a dozen thunderstorms.

May is a treacherous month in southern Utah. Great storms build up over the Kaiparowits Plateau and come bellowing up Glen Canyon with torrential cloudbursts and stinging winds. Such storms drove us at last from Monument Canyon.

Back in Moab, Bates Wilson, superintendent of Arches National Monument, and his son Tug joined Ben Cornwall and me for a jaunt down to the Natural Bridges country. Taking U. S. Highway 160, we sped south past our old turn to Indian Creek and on to Monticello.

Atomic Age Comes to Back Country

Long the isolated seat of San Juan County, this cool, green little Utah town—founded by Mormons—has now become the center of an oil and uranium boom. Huge mills at Monticello and in Colorado and a new pilot plant at Hite, on the Colorado River, work night and day to process ore hauled in by truck from all parts of the Four Corners sector.

Oil companies, using airplanes and helicopters, are mapping many locations from the air. Teaming up with the Atomic Energy Commission, the State, and the county, they are now striving to improve existing roads and to lay new ones.

Rough Going Ahead! Only Horses and Mules Can Conquer Some Utah Trails

After an aerial survey (page 723), the author and party decided to use a pack train for the perilous descent into Monument Canyon. "I've done it before—it can be done again," said rancher Roy Holyoak. From Moab the animals were trucked to Grand View Point to begin a hair-raising trip down the face of a 2,500-foot cliff. Here Holyoak unloads a horse, assisted by Earl Worthington, Swanee Kerby, and Russ Mahan.

What this has meant to sleepy San Juan County can more easily be imagined when it is recalled that maps of this, the largest county in Utah, have up to now contained blank spaces as large as Rhode Island, spaces never even surveyed and barely explored. A few Mormons and a few "Gentiles" (non-Mormons) have farmed patches here and there and run cattle over its sparse range. Now they are awakening to find themselves suddenly at a focal point in the Atomic Age.

Zeke's Best Friend Was His Mummy

From Monticello we continued southward to Blanding and over the Bears Ears route to Natural Bridges National Monument.*

First custodian of the monument, and its greatest enthusiast, was Zeke Johnson. He served his first eight years for wages of $1 a month, picking up what he could on the side by renting horses and acting as guide.

Finding an Indian mummy once, Zeke carefully reburied it in a small cave. When visitors came to see the bridges, he would sometimes suggest they climb up to this cave and scrabble for arrowheads. Invariably, with enormous excitement, they would "discover" the mummy. Zeke pulled this stunt so often he wore out the mummy.

Thanks to Zeke's more serious labors, it is now possible to drive a car within sight of the first and most spectacular of the monument's three bridges: Owachomo, a slender 180-foot span now worn to a mere nine feet thick (pages 736-7 and 738).

From Owachomo a trail leads three miles down Armstrong Canyon to the massive Kachina Bridge, christened to honor the pictographs, found on an abutment, which so much resemble the Hopi masked dancers, or kachinas. By far the thickest of the bridges, 93 feet, Kachina is steadily being scoured to more shapely dimensions by the White River.

* See "Colossal Natural Bridges of Utah," National Geographic Magazine, September, 1904.

Sipapu, the third and largest span, rises several miles farther up White Canyon (opposite page). Its proportions are impressive: 268 feet long, 53 feet thick, and 220 feet high. Because its abutments now sit back a long way from the stream's main channel, the water can no longer exert much erosive pressure on the great arch.

Sipapu's geological origin, like that of the others, is simple. At a sharp bend of a meandering river, water seeking a straighter course eventually bored right through the rock wall. Sand blown by the wind polished the hole and left the finely contoured span we see today.

Not quite so simple was the matter of nomenclature. Owachomo, Kachina, and Sipapu were once known, respectively, as Edwin, Caroline, and Augusta, after early explorers or their relatives.

To the United States Board of Geographic Names, these titles apparently seemed a little flat. When the bridges became a monument, the Board cast around for appropriate Indian names.

Unfortunately, the Paiutes of the vicinity weren't in the habit of naming bridges; they referred to them all, indiscriminately and rather inelegantly, as Ma-Vah-Talk-Tump, or "Under the Horse's Belly."

Undeterred, the Board turned to the Hopi, who were then thought to be descendants of the prehistoric Indians who had inhabited southern Utah. Edwin became Owachomo (meaning "Rock Mound," applicable to the beehivelike formation at one end); Caroline became Kachina, as related above; and Augusta became Sipapu, for the Hopis' "Entrance to the Underworld," from which their ancestors were presumed to have emerged.

The Rustlers of Robbers Roost

From Natural Bridges a new road enabled us to continue westward another 40 miles through White Canyon to the Colorado River. Long a hangout of outlaws and rustlers and the scene of many an Indian skirmish and range war, the area figured prominently in several of Zane Grey's western novels.

One of the most successful and most unusual of the desperadoes was Butch Cassidy, who holed up with his gang in a gulch known locally as Robbers Roost.

Born George LeRoy Parker, son of a pious convert to Mormonism, young "Cassidy" found respectability intolerable. Gathering a gang of free spirits, he proceeded in Robin Hood fashion to make life miserable for the law, the bigger cattle companies, the railroads, and the banks, from Canada to Mexico and from Nebraska to California.

When he stole horses for a getaway, or lifted a few chickens for a grubstake, Cassidy usually left twice their value in clinking coin. He paid his bills; he gave to the poor; he scrupulously avoided Wyoming, whose governor had paroled him on a promise never to return.

He never shot a man until his final battle. Oddly enough, that occurred in South America, where he tried with the help of one fellow rancher to hold off a whole company of cavalry.

People still bob up who claim that Cassidy never actually died in that fracas in Bolivia, that he has been seen in Mexico, or Idaho, or some other spot. All I can say is that we caught no glimpse of him in White Canyon.

We pressed on to Dandy Crossing and clanged the bell for Art Chaffin to come over from Hite and pick us up with his ferry, the only means of getting a car across the Colorado on its 255-mile course from Moab down to Navajo Bridge, Arizona.

In a few minutes the one-man barge, powered by an ancient model-A Ford engine, groped across the river on its steadying cables. We drove aboard (page 735).

"Five dollars for the car," said Art, "and 50 cents for each passenger."

"Mighty cheap," I thought, reflecting on the detour it saved.

Chaffin Makes His Dream Come True

The Crossing's history was not uninteresting, we found. Old Cass Hite, the hermit of the Colorado, had settled here in the 1870's, started a small ranch, panned for gold, and even established a short-lived post office. He is well remembered for having launched rumors in 1893 which started a gold rush downriver to Navajo Mountain. When no gold materialized, angry prospectors drove Hite into hiding for two years.

Years afterward, Mr. and Mrs. Chaffin moved in, cleared land, planted orchards, and set themselves up as a two-person town. Art dreamed of the day when a road would be built down to the river from Hanksville on the west and from Natural Bridges on the east.

His day came on September 17, 1946. After years of patient waiting and many disappointments, Art's road, completed mostly through his own labors, stood ready. Some 350 persons jounced down in 100 automobiles for the opening ceremonies, which

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This Natural Bridge Is About a City Block Long →

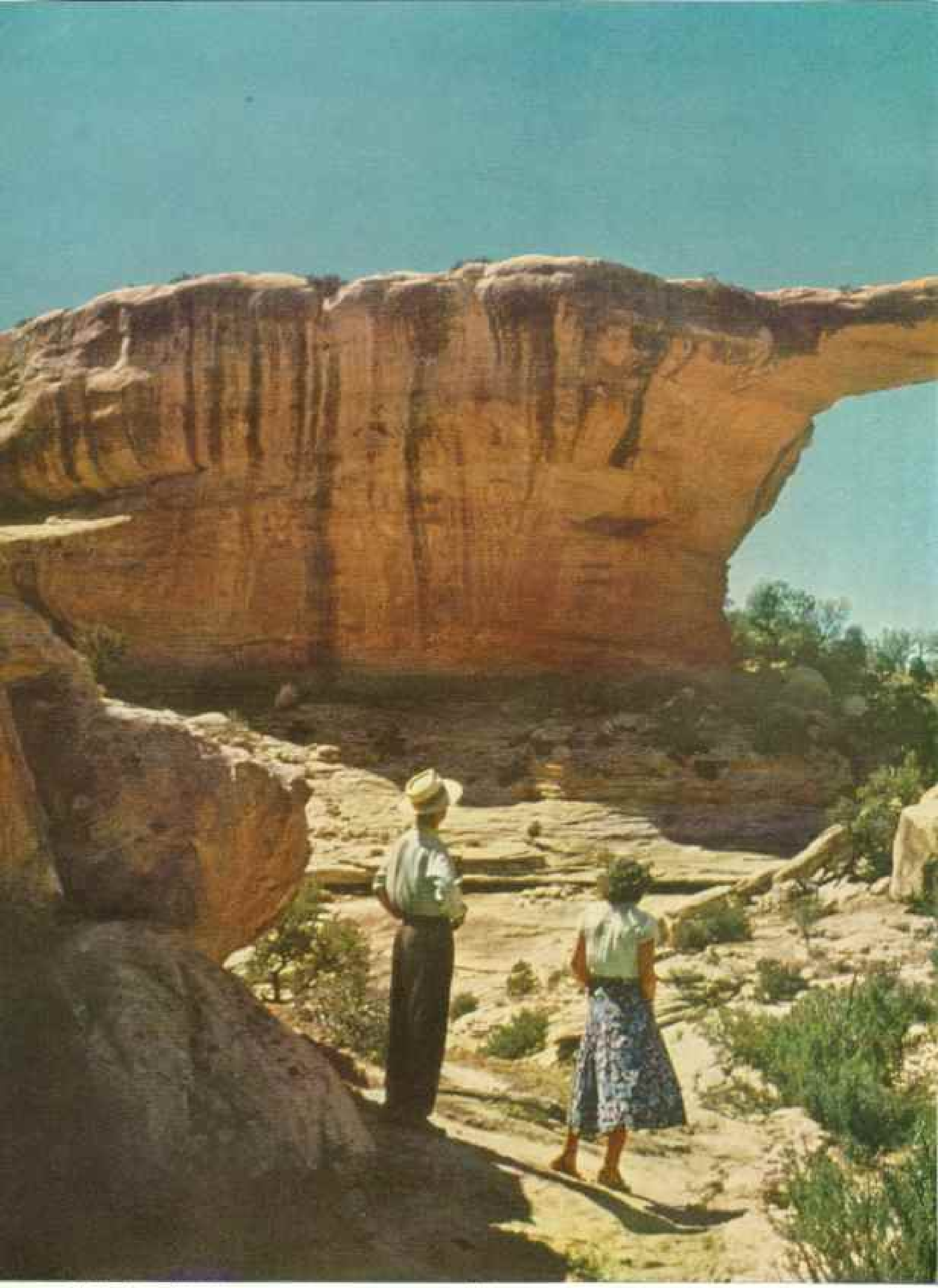
Sipapu arch, 268 feet from end to end, spans White Canyon in Utah's Natural Bridges National Monument. Paiute Indians living near by had only one name for any kind of bridge: Ma-Vah-Talk-Tump, or "Under the Horse's Belly." White men first called it Augusta, then turned to the Hopi language for the more poetic Sipapu, or "Entrance to the Underworld."

Desert Gothic: Sunlight and Shadow Play upon the Massive Naves and Buttresses of Cathedral Valley

Flash floods nearly stranded the jeep and station wagon in this arid, isolated valley south of Emery, Utah. Shaly surfaces became impassable gumbo.

Powered by an Automobile Engine, This Colorado River Ferry Saved the Party a 150-mile Detour

From Moab, Utah, down to the Arizona line, no bridge crosses the turbulent Colorado. Safe enough in good weather, Art Chaffin's ferry at Hite has several times been swept down-river by floods. Chaffin and his wife once were Hite's sole inhabitants. Now scores of oil and uranium prospectors share the town.



Owachomo Bridge, Tapered to the Contours of an Ax Handle, Supports Three Explorers

Only nine feet thick, slim Owachomo is the smallest of three major arches in Utah's Natural Bridges National Monument, and may well be the first to collapse (page 738). Its Indian name means "Rock Mound."

Kodachrome by Jack Breed

Unlike Most Four Corners Marvels, This Bridge Is Accessible by Road

A rough dirt track, easily traversed in dry weather, winds into the monument from Blanding, Utah, 50 miles distant. Owachomo, originally called Edwin Bridge, can be seen from a car; the other two spans require a 9-mile hike.

Kodachrome by Jack Breed

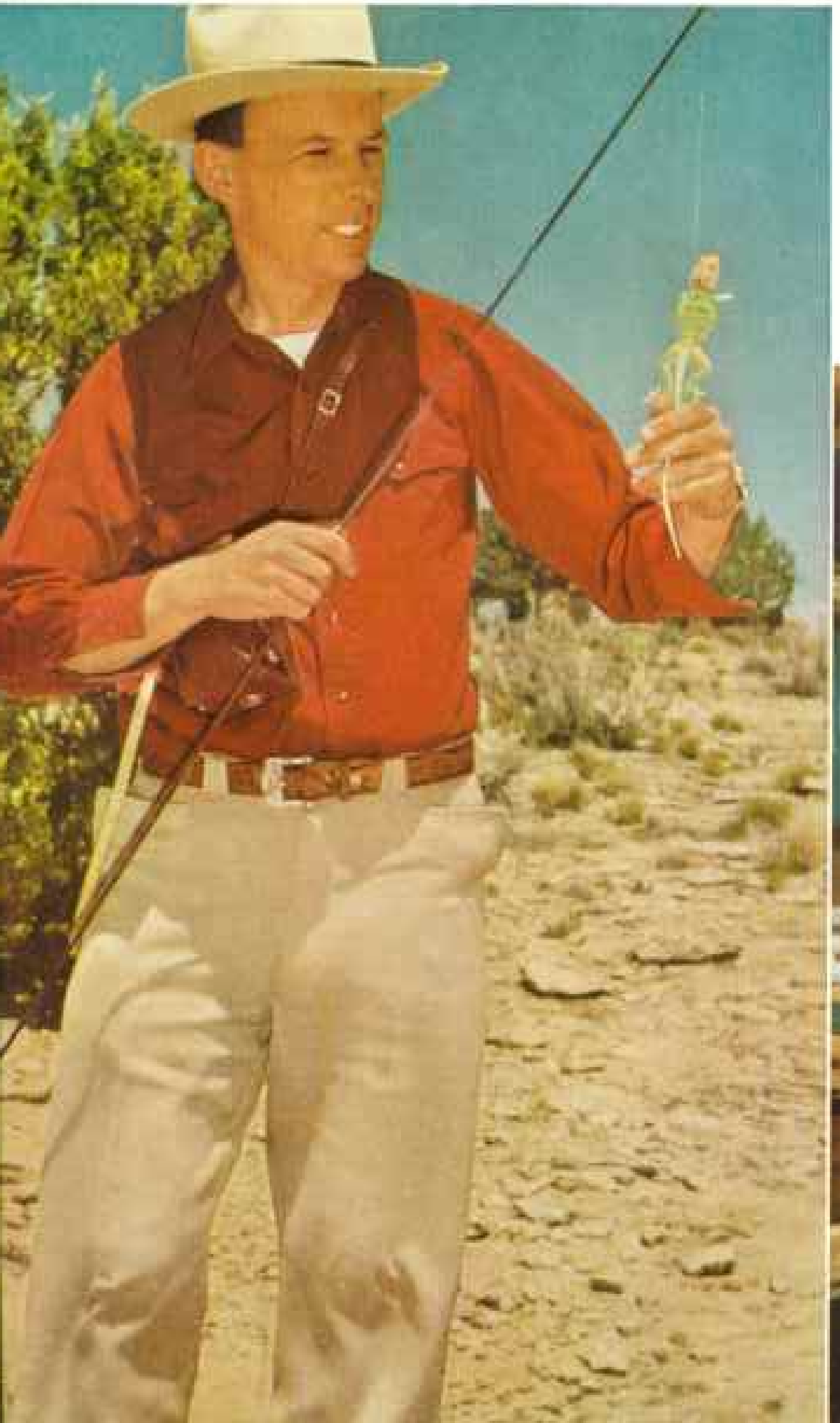
↑ **Atop Owachomo Bridge: a Rocky Wonderland Lies 105 Feet Below (Pages 736-7)**

← Using a fishing rod and noose, the author snares a collared lizard. Though these handsome reptiles can easily outrun a man, sometimes racing along on their powerful hind legs like a kangaroo, a slow and cautious fisherman can often catch them. The reason: They pay more attention to the stalker than to the noose.

↓ Inquisitive Ute children didn't mind inspecting safely bottled lizards, but when the author started to remove one of the "green dragons," Utes young and old skedaddled without a backward glance. Superstitious, they took little stock in the author's assurances that his specimens were not only pretty but harmless.

Kodachrome by B. N. Cabot

Kodachrome by Jack Breed



Manpower Comes to the Rescue of Horsepower

With the timeless beauty of Cathedral Valley as a backdrop, Bill Lane, Perry Jackson, and Charlie Kelly struggle with a workaday problem—how to free the jeep from a caved-in arroyo. The luggage carrier had caught on the lip of a sandbank.

Fleeing a Storm, the Author's Car Leaps Across a Stream

Specially geared, this station wagon could tackle almost any terrain. In addition to two passengers, it carried a double bed, three-burner gas stove, deep-freeze unit, film compartments, supplies, gear, cameras, gas and oil—a total of more than 2,500 extra pounds.

included speeches by Utah's Governor Herbert Maw, Zeke Johnson, and Art himself. Now several thousand dollars have been appropriated to improve Chaffin's trail, and oil and uranium prospectors moving in along it have boosted Hite's transient population to nearly a hundred.

The road up to Hanksville at the time we traversed it was hardly a boulevard. Of its 58 miles, about half is spent crossing and recrossing the bed of North Wash. One disgusted driver reckoned he had crossed it 76 times in 30 miles.

Hanksville itself proved to be a sad spot. Once knee-deep in rich prairie grass, the region around it is now unimaginably barren and desolate. The answer can be compressed into one bleak word—erosion.

The Mormons who settled this section in 1880 were both courageous and determined, but their very efforts to grow and expand as a community were their undoing. Water for irrigation was insufficient and unreliable, and the attempt to wring more from the earth by grazing and dry farming stripped away the topsoil.

In such a situation, perhaps the least useful doctrine for the settlers to have brought with them was polygamy. Yet it was precisely to practice this prohibited system that many of the Mormons came to isolated Hanksville and its environs.

One group holed up at Lees Ferry on the Colorado. When Arizona's Governor George Hunt visited the area, he was told about the polygamy and urged to stamp it out. Said Hunt, after a sour look at the town, "If I had to live in this place I'd want more than one wife myself."

Another group settled near the Capitol Reef buttes. In a certain gulch there, Mormons and their wives hid from the "Federals," and thus it acquired its piquant name, Cohab Canyon—short for "cohabitation," the official charge placed against polygamous Saints.

Such refuges served their purpose well enough. The Government couldn't be bothered to hound lawbreakers so far off the beaten track. Hanksville and its fellow oases developed undisturbed.

When polygamy died there, it fell to a subtler enemy, the economic impossibility of supporting more than one wife on wind-blown acres like these.

Valley of the Goblins

Mormons of the Four Corners Country have come to take for granted the remarkable scenery that surrounds them. For example, one seldom sees a farmhouse set with an eye to the view, though there are some amazing sites for a picture window.

The Mormon ranchers around Hanksville long have known about the fantastic Valley of the Goblins, better known as "Goblin Gulch," only 10 miles to the north; but they have never made any fuss about it.

This amazing little valley, about eight square miles in area, looks like a convention of freaks. Crowded into its galleries and amphitheaters are hundreds of crazily carved sandstone figures, in inspiration somewhere between the bizarre creations of a Dali and the prehistoric statues of Easter Island (pages 706 and 726).

Staring at this extraordinary galaxy, I could only laugh and think to myself, "What a place for a high-school initiation on some moonlit night!"

Public interest in the gulch dates back only to 1949, when Art Chaffin and P. W. Tompkins of San Francisco visited it and took what are thought to be the first pictures ever snapped of its weird formations. Now it is in danger of being loved not wisely but too well by tourists more interested in leaving their mark than in preserving a very fragile whim of nature.

Where Pioneers Met Their Match

Enthusiastic, but undeniably parched, we left the Gulch and drove west over State Route 24 through badlands as dusty and thirsty as ourselves.

The deserted settlements we passed bore mute evidence of the struggle which Mormon pioneers made to cultivate this forbidding country, only to be forced away by flood and erosion from a land that just did not want to be farmed.

Beyond the cottonwoods of Caineville we crunched up the slopes of Blue Valley and prayed that the rains would leave us alone. This stretch of Mancos formation is one of the worst places in the United States for a vehicle in a storm. In pioneer days, wagons crossing it in wet weather had to stop every 100 feet to have the mud hacked from the wheels.

Passing up the narrow entry to Capitol Reef National Monument, with canyon walls towering 1,000 feet above us, we encountered signs warning us to "Get out fast in case of cloudburst!" A good bit of advice, we thought. But how?

Our luck held good, however. No rains assaulted us, and in 30 minutes we emerged from the gorge in front of the comfortable house of the superintendent, Charlie Kelly. From his windows we could look up at the red cliffs and white domes of the reef itself.

Said Kelly, "There's one last place you've got to visit before you head home. And that's Cathedral Valley."

747

Roadside Warnings Stop Ben Cornwall near Hite, Utah

These signs are posted on the route from Natural Bridges to Hite. Sand, engulfing wheels, may stall motorists. Flash floods, built by cloudbursts in mountains, can destroy cars. Here the road descends into White Canyon. Bags hanging from the station wagon carry reserve water for the hot, dusty trip.

I thought we had done enough for one trip. But any new place intrigues me, and Charlie, with his steadily puffing corncob pipe, can be persuasive. Soon we were all bundled back into the station wagon and driving northwest for Fremont, Utah.

Here we paused to pick up a guide, Perry Jackson, and his jeep. Turning off the main road, we began to work our way along the base of the Thousand Lake Mountain. For 27 miles we inched the car over boulders, down stream beds, across dunes, and through treacherous stretches of soft sand.

Cathedrals in Color

Soon on the horizon appeared a panorama of great, bulky monoliths, hundreds of feet high and startlingly colored (pages 708-9 and 734). Isolated from the surrounding cliffs and mountains, each butte stood alone on its dissected gray base, dominating its own "cathedral close."

Setting up camp in an abandoned range rider's shack, we started, despite threatening weather, a photographic attack on this strange landscape. It was not simple. The terrain was anything but accommodating. But the more we saw of Cathedral Valley, the more we agreed with Charlie Kelly that this was the way to end our long journey through the Four Corners Country.

Those who come after us will have it easier. New roads are being built, and more will follow. But with such advances will come new dangers, too—the risk of tourists' careless "pot hunting" and vandalism, the risk of commercial exploitation of Nature's perishable offerings.

Scenic Treasures Need Protection

Some geologists and naturalists feel that a sensible precaution would be to make National Monuments of areas like the Valley of the Goblins, the Needles, Monument Canyon, and Cathedral Valley.

This would first require acquisition by the Government of those scenic treasures not already in the public domain. Then a presidential proclamation could put them under the protection of the National Park Service, which now watches over some 23,700,000 acres in the public interest.

Such control would make it possible not only to surround these scenic spots with certain legal safeguards against wanton damage, but also to provide them with ranger service, with access trails, and with every feasible means of lessening further accidentally initiated erosion—such as reckless climbing among the Goblins can set in motion.

That day, we trust, will come. The Four Corners Country represents a geologic heritage which, once squandered, can never be replaced.

Where Turk and Russian Meet

An American Newspaperman Reports on Conditions Along the "Barbed-Wire Curtain," Turkey's Remote Soviet Frontier

By Ferdinand Kuhn

"WHY DO you want to see Turkey's Soviet frontier?" Dr. Halim Alyot, Director of the Turkish Press and Tourist Bureau, asked me as we sipped coffee in his office in Ankara.

"Because," I answered, "it's going to be our frontier too. When Turkey comes into the North Atlantic Treaty Organization, an attack on your country will be an attack on mine."*

I said I would like to see what kind of people live on this frontier in the very shadow of Soviet power. I wanted to learn what they thought of their Soviet neighbors, and why their sons had volunteered to fight the Communists in Korea, thousands of miles away.

Dr. Alyot was friendly but noncommittal, reminding me that the whole 350-mile frontier with Russia is a military area.

He thought he could let me go as far as Kars, provincial capital close to the border. He wasn't sure I could get military permission to go all the way to the boundary, 35 miles beyond (pages 745-7, 752, 762).

But Dr. Alyot was better than his word. Within a week I was standing in the tower of a Turkish army post on the frontier itself.

Behind me the mountains and plateaus of Turkey stretched westward for some 800 miles to storied Istanbul and the Straits. Ahead, only 300 yards from the observation tower, was the Soviet Union. (See the new map of Southwest Asia, a supplement to this issue.)

From where I stood, the oil fields of Baku, a major source of Soviet power, were only about 325 miles away—little more than an hour's flying time for propeller planes, much less for modern jets.

A Look Behind the Iron Curtain

A tall Turkish soldier in a British-type helmet was looking through a spyglass from the tower (page 758).

"What do you see over there?" I asked him. He handed me the glass.

I took a long, hard squint through an aperture in the wall. Straight ahead was a grassy plateau about five miles wide. It was as if a giant had laid out a colossal bowling alley leading into Soviet territory.

The sides of the alley were smooth, rounded hills, as bare of trees as some of the hills I have seen in Wyoming or Arizona. At the end of the alley was a rise just high enough to hide what lay beyond.

From a near-by hill I could have seen the snowy cone of Mount Alagez, 13,435 feet high, in Soviet territory. But from the border post the great peak was invisible, and there was no hint of the mighty Caucasus Mountains that rear their heads to the north, between the Black Sea and the Caspian.

The Turks had told me that the Russians had 26 divisions in the Caucasus area, a force greater than the entire strength of the Turkish army. I had expected to see impressive frontier fortifications, but the only visible evidence of this jealously guarded border was a barbed-wire fence that stretched across the huge bowling alley. "The Barbed-wire Curtain," I called it.

Through the spyglass I saw observation posts on the Soviet side, but no soldiers, no villages, no people.

I shivered to think of this treeless no man's land in the winter, when winds whistle down from the Caucasus and the temperature plummets to 30° below zero F.

Lone Tractor Proves "Mechanization"

Luckily, I was there on a brilliant summer day. The border was as still as the surface of the moon except for the twitter of birds and the droning of a single gasoline engine. I turned and saw a tractor on the Soviet side, slanting down a grassy slope.

After days of traveling through the bare, almost tractorless grazing land of eastern Turkey, I thought the tractor looked as odd as a camel in Connecticut. I asked my Turkish soldier friend whether there were many tractors on the Soviet side.

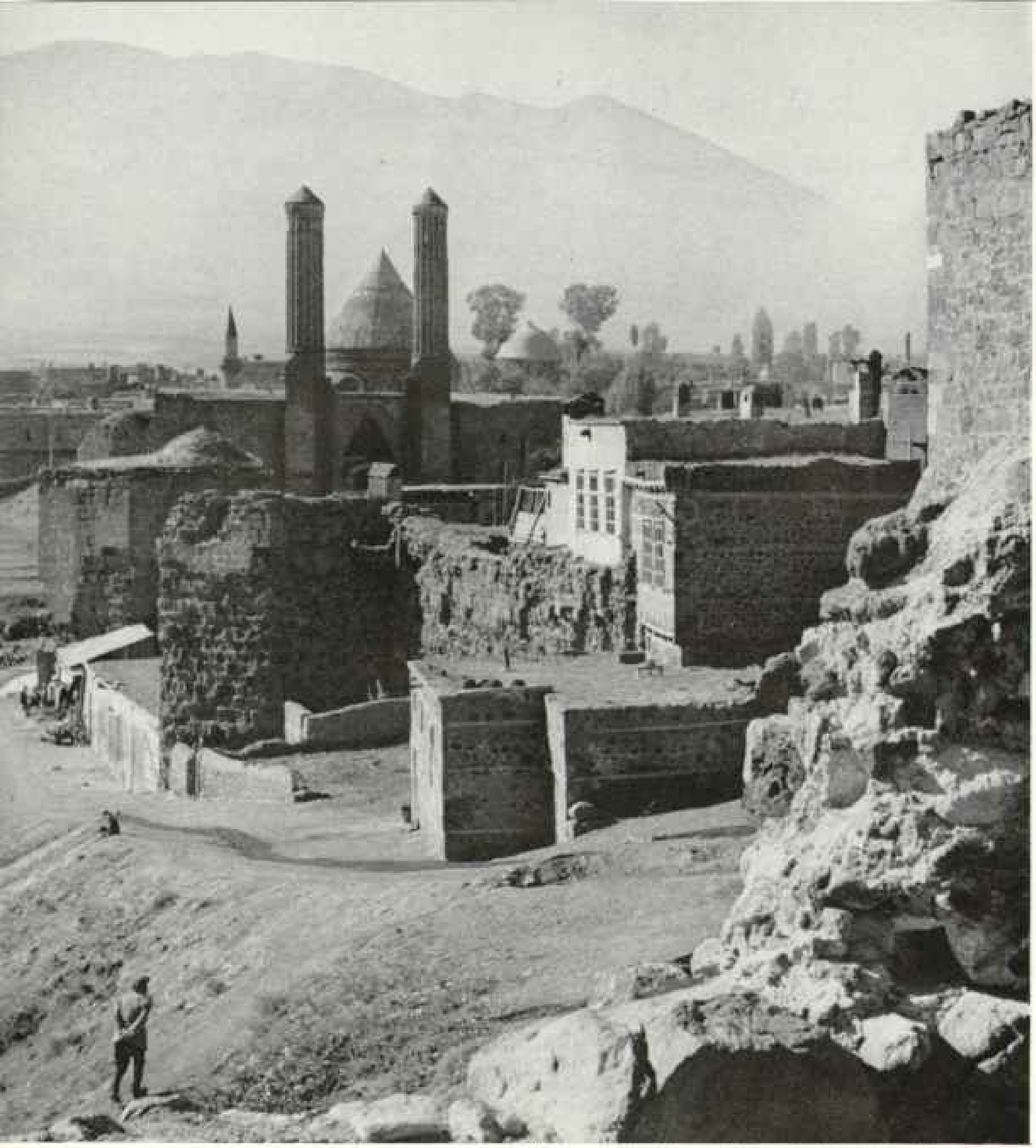
"Sir," he said with a smile, "our unit has 35 miles of this border under direct observation at all times. And the only tractor any of us has ever seen is right here, opposite this tower."

The Russians have made many claims that they are transforming Soviet Armenia, next door to Turkey, into a paradise of mechanized farming. But no foreigner can go there to see for himself.

The Turks are sure that this tractor, next to the Barbed-wire Curtain, is there for show purposes, solely to impress them.

I handed back the spyglass and twisted down a spiral staircase into the spotless barracks of the Turkish border guards (page

* Turkey joined the North Atlantic Treaty Organization on February 18, 1952.



744 National Geographic Photographer Maynard Owen Williams

Erzurum, Once a Roman Outpost, Guards Democracy's Eastern Ramparts

When Roman emperors ruled at Constantinople (Istanbul), their citadel of Theodosiopolis faced east from this mountain valley. The Soviet Union lies that way today; Erzurum is the nerve center of Turkey's modern frontier field army. Here crumbled walls of an Ottoman fort (right, foreground), stormed and taken by Russians twice within the past 75 years, stand beside the Çifte Minare mosque, roofed with sod and topped by the dome and minarets of early Seljuk Turkish conquerors (pages 750, 736).

754). There I was able to question my hosts about the frontier.

Did any refugees come across? No, they told me, the refugees used to come, but the Russians had shot eight of them two years ago before they could get across. Since then none had tried.

Were there any airfields? Yes, at least one big one, for fighter planes, near Leninakan.

Were there any incidents? Oh, yes, the Turks said, just one.

A horse belonging to a Turkish farmer had managed somehow to get across the barbed wire. The Russians chased it; the horse was terrified and ran. So the Russians used it for target practice and killed it.

The Turkish farmer wailed for compensation, for a horse is valuable property in far-

George Fiskiss, Three Lions

Alert Members of the NATO Team Are These "Oscars," Turkey's Tough GI's

Americans bestowed the nickname, from the Turkish *asker*, meaning soldier. "Kars—Soviet Border," says the sign.

Hunner D. Kamilos, Pix

"Next Stop, Russia . . . Everybody Out!"

Twice a week a train chugs from Kars across the border into Russia. Sometimes it carries a handful of specially accredited diplomats; usually it runs empty, just to maintain a schedule. The engineer (inset) may not leave his cab during the six-mile round trip. At "Red Chips"—Kızılçakçak (above)—soldiers search the train for stowaways.

Face to face on the boundary between West and East, Turkish and Russian officials meet to hand over passports of the train crew.

Tickets from Erzurum to the closed Soviet border pile up at Kars, where most Turks get off.

George Pikov, Three Lions

eastern Turkey, where animals are the basis of the entire economy.

The Turkish Government arranged a border conference with the Russians. Five officials from each side met around a Turkish conference table for ten hours to settle the dispute.

The Turks, with their usual overflowing hospitality, had loaded the table with vodka, cigarettes, and a whole lamb with trimmings, and brought endless relays of Turkish coffee.

But they might as well have demanded the surrender of Baku as to have expected compensation from the Russians.

In the end the Turkish Government had to pay the unhappy farmer $70. The Turks took what comfort they could in the spectacle of their giant neighbor asserting the sanctity of Soviet frontiers—against a horse!

742 Gunnar D. Knudsen, Fix

Russians Take No Chances: Bayonets Will Prod for Bombs

The train rolls into the Soviet Union on a 5-foot-gauge Russian track laid while the Tsars ruled Kars before World War I. Most Turkish lines are standard gauge—4 feet 8½ inches. The brakeman on rear platform is one of the few Westerners who enter and leave Russia regularly. At this point, Soviet border guards inspect every foot of undercarriage.

The Turko-Soviet border beyond Kars is a political and geographical oddity. It is the only place in Europe or Asia, except for a few miles in the desolate north of Norway, where the Soviet Union borders directly on a strongly armed, democratic, and traditionally hostile neighbor.

On the National Geographic map which accompanies this issue you will see the black line of a railroad running northeast out of Turkey. That black line pierces the Soviet boundary and runs on to Leninakan, in Soviet Armenia, and to Tbilisi (Tiflis), the metropolis and communications center of Soviet territory between the Black Sea and the Caspian.

This line, too, is unique. It is the only place around the entire 35,000-mile Soviet perimeter where a railroad provides direct connection between the territory of the North Atlantic allies and the Soviet Union.

Today this connection is more theoretical than real, for the cold war has frozen all Soviet-Turkish trade. Only an occasional diplomat uses the railroad on official business.

Yet a train still runs. Every Wednesday and Saturday, except when snowdrifts block the line, it puffs slowly uphill from the city of Kars to the Barbed-wire Curtain.

I saw the train and watched the solemn, half-comic ceremony that accompanies each of its border crossings.

It had a tall-stacked engine, built, I guessed, around 1890, although I could find no date on it. It had a coal car, a tiny baggage car, and a passenger car.

Except for one package, the baggage car was empty. The passenger car had only the Turkish train crew and three Turks in uniform—an army lieutenant, a police official, and a customs guard—to see it to the border.

Soviet Guards in Full Dress

The train stopped a few yards short of the frontier, which was on a bridge over a high culvert. The three Turks walked out and advanced to the boundary, the lieutenant in unpressed khaki, the officials in well-worn gray.

From the Russian side two officers marched stiffly down the tracks toward the boundary, followed by two privates carrying long bayonet-tipped rifles.

All four were dressed as if on parade.

248 National Geographic Photographer Maynard Owen Williams

Aid to Turkish Farmers May Result in New Crops for American Fields

Food and agricultural experts such as Hugh K. Richwine (left), of the Mutual Security Agency, teach the use of modern farm machinery on Turkey's high, hot, dusty plateaus. Seeds of drought-resistant and other crops are sent to the United States for testing. A grizzled farmer and an official of a Turkish experiment station show Richwine a thick stand of *korunga*, similar to alfalfa but easier to grow.

They wore green visored caps with brilliant blue bands around them. Their well-cut, well-pressed green uniforms were brightened with red facings, and the officers wore gold epaulettes. Clearly the Russians were taking this twice-weekly ceremony seriously.

Their insignia showed the four men to be *pogranichniki*, or frontier guards. Although they are an essential part of the Soviet Army, they take their orders not from the Ministry of War but from the Ministry of Internal Affairs, the dreaded MVD.

My Turkish interpreter, Capt. Ali Tokath, who had been trained in Louisiana during the war, whispered to me to come and see the show.

"But don't talk English," he warned. "They mustn't know that an American is here."

Probably the Russians were less suspicious of me than of the Turkish captain. I was wearing a dark suit with a white shirt, and I might have passed for a Turkish official. But Ali, who is as tall and rangy as a Texan, and as good-natured, was wearing a khaki shirt and trousers that were as American as a cowboy outfit.

The Russians saluted; the Turks saluted back. The Turks handed the Russian commander the passports of the train crew and the bill of lading covering, presumably, the single package in the baggage car.

Bayonets Probe for Hidden Bombs

I noticed a steel rail laid across the tracks as a barrier. The Russians lifted this to one side, and the train chugged slowly across onto Soviet soil.

At once the Russian privates poked under each car with their bayonets, as if to make sure no bombs were concealed there. Then the train moved out of sight, behind the low hill that hid the first Soviet frontier post.

Turkish Press Bureau

In Valleys of Northeast Turkey, Farmers Wrest Food from Grudging Soil

Across mineral-rich ranges lies Soviet Georgia. Growing seasons are short on these alpine pastures, but cattle, sheep, donkeys, and fine hard wheat come from farms such as this near the village of Artvin, between Kars and the Black Sea. Stones hold the roofs against winter's bitter *tipi*, blizzards that howl down from the Caucasus peaks to the north.

It chugged only three miles beyond the barbed wire. There passengers (if any) must change to a Russian train.

Half an hour later the little Turkish train returned, this time with the engine pushing it from behind. The same solemn ceremony was repeated, without the bayonet jabs, as it recrossed to Turkish territory.

Birds Form an Aerial Escort

I wanted to travel at least a short distance on this railroading curiosity; so I climbed aboard for the first few miles of the journey back into Turkey.

Standing on the open platform, with the engine pushing us, I felt as if I were on a magic carpet. The green bowling alley, between its rounded hills, stretched ahead of me down the slight grade toward Kars.

Thousands of birds flashed ahead of us as the train rolled on slowly. Some were sparrows, already migrating southward to escape the bitter winter. Some were hoopoes, as big as our blue jays and just as showy. They had reddish heads and bodies and wings that were brilliant with vertical black and white stripes.

The birds floated alongside our rattling train, borne on air currents like sea gulls escorting an ocean liner. They were a more thrilling escort, and more colorful, than a royal guard of honor.

So our train slid into lonely Kızılçakçak (page 746), a grazing center and army post, one of the most remote settlements in eastern Turkey and one of the nearest to the Soviet frontier.

I felt I was at the end of the world at Kızılçakçak. (The name, incidentally, means "Red Chips," though no one could tell me its origin.) The country around it had the spaciousness of our own Southwest.

Teams of Indian buffalo—not, of course,

Ottoman Battlements Frown from Erzurum's Earthen Walls

Cramped within ancient ramparts, ox-plowed fields edge a broad, tree-lined boulevard (pages 744, 756).

Behind the towered citadel on the southern wall, old caravan trails cross the 9,800-foot Palandöken range, so tortuous that its name means "Saddlesore."

Turkey, No Longer "Sick Man of Europe," Flexes Its Muscles. Tractors Haul Artillery Past a Grazing Flock

Guns are obsolete, but Turks train with anything that shoots (page 757). A lone donkey dozes peacefully amid broadtail sheep in the maneuver area near Erzurum.

Lee Stocker, Arno

George Pickow, Three Lions

Kars's Wide Streets Link City with Tsarist Past

Nicholas II, last of the Romanovs, hunted in the high mountains near Kars while his viceroys ruled eastern Turkey.

Part of the Russian Empire from 1878 until 1917, city and Province were handed over to Turkey by the Bolsheviks in 1921. In 1943 the Soviet Union demanded return of two of the border areas.

Above a deep gorge of the Kars River stands a huge citadel built by Ottoman Sultan Murad III in 1579. Once the seat of an independent Christian kingdom, Kars was taken by Mongols in the 13th century and again by Tamerlane (Timur) in the 14th. War and massacre have visited this city many times (page 763).

Newly planted trees along the cobblestone street are cared for by the proprietor of each steel-shuttered shop.

Many articles sold by Turkish merchants are marked "Made in USA." Scythes form a steel lattice before glass and china in the window.

Leo Stoecker, Acme

733 Leo Rosenthal, Aitos

Antiaircraft Gunners Watch the Sky over a Vigilant NATO Nation

Split-second teamwork between range-finder operators (foreground), aircraft trackers, and gun crew results from constant training. This emplacement guards the airport at Erzurum. American-made director equipment controls a British-built gun, manned by Turkish soldiers in British-type helmets.

our American bison—were pulling wagonloads of grain into storage for the coming winter. These huge black animals are the strongest and most valuable beasts of burden in eastern Turkey.

Each one is worth 500 Turkish liras, or pounds, about $180—not a large sum by American standards, but more than a whole year's income for the average Turkish farmer. The huge beasts stood facing me, waiting their turn to pull their loads into the storage yard, licking their shiny black lips because of heat and thirst.

It had taken me three days to reach this remote outpost from Ankara, even though I had covered the longest part of the trip by air. Luck had been with me more than once.

"We have good news for you," a Turkish official said just before I had left Ankara. "The new governor of Kars Province, on the border, will be on your plane, and he speaks English."

Governor Lived in Washington, D. C.

But I had not expected what followed. While I waited at the Ankara airport, a smiling, soft-spoken young Turk came up and introduced himself as Niyazi Akı, the new governor (page 764).

"Do you really live in Washington?" he asked me. I said I did.

"Wonderful!" he said. "I used to live in Washington too. I worked in the Bureau of the Budget, in the old State Department

234 George Pickow, Three Lions

Turkish Border Guards, Tanned, Tough, and Ready, Receive Their Orders

Two years' military service is required of every Turkish youth. Issued one summer and one winter uniform, he must clean and mend them on an allowance of about 21 cents a month. "Oscar" calls this his "shave money." Ammunition cases hang from the belts of this squad. Shoulder packs and rifles modeled on the old German Mauser complete their patrol equipment. Corporal (right) holds a submachine gun.

building. I even had my own telephone extension!"

He could not have said it more proudly if he had told me he lived in the White House.

Then he explained how he, an ex-Washingtonian, was about to become the chief representative of the Turkish Government in a Province of 409,000 people on the far-off Soviet-Turkish border.

Furnished Room—for Turks Only

Niyazi Akı was one of about 30 foreign officials brought to the United States each year and trained in public administration by the Bureau of the Budget. When he came in 1947, he knew so little English he could not even ask for a glass of water.

A wise friend advised him to go to Springfield College, in Springfield, Massachusetts, to study English, and to live with an American family instead of staying in a hotel. The future governor found a room in the home of Mrs. Nellie Ayer, a widow.

Mrs. Ayer had boarded two Turkish boys the year before and had liked them so well that she advertised in a Springfield newspaper, "Turks only."

Today the governor calls Mrs. Ayer "Mother," and one of the gifts I brought back from Turkey was a pin of black amber from Erzurum, a remembrance for her from her Turkish "boy."

Having learned some English, Niyazi Akı spent eight months in Sacramento, California,

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Recruits Learn How to Foil an Attacker Armed with Bayoneted Rifle

To help equip and train Turks, the United States has assigned about 1,250 experts to JAMMAT—Joint American Military Mission for Aid to Turkey. In field camps and special training schools, Americans help teach modern warfare. The Turkish Brigade in Korea proved the nation's fighting prowess. Hand-to-hand tactics such as these soldiers practice paid off in the critical days following the first Chinese Communist assault.

learning the problems of State government, and came to Washington for another eight months with the Budget Bureau.

In the Capital he commuted to work by streetcar, learned American ways, came to like Jane Wyman movies and Bing Crosby songs, and learned the American way of administering a county, state, and nation for the benefit of all the people.

Now this American-trained public servant was about to put his lessons to use on the Soviet border, in what could be one of the hottest spots in the cold war.

As we walked to our Turkish State Airlines plane for the six-hour flight from Ankara to Erzurum, I asked him whether he was the youngest Turkish provincial governor.

"No," he said, "there is one who is only 34; I am 38. But we have 63 Vilayets, or Provinces, in this country, and every Province except one has a governor who is under 50."

Plane Salutes Turkey's President

Just before we landed to refuel at Elâziğ, our plane dipped its wings abruptly until we flew almost vertically, then leveled off again. From my window I could see a gleam of silver as a plane took off from the Elâziğ airport.

It was the plane carrying the President of the Republic, Celal Bayar, and we were saluting him. The President had been in eastern Turkey inspecting possible sites for a new university.

We soared over 10,768-foot Bağırbaba Dağı

Lee Stoecker, Artist

Sarıkamış Breathes Mountain Air in Climate as Cold as the Far North

Forested hills slope down to a school and military barracks at the edge of town. Turks fought Russians here in one of World War I's fiercest battles (page 762). Enver Pasha lost, and the Grand Duke Nicholas marched southwest to Erzurum, laying a narrow-gauge railroad to supply his troops. Three different track widths still link Erzurum and Kars. Passengers change at Sarıkamış, more than 7,000 feet above sea level.

on the last leg of the flight to Erzurum. As we cleared the last of its ramparts, the American-trained pilot asked if I would like to sit in the forward compartment with him for the landing.

Ahead was a broad valley, green but treeless, with a town in the far distance. The pilot flew directly toward it and for my benefit sailed low over the minarets and the square gray buildings of Erzurum (pages 744, 750).

In a few minutes we landed, and soon I was in the middle of the old town. The streets were alive with oxcarts. The creaking of their wooden disk wheels was as insistent as the noise of factory whistles at home.

Tattered shepherds with bearded, leathery faces were hustling herds of oxen and black goats through main thoroughfares.

This was a vastly different Turkey from İstanbul with its cosmopolitan population and monuments of ancient grandeur. It was different, too, from the streamlined buildings and modern ways of Ankara.

Now I was seeing a more primitive Turkey, where living standards are low and the socio-economic revolution of the 1920's is not yet complete. I was also seeing territory that had been soaked in Turkish and Armenian blood.

Twice in the last 75 years the Russians have captured Erzurum—once in the war of 1877, which was almost fatal to the decaying Ottoman Empire, and once in 1916, when the armies of Grand Duke Nicholas poured through Caucasus passes into Turkey.

Later, Erzurum had a prouder distinction. In 1919, when Allied statesmen in Paris

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George Fleikow, Three Lions

Among Hills Scarred by Weather and War Runs the Winding Road to Kars

A graded surface makes this one of the smoother sections of the highway twisting among the eastern hills between Erzurum and Kars (page 739). It is important to the defense of Turkey's northeastern border. American-built cars such as this Kaiser are a rarity on the road. From a bluff in the distance an old fortress overlooks the valley. The Erzurum-Kars railroad runs along a hillside cut at upper left.

were planning to detach the city from Turkey and make it the capital of an Armenian republic, a Turkish general of genius named Mustafa Kemal (later Atatürk) was assigned to the Erzurum command.

From this eastern outpost, safe from the guns of Allied warships, Kemal began his great work as regenerator of the Turkish nation and founder of the present Republic.

Today, as in generations gone by, the main business of Erzurum is military defense. Along roads leading eastward are miles of barracks and training fields (pages 760-1).

I saw Turkish conscripts shooting at tiny white models of parachutes dangling from pulleys, for the Turks believe that, if a Soviet attack comes, it will be by airborne troops fluttering down like autumn leaves. They are taking no chances.

Every Turkish youth of 20, with rare exceptions, must go into the Army for training and service. He lives on a simple diet of bread and stew three times a day.

It is up to him to clean, patch, and mend his uniform, and to do it out of an allowance equivalent to 21 cents a month.

Turkish Army Morale High

Yet Maj. Gen. William H. Arnold, chief of the Joint American Military Mission for Aid to Turkey, considers that the Turkish soldier has "one of the highest morales of any of the armed forces I have ever seen" and is "a great person to have on our team."

The Turkish soldier has a few quirks, such as his unwillingness to discard any weapon that is good enough to kill even one enemy.

The Turk has a stoical spirit of service,

158 M. Stavros

Sentries Watch from a Tower on Turkey's Skyline

Erguder Patrol Station commands the valley of the Aras (Araxes) River, visible through gate, at the point where it reaches the Soviet border. The post is named for a retired Turkish corps commander. From its gun slot can be seen Mount Ararat's snow-capped peak, traditional resting place of Noah's Ark.

and pride in his country. There was not the slightest doubt in my mind that he would fight and die for his country whenever necessary.

My opinion was borne out by witnesses much more expert than I—American officers in eastern Turkey assigned to help train Turkish divisions in the field. They know the Turkish soldier at firsthand.

The United States has some 300 officers in Turkey from every important branch of the service. By the end of last year 30,000 Turkish soldiers had gone through American training courses.

Blaring Is Banned

The commander of the Americans in Erzurum, Col. Horace B. Frederick, of Hugo, Oklahoma, drove me in a jeep around the old city. I noticed that he drove slowly and never blew his horn or shooed a civilian from the roadway.

"I'll bet all your drivers aren't so considerate," I remarked.

"Oh, yes, they are," the colonel said. "They have to be."

And he told me of an order he had issued just the preceding day, an order forbidding all drivers of American vehicles to honk at civilians. He had instructed his drivers to slow down to walking pace whenever moving through a town or village.

To make doubly sure that the order would be obeyed, the Oklahoma colonel paid a call on the mayor of Erzurum. He read the order and asked the astonished mayor, as a personal favor, to report any infraction directly to American headquarters in the town.

This consideration for the Turks has made an enormous impression on them. The stock of Colonel Frederick and his men, and of the United States, is sky-high in eastern Turkey.

These American officers believe that they have two jobs to do in Turkey. The first is to prove worthy of the respect and confidence of the Turkish Army and the civilian population. The second is to help in developing the Turkish armed forces.

Unless they accomplish the first task, they know they will not be able to succeed in the second.

Guided by the same philosophy, Colonel Frederick and his men have not asked for a post-exchange shop

where they can buy American luxuries that are denied the Turks.

Instead of requisitioning a fine building in Erzurum (and there are not many), they have rented and reconditioned an old hotel as their dormitory and officers' club. Instead of paying American wages and upsetting the economy of Erzurum, they pay their servants and helpers on the Turkish scale.

They have trained Turkish boys to cook their meals in American fashion, and what they can buy in the Erzurum markets is good enough for them. All this is being done for a purpose.

"I don't know just how much we'll accomplish in a military way," Colonel Frederick told me, "but I do know that when we finish the job here there's going to be respect and good will for the United States among the Turkish people."

These ambassadors in khaki made me proud to be an American in a strange land. I was glad to know, after I had come home, that Colonel Frederick and two of his fellow officers in Erzurum—Lt. Col. Russell O. Fudge of Wichita Falls, Texas, and Lt. Col. Roy T. Dodge, of Gadsden, Alabama—had received personal letters of commendation from Gen. J. Lawton Collins, Army Chief of Staff in Washington.

To Kars by Jeep, the Governor Driving

Colonel Frederick saw me off on the day-long road journey from Erzurum to Kars. The Turkish governor insisted on driving our oversized jeep to his new capital and home 125 miles away.

For the first 50 miles the road was good (page 757). At Horasan, where railroad travelers have to change to narrow-gauge track, the road became narrow-gauge as well.

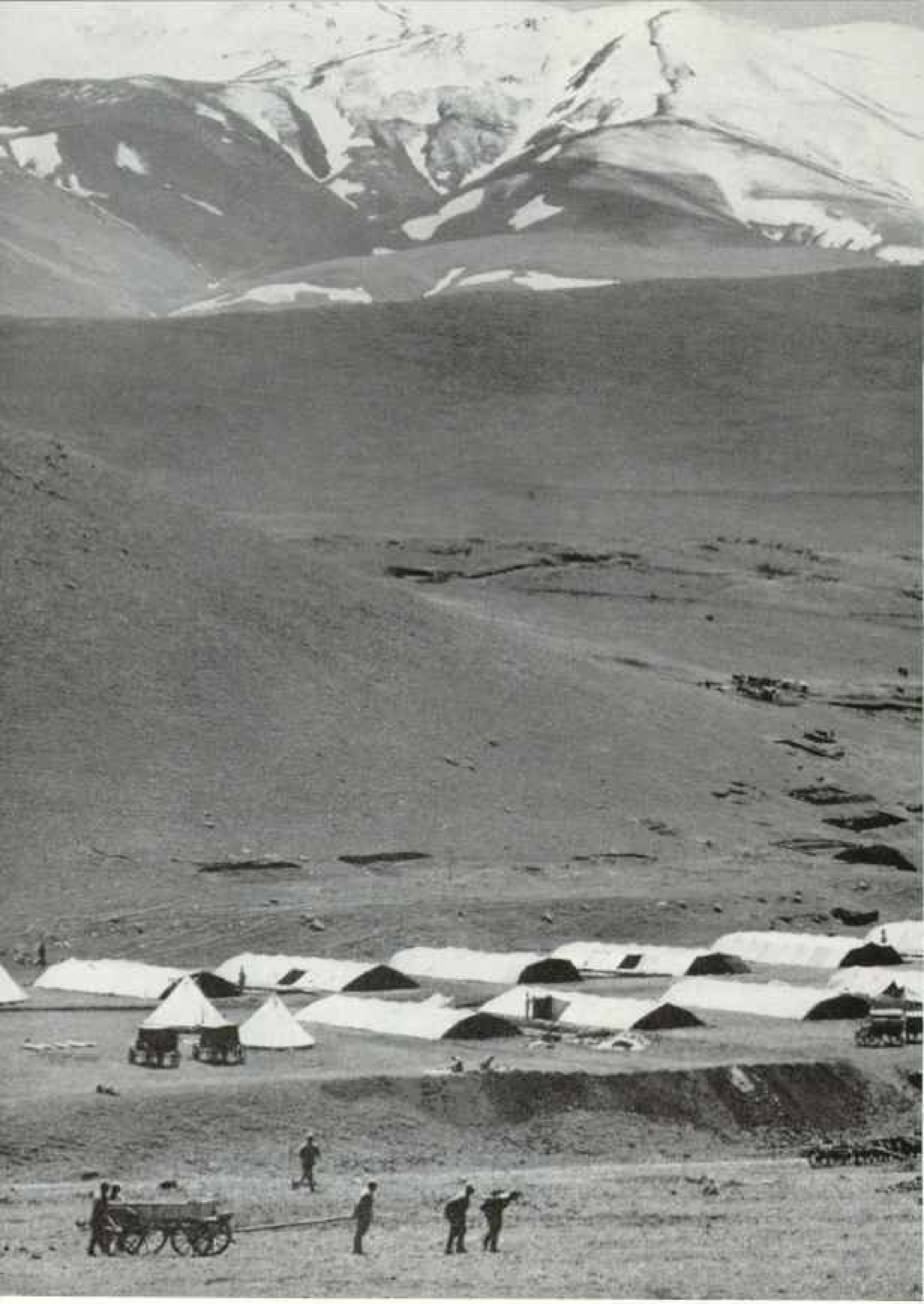
It was typical of the roads in this part of Turkey, which meant that the original paving blocks had sunk over the years. We lurched and bumped, and sometimes we found it smoother to ride alongside the road through fields of stubble.

This was bare, forbidding country, with some grazing land on the hills and farming in the valleys. Sometimes, on a rocky crag, we saw the ruins of huge fortresses built 500 years ago; once we saw a crag eroded by the wind until it looked like castle ruins.

759 George Pickow, Three Lions

Tall Torch Stands Ready to Signal Border Trouble

This emergency flare, a pole wrapped with dry grass, rises about 100 feet behind the barbed-wire Turkish-Russian line. A bottle of kerosene is kept in the box to kindle warning flames in event of a raid. A Turkish sentry, bottle in hand, checks up on the fuel level, a daily routine.



Canvas Huts House Turkish Soldiers in a Chill Mountainside Camp near Erzurum

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Lee Boecker, Acme

American Aid Since 1947 Has Helped Turkey Guard the Wild, Barren Border Country

Golden Grain Spells Capital Gains in Turkey's Agricultural Economy

Most peasants of the eastern Provinces live by growing grain and livestock. American aid is doing much to modernize primitive farming methods still used in the river valleys and mountains of Turkey. In Horasan, village east of Erzurum, a farmer and grain dealer inspect harvest samples amid curious onlookers.

In these wind-swept highlands a tree is an object of curiosity. I thought of the woods at home and had a twinge of homesickness and pity for people who have to live without ever seeing a forest.

But my pity was wasted. As the road began winding through a mountain defile, I had a surprise—wooded hills! Pine trees!

If it had not been for the villagers' flat-roofed houses of stone, with a foot of sod on their roofs to keep them warm, I might have imagined myself in New Hampshire.

Where 30,000 Soldiers Died

In these forests, 30,000 Turks were killed or frozen to death in a bitter campaign against the Russians in the winter of 1914-15. This was the strategic frontier of Turkey in days when a mountain range was supposed to be enough to stop an invading enemy.

From the brow of a hill, out of the pines, we caught our first sight of Sarıkamış (page 756), lying in a dusty hollow. We were now in the Province of Kars.

The governor wanted to drive into town, but I had spotted a guard of honor drawn up outside a one-story building. A big official-looking car was starting up the hill toward us.

"Governor, you'd better get away from that wheel," I advised him. "They wouldn't like it if you drove into your new Province without waiting for an escort."

Reluctantly the governor waited and was driven into the Province in style. The guard of honor snapped to attention as the official car pulled up in a cloud of dust outside the city hall. The governor stepped out to be greeted by the mayor and other dignitaries.

In Sarıkamış, more than 7,000 feet above sea level, the winters are Siberian. The mercury often tumbles to 40° below zero F. The average temperature of this Turkish town, on the latitude of New York, is as cold as that of Hammerfest, Norway, north of the Arctic Circle.

In this bleak setting, so far from home, I found an American military training team cheerfully going about its work and preparing for the winter. These men were cut off from their wives and families for 18 months, stationed in a fierce climate in a distant land, but they were making the best of it.

Sarıkamış has the nondescript look of most eastern Turkish towns. But Kars, the capital

Bargain Cow? A Prospective Buyer Examines a Scrawny Offering

Early morning is trading time at cattle markets outside border towns of eastern Turkey. The "Barbed-wire Curtain" has cut off livestock trade with Russia and forced Turks to develop new markets. Kars boasts a milk-drying plant. Erzurum will soon have new American-designed meat-packing and cold-storage facilities.

of the Province (page 752), has the straight, wide streets and the buff-colored public buildings of a provincial Russian town of the 19th century. Town taxis are horse-drawn droshkies, much the worse for wear after generations of rattling over cobbled pavements. The reason for its Russian appearance is, of course, that this city of 20,000 was Russian for 43 years, between 1878 and 1921.

I rejoined the governor at the entrance of his official home, and together we inspected it. From the outside it looked modest enough —a handsome one-story, U-shaped building with an overgrown garden of marigolds and sunflowers alongside it.

In the public square opposite, where probably a statue of a Russian tsar had stood, loomed a statue of Atatürk, founder of modern Turkey.

Inside, the governor's mansion was as Russian as the Kremlin and seemed almost as big. We walked incredulously through rooms 40 feet long and more, with ceilings 20 feet high.

In the corners stood floor-to-ceiling tiled stoves on which some Tsarist craftsman had lavished his art half a century ago. The Russians had built the house for their viceroys in the days when they used to rule Kars.

The governor took me out on the terrace for a breath-taking view. Far below us the muddy Kars River wound through the valley on its way to join a bigger river, the Arpa, thence to the distant Caspian.

Across the river, on a steep hill, frowned a colossal fortress built by Sultan Murad III about 50 years before the Pilgrims landed at Plymouth. Now the fortress has no military value except as an observation post.

Behind it, sheltered from the fierce winds that blow from Russia, is a villa which Nicholas II, last of the Romanovs, used as a hunting lodge.

The governor led me away from the view and into his house, where some of the local officials of Kars had gathered to pay their respects. I was interested especially in talking to the superintendent of schools and the public health officer.

"What we need here," the young superintendent said, "are not more but better teachers." And the public health officer told me that the health of his highland people was generally good, in spite of the poor and sometimes primitive conditions in which they live.

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Kars Province, at the Soviet Border, Has an American-trained Governor

Niyazi Akı, youthful administrator of this sensitive area, lived and studied in Massachusetts, California, and Washington, D. C. (page 753). Above his desk hangs a portrait of Atatürk, Turkey's first President, the general of genius who broke with the veiled past and built a new nation where Europe and Asia meet.

He was troubled, though, by more than 100 cases of leprosy in the far southeast of his Province, where it borders Iran.

At dinner, in the vast dining room, the governor had as guests two local government inspectors who had come from the capital at Ankara. These young men were of high quality. They won their jobs only after the most rigorous competitive examination; in one group of 60 applicants only four managed to make the grade.

These inspectors spend six months a year traveling to the distant Provinces of Turkey to check up on the performance of local authorities and to offer advice and help.

To them, and to me, the governor talked of his hopes for the people of his Province and of his desire to better their difficult conditions. He assumed that there would be no war if Turkey remained alert and strong.

"We Turks are happy to be free in our own country," he said. "We want the Russians to be happy in theirs and to let us alone."

Remembering his American experience, he talked of the difference between incorporated and unincorporated villages. "You see," he explained, "in this part of Turkey our villages are incorporated, which means that it will be hard to set up consolidated school systems or water plants. But we'll get them; just wait and see."

One Secret of Turkey's Progress

I discovered then one of the secrets of Turkey's progress in recent years. Schooling is not yet universal, but there are now schools in 41 percent of the 40,000-odd villages. No matter how poor a Turkish boy may be, he has an opportunity to take a competitive examination and be trained, at government expense, for a career as a village teacher.

The central government, quite clearly, is aware of the people and their problems in the most distant parts of the country. I suspected that this was one of the reasons why every Turk, in Kars and elsewhere, feels that he has a stake in his country and is ready to fight for it.

On a dusty street in Kars, around the corner from the cobbled cattle market, I found an old tailor, Navrus Imir, who had a son fighting in Korea. He was sitting in his shop, which he shared with a barber.

I asked old Navrus what he would do if the "Moskovs" came—"Moskovs" being the universal Turkish name for the Russians, a name that goes back to the old Turkish wars against the Grand Duchy of Muscovy.

"I'd kill them," the old man said without a moment's hesitation. "I have a horse, and I'll be the first in my family to ride it against the Moskovs."

There was a special reason why this old tailor hated the Russians; he had been born in Russia, and had been forced to flee to Turkey during the Bolshevik Revolution.

Not far from Kars I met Haci Altıner, a Turkish war hero just back from Korea. He had been wounded 14 times at the Battle of the Kunuri (November 27-30, 1950), and he wore the American Silver Star.

"Tell me," I said, "why did you volunteer to go to Korea when you live so near the Russian border?"

"The others in my regiment volunteered," he explained. "Anyway, I thought the best way to defend my village was to stop the Moskovs in Korea."

Handsome Haci has been in the United States since then with a contingent of Korean veterans from 18 countries. But he has paid

Tan Studios, Ariana

↑ Oxcarts Roll the Roads of Kars

Along such ancient trails marched the armies of Xenophon and Alexander, Romans, Persians, Russians, Turks.

↓ Dancers Dodge Death by Inches

Clarinet and kettledrum play a wild accompaniment to this sword dance of Turkey's border Provinces.

George Philips, Three Lions

George Pickow, Three Lions

A Turkish Farmer Makes an Offer for Some New "Threshing Machinery"

Grain is still harvested by ancient methods on the high plateau. Cut by scythe or sickle, it is gathered with wooden pitchforks. The farmer rides an ox-drawn wooden sled (right) around and around on a communal threshing floor out on the open plain. Embedded flints break up the ears. Husband, wife, and children toss the chopped grain into the air, allowing the wind to separate wheat from chaff.

heavily for his patriotism. He is a jeweler by trade, and his left arm is so shattered that he may never be able to repair a watch or fashion a brooch again.

Back in Erzurum, on the way home, I saw other signs of steady Turkish nerves. There are no air raid shelters in this city of 54,000, although Erzurum is only ten minutes' flying time from the Russian border.

Turks Keep Cool and Steady

My last night in Erzurum showed me a symbol of Turkey's unterrified spirit. Hulusi Köymen, the Minister of Defense, was in town on an inspection trip. The Army commander had arranged a party for him, and I was invited.

As part of the entertainment, six lithe young men in white shirts and black sleeveless jackets performed a local folk dance that had come down through the ages (page 765). Clarinet and kettledrum combined in wild music that suggested the skirl of bagpipes.

One of the dancers brandished a vicious-looking knife as he advanced with catlike steps toward his partner. He twirled the knife under the partner's eyes and nose, but the latter never flinched as he backed slowly away, in time to the beating of the drum.

Now it was the second man's turn to take the offensive. He too took out a knife and twirled it as if it were the baton of a drum major in a college band. He advanced on his partner while the music rose.

Both men had been within a fraction of an inch of serious injury. Neither had shown so much as a flicker of fear. It seemed to me, watching this spine-tingling performance, that I was seeing the confident, steady-nerved Turkey of today, our newest ally.*

* For other postwar articles on Turkey, see, in the National Geographic Magazine: "Turkey Paves the Path of Progress," August, 1951, and "Turkish Republic Comes of Age," May, 1945, both by Maynard Owen Williams.

Paris, Home Town of the World

All Nationalities Know the Magic of the Siren "City of Light," 2,000 Years Old but Young as Spring

By Donald William Dresden

With Illustrations by National Geographic Photographer Justin Locke

As I entered the familiar hotel once again, the proprietor's wife looked up from her paper. "Welcome back to Paris, monsieur!"

Thanking her, I said I hadn't thought I would be back so soon.

"But, monsieur!" she exclaimed. "Surely you expected to return?"

I assured her I had.

She beamed. "Ah, yes," she said, "everyone always comes home."

The *patronne* was right. The appeal of Paris is so universal that in a sense the city is everybody's home town.

I have come "home" to Paris many times and in many ways. Approaching it by air at the velvet hour of twilight, I have seen the capital glowing like a bed of hot coals. Wriggling through its suburbs by automobile, I have stolen upon it almost unawares.

But this time I came to the City of Light by train, from the port of Cherbourg across the pastures of Normandy. I liked this approach then, as always, because in the train's own movement I sensed a gathering impatience which matched my own, a crescendo of expectation for the delights of the capital.

Outside my window the farmlands gave way to towns; the towns clotted abruptly into suburbs; the train rushed headlong into the smoky shed of the Gare St. Lazare and drew to a stop. Paris. And home.

On the station platform mustachioed porters in blue smocks and berets swarmed over the luggage. One stocky fellow, a smoldering, hand-rolled cigarette drooping from his lip, snatched my bags and trotted off, favoring me with only one word of explanation: "Taxi!"

Battle of the Boulevards

Soon I was in one. A rickety antique, it looked as if it had been left over from those commandeered by General Gallieni to rush troops to the Battle of the Marne. With bulb horn squawking impatiently, it sailed into the frenzy of Parisian traffic.

Our first near-accident was not long in coming. The other driver, of course, had blundered; at once the air was filled with waving arms, cries of "*Espèce d'idiot!*" and various other phrases not generally found in the dictionaries.

Paris, when at length I could settle back in my seat to contemplate it, looked as familiar and as welcome as an old friend. The great plane trees with their mottled trunks and elephant-ear leaves, the lichen-encrusted chestnuts and acacias, all seemed to share with the city its patina of dignified old age, gray but indestructible.

Along the narrow streets crouched the tiny shops I had known so well, their windows whitewashed with price quotations for wine, bread, meat, and other edibles. Kiosks, barnacled with layers of daily and weekly papers, and pillars festooned with posters for the theater and opera, told me Parisians had not lost their appetite for politics, polemics, and the arts.

The French themselves, some in patched denim, some as chic as next week's showings, seemed as always to have stepped from a canvas by Renoir.

I left my bags at the hotel and took to the streets again, on foot, driven by the desire common to tourists and old hands alike—to swallow Paris at a gulp, to see everything at once, whether for the first time or the fiftieth.

Where Burns the Flame of France

Walking up the great Avenue of the Champs Elysées to the Arc de Triomphe (page 773), I found I was not alone in my pilgrimage. Toward it also marched a column of gray-haired Frenchmen. Many limped; all wore campaign ribbons. At the head of the formation strode a standard-bearer with the flag of the regiment.

Under the Arch, from which rippled a huge Tricolor of France, these veterans of World War I bared their heads, eyes fixed on the flag and on the bronze plaque which commemorates the liberation of Paris in August, 1944.*

Their commander then stepped forward, bent down at the Tomb of the Unknown Soldier, and turned up the flame which burns there, low but constant, in honor of those who fell for France in World War I.

When the veterans had departed, I went up by elevator to the top of the Arch. Here, high above the Place de l'Etoile, I could study once more the twelve avenues which radiate from

* See "Paris Lives Again," by Maynard Owen Williams, National Geographic Magazine, December, 1946.

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Notre Dame, the Seine, Choice Food, Good Talk—a Blend of Paris at Its Best

Like an anthem in stone soars the towered Cathedral of Notre Dame on the Ile de la Cité in the Seine. On that small island, two millenniums ago, Paris got its start as a fortified village of the Gallic tribe of Parisii. Gradually the city invaded adjacent islands and mainland. Here conversation, coffee, and enjoyment of the view top off a luncheon at the Tour d'Argent, famed for its pressed duck.

it—the Grande Armée, the Champs Elysées, the wide, grass-lined Avenue Foch, and the others.

Beyond, on my right, I could see in the fading light the leafy crest of the Bois de Boulogne—the city's built-in forest, where children can picnic and romp and where horsemen ride for miles under trees that have seen duels as well as trysts.

Straight down the Champs Elysées, Fifth Avenue of Paris, loomed the tall shaft of the Obelisk, marking the avenue's culmination in the Place de la Concorde. There stood the guillotine in the bloody days of the French Revolution.

But the Place breathes now more of the spirit for which it was hopefully named: concord. Subtly harmonious, its fountains, trees, statues, and buildings soothe the sight—and the soul.

Paris Puts On Her Jewels

Night descended as I walked back to my hotel. Suddenly, as if at the command of the city's stage manager, the lights came on. The fountains of the Concorde danced in a soft glow; the classical columns of the Church of the Madeleine stood bathed in mellow beauty (pages 776, 789). Up the Seine the great spire of Notre Dame rose above the trees,

luminous, majestic. The strange, gaunt frame of the Eiffel Tower surmounted all.

My course took me past tangible evidence of Paris's place in the international scheme of things. Not far from the American Embassy, near the Concorde, W. Averell Harriman had established the headquarters of the Economic Cooperation Administration in a house once occupied by Talleyrand. Now it continued to serve as the focal point for ECA's successor, the Mutual Security Agency, charged with meshing the economic and defensive efforts of America and the free nations of Europe.

On the other side of the river from the Place de la Concorde I glimpsed the Quai d'Orsay, home of the French Foreign Office. Here was signed last year the momentous Schuman Plan for the pooling of Western Europe's steel and coal resources.

Near the Iéna Bridge, on the crest of a hill dominating the Seine, I saw the white Palais de Chaillot, where the United Nations held its Sixth General Assembly (page 775). Not far away, I knew, were the permanent offices of UNESCO, the United Nations Educational, Scientific, and Cultural Organization.

Walking through Paris is walking through history, past and in the making. But the centuries sit lightly on the old city.

As I strode along the river, the fog rolled up and street lamps filtered their light gently through the gossamer, spilling a silky radiance on the smooth, black surface of the Seine. Passers-by emerged from the dusk and as quickly disappeared again, leaving behind them only the diminishing beat of metal-rimmed heels on the pavement. Buildings, tightly shuttered, took on an air of mystery.

Seeing these sights, hearing these sounds, inhaling the damp mustiness of Paris, I felt again what so many have felt before me: a sense that this capital of a foreign land was, paradoxically but truly, my "home town."

Madame Distrusts the Night Air

It is hard, in any event, to feel a stranger very long in Paris. For one thing, hotel-keepers, and especially their wives, take a proprietary interest in their guests. When I retired to my bed with a severe cold, Madame la patronne bounded up to my room with a steaming pot of soup.

"*Eh bien,* monsieur," she said, shaking a finger at me. "You Americans do not understand the danger of a current of air. *Voilà!*" And, spotting a window open a hairsbreadth, she rushed over and slammed it.

"Now eat this," she commanded, and ladled forth a body-strengthening broth delicately flavored with herbs and loaded with tender morsels of chicken and beef.

Next day I struggled to my feet and set out for a walk. I had gone no farther than the lobby when a voice with the authority of a traffic cop brought me up short.

"Monsieur, do you have on your woolen socks and muffler?"

Useless to protest. I retreated to my room and put them on.

At the sacrifice of such solicitude, I took an apartment on the Quai St. Michel, not far from the Rue de la Huchette and the Rue du Chat Qui Pêche, streets immortalized by Elliot Paul in *The Last Time I Saw Paris.*

From my windows overlooking the Seine I could see on my right Notre Dame and its gargoyles (opposite and page 800), on my left the gray towers of the Conciergerie, where Marie Antoinette spent her last unhappy days, and, farther down the river, past the delicate spire of the Sainte Chapelle, the classical Pont Neuf.

Views like that are an inspiration, but one cannot eat them. I hired a servant. She was French; therefore, I reasoned, she could cook. I invited a friend to dinner to bask in his praises.

The soup was a signal of disaster.

Then came the chicken. By some strange technique, the cook had contrived to rip the wings and breast from the bird, leaving for my guest and myself a scant bit of inedible carcass and skin. We repaired to the nearest bistro.

To Cooking School in Self-defense

That was a sufficient solution for the evening. But, for the long pull, I decided on a more basic approach. I enrolled in the Cordon Bleu, Paris's celebrated cooking school.

My first night's lesson was the preparation of a *sauce Béchamel*—in plain American, a cream sauce, with no lumps. It came out well. Elated by my achievements, I ladled variations of it over all manner of dishes.

Before long I advanced to *poulet sauté Gabriel,* which is chicken cooked in butter to a golden tone, spiced with shallots, salt, freshly ground pepper, and other seasonings, and then left to simmer for a couple of hours in white wine.

Next step was the discovery that a pound of chestnuts, carefully cooked in broth with a celery root and leeks and braced with egg yolks and seasoning, could make a delightful soup, *crème Clermont.*

As time drew near for the final examinations, I practiced nightly on the preparation of wild and barnyard ducks. I cooked them with oranges, with peaches, with practically every fruit that Paris afforded. I even learned to marinate a goose properly in olive oil, vinegar, chopped shallots, carrots, parsley, and seasoning. My maid looked at it uncertainly.

"Do you think, monsieur, it will taste like goose?"

It did.

The ultimate test, on which my hopes of a diploma rested, called for the preparation—within an hour—of an *omelette Parmentier* (a potato omelette), *canard à l'orange* (duck with orange), and a dozen little tarts stuffed with apple purée and spiked with cognac—*tartelettes mignonnes*.

I passed. And afterwards, with the help of two friends and an excellent bottle of Saint-Emilion, I ate my masterpieces. I could truthfully say that it was the best examination I had ever tasted.

A New Use for a Pavement

Paris was cold that winter, and into the apartment crept the marrow-chilling temperature of the tomb. Lying abed to read the morning papers, I found my hands getting too stiff to hold the pages.

Fuel was expensive, but at least it was not rationed, as it had been in the immediate postwar years.

During that grim period, a French friend of mine, alarmed at the effect of the cold upon his newborn daughter, had taken the matter into his own hands. Late one night he had slipped out of his apartment with a large sack and a pickax. Around the corner he went to work, as quietly as he could, on the street's wooden paving blocks.

He had nearly filled his sack when the shadow of a policeman fell across him.

"And what do you think is under that pavement, monsieur? Gold?"

My friend looked up. "No, monsieur *l'agent*; what I want is on top—the wood. I have a baby in the apartment up there, and not enough fuel to keep her warm."

The policeman shrugged.

"But, the little one—" protested my friend.

The policeman gazed thoughtfully at the sack, then turned away. Over his shoulder he said: "Let us hope she will be warm, monsieur. I have three of my own."

Gallic Good Will for "l'Américaine"

This awareness that we are all, for good or ill, in the same boat seems to imbue the ordinary people of Paris wherever one lives.

When my wife joined me in the capital, we moved to a 10-room house, off the Avenue Foch, which had once been part of an even larger mansion. To the tradesmen of the neighborhood our affairs immediately became their affairs, to be discussed with all the frankness common to a big and uninhibited family.

Known quickly as *l'Américaine* despite her impeccable French, my wife achieved a certain popularity among the shopkeepers because, unlike so many of her countrymen, she would ask the price of a bunch of carrots before ordering them. That, to the Gallic mind, showed not merely good sense but good manners.

When, eventually, we were going to have a baby, interest along the Rue Pergolèse became even keener. Dropping in at the butcher's, my wife was watching him perform a surgical operation on some beef when he put aside his knife, left his work, and produced a chair.

"Madame," he said, "you must sit down. And what would you like, to give you the strength you need?"

That night we dined upon the finest filet mignon in all Paris.

Speculation about the sex of the expected baby grew from day to day. The druggist, the butcher, the florist, the baker—all had their theories. One day Madame l'Aigre, as we called the sour-faced news vendor, put the question directly.

"Madame, what is it that you are expecting?"

"A girl," replied my wife.

"But, madame, it is easy to see that you are going to have a boy."

Two weeks later my son Christopher was born. Respectfully I raised a tiny glass to the health of Madame l'Aigre, oracle of the Rue Pergolèse.

The Lady of the Horses

Another remarkable Frenchwoman introduced herself in a rather strange way. On the first night in our new house we heard a whinny. We also smelled a strong whiff of ammonia. Since it seemed highly unlikely that horses would be quartered in this district of Paris, we chalked up our suspicions to overactive imaginations.

But we had been more right than we knew. Next morning we heard a clatter of hoofs in the courtyard below our back windows; doors swung wide, and a team of bays pranced out into the street, pulling a carriage. At the reins sat a French lady with a very firm pair of hands.

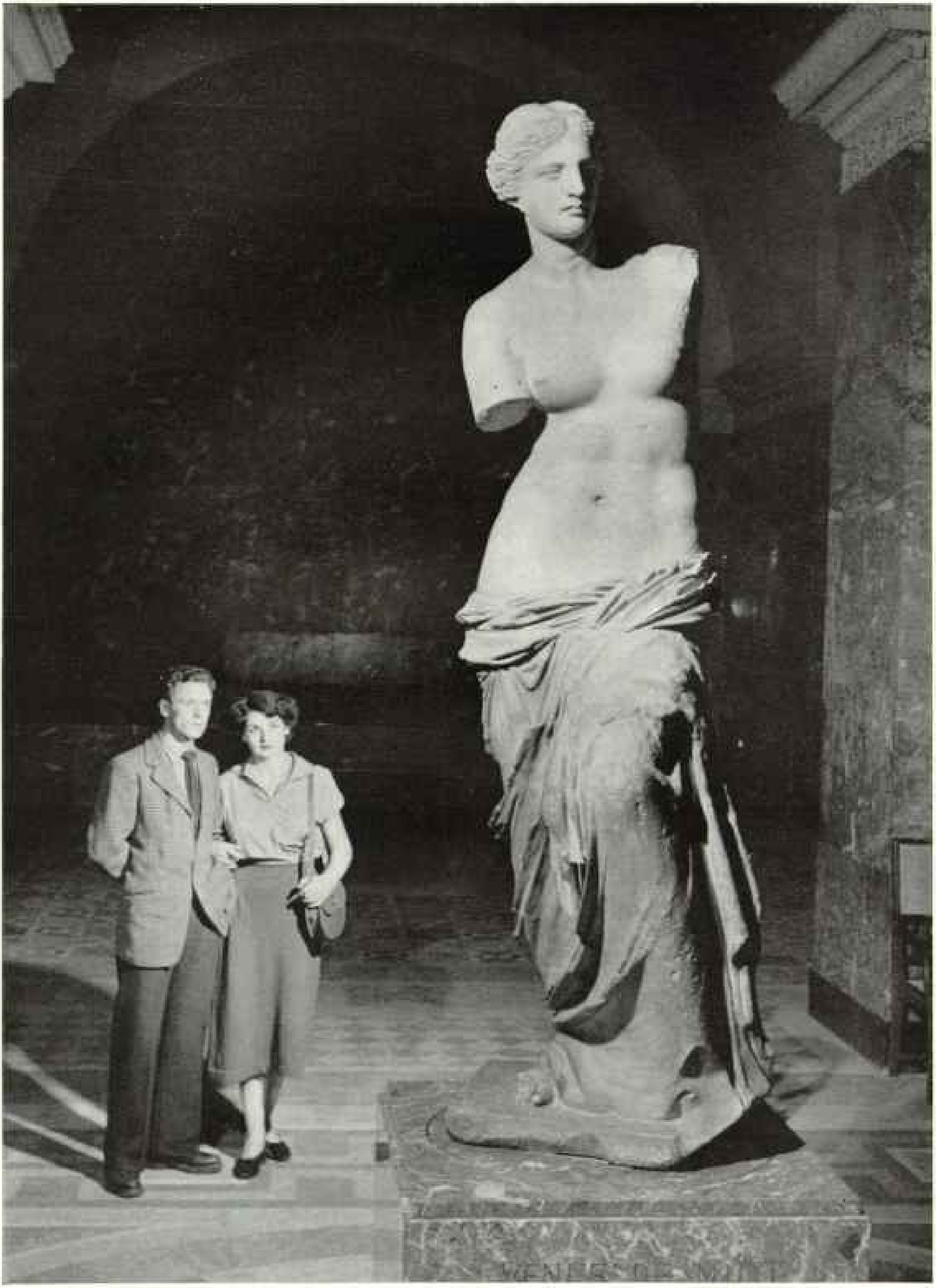
Goggle-eyed, our maid Denise cried out: "Look! *La dame aux chevaux!*"

From that moment, nothing could keep Denise at her cooking and cleaning when the lady of the horses appeared.

But there were other disadvantages. As winter passed and summer approached, the dung heap in the courtyard grew—and fumed.

We thought of calling the Minister of Health. In deference to our neighbor, however, we sought to see her first. Next day Denise announced: "The lady of the horses is in the kitchen."

She was. "I am Mademoiselle Jeanne,"



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Young English Visitors Stand Spellbound by Venus de Milo, Dazzling Still at 2,200 Years

An unknown Grecian sculptor carved the goddess of love, probably in the 2d or 3d century B. C. The priceless statue was found in 1820 on the Aegean island of Milos. In the Louvre, once fortress and palace but now a treasure house of art, the lovely lady of long ago never wants for admirers (page 781).

she declared, as if defying me to prove otherwise. The set of her jaw reminded me uneasily of Dickens's Madame Defarge, who knitted so implacably beneath the guillotine.

Politely, we told her we thought the horses and their by-products jeopardized the health of our family, particularly that of the baby, who was only a few months old.

The lady of the horses drew herself up.

"Sir and madame!" she thundered. "There is no question about the smell. That I admit myself, and I love horses. But surely you know that the smell is most healthful. No baby who sleeps above a stable has ever contracted tuberculosis. The air prevents it!"

Perhaps it does. I have never checked the point with the medical authorities. All I know is that I would rather dispute the issue with them than with *la dame aux chevaux*.

At all events, when we needed a change of air, we found we could get it most agreeably in the Bois de Boulogne. We began to use it, in fact, as the French use it, as if it were our private garden.

Enclosing some 2,150 acres, the Bois contains magnificent trees, lakes, lawns, springs, bridle paths, and lanes. Its restaurants, where food is served under arbors and beside waterfalls, would do credit to Marie Antoine Carême, a father of French cuisine.

For a few francs we occasionally rented a rowboat or a canoe and skimmed over the sunlit water. At other times we shared the children's delight in the miniature railway which runs from the Porte Maillot entrance to the little combined zoo and arboretum, the Jardin d'Acclimatation.

Seeing Paris from a Sidewalk Café

We were in no hurry. After all, as the Parisians would say, "Where do you want to rush to? You are in Paris already."

It is a spirit which pervades the city—a spirit which seems to assert, in defiance of the hobgoblins of efficiency, that the clock was made for man, not man for the clock. Parisian taxicabs may dart about the streets like nervous polo ponies. But not Parisian pedestrians. They don't stride; they saunter.

And they do not find it easy to pass a sidewalk café. At all hours of the day they are to be found sitting under the gaily colored parasols, sipping coffee or some other drink, amiably chatting and watching the rest of Paris pass in review.

I had a friend whose office was on the Champs Elysées. He was a businessman, a chap with many irons in the fire. But when a client came to call, he would steer him gently downstairs to the nearest café.

"Why sit in a stuffy office?" he would say. "Deals work out better when one can relax in a friendly, unhurried atmosphere. Naturally."

Besides, there is always something to see from a café, whether it be simply the parade of pretty girls, a political demonstration by inflamed students, or another attempt by the citizen to put the police in their places. (Incidentally, the picturesque cops the visitor sees on the street corners, their stiff blue capes sometimes lined with lead for swinging at rioters, are not *gendarmes*, as they're often miscalled. They are *agents de police*. The *gendarmerie* keeps order in rural areas.)

These impromptu experiments at needling the arm of the law can take many forms. There was the occasion a while back when a young man, dressed in the boots and jacket of a surveyor, approached the Champs Elysées with a long chain. Handing one end to a passer-by, he crossed with the other to the far side of the broad and busy avenue. To a second stroller he said:

"Say, hold this and draw it tightly a moment, will you? Have to get a bearing across here."

With that he vanished into the crowd, repaired to a café, and watched with much relish the efforts of the police to untangle, and to understand, one of the worst traffic snarls in their experience.

More recently, another studious-looking youth asked the police if he might examine some of the hieroglyphics near the top of the Egyptian Obelisk that graces the Place de la Concorde.

With a true French regard for intellectual pursuits, the police not only agreed but suggested that he obtain the loan of an extension ladder from the Fire Department.

Up went the "Egyptologist," at 4:30 in the morning, carrying a pink umbrella and a walkie-talkie. By 10, a large crowd had collected, attracted by his waving umbrella. Fishing out a cigarette lighter, the pseudo scientist announced over his radio that the excellent little gadget he held in his hand would light in any breeze, at any height. Moreover, it could be purchased at any of the better shops.

The crowd roared. So did the apoplectic police, but in a different tone. Nor were they

L'Arc de Triomphe Symbolizes the Glories of French Arms

A soft breeze stirs the huge Tricolor suspended from this monument to the victories of Napoleon Bonaparte. World's largest structure of its kind, it stands in the Place de l'Etoile, hub of a dozen famous avenues. Visitors ride an elevator to the top for a magnificent view of Paris. Beneath the Arch rests France's Unknown Soldier of World War I, his tomb marked by an eternal flame. Here a crowd watches President Auriol depart after 1951's Armistice Day ceremonies.

For Parisians, There Is Nothing Like a Parade

Grandest turnout of the year comes on Bastille Day, when all France joins in a celebration like America's Fourth of July. It commemorates the storming of the Bastille, a political prison, on July 14, 1789, and the beginning of the French Revolution.

Here, stepping smartly to the rat-tat-tat of drums, bandsmen of the 5th Moroccan Regiment pass before throngs lining the Champs Elysées on Bastille Day, 1951. Behind them looms the dim hulk of the Arc de Triomphe (page 773).

The Moroccan fighters saw World War II action in Italy and France. They are now on occupation duty in Germany. Their goat mascot, with regimental number on blanket, keeps eyes front in true military manner.

Of all the public spectacles that have delighted Paris, none will be remembered longer than the joyous carnival after the city's liberation in August, 1944. Only a modest force was available, but Gen. Charles de Gaulle ordered a parade—and a super parade was what Paris had.

775 Kodachromes by Justin Locke

A Soaring Sentry, 984-foot Eiffel Tower Guards the Massed Flags of UN

The banners fly beside the meeting place of the 1951–52 General Assembly at the Palais de Chaillot (page 804).

A Policeman, Well Shielded Against Erratic Drivers, Directs Traffic Before the Madeleine

Rue Royale and Rue St. Honoré, smart shopping streets, intersect here. "Near the Madeleine" is a byword among Americans describing Paris sights. Begun in 1764, the famous church in 1806, at Napoleon's orders, became a "Temple of Glory" for the *Grande Armée*. Ten years later a royal decree again made it a place of worship.

At Roger the Frog's, a Gay Left Bank Party Sups on Garlic-flavored Snails. Conversation and Wine Flow Freely

Menus are merely chalked on a blackboard and read with Roger's old pair of opera glasses. A prankish guest awaiting a table may sample your food or wine.

Kodachromes by Justin Locke

In Luxembourg Palace Gardens, a Left Bank Retreat, Young and Old Parisians Find Fun and Beauty

Mothers and nurses enjoy the sun while youngsters roll hoops, ride donkey carts, or just toddle. In more than three centuries the palace (background) has housed royalty, lawmakers, famous prisoners, and conferring world statesmen.

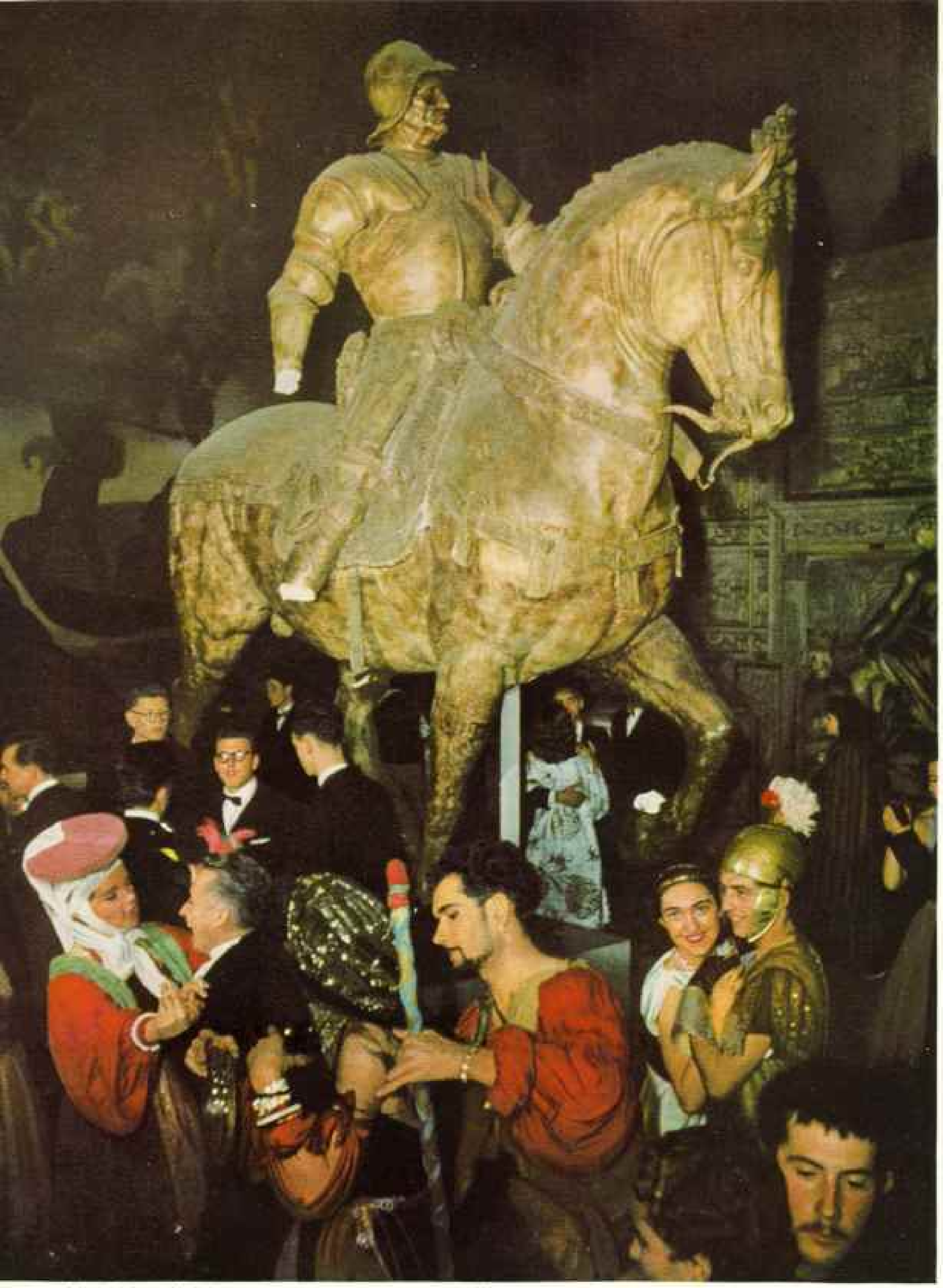
◂ **Rapt Faces Pay Tribute to a Puppeteer's Magic**

These young Parisians watch the *guignol*, French cousin of Punch and Judy. The show, one of the oldest in France, is not to be confused with the Grand Guignol, a Montmartre theater specializing in horror.

▾ **Peril Stalks Our Hero**

The smiling little man is Guignol, and he seems about to be seized by a fearsome creature equipped with horns and fangs.

Kodachromes by Justin Locke 273



Kodachrome by Justin Locke

Ah, Paree! When Art Students Frolic, Something Must Give!

This time it's a plaster statue of Bartolommeo Colleoni, 15th-century Venetian warrior. Hand and foot broke off when a reveler tried to mount the horse at the annual masquerade ball of the Beaux Arts School.

any happier the next day when the Paris papers front-paged the advertising stunt with gleeful emphasis.

We ourselves were no strangers to the weekday life of the cafés and its passing show. But we tended to reserve Saturdays and Sunday afternoons for the Louvre, that sprawling treasure house of the arts, itself a history in stone (page 794).

Philip Augustus, we knew, built the Louvre's first section as a fortress, around 1204. Charles V converted it into his residence. Catherine de Médicis, that terror of her day, planned the building of the long gallery paralleling the Seine; she wanted to connect the Louvre with her apartments in the Tuileries.

The Louvre: 45 Acres of Masterpieces

Louis XIV eventually allowed the building to fall into disrepair, but Louis XV refurbished it. Henry IV, Napoleon I, and Napoleon III ordered important additions which made the Louvre not only one of the largest—it covers some 45 acres—but one of the most beautiful palaces in the world.

What hangs upon its walls and stands in its great rooms is, of course, worth far more to civilization than the edifice itself. Nearly any school child knows that it houses the superb Winged Victory of Samothrace, the Venus de Milo (page 771), and Leonardo da Vinci's Mona Lisa. But they are only three of its gems. To sample even cursorily its vast collection of French, Flemish, Italian, Greek, Egyptian, and other masterpieces is a formidable undertaking.

The Louvre, indeed, is so enormous and so mazelike that it is no trick at all to lose yourself in its corridors. Someone has calculated that it would take three hours of fast, nonstop walking merely to glance once in passing at its collection of fine arts through the ages. And yet the same building also houses the Ministry of Finance and the National Lottery!

Not the least attraction of the Louvre is the people who frequent it. Parents enthralled by a painting learnedly explain its virtues to 8-year-olds who nod politely and hear nothing at all. Lovers, their fingers interwoven, sit on benches in a happy daze of contemplation. A bearded art student hurries in, stares at a Tintoretto, and dashes off to his studio to catch on canvas that elusive color.

A source of wonder to numerous art lovers used to be that French *salons* remained cold for so long toward France's own masters of impressionism—Cézanne, Manet, Degas, Monet, and the others. The great collections of these artists' works were found outside France, especially in America. In later years, however, the attitude of the Louvre and other French museums changed appreciably in this respect.

Midwinter Night in Montmartre

My wife and I used to tackle the Louvre with caution, restricting ourselves to a few galleries, or only one, at a time. Even so, we would often emerge limp and esthetically a little numb. It would be pleasant then to take a subway or a bus to Montmartre and its hill crowned by the basilica of the Sacré Cœur.

It is a steep climb, through narrow and winding streets, but in winter a lovely one. Snow, falling softly over the chimney pots of Paris, masks the harsh lines of cornice and gable, smooths the stern symmetry of classical façades.

Tourists tend to identify Montmartre with the Place Pigalle and its bawdy night clubs and well-publicized "dens of iniquity." But there is a gentler side to the hill, typified by the Place du Tertre.

Around this tiny square cluster some of the oldest and most picturesque buildings in all Paris, preserved as if under glass. A restaurant, Chez la Mère Catherine, occupies one site, and a famous art shop another: Au Singe Qui Lit (The Monkey Who Reads).

In summer the Place takes on the atmosphere of a village square at carnival time. But on a winter evening it is quiet, almost deserted. The half-timbered houses huddle together for warmth. The door to a cabaret swings open, flicking a bar of light across the snow; from the rooms behind float laughter and the scrape of a violin. The door closes, and the square is silent again, hushed as if waiting to see if it is the brawling poet of the Middle Ages, François Villon, who has emerged.

Central Markets at Midnight

Many a man who has toured the cabarets of Montmartre has wound up at midnight, as I have, at Les Halles, the Central Markets of Paris (page 786). There are two sobering things to be found here. One is the realization that farmers have been sending their produce to this spot for at least 800 years, centuries before Columbus left his cradle; the other is onion soup.

My favorite place to obtain the soup is the Père Tranquille, a restaurant whose concoction is noted for its restorative power. In its rich beef stock float paper-thin rings of delicately cooked onions and chunks of French bread, sprinkled generously with grated cheese. As a second course, one can pick up from neighboring stalls cornucopias of French fried potatoes just out of their sizzling bath—golden and crisp.

Revived, the reveler can watch the trucks and wagons rumble in from the city's outskirts with their neat loads of carrots, cauliflower, leeks, onions, potatoes, and other rural riches.

The farmers arrange their vegetables on the pavement as if for a still life—the white beards of leeks laid alternately with the green ends, the frizzled tops of carrots tucked opposite the orange-colored roots, the snowy centers of cauliflower nestled in green leaves.

To tour the whole market takes quite a walk. But there is this to be said about Paris: it's a city in which walking comes naturally. No towering skyscrapers oppress the pedestrian; no canyon walls of blank and noncommittal office buildings shut out the sky and belittle the man on foot.

The architectural scale, in short, is to man's measure. Buildings of note and worth are set off by a square or an avenue; they can be seen. Cramped streets there are; but to follow one is to anticipate with confidence the moment when a twist and a turn will suddenly reveal a guildhall, a church, an old and ornate hotel, a noble statue.

Even the massive bulk of Notre Dame de Paris, thanks both to its gracious setting on the Ile de la Cité and to the impeccable proportions of its great towers, seems impressive but not overwhelming. It is enormously old; the artisans who set to work on it in 1163 laid their stone over a pagan altar dedicated to the Roman Jupiter. Yet as sunset turns its gray walls to rose, the ancient cathedral with its rich central window appears not cold with age but warm with life (pages 768, 802).

Eiffel Tower, Symbol with a View

A city so deft in the placement of its chief edifices can absorb huge incongruities of style. It would be hard to conceive of a greater architectural leap than that from the flying buttresses of Notre Dame to the girders of the Eiffel Tower and thence to the classical Dôme des Invalides, where Napoleon lies buried. But they are all equally symbols of Paris.

The Eiffel Tower, set off by the wide spaces of the Champ de Mars, is both a view in itself and an incomparable vantage point for other views. From its peak, on a clear day, one can embrace all Paris and its surrounding countryside within a 55-mile radius.

Two and a half million rivets hold together this skeleton of steel. In a strong wind one can almost feel the strain on the strange, emaciated structure (pages 775, 804).

The tower dominates but does not dim the gleaming roof of Les Invalides. Beneath it, in the curious blue light which filters down from the dome, rests the Emperor's sarcophagus, of antique red granite from Finland. Other generals and marshals of France, from Turenne to Foch, sleep near by in chapels or crypt. It is a stately resting place and, in its somber elegance, peculiarly French.

One does not need to make the "grand tour," however, to discover the sights of Paris; a walk in almost any direction will reveal them. Thus, a stroll southeastward from Les Halles confronts one with the dramatic upthrust of the Tour St. Jacques, a beautiful remnant of the 16th-century church of St. Jacques la Boucherie; and, across the square behind it, the broad bulk of the Hôtel de Ville, the City Hall of Paris (page 797).

The Hôtel was rebuilt after being burned down in the turbulent days of the Commune. A flamboyant and appealing example of French Renaissance architecture, it has a profusion of gargoyles peeking over its roofs and a host of illustrious sculptured Frenchmen ready, from their niches, to burst into political speech at the drop of a top hat.

Close to the City Hall are the sewers. A few steps from the Hôtel a manhole leads to a flight of iron stairs down which I once climbed to the echoing and surprisingly nonodorous tunnels. I expected at any moment to see Jean Valjean racing out of the pages of *Les Misérables* and splashing off around the corner, with Inspector Javert behind him.

Rambling Along the Left Bank

If Victor Hugo is the literary guardian of the sewers, then the spirit of Ernest Hemingway presides over the Left Bank. He lived in this quarter of the city, south of the Seine, and he wrote of it simply and well. One of his characters in *The Snows of Kilimanjaro* remembered a most colorful part, the Place de la Contrescarpe, this way:

"There never was another part of Paris that he loved like that, the sprawling trees, the old white plastered houses painted brown below, the long green of the autobus in that round square, the purple flower dye upon the paving, the sudden drop down the hill of the rue Cardinal Lemoine to the River, and the other way the narrow crowded world of the rue Mouffetard . . . [and] the high narrow houses and the cheap tall hotel where Paul Verlaine had died." *

Equally appealing is the section near the Luxembourg Gardens, that lively park where children old and young sail their boats beside the misty fountains, lovers stroll through the flowers, and donkeys draw cartloads of youngsters under the ancient trees (page 778).

Then there's the Rue Servandoni, just off the Luxembourg. A charming street, it meanders gently to the church of St. Sulpice.

* Reproduced by permission of the publishers, Charles Scribner's Sons, New York.

Over its pavement lean weatherbeaten buildings, nodding at each other like portly gentlemen who have partaken fully of the best France has to offer in food and drink.

Around the cafés that Hemingway and his fellow writers and artists once frequented—the Dôme, the Coupole, the Rotonde—now gathers a new generation of Bohemians. Like their predecessors, they use the cafés as living rooms, post offices, debating halls. Quite in keeping with the sartorial tone of the area was the expatriate I saw garbed in a turtle-neck sweater, beaver hat, ski boots, and riding breeches.

Yet the artistic center of gravity has switched somewhat north in the postwar period to the sector known as St. Germain des Prés. Here, at the sidewalk tables in front of the Café de Flore or the Deux Magots, one can hear on any given afternoon or night more talk of pictures, plays, novels, and philosophy than anywhere in Paris. And the number of beards sported by Americans will be seen to be higher, too.

The philosopher Jean Paul Sartre, leading exponent of the doctrine of existentialism, endowed the Flore with its postwar philosophic flavor. M. Sartre, besieged by would-be philosophers, now has found other haunts. But the café's reputation remains enormous still, and even native Parisians consider a nod from Pascal, the first waiter, almost on a par with a greeting from the President of the Republic.

To the students of the quarter, ideas are food and drink—which is perhaps fortunate, for they

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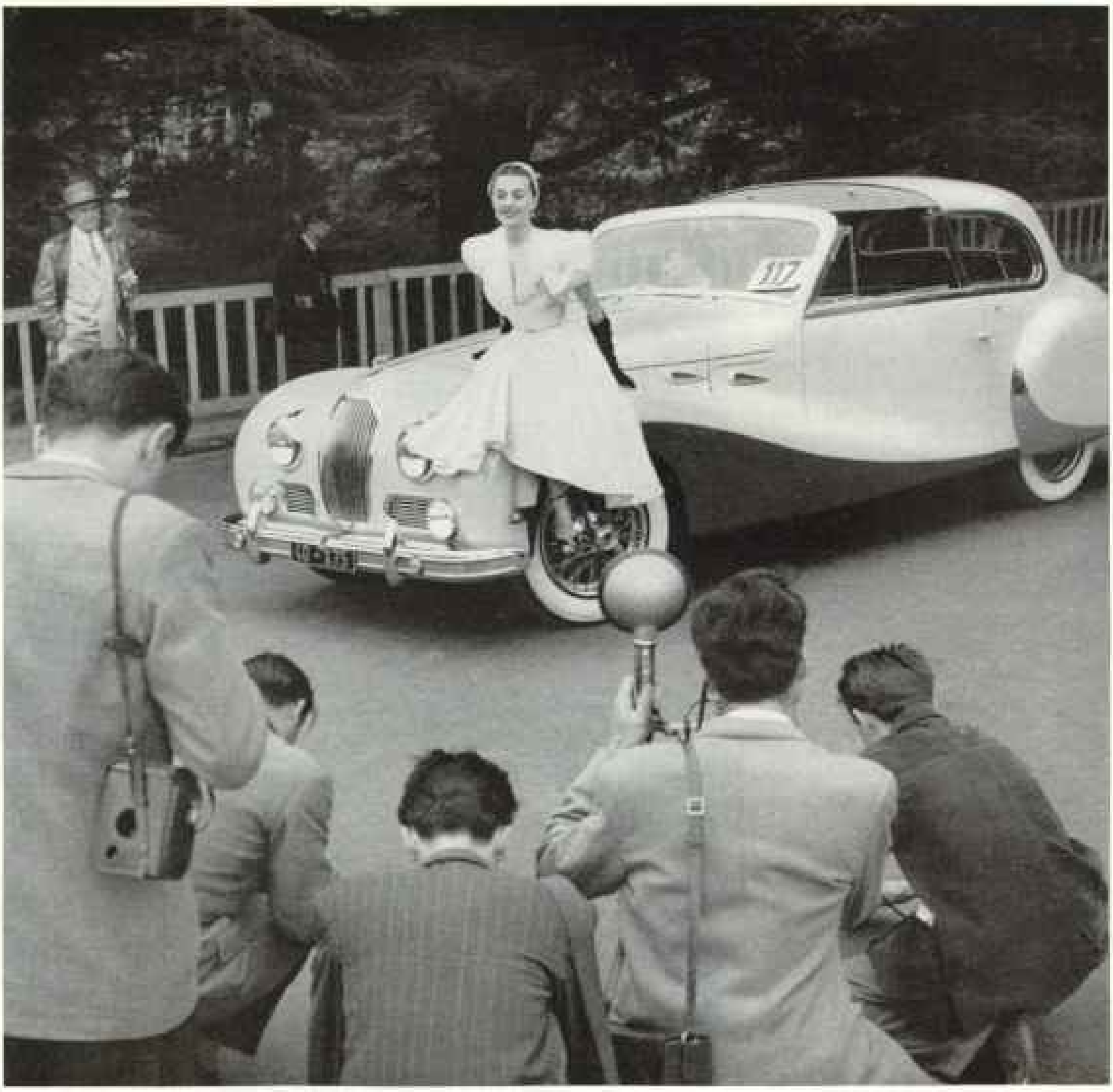
Even to Stopping Traffic, There's an Art

The whistle held just so to make the "r-rr-r-rr-tt" reach out, the white-painted truncheon delicately poised aloft—how Parisian the police of Paris are! The city backs up traffic lights with gesturing policemen: ten of each, plus a supervising officer, barely prevent chaos at the Place de l'Opéra.



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A Pretty Actress-Mannequin Adds Grace to Two New Paris Models

News photographers capture the graceful drapery effect of a gown by Gres (Madame Alix) and sporty lines of a luxurious new automobile. The scene is a June fashion and auto show at La Cascade, a restaurant in the Bois de Boulogne. Every fall Paris stages a brilliant international auto show, the Salon de l'Automobile. Style shows draw buyers from the world over in spring and fall.

frequently are without the price of other provender. Many must earn their subsistence on the side.

Students Make Paris Their Campus

Some students work as porters in the great markets; some scrounge a living as interpreters and translators; others become part-time bookkeepers. A few serve as models in the many studios and schools of painting and sculpture that dot the city.

There is this difference, among others, between their life and that of American undergraduates: they have no campus—or, rather, all Paris is their campus. The museums, the opera houses, the concert halls, the libraries, the bookstalls, the galleries, and, above all, the cafés of the whole capital, are theirs to explore and exploit.

They look solemn enough in disputation, these students. But they can be gay and rowdy, too. Every year they forget their books and their penury alike in the organization of great balls, sometimes preceded by parades through the streets in outlandish costumes and by public burnings in effigy of unpopular professors.

The balls themselves are gaudy affairs. Each has a theme, and the students carry it out with verve and imagination in their in-

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Americans Always Have Flocked to Paris, Most to Play, Some to Work

At Gordon Heath's Bar in the Latin Quarter, guests register varying moods listening to American-born Heath (with mustache) and partner sing folk songs as they strum guitars. Heath's bar, one of hundreds of colorful entertainment spots in Paris, is a favorite rendezvous of transatlantic visitors. Said H. A. Taine, French critic and historian: "Amusement is a French word and finds its real meaning only in Paris."

genious getups. One medieval knight came to a ball one year not only in armor but on his charger, which he rode right up the steps and into the throng.

Typical of these events is the masquerade ball given by the students of the Beaux Arts School (page 780). Another is the Bal de la Horde. In some of these affairs, students contrive to achieve the maximum effect with a minimum of clothing. And even that minimum is usually considerably reduced by the time the ball breaks up, about 6 in the morning.

By tradition, revelers must bathe in the Fountain of St. Michel or in those of the Place de la Concorde before going home. It is, of course, against the law. But on such mornings justice is inclined to be blind.

Tales of Tripe and Truffles

When the students, or indeed any Parisians, are not arguing about the balls or philosophy or art, they are apt to be debating the merits of the capital's various restaurants, whether M. Jean or M. Paul makes the better *tripe à la mode de Caen;* which chef concocts the best truffled sauce; which place offers the most delectable oysters.

To eat well in Paris it is not necessary to frequent the justly world-renowned temples of gastronomy. The corner bistro will often

Hungry Paris Consumes Country Produce by the Ton

Bustling with life and splashed with color, the city's 800-year-old Central Markets (Les Halles) suggest a scene painted by Pieter Bruegel. "The belly of Paris," French novelist Emile Zola called the 10-acre area near the center of the city (page 781).

Twelve pavilions (left) roof two blocks of meat, cheese, fish, poultry, and specialty markets. Surrounding streets accommodate open-air vendors. Buyers inspect piles of cabbages (right). Emptied crates and baskets will bulge again with eggs and newly picked vegetables and fruits.

Market gardeners arrive between 2 and 3 a. m. for the wholesale market. Sounds of bones being sawn, wheels crunching over leafy refuse, the excited tones of bargaining, the thud and clatter of panniers and crates make a confusing hubbub.

All-night revelers visit Les Halles at dawn to savor onion soup, snails, grilled pigs' feet, and fried potatoes at plain restaurants esteemed by gourmets.

St. Eustache (right) ranks among the most beautiful churches of Paris.

The Panthéon gives a backdrop to student talk at a sidewalk café; the Sorbonne is near by. Built in 1764–90, the Panthéon became a temple of fame for the burial of famous citizens; among them Voltaire, Victor Hugo, Zola, and Jean Jacques Rousseau.

Albert Plone from Black Star

provide fare that would grace the damask-covered tables of New York's most expensive dining rooms.

The proprietor of one such place, M. Jean, was a butcher before he took over his modest establishment. Perhaps that accounts, in part, for the superb Châteaubriant he provides.

This magnificent filet, thick, tender as butter, is a deep, crusty brown on the outside. Inside, it is purple to deep red, and so succulent that its juices almost squirt under the knife's pressure. With the beef come mounds of French fries. To wash them down, M. Jean offers an honest red wine.

Following the entrée, one can enjoy a salad of crisp lettuce, gently turned in oil and vinegar, with a sprinkling of salt and freshly ground pepper. Then cheese. Then a bit of wine to accompany the last bit of cheese; and a little more cheese to finish off the wine.

It is not an imposing menu. But it is a meal to warm both body and soul; and to be able to come by it in a simple shop with a zinc bar and sawdust on the floor is a vivid illustration of the blessings of Gallic life.

For Americans, a Home-town *Herald*

Americans, it must be confessed, have added little to this cuisine. But in journalism we can rightly claim credit for a Parisian institution: the European Edition of the *New York Herald Tribune*.

Though published in English, it is no mere offshoot of Manhattan. It's a metropolitan daily with a home-town flavor—and Paris is that home town.

James Gordon Bennett, Jr., founded the Paris *Herald* in 1887. Even Paris found Bennett somewhat unusual. Deciding that the printer's ink used by the *Herald* was inferior, Bennett shopped around for a substitute. He found no black ink that satisfied him, so he bought red. For the next few weeks, until the supply ran out, *Herald* readers needed no rose-colored glasses.

Bennett had other whims. In one issue he ran a letter to the editor, signed "An Old Philadelphia Lady," which asked how to convert temperature readings from centigrade to Fahrenheit. Readers took that in their stride; but they were a little astonished to see it appear again the next day, and the next.

They hadn't seen anything yet. Bennett ran it daily for 18 years and five months—a total of 6,718 times.

Why? Some claim it was for publicity; some that it was part of a Bennett crusade for adoption of the centigrade thermometer; some that Bennett, too stubborn to admit having let it slip into the paper a second time, tried to pass it off as a deliberately scheduled daily feature.

However that may be, Bennett was no mere jokester. He was an exceedingly competent journalist. He introduced cabled news from America, linotypes, photoengraving, and comics.

Even more important to Parisians, he picked a staff of truly brilliant writers. In addition to American and British newspapermen, he hired such European luminaries as Anatole France, Camille Flammarion, Pierre Loti, Marcel Prévost, Paul Bourget, and Gabriele d'Annunzio.

Perhaps the best known of the old *Herald* staffers was Sparrow Robertson, who covered the capital's sports, café society, and night life until he was past 80. Slight in build, with a grin-creased face, rumpled suit, and battered hat, Sparrow looked like an overaged elf.

Touring the night spots till dawn, Sparrow would return to his typewriter and peck out in surrealistic grammar and syntax his recollections of the evening. He referred to friends and mere acquaintances alike as "My Old Pals"; some were delighted to appear the next morning in his column; some were not.

Frankie and Fifi—a Paris Problem

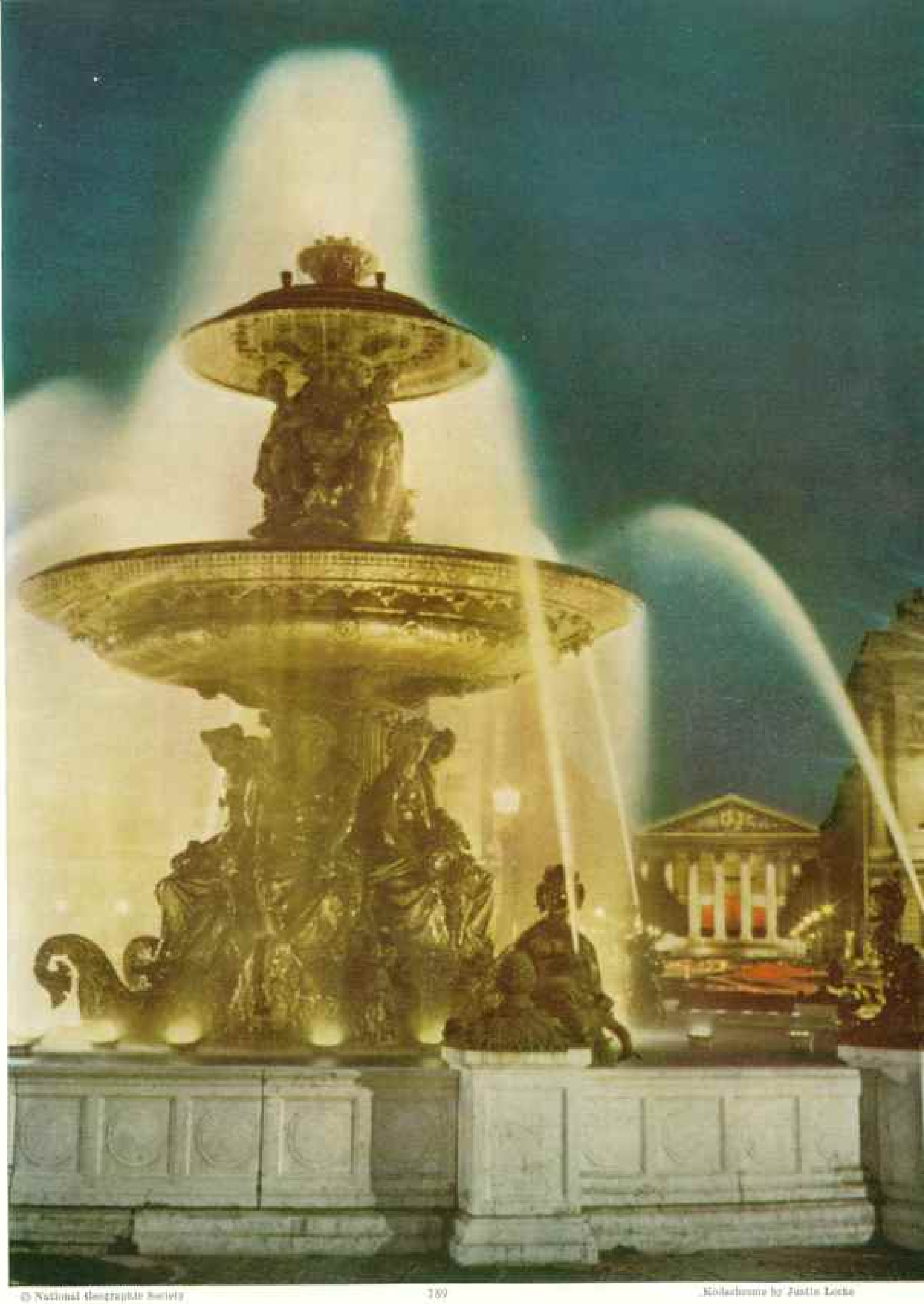
There are fewer pixies on the staff of the Paris *Herald Tribune* now, though in Art Buchwald a worthy replacement for Sparrow has been found. Under the direction of such sober-minded newsmen as Geoffrey Parsons, Jr. (who revived it after the Liberation), Walter Kerr, and Buel Weare, the European Edition has developed a more cosmic viewpoint with better coverage and editorials.

The paper still keeps Americans in Paris in touch, however, not only with world affairs but with the World Series. And it retains even today much of the atmosphere of a home-town paper.

Not so long ago, for instance, it ran for several weeks in its "agony column" this plaintive appeal:

"FRANKIE GOSNELL: Please come back to me. Fifi."

On the boulevards, in the cafés, at the news kiosks, readers pondered Fifi's problem and speculated at length upon her chances of finding Frankie again. Paris, perhaps, knew the answer. But Paris, home town or not, is discreet. Paris never told.



Kodachrome by Justin Locke

Heart of Paris: Place de la Concorde Glows in a Bath of Light

The illuminated fountain plays where the Reign of Terror's guillotine beheaded thousands, including Louis XVI, Marie Antoinette, and Robespierre. In the background shine the floodlit columns of the Madeleine (page 776).

Two Glittering Folies Bergère Beauties Await the "On Stage" Call

→ Poodle and Screen Star Typify the Chic Note at a Fashion Show

Suzy Carrier, French movie actress, claps her poodle, Chiffon, whose attention appears centered elsewhere. The *caniche*, or poodle, is a favorite dog in France. One of the most intelligent of all breeds, poodles have a touch of the clown and are adept actors, qualities which endear them to Gallic hearts. Chiffon's name sounds elegant in English, but in French it means "rag."

↓ Paris Is to Fashion What Circe Was to Sorcery

Showing the latest in what Milady should wear, these are models who glide glamorously through the salon of Jacques Fath, a leading designer. A girl of rare beauty may find difficulty in this work, for some couturiers believe too much comeliness distracts attention from a gown being exhibited. In the usual salon display, some 25 creations are modeled for clients.

Kodachromes by Justin Locke

Be It Model Boatbuilding or Long-distance Bicycling, Competition Fires a Frenchman's Enthusiasm

Opposite: Fine detail of the boats displayed in the Tuileries Gardens attests the zeal devoted to a popular French hobby. Lower: Autographs are sought eagerly as racers from all over Europe pedal off in the grueling Tour de France, an event comparable to America's baseball World Series.

Ko-dachromes by Justin Locke

With Lifted Hand, Germain Pilon's "Resurrected Christ" Seems to Bless a Spring Flower Display in the Louvre

Paris Theater Runs the Gamut from Bible to Ballet

The French capital gave full expression to its love of pageantry when it presented "The Real Mystery of the Passion," an elaborate religious spectacle, in the open before the Cathedral of Notre Dame. It was one of the many colorful events marking the city's 2,000th anniversary celebration in 1951.

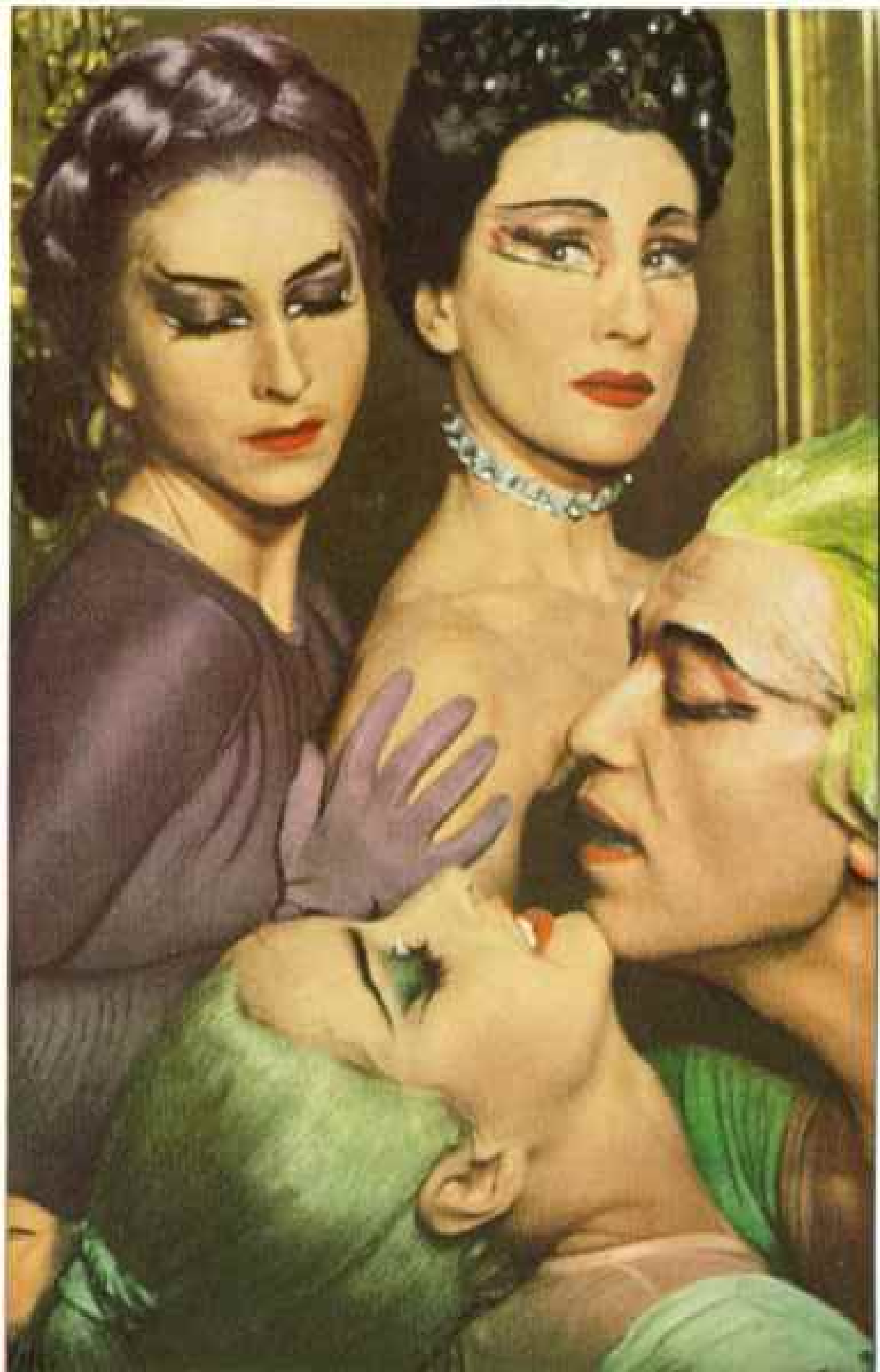
The show, featuring troops of horsemen and hundreds of extras carrying torches, played nightly to crowds of 10,000. There were some mishaps, including trouble with the amplifying system. At one performance, a many-throated Gallic roar interrupted "Judas Iscariot" with a demand that he get closer to the microphone.

In the cast of some 1,200 were professional actors, singers, dancers, and even members of the Republican Guard. The turbaned pair at left played the roles of merchants in Jerusalem.

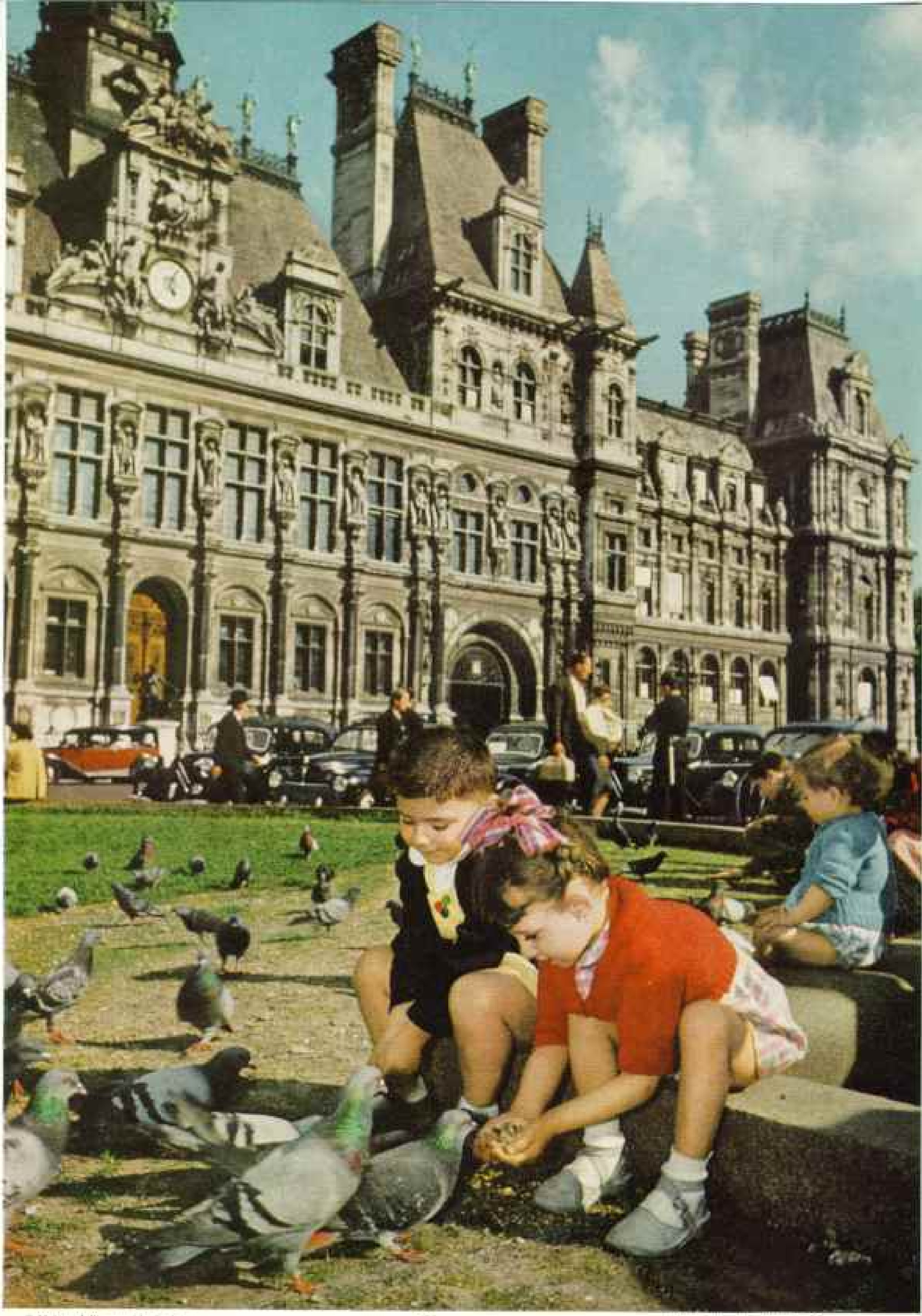
Green and Lavender Hair? In Paris, Why Not?

Verdant coiffures are worn by Serge Lifar, Russian-born choreographer of the Ballet de l'Opéra, and his partner, Liane Daydé. Here they appear with Nina Vyroubova (left) and Lycette Darsonval in a love scene from *Phèdre*, a modernistic ballet by Jean Cocteau.

Kodachromes by Justin Locke



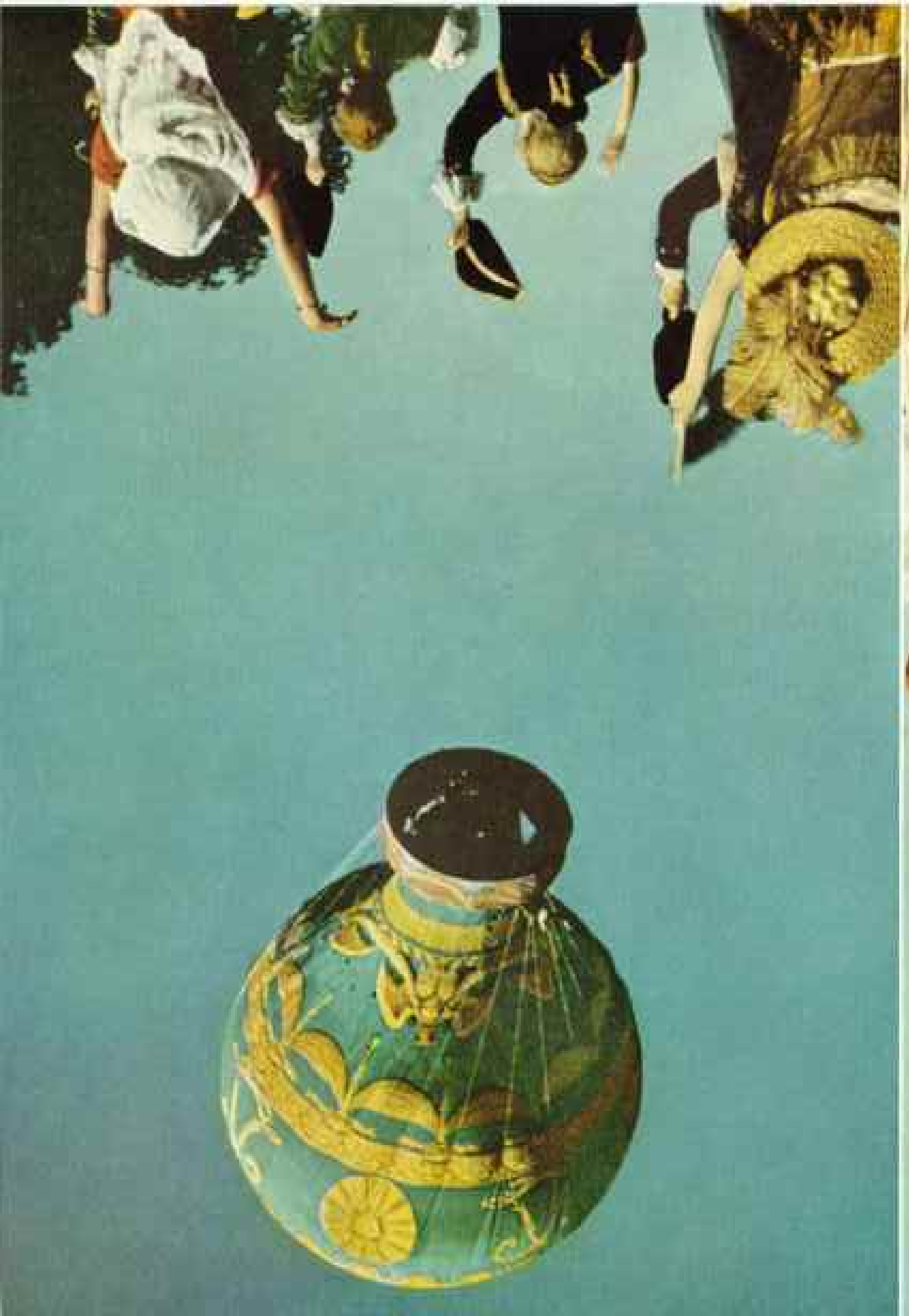
Fête des Mères



Kodachromes by Justin Locke

Parisian Fortunes Rise and Fall; Children, Pigeons, and Flowers Go On Forever

These birds accept handouts from youngsters before the Hôtel de Ville, or City Hall. Opposite: A vendor's stand near Porte St. Denis blazes with color. A sign reminds of Mother's Day.



^ Balloon Away! Paris Salutes Air Pioneers

As part of the city's 2,000th anniversary celebration in 1951, Paris honored Jacques Etienne and Joseph Michel Montgolfier, brothers who built and flew the first balloon in 1783.

Here a hydrogen-filled replica of the Montgolfier balloon soars upward from the Bois de Boulogne, while spectators in 18th-century costume cheer and wave. Before the ascent the crowd was entertained by Mary Meade (left), American night-club singer.

<- A Turf Victor Receives Official Acclaim

Jockey Paul Blanc beams proudly after winning the 1951 Grand Prix de Paris and a $70,000 purse at Longchamp. His mount was Sicambre, owned by Jean Stern (extreme left). President Auriol (second from left) congratulated Blanc and Stern on behalf of the French Republic. Surrounding the party are the President's plain-clothes bodyguards and helmeted members of the Republican Guard, who salute with upraised sabers.

Both photographs by Justin Locke

Under Notre Dame's Leering Gargoyle Flows the Seine, Placid Highroad Between Paris and the Sea

Besides contributing beauty, the river makes the inland capital an important port. Tugs and barges ply the Seine to Le Havre's big harbor on the English Channel. Pleasure craft churn its surface in spring and summer, and anglers, who never seem to catch fish, line its banks.

Opposite: From Cathedral roof the camera looks down upon the Pont St. Michel. On the horizon, Eiffel Tower's base is partly obscured by an unfinished hospital.

→ At journey's end a barge family enjoys an accordion tune. They brought coal from Belgium and will return with gypsum.

↓ Passing the Palais de Justice, a cabin cruiser impudently flips its wash at quay-bound barges.

Bookstall Browsers Need Not Hurry

Those who frequent the outdoor shops beside the Seine may come occasionally upon a rare volume, a long-sought print, or even meet an old friend. At the very least, the stalls are a good excuse for an idle riverside walk.

Business obviously is dull this morning, as a Parisian mother hurries two children along the quay toward the twin towers of Notre Dame de Paris (page 800).

Ah, Monsieur, a Real Find!

Stamp stands in the park often yield a collector's item. Most dealers have regular stores, but on Thursdays and Sundays they set up outdoor stands just off the Champs Elysées. Here an American customer's selection delights the seller.

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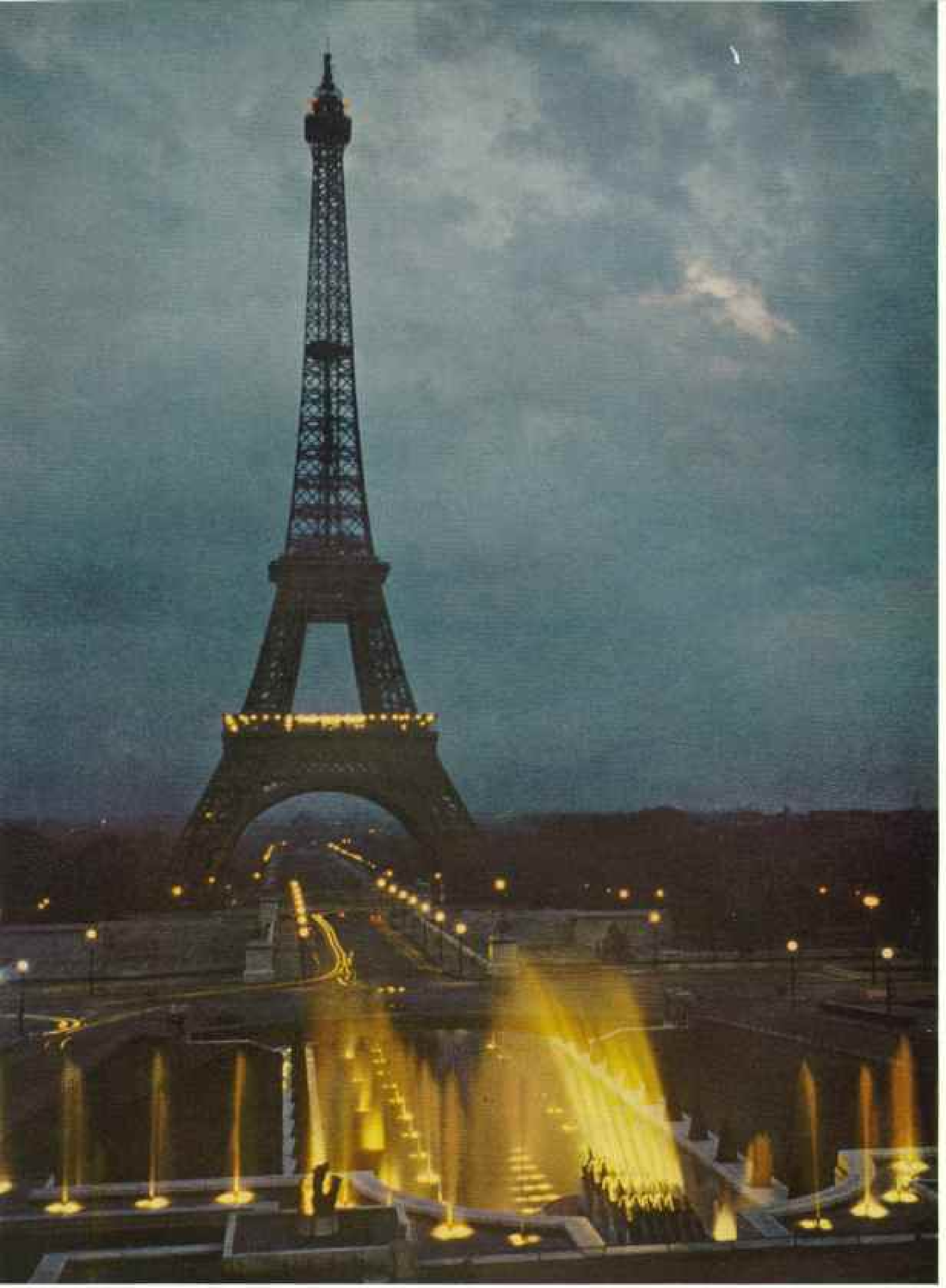
Kodachromes by Justin Locke

A Relic of Renaissance Days, Hôtel de Sens Watches Today's Children at Play

Erected for the archbishops of Sens, the house is one of the city's few to survive that storied era. It was built sometime between 1474 and 1519; hence it may predate America's discovery.



In the Soft Folds of Summer Dusk, Paris Becomes Indeed the "City of Light"

Palais de Chaillot fountains play sportively in bubbling, colored streams. In this time exposure, headlights of moving automobiles make wavy golden streaks in front of the Eiffel Tower (page 775).

We Dwelt in Kashgai Tents

An Adventurous American Couple Shares Daily Life in Camp and Saddle with Nomad Shepherds of Iran

By Jean and Franc Shor

With Illustrations from Photographs by the Authors

FROM Istanbul to rugged Afghanistan, across desert wastes and barren mountain ranges of the Near East, the word "Kashgai" spells red-blooded adventure.

Ranging from Persian Gulf pastures to wind-swept highlands in the Zagros Mountains, the Kashgai tribesmen are saddle-bred, tent-dwelling descendants of the conquering hordes of Genghis Khan. In their ancestral lands of southern Iran, these proud and fiercely independent people preserve a nomadic way of life rare in our modern world.

The suave, slender man sitting across the table from my wife and me in a Tehran restaurant seemed far removed from such an existence. His well-tailored clothes and Oxford accent bespoke, rather, a London drawing room or gentlemen's club. Yet Malek Mansur Kashgai—proudly bearing the name of the tribe—is one of its hereditary chiefs and is famed throughout Iran for his horsemanship and prowess as a hunter (page 832).

"When you return to Iran," he said, "make us a visit. Live with the tribe, travel with us on our migration, share our everyday existence. Then you can tell others about the life of nomads."

A year later new assignments took Jean and me to the Near East. We wrote to Malek Mansur, asking if his invitation still held good. Back came a cable: "We are in summer pastures. Hurry to Tehran. My cousin will escort you to tribal lands."

To Iran's capital we flew, only to receive bad news. The Anglo-Iranian oil dispute was reaching a crisis, and the Government had issued a decree strictly forbidding foreigners to enter tribal areas.*

His Majesty the Shah Intercedes

Appeals to the Press Ministry and Army were fruitless. In desperation we took our case to Mohammed Riza Shah Pahlevi, our gracious host during part of our previous visit.

The Shah was sympathetic. Two days later the Chief of Staff of the Iranian Army handed us a pass that permitted us to travel freely in Kashgai land. "With the compliments of His Imperial Majesty," he said with a smile.

With Habib Kashgai, Malek Mansur's cousin, we flew to Isfahan. He was accompanied by two servants. One carried shotguns, rifles, and a case of Coca-Cola, while the other gingerly held a package that was encased in a box of crushed ice.

Half a dozen tribesmen in a jeep and a command car met us. Our luggage and Habib's supplies were loaded into the car. We climbed into the jeep and set out on the 50-mile drive to the town of Shahriza (see Southwest Asia map, a supplement to this issue).

At every large village sentries stopped us, but our pass proved an open-sesame. One glance at it and the soldiers saluted and sent us on our way.

We left the main highway at Shahriza and jounced overland on narrow trails that grew more rugged by the minute. Often we crossed swift mountain streams; each called for a halt to wet our dusty throats. Every time we stopped, Habib's servant cooled his mysterious package in the rushing water.

Share Tribesmen's Rice and Lamb

At trail's end we camped for the night. Kashgai families had pitched black goat-hair tents near by, and we shared their dinner of fluffy rice and lamb broiled over open coals. Early next morning, mounted on horses and burros, we set out for Malek Mansur's camp.

"Now we're in Kashgai territory," Habib informed us. "All the people you meet from now on will be our tribesmen."

The jeep ride had taken us through arid country, bare and desolate under the scorching sun. Now the land changed as we rode toward the towering Zagros Mountains. Snow still capped their highest peaks, some of which reach up to over 14,000 feet.

Our horses picked their way through flower-strewn valley meadows and an occasional field of grain ripening beside the trail. Herdsmen in brightly colored robes tended flocks of fat-tailed sheep. White camels grazed everywhere. Horsemen, erect on finely bred animals, raised guns in salute as we passed.

Dusk found us in Malek's camp, pitched in a high mountain valley. A snow-fed stream, lined with trees, ran through the cluster of canvas and goat-hair tents. The canvas shelters were bright blue, yellow, and red, in contrast to the usual black Kashgai tents.

* See, in the National Geographic Magazine: "Journey into Troubled Iran," by George W. Long, October, 1951, and "Mountain Tribes of Iran and Iraq," by Harold Lamb, March, 1946.

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A Blast on the Surnay Starts the Trek to Winter Pastures

In the first flush of an August dawn, a long, shrill note on this bazookalike instrument gave the signal to break camp at the Kashgais' summer grazing grounds in the Zagros Mountains of Iran. Within minutes, hundreds of nomad tents collapsed as stakes were pulled. An hour later, a mile-long procession of laden camels and donkeys, led by horsemen and flanked by flocks of sheep and goats, headed south for grazing lands near the Persian Gulf (page 831).

Dismounting before the big headquarters tent, we were greeted by Nasser Khan, Malek's older brother and head chief. Tall and broad-shouldered, with aquiline nose and piercing eyes, he wore Western clothes with shirt open at the neck (page 825). Beside him stood Malek dressed in bush jacket and khaki slacks. Greetings over, they led us inside the tent.

It was like a scene from Marco Polo's travels. Bright rugs carpeted the big tent; hand-woven materials in gay colors covered its walls. Large carpetbags filled with grain surrounded a cleared center space. Silken cushions were scattered about the floor. Silver dishes on a table held fruit, pistachio nuts, dates, and, for the guests, a silver tray with imported liquors and soft drinks.

After a friendly welcome, we were shown to our own tent, where servants brought us warm water in silver pitchers, pouring it over our hands as we washed. Mattresses stuffed with the breast feathers of mountain partridge covered our cots.

"If this is the life of a nomad," laughed Jean, "let's join the tribe. I never realized what luxury is possible without a lot of modern conveniences."

Dinner increased our amazement. A linen cloth was spread on heavy carpets in a tent with open sides. We ate from silver dishes, serving ourselves from two huge platters of rice, one crusted with saffron and flavored with raisins and pistachio nuts, the other filled with breasts of partridge.

Other silver plates were heaped with roast mouflon (a wild sheep), ibex, and lamb, the meat mixed with peas and spiced heavily with cumin. Then there was eggplant stuffed with partridge and cooked in oil, yoghurt, whole roast partridge wrapped in thin bread, and rich goat cheese. Persian melons, cooled in the icy stream, finished the delicious feast.

"I apologize for this simple meal," said Malek when we staggered to our feet. "We were not sure of the exact date of your arrival, so we were unable to prepare a proper welcoming banquet."

As he spoke, two tribesmen appeared, straining under a load of four ibex heads, each with massive horns more than a yard long. They placed the trophies on the ground and bowed to Nasser Khan, who inspected the horns and

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Kashgais Relax Completely in the Saddle; It's Their Home Four Months a Year

On the annual southward migration in late summer, nomads and their worldly goods retrace their spring-time route. Dispensing with reins, the mother in the foreground guides her donkey with taps of a stick. Kashgai legend says the tribe came originally from Chinese Turkistan, sweeping westward in the vanguard of Genghis Khan's legions. About 1600 they settled on their present lands in the Iranian Province of Fars.

commended the huntsmen. Proudly they left, carrying the heads with them.

"It is tribal custom," Habib explained. "When a Kashgai shoots an ibex, he brings the head for the Khan to inspect. And half the meat is taken to the cook for Nasser Khan's personal use."

Awakened by the Law's Long Arm

"You may want to go to bed early," the Khan said. "We rise at dawn to hunt. If you like the sport, we shall be glad to have you join us."

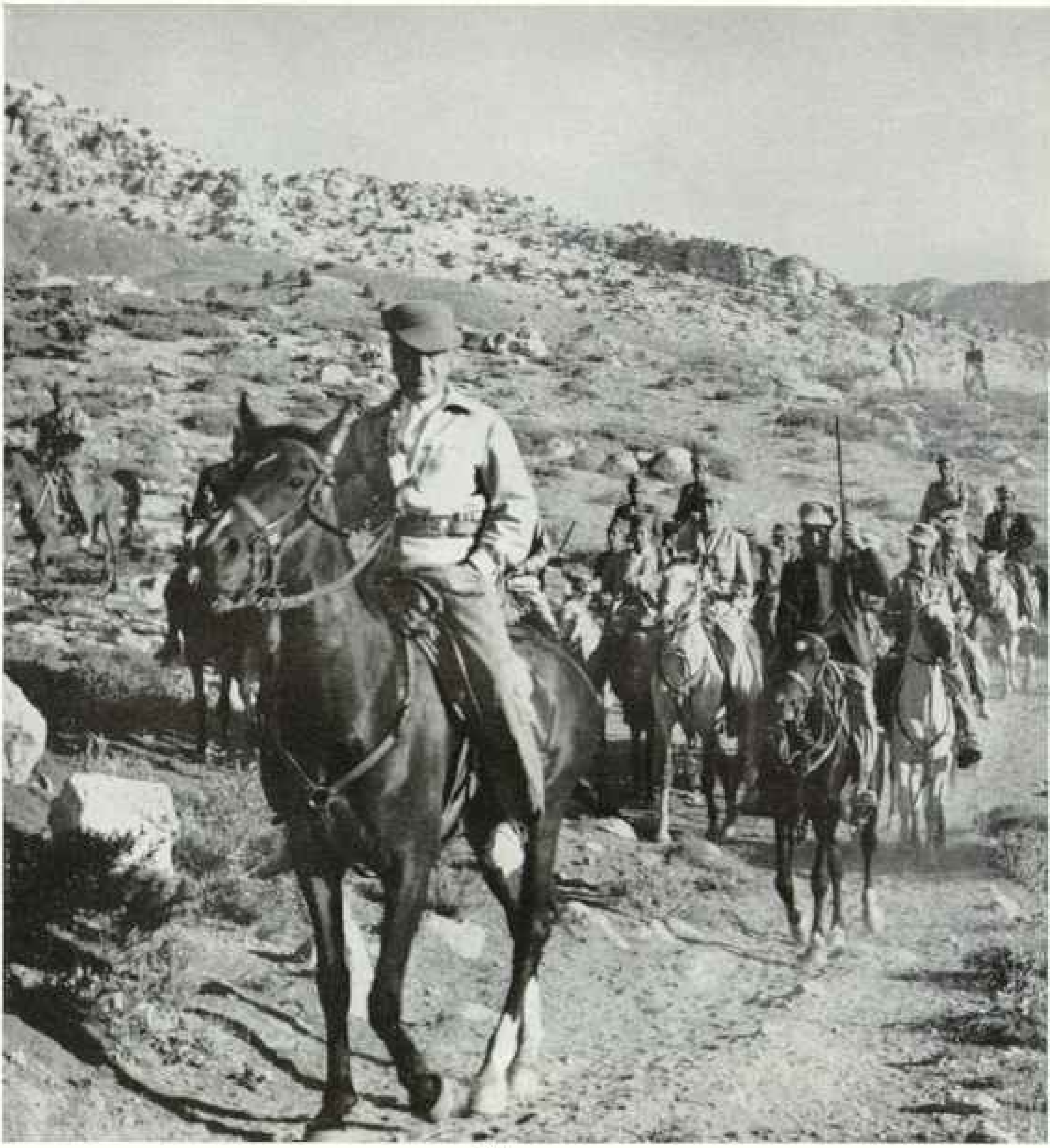
About midnight a servant woke us. An apologetic but determined Iranian Army major, carrying a telegram from headquarters in Shiraz, had arrived in camp.

"Understand two foreigners have entered Kashgai tribal area," the message read. "This violates law. Investigate immediately. Unless they have pass signed by Minister of Interior and Chief of Army Intelligence Staff, arrest and remove them from area."

"Who signed our pass?" Jean whispered as I searched for it.

"I don't know," I replied. "I can't read it. Keep your fingers crossed."

A sleepy Kashgai held a lantern while the major, with a stern look, studied the red card. Slowly his face relaxed.



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Ziat Khan, "Father of the Horse," Leads a Kashgai Cavalcade

As a subkhan of the tribe, Ziat Khan rules several thousand families. The authors found a mare and foal standing on a Persian carpet in the leader's tent. "My prize stallion sired this colt," he explained. "A good mount is part of a Kashgai's family circle" (page 810).

"This has the proper signatures," he said. "I am sorry I bothered you."

Malek Mansur appeared and listened to the major's story. To find us, he had driven 40 miles by jeep and ridden a horse 15 more through the dark. Two hours later we got back to bed; dawn came all too soon.

Breakfast was ready when we were—tea, eggs, coarse "gravel bread," and wild grape preserves. As we started to eat, a servant placed a blue tin in front of me. I opened it and found fresh caviar!

Habib laughed at our open astonishment.

"Last year when you had lunch in Tehran with Malek," he reminded us, "you told him that our Iranian caviar was the finest you had ever tasted and that you'd like to have it every meal, even breakfast. We want our guests to be happy, so a special servant brought this down from Tehran. This was in the package he cooled in the streams."

For two weeks we had caviar for breakfast. At first Jean refused to try it, but after one taste she joined in with gusto.

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"After all," she said, "eggs are for breakfast, and why not fish eggs?"

When Kashgai khans go hunting, they hunt in comfort. Instead of packing a lunch, they pack the whole camp (page 818). By the time breakfast was over, every tent had been struck and packed on mules and camels. A line of servants and heavily laden pack animals was weaving across the green valley.

Malek's bearer brought out half a dozen superb handmade English and Belgian guns, worth a king's ransom. We had our choice.

"We like good weapons," Nasser Khan told us. "A Kashgai and his gun are seldom separated. We have a tribal saying: 'Keep your gun by your side and leave your money with your wife.' A man who does that seldom gets into trouble."

Mounted on Arabian stallions, we galloped after the disappearing baggage train. A score of Kashgai men made up the hunting party, and each of the khans, as well as Jean and I, was followed by a gunbearer on a mule.

Kashgais are magnificent horsemen, with a deep affection for their mounts. They stroked their sleek necks and patted them as they mounted; hands were gentle on the reins. In the Near East, where there is little regard for animal life, that is a rare thing.

By midmorning we had climbed to nearly 10,000 feet. The ground was rough and broken, covered with rocks, a stubble of grass, and scrub cedar. Soon we heard the unmistakable call of the red-legged partridge. We reined in, and I prepared to dismount. Malek Mansur stopped me.

Horsemen Shoot at Full Gallop

"We will hunt this flock in Kashgai fashion," he said. "You and Jean stay back a bit and watch."

The line of mounted men moved at a trot up the valley floor. Suddenly there was an explosive whir of wings, and a bevy of partridges burst into the air and sped away like feathered bullets.

The stallions swept forward at a dead run. The Kashgais rose in their stirrups, reins loose on the horses' necks (page 813). Guns came up and spoke; suddenly it was raining partridges. I watched Malek Mansur. Man and horse seemed to be one. Three times he fired his Belgian automatic shotgun, and three times a feathered ball exploded in the air.

After the first onslaught the riders reined their mounts to a halt. Bearers gathered the game. Forty-four partridges were hung from saddle strings.

We dismounted to hunt the remaining birds on foot. Soon the Khan called a halt.

"It is enough for now," he said. "By next year this flock will be back to its original size. We don't want to wipe out our own game."

At noon we rounded a hill and came upon our camp, re-created in a new setting. In our own tent Jean and I found everything exactly as it had been the day before. Lunch was ready in the big dining tent, and after another banquet-size meal everyone took a brief siesta. At 3 o'clock the camp came to life, but no one went for the horses.

"The afternoon sun is not good for hunting," said Nasser Khan. "We will remain here for an hour or two and enjoy the shade."

When a Kashgai has nothing else to do, he practices marksmanship. Servants placed targets on a hillside near the camp, and khans and minor chiefs took turns shooting.

Their skill was unbelievable. Nasser Khan, during one of his turns, brought down five

crows flying past, firing offhand from a standing position.

On a later hunt, I saw Malek at full gallop drop five antelope with five rifle shots.

Used midget flash bulbs, we found, were much in demand as targets. Set up 50 paces from the shooter, they were difficult to hit with target rifles. As the afternoon practice ended, the Khan had a servant place two bulbs about 75 feet in front of our tent.

"We have been most impolite," he said. "We have not offered Mrs. Shor a chance to shoot. Does she know how to use a rifle?"

"I'll try," replied Jean. Carefully she aimed the target gun. It barked twice. Both flash bulbs disappeared.

The Kashgais looked amazed, then broke into shouts of delight.

"I knew that Texas background of mine would come in handy someday," Jean said.

Hunter and Horse Are as One

Keen as I was about the hunting, I found the remarkable oneness of the Kashgai and his horse even more fascinating. The finely bred Arabians seemed almost human. When a horseman stands in the stirrups and shoots at full gallop, his very life depends upon his mount's intelligence. A sudden swerve or stop can be fatal. These horses, perfectly trained, never changed course or stopped abruptly. They looked ahead for obstacles. When changing direction, they did it slowly.

Later, we were to spend a week in the tents of Ziat Khan, one of the principal subkhans of the tribe and its leading horse trainer.

This head of several thousand families is known as the "Father of the Horse." A bronzed, stocky man of medium height with deeply lined face, he is famous even among the Kashgais for his horsemanship (page 808). He trains the mounts ridden by Nasser Khan and Malek Mansur, and his strain of Arabians is the finest in the tribe.

More than 300 years ago the Kashgais first brought steeds from the deserts of Araby, and they have kept the blood lines clean. Their studbook is one of the oldest in the world.

Calling on Ziat Khan, we were surprised to find a clean-limbed mare standing contentedly in one corner of his tent on a deep-piled Persian carpet, her foal nursing at her side.

"My prize stallion sired this colt," Ziat Khan told us, patting the neck of the leggy youngster. "He will make a wonderful mount, one of the best I have ever bred. He will live in my tent, go where I go. A good mount is part of a Kashgai's family circle."

Our first hunt with the chiefs lasted three days; each day camp moved with the hunters.

When we returned to our original camp site, Malek said that arrangements had been made for us to spend a few weeks with a Kashgai family in a camp a few miles distant.

"You will want to see how ordinary members of our tribe live," he said. "I think you will be surprised at the life they lead. In many ways our people are well off. They have comfortable clothes, enough to eat, and a satisfying existence. We are a free people, proud and independent. We have a lot in common with Americans. The degree of mechanization is not important; vital things go deeper, and in those we are very much alike."

In the Vanguard of Genghis Khan

That night, seated under the big tent, Malek Mansur and Nasser Khan told us the history of their tribe. Never written, it is a story handed down from father to son for centuries, told and retold around thousands of campfires. No one knows it better than these brothers, for they are direct descendants of the family which founded the tribe, and which has ruled it for more than 400 years.

The Kashgais, according to their own legends, came originally from Chinese Turkistan, sweeping across Afghanistan and northern Persia (Iran) in the vanguard of the legions of Genghis Khan.

Considerable evidence supports this belief. They still speak the Turki language, with a dialect strikingly similar to that of Kashgar, in Turkistan. A number of their idioms come from that region. For instance, their use of the word "Tadjik" to describe a person they don't like may indicate a long period of proximity to, and disagreement with, the Tadjik people near Kashgar.

"In the time of Genghis Khan," said Malek, "we were not yet a separate tribe. After our ancestors settled in Azerbaijan, on Persia's northwest frontier, we came together as a unit. Then, around 1600, we made our way south, settling where we are now. The tribe has grown until there are about 100,000 of us, occupying nearly half of the Province of Fars, or Parsa, which gave old Persia its name."

Tribe a Band of Brothers

"The important thing to remember," Nasser Khan added, "is that we are all members of one big family. All Kashgais are brothers. For four centuries we have lived, hunted, and fought on that basis. It is our strength."

While legally subject to the Iranian Government, the khans are the actual rulers within tribal bounds. Serving under Nasser Khan are *kalantars*, or subkhans, each with several thousand families under his control. The kalantars, in turn, act through *kadkhudas*, or guards, each in charge of as many as 100 families. Beneath them come the *rish safids*, or graybeards, one to each few households.

Rugged Tribesmen Interrupt a Hardy Life to Pour Tea for a Visitor

Kashgais drink tea from glasses, but plastic cups, lump sugar in a chased silver bowl, and even tongs appeared for use of their guests, the Shors. The authors quickly grew accustomed to the sight of hard-riding, sharpshooting nomads dressed for the strenuous life in Western-style clothing. Headgear, however, is the high-brimmed tribal felt hat (page 815).

Technically, the power of the khans is absolute. In practice, every Kashgai is free to appeal any decision of a kadkhuda or kalantar to Nasser Khan himself.

Jean and I witnessed one such appeal. A tribesman and a kalantar had disputed title to a piece of land; the Khan's ruling favored the tribesman.

In theory, positions of leadership in the tribe are hereditary, passing from father to eldest son. In practice, however, there is remarkable flexibility.

Nasser Khan and his elder subkhans form a continuing council of state, which discusses tribal problems, including matters of succession, as required. If these elders feel that an oldest son is not fitted to assume his father's position, the title may be passed to a younger brother or to any other male relative.

"The khan must be the wisest of his people," Malek explained, "the finest horseman, and the best shot. If an eldest son does not show signs of such leadership, another is chosen and trained for the responsibility."

"What happens to the eldest son in that case?" I asked.

Malek Mansur looked uncomfortable.

"He goes away," he said, and changed the subject.

To see more of Kashgai life, we accepted Malek's suggestion and moved with Habib to a new camp two days' trek from the Khan's. Our new host was Shir Ali (Lion of Ali), and he bade us welcome in a tent smaller than Malek's but quite as comfortable.

Shir Ali's wife stood beside him as he greeted us, and his mother came from her own tent near by to join in our reception. Since women are usually secluded among Moslem people, we asked Habib about it.

"Our women have equal rights with their menfolk," he explained. "They keep title

to their own dowries, inherit property, and dispose of their own land and flocks as they see fit. Also, the wife is usually the family banker. She keeps the money, pays the bills, often dispenses charity, and hides the family savings" (page 823).

Blizzard Victim Helped by All

Kashgai charity is direct and practical. We witnessed an example shortly after our arrival in Shir Ali's home.

A neighbor, Kalish by name, had moved his flock of more than 100 sheep high into the mountains. A freak blizzard caught the flock a few nights before our arrival, and every sheep was frozen to death. Kalish, his wife, and four children were left destitute.

Gorgali, the kadkhuda of the group, called a council of the heads of the 100-odd families under his control. The meeting was held at dusk around a campfire in front of Gorgali's tent. We were invited to attend.

Shir Ali walked to the meeting leading a fat ewe by a goat-hair rope. To our astonishment, every man had brought a ram or ewe. A few carried a lamb under each arm.

Gorgali called the meeting to order and made a speech remarkable for its brevity.

"I see you all know why we have met," he said. "Our brother Kalish has suffered misfortune. We shall make it up to him. Put your gifts in the sheepfold. Tomorrow Kalish shall lead them to his own pastures."

Kalish made a brief speech of gratitude, and the humor that is a vital part of the nomad's life flashed at the conclusion.

"I have been counting the sheep you have brought," he said. "I now have 15 more than I lost. That was a lucky blizzard!"

The Kashgais roared with laughter, left their gifts, and returned to their tents.

"It is our way of life," Shir Ali explained. "We all share good and bad fortune. No Kashgai household is ever destitute. If Kalish had perished in the blizzard, we would have replaced the flock and taken turns tending it until his own sons were old enough to take responsibility for the family."

Life with Shir Ali was less elaborate than that with Malek Mansur, but equally exciting. The Lion of Ali was a typical tribesman, neither richer nor poorer than most of his fellows. He owned 160 sheep, more than enough to yield milk, cheese, and a daily portion of meat for his family. Six horses and eight camels provided transportation for himself, his wife, mother, two sons, daughter, and all their possessions.

A screen of woven rushes divided the family's goat-hair tent, about 14 by 25 feet. One half served as a bedroom; the other, living and dining room (page 821).

Here, in summer grazing land, Shir Ali owns 40 acres of mountain meadow. In winter pasture, near the Persian Gulf, he owns another 60 acres and rents two more of irrigated farm land from Nasser Khan. There he grows wheat and rice, which are stored in carpetbags and carried by lumbering camels to the summer quarters.

Shir Ali's daily life differs little from his ancestors' 2,000 years ago. He rises at dawn, dresses in homespun shirt and trousers, homemade shoes, and slips on a coat woven from the wool of his own flock. After a breakfast of coarse bread, goat cheese, and tea, he and his sons take the flocks to pasture. Leaving the boys in charge of the sheep, he spends the day with his friends, hunting partridge.

He owns shotgun and rifle, but the birds are bagged by hand. "Shotgun shells," our host told us, "cost more than partridge."

Hunting Without Guns

Mounted on a gray Arabian, I rode with him and his friends on a weaponless hunt. It began in the same way as the hunt with the khans—a line of horsemen moving forward across an open plain. Birds were flushed, and the horses broke into a run. They followed the birds until they came to ground, then flushed them once more.

After three flights, each shorter than the last, the partridges' short wings could no longer lift their heavy bodies. The Kashgais dismounted and ran after the birds. The hunt netted four birds per man.

On horseback I had little difficulty keeping up with the hunters. On foot it was another story. The Kashgais are swift runners, with remarkable endurance. Before the first bird was captured, I was gasping for breath and watched in amazement as the tribesmen ran uphill and down, seizing the fluttering game.

In the heat of the day we rested on carpets spread under trees, ate a lunch of bread and cheese, and played the ancient Persian game of *ahs*. The game, similar to Western poker, is played with a brightly colored deck of wooden cards. There are five denominations, the ahs, shah (or king), queen, warrior, and dancing girl. The Kashgais love to gamble, and stakes often run high. More luck than skill is involved, but bluffing is important; Shir Ali won three partridges from his less fortunate friends.

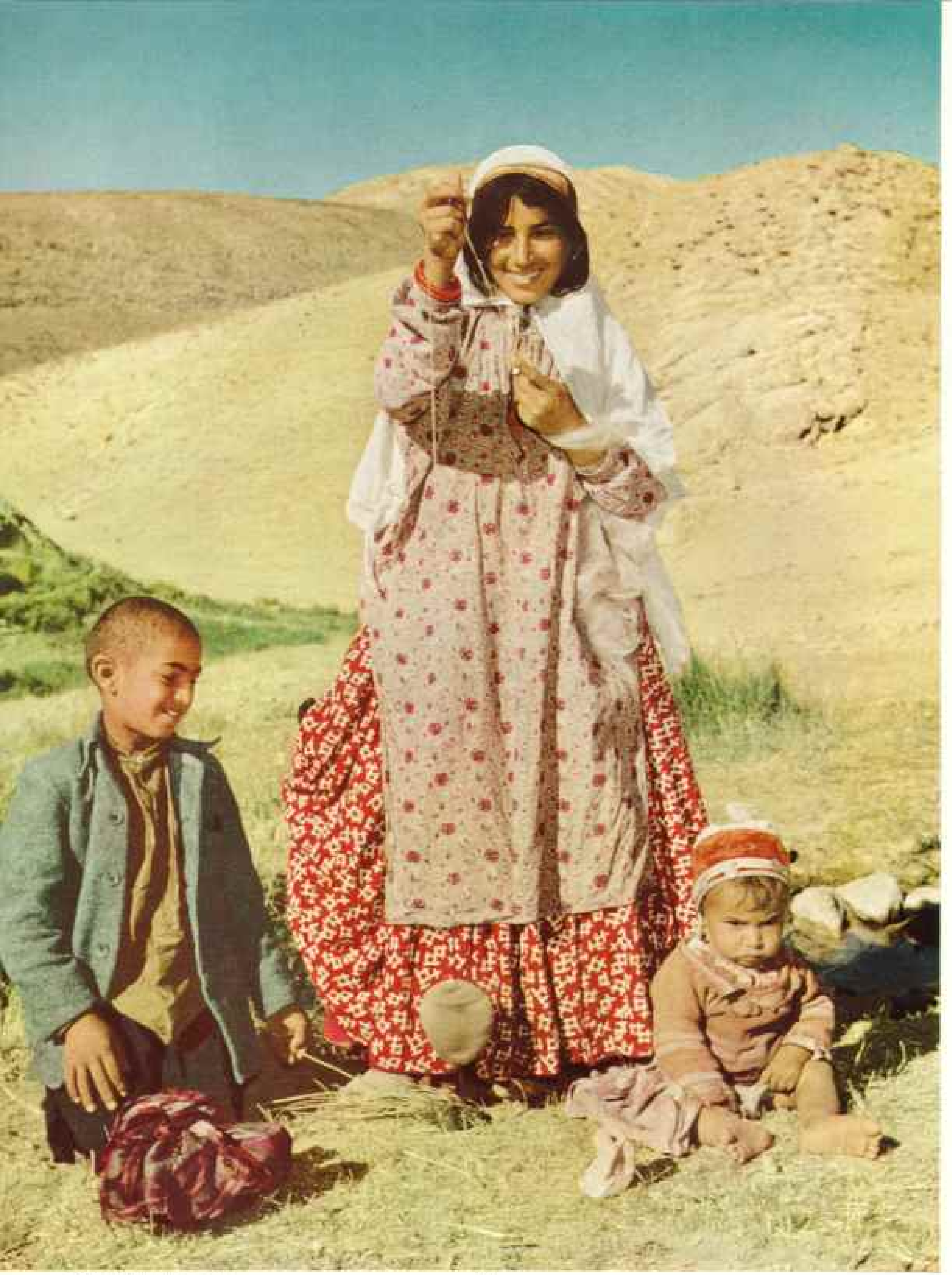
"Hunting is more than a sport with us," Shir Ali pointed out when we were back in camp. "A good hunter has a good larder. In the winter we have gazelle and antelope, in the summer mouflon, ibex, and partridge. They are good to eat, and they save money."

Ali's sheep were penned by dusk. While

Kodachrome by Jean and Franc Shor

Kashgai Hunters Shoot Partridge While Racing Like Centaurs Across an Arid Valley

To flush the birds, mounted tribesmen trot in line up the valley floor. When a covey takes wing, hunters charge and blaze away with shotguns. The authors also saw Kashgai riders bring down running antelope with deadly fire. The mounts are Arabian stallions, specially trained for hunting. Here a tribal chief, riding a handsome gray, lets reins dangle while he uses both hands to fire. Behind him a companion tries a one-handed shot.



While Father Hunts Ibex, Mother Spins Wool Yarn and Baby-sits in a Pasture

Hands are never idle among Kashgai women. Spindles and balls of wool are their constant companions when household chores are done. Whether walking, riding, or baby-sitting, they literally spin the time away. Rugs and cloth are made from the thread. Women fashion colorful skirts from Iranian-made cotton prints, purchased in Shiraz and other towns. Many other items of apparel, such as the jacket worn by this boy, are homespun.

Is the Bride Smiling, Too, Behind Her Veil?

Chadors, or veils, are unusual among Kashgai women. When worn they are the mark of a new bride. This shy young woman at first refused to pose. Then, witnessing her friend's delight at being a model, she climbed on the wall and lowered her veil to nose level.

Both girls live in one of the permanent villages which dot the tribe's southern pastures. Behind them is a weathered stone residence. Relatively few of these restless wanderers have become town dwellers.

An Elder Models the Tribal Hat

Kashgai felt hats may be worn in several ways. Some men prefer this style. Others turn the headgear around and use one flap as a snap-brim visor (page 824). In winter both flaps may be pulled down to protect the ears.

Kodachromes by Jean and Franc Shor

Migrant Tribesmen Begin a Leisurely Trek to a New Camp Site in the Mountains

Kashgai families range southern Iran in tribal groups. Economic necessity makes them nomads. Their land is too poor to support life on a year-round basis. These men ride in the vanguard of a caravan.

817 Kodachrome by Jean and Franc Shor

"Keep Your Gun by Your Side and Leave Your Money with Your Wife"

Tribesmen believe those who follow this ancient saying rarely get into trouble. Here nearly every rider keeps a shotgun or rifle close at hand on a leather sling. Distant pack animals carry tea for Kashgais to brew at rest stops.

Husbands Work Like Circus Roustabouts to Pitch the Family Tents

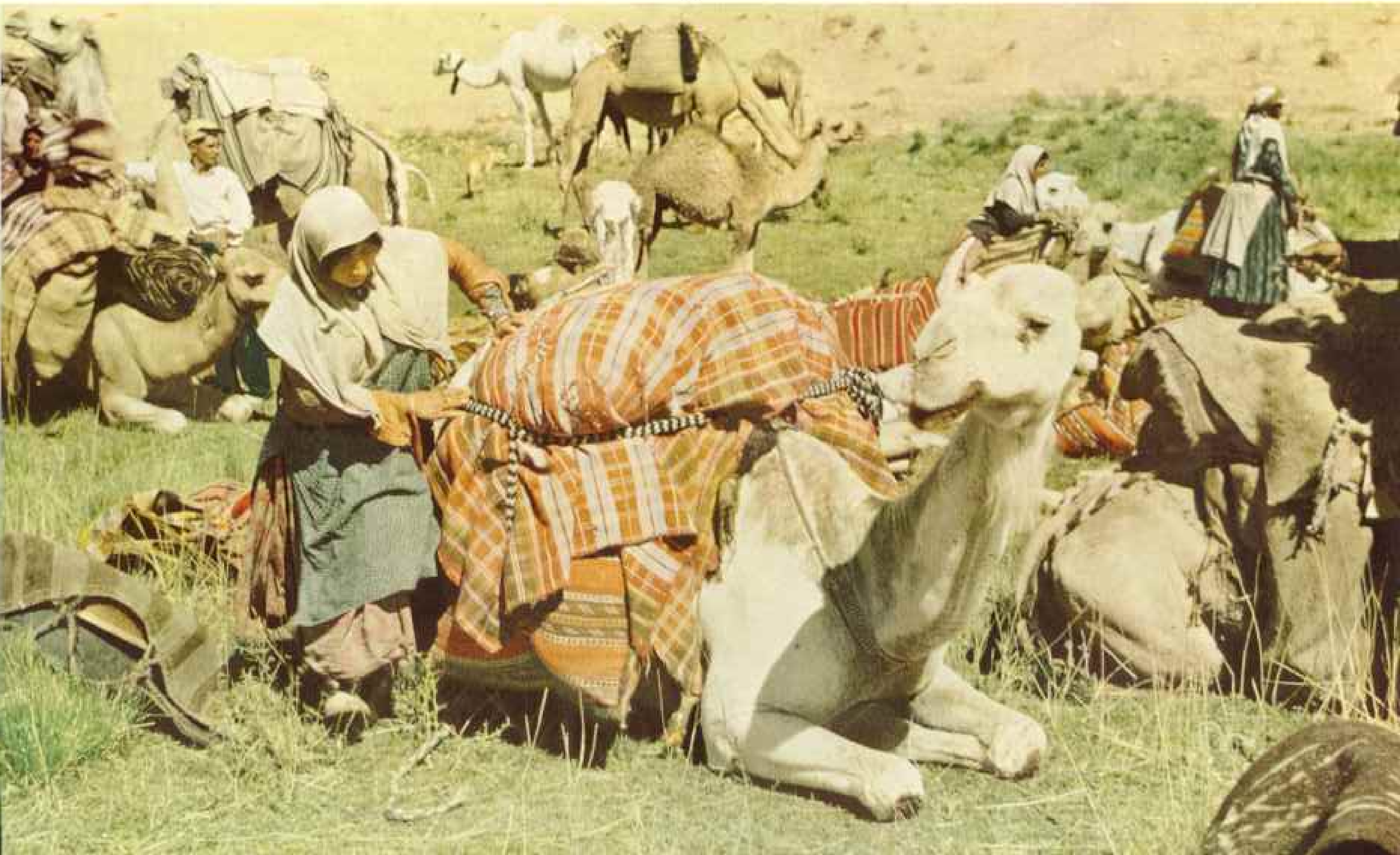
About 100,000 strong, the Kashgais winter along the Persian Gulf and migrate to the Zagros Mountains in spring. En route the marchers cover nearly 300 dusty miles at an average pace of 10 to 12 miles per day. Tribal chiefs schedule the movements of bands like generals shifting divisions.

Between migrations the Kashgais move frequently, seeking better hunting or grazing lands. Well-organized camps spring up in an hour. Even at noonday stops the tribesmen pitch their tents and furnish them comfortably before eating.

"The best thing about being a nomad is that you're always at home," a tribal leader told the authors.

Unlike some nomadic peoples, Kashgai men do not require their women to do the heavy camp work, such as driving stakes (above) and raising tent poles (left).

Kneeling Camels Wait Patiently While Women and Children Unpack Bright Rugs and Blankets During a Noonday Stop



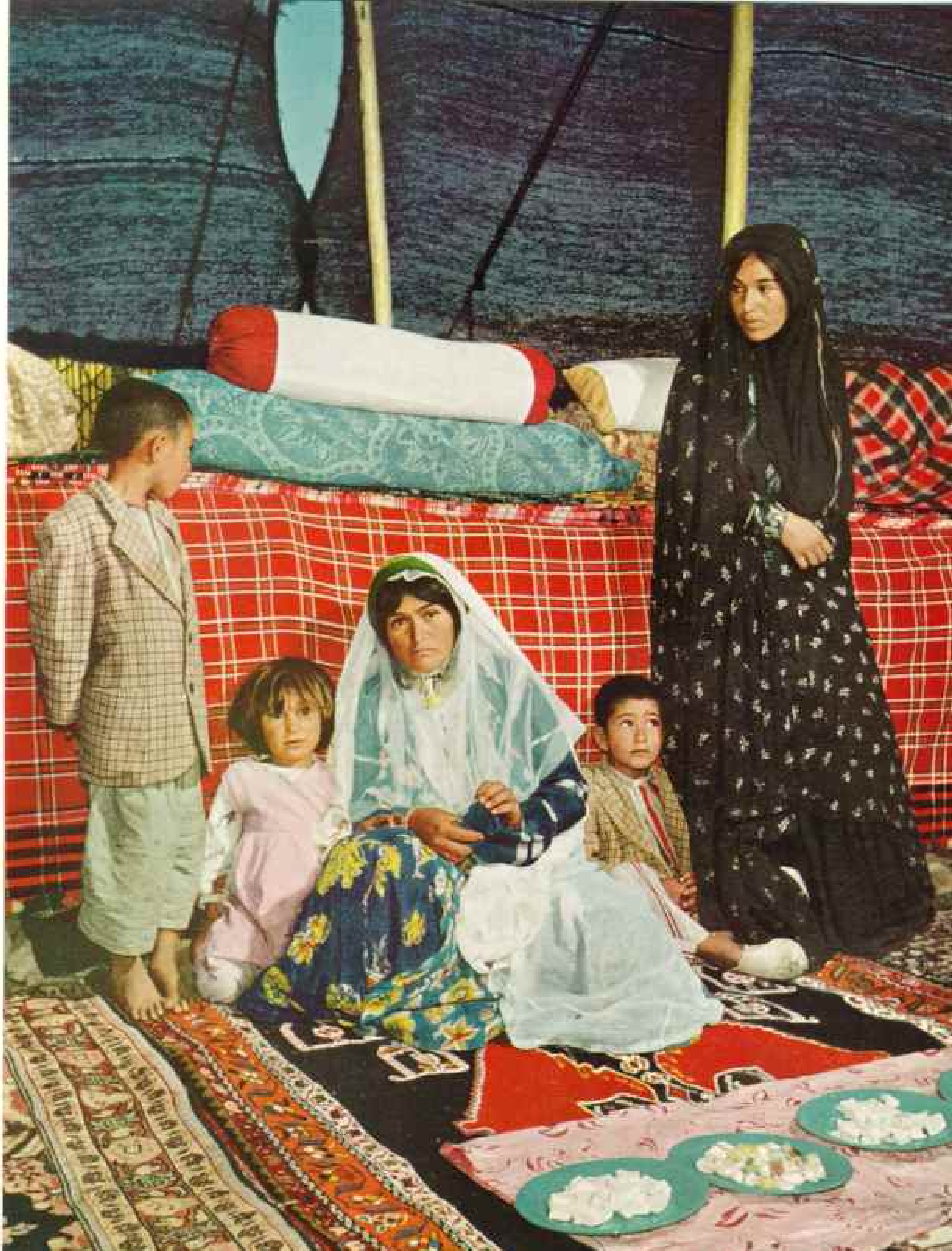
A Servant Rides Muleback with His Chief's Chattels

Nasser Khan, the tribal leader, owns many fine guns of European make. His favorite weapons, together with other valuable personal property, are carried in this large pannier. It is made of hand-worked leather with a center design of colorful carpeting.

Ghulam, the Khan's personal servant, is extremely proud of his job and always rides near the head of a procession.

← Sister and Brother Travel as One

This self-reliant little girl took charge of her brother during the fall migration. Daily she held him on the back of their donkey. Her multi-hued robes typify the Kashgai love of color. A Kewpie doll, beloved by the boy, is their travel companion.



Kodachromes by Jean and Franc Shor

Women and Children Relax in Carpeted Ease Within Their Goat-hair Tent

"Where my carpet is, there is my home," say the Kadugnis. Loosely woven tent material keeps out the sun but admits air. Pillows and bedrolls (top) are ready for night use. Plates of sweetmeats were brought out in honor of the authors.

A Little Nomad Grins in Wonder and Delight as He Holds His Magic Sphere, a Shimmering Plastic Balloon

To children of their hosts the Shors presented playthings. Transparent plastic, squeezed from a tube, was inflated with a pipe, like a soap bubble. Old and young alike gawked at the authors' magic. Right: Mothers delight in dressing their little girls in rainbow hues.

→ **Tea Is Served to the Wife of a Khan**

Although the Kashgais are Moslems, the women do not live in seclusion. Wives and husbands alike received the American guests.

Usually a tribesman's wife is also his banker. She pays the bills and hides the family savings. She keeps title to her dowry and has the right to inherit property and dispose of her own lands and flocks as she sees fit.

Nushi Bibi, wife of Malek Mansur, a hereditary chief, is a wealthy woman in her own right. Here she wears a typical Kashgai dress with full skirts and many petticoats. When visiting in Tehran, she dons the latest Paris fashions.

← **Rugs Cushion Young Travelers**

When migrating, the men ride horses, the women mount baggage camels, and the children and servants jog along on well-padded donkeys. A carpet of grass covered this meadow at the tribe's arrival in early spring. Late summer finds the land dusty and denuded.

Kodachromes by Jean and Franc Shor

Solemn Kashgai Chiefs Begin a Marathon Feast of Rice, Game, and Lamb

Tribesmen staged this banquet as a farewell party for the Shorts. *Kalantars*, heads of various Kashgai units, attended.

Kodachrome by Joan and Franc Shor

Shirt-sleeved Nasser Khan, the Leader, Presides Over Heaping Silver Platters

At the banquet's end, Nasser Khan presented the authors with a rug and hat, symbolic of honorary tribal membership.

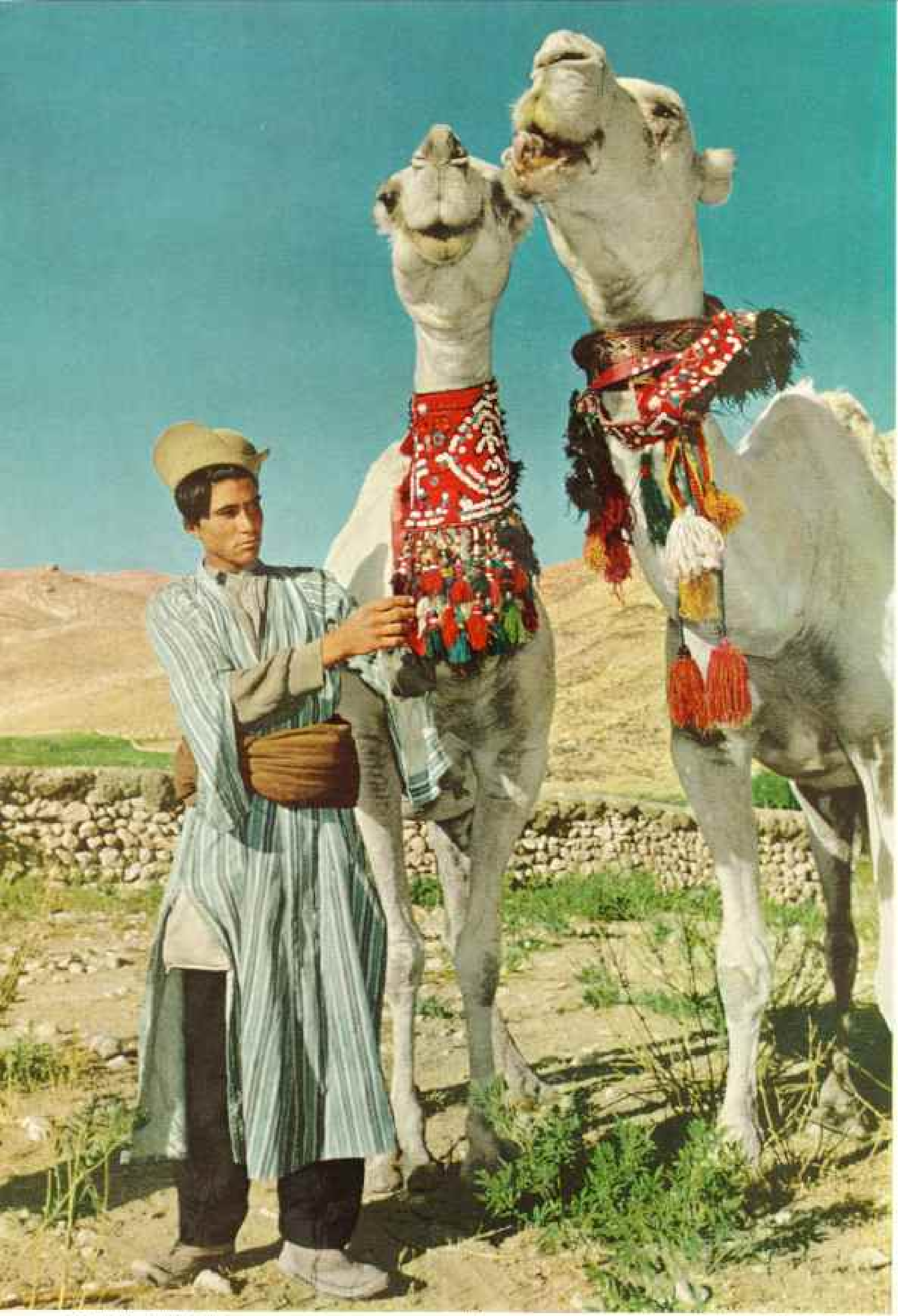
↑ A Carpet Grows as Deft Fingers Work a Crude Loom

Carpetmaking among Kashgais is like an old-fashioned quilting bee. Tongues wag over neighborhood gossip as the women share the work. Some take turns at looms, others brew dyes.

Seven women will labor nearly a year on this rug; it will measure 13 by 24 feet.

← Strands of wool are worked into the pattern and knotted. Combs, decorated with jingling metal bangles, tighten the threads (below).

Kodachromes by Jean and Franc Shor



Kodachrome by Jean and Franc Shor

Camels, the Tribal Moving Vans, Wear Tasseled Scarves for Decoration

the women prepared the evening meal, he gave his sons their daily lessons. Our host was one of the few Kashgais who could read and write, and he was proud of his accomplishment. Each night, by the light of a sheep-fat lamp, he spent a half-hour teaching the boys the difficult Arabic strokes. During the day, while tending the sheep, they practiced.

Supper was the big meal of the day. Shir Ali's mother and wife cooked and served, but neither ate with the men. Rice was the mainstay of the diet, prepared in so many ways that it never became tiresome. Roast or broiled lamb was usually included, with frequent supplements of partridge, ibex, or mouflon. The flesh of the mouflon we found particularly flavorful. Darker than mutton, it tastes very much like beef.

After supper Shir Ali plaited goat-hair ropes, repaired the family shoes, and tanned sheep and ibex skins. His sons were constantly at his side, studying his every move. He was thorough in his instruction, and gentle, too, a trait we found common in the Kashgai treatment of their children.

Jean, sharing the women's life, soon found that a Kashgai wife is never idle. In the morning, goats and ewes had to be milked, butter and cheese made by primitive methods.

"Every morning pots and pans are carried down to the stream and scrubbed with sand, then boiled for several minutes," Jean told me. "Milk is covered while it cools, and even the dirt floor of the cook tent is swept several times a day with bunches of twigs."

The only vessel not washed daily was the battered stone pot holding the culture from which yoghurt was made. Every Kashgai bride takes a bowl of yoghurt to her new husband's tent, and the strains are preserved for generations. A little is saved from each batch to turn the next bowl of milk.

Kashgai cheese is of the simplest variety. The women leave goat's milk to sour in an open bowl, pack the curd in a homespun cloth, and twist the bag to force out all moisture. They tie a string around the bundle to hold it together, and leave it in a running stream while water washes through the curd. Dried again, it is compressed into small cakes and eaten with bread.

Wealth Counted in Sheep, Carpets

Kashgai families count their wealth in carpets as well as sheep.

"The women are always busy with carpets," Jean observed. "If they aren't sweeping, washing, or mending a rug, they're making one."

Looms are set up outside the tents, and when household chores are finished the busy housewife takes her turn at rug making and the weaving of woolen cloth. A spindle and ball of wool are constant companions of a Kashgai woman. Even as she walks or rides her hands are busy spinning (page 814).

Rug making is like an old-fashioned quilting bee. Half a dozen women work together, laughing, talking, and exchanging neighborhood gossip (pages 826 and 827). While they work, their friends gather mountain herbs and berries and brew the natural colors for dyeing the wool. A woman works on one loom for a while and then moves to the carpet of a friend, finally returning to her own. There doesn't seem to be any particular division of labor, but work on every loom progresses steadily, and everyone seems satisfied.

Health Good Despite Lack of Doctors

By Western standards the tribesmen's diet is seriously deficient in green vegetables and fresh fruit. Perhaps the heavy consumption of milk products makes up for the deficiency. Whatever the cause, there is little sickness among the Kashgais. Their active outdoor existence produces sturdy bodies and strong resistance to disease. It is fortunate, for there is not a single doctor in the tribal lands.

"Our greatest needs," Nasser Khan told us, "are emergency medical care and better education for our children. My eldest son is in the United States studying medicine. When he takes his place as head of the tribe, he will be able to take better care of his people."

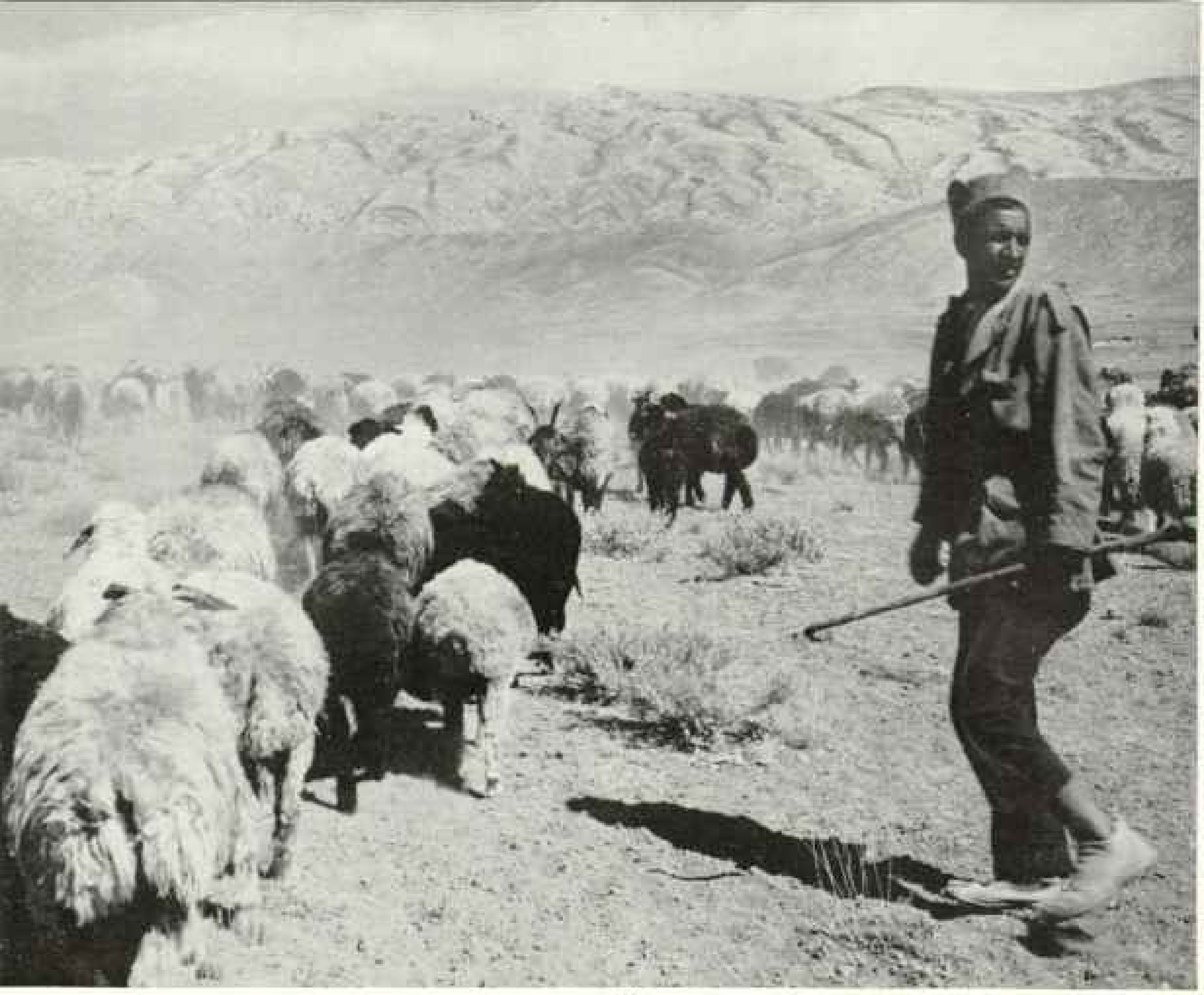
The khans are well educated. Members of the wealthier families study in Iranian and Turkish universities and even, like Malek and Nasser Khan's son, farther afield.

During the reign of Riza Shah, father of Iran's present ruler, Malek was exiled from his homeland for eight years. He spent the time to good advantage. He was graduated from the agricultural college of the University of Reading in England; then he took a degree in law at Oxford University. Further study in Germany and Switzerland rounded out his schooling. Now he is using his agricultural knowledge to improve the living conditions of the tribe (page 832).

"We have imported thoroughbred rams for our flocks," he said, "and have developed a sheep which produces more wool and meat than our native flocks, yet is hardy enough to stand our nomadic existence. To produce a better balanced diet, we have also tried to import new varieties of grains and vegetables."

Irrigation of the arid soil of the tribe's warm winter pastures, south of Shiraz, has brought miracles of fertility.

"In Switzerland," Malek Mansur told us, "I found a midget watermelon. It weighed only a couple of pounds. It would be nice, I thought, to have some to carry in the pocket of my jacket on hunting trips. I planted



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In a Haze of Desert Dust, Sheep and Goats Jog Along to Greener Pastures

His flocks are a Kashgai's capital; their welfare drives him to twice-yearly grass-seeking treks totaling nearly 600 miles. The nomad's sheep provide meat for family and market, as well as milk, cheese, and wool for the colorful rugs and blankets his wife weaves. Goats yield milk and tent material. A typical Kashgai may own 150 sheep, a few goats, and a dozen or so horses, camels, and donkeys. This herdsman drives his flocks south from cropped mountain pastures seared by summer sun.

some seeds on a newly irrigated desert tract.

"They grew very nicely—so well, in fact, that the melons weighed about 30 pounds each! The same thing happens with everything we plant. We have imported hundreds of California fruit trees, and in a few years they should bear a nice cash crop.

"What we hope to do is give our people a more balanced economy and a better diet, but keep our own advantages. Our tribesmen are much better off than the average Near East villager. We must gain the benefits of civilization without losing our own way of life."

Early Snow Launches Migration

It was the middle of August, but mountain meadows were already heavy with frost at dawn. Each day the hoary covering was a little heavier, the ground a little harder. Then one morning we awoke to a light flurry of snow. Gorgali called a meeting of his tribesmen that evening.

"It looks as if winter is coming early this year," he said. "We should prepare for the migration. Are you ready to start south?"

For an hour the Kashgais discussed the matter. They agreed to leave in three days, and a horseman was sent to inform Nasser Khan of their plan. He returned the next evening with the Khan's approval.

"The migration is a large-scale project," Gorgali explained. "In the next 60 days some 100,000 people with sheep, horses, camels, and all their belongings will begin the trek of nearly 300 miles.

"The move has to be planned like a military operation. The people to the south of us, for instance, must move at the same time we do so there will be pastures available for our animals and camp sites and water for the tribesmen. We move slowly, but, once under way, we can't afford to stop."

A nomad recognizes but two seasons—warm and cold. It is not a yearning for a better

climate that drives him to migrate, but economic necessity. His land is too poor to support life on a year-round basis.

The days of preparation were hectic. Everyone worked from dawn until long after dark. Flocks were carefully checked and the weakest sheep butchered for meat. Horses were shod, camels examined for sore backs.

Women mended grain sacks, dismantled looms and carefully packed them in sturdy bundles. Graybeards went from tent to tent, making sure every family was ready. On the last night a great feast was held, with sheep roasted over open coals. The Kashgais danced and sang around the campfires until midnight.

A hare-skin drum and a surnay furnished the music, a weird, pulsing tune that seemed to go on forever. The surnay player was particularly proud of his ability and brought his long trumpet-shaped instrument close to our ears so we could better appreciate his talents. Habib translated the songs for us. Most of them dealt with Kashgai feats of arms, victories in battle against heavy odds.

The men did all the dancing. The steps were simple, with much whirling. Late in the evening several performers armed themselves with stout sticks and staged mock duels, swinging their weapons in time with the music.

Camp Disappears as if by Magic

The surnay player had a dramatic role in the breaking of camp next morning. After breakfast, in the first rays of dawn, the camp looked exactly as we had first seen it. Hundreds of tents dotted the valley; sheep huddled together in their pens. Beside Gorgali's big tent stood the musician, atop a low hill commanding the valley. Slowly he raised the big, bazookalike instrument and blew a long, piercing blast (page 806). At the signal, Gorgali's servants pulled the stakes and his tent collapsed. Immediately every family in the tribe struck its own shelter, and the camp disappeared as if by magic.

Rugs were tied into bundles; cooking equipment went into big sacks. Camels grunted angry protests against the big bags of grain lashed to their backs. Donkeys brayed bitterly as they received their loads.

Tents big and small were folded into neat bundles for the pack horses. An hour later a mile-long procession wound down the hill, men on horseback leading the pack animals, women perched high on top of swaying camels, their voluminous skirts covering the bulging packs (page 807). Children rode on donkeys; young men and boys drove the flocks of sheep beside the trail (opposite page).

After an hour we halted to adjust loads, tighten ropes, and make emergency repairs.

"The first day is always slow," Gorgali told us. "Later, we will average 10 or 12 miles a day. We travel three days, then rest one or more, to let the flocks recuperate."

We covered eight miles that day. An hour or so before dusk we stopped beside a stream. Flocks were corralled; camels kneeled to be relieved of their loads. Men and women worked together on the tents, and in an hour a new camp had sprung up. Carpets were spread on the ground, fires lit, and the good smell of roasting meat filled the air.

Home Is Where Tents Are Pitched

"The best thing about being a nomad," said Gorgali after a good meal, "is that you're always at home." He patted the heavy carpet on which he lay. "We have a saying: 'Where my carpet is, there is my home.'" He smiled. "In the next two months we'll travel 280 miles and be home every night!" (pages 818 and 821).

As we moved slowly southward, other groups joined in the migration. Within a week a majority of the tribe was on the move; one sparkling morning we sat our horses atop a hill and saw the valley below us filled with men and animals. There was no confusion, no crowding as this great tide of men and beasts swept on to warmer pastures (pages 816 and 817).

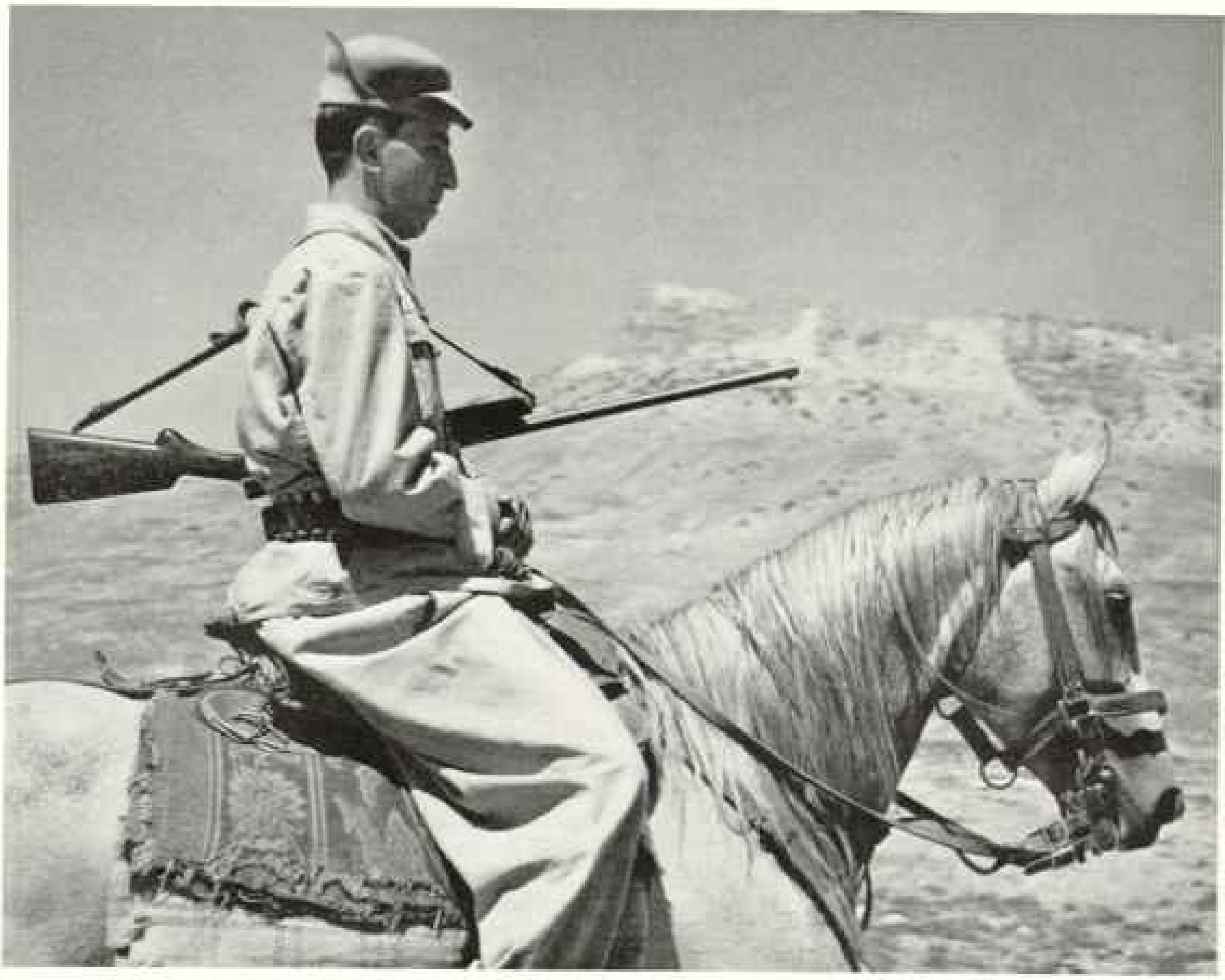
The march was well organized, but not easy. Animals died or were injured and had to be left by the wayside. Men and beasts became footsore and limped beside the trail. There was a night when, in a narrow pass in the Zagros Mountains, we went to sleep beneath a sky sparkling with stars and awakened after midnight in a howling blizzard. Men and women worked side by side in the bitter cold, calming their frightened flocks, fighting to keep them in makeshift pens.

It was dangerous to remain in the pass, for, if the blizzard continued, the snow might drift and block the way. We broke camp in the darkness, packing the stiff wet tents with freezing fingers, and plodded miserably over the rocky trail in the early dawn.

Crossing a rocky, slitlike valley a horse and rider tumbled 60 feet down an abrupt cliff. Its rider arose. The horse struggled, a broken leg sticking out at a crazy angle. We turned our heads as we rode by, while the disconsolate rider sat on the animal's head to calm his struggles while he whetted the knife which would still them forever.

Day after day the migration went on, as it had through history. It was time for us to go. We were nearing Shiraz, where we could board a plane for Tehran. Reluctantly we told Nasser Khan that we must leave.

"You must stay one more day," he said. "Tomorrow night in your honor we will have a



An Educated Rider Has a Good Seat—and Degrees in Agriculture and Law

Malek Mansur, one of the hereditary chiefs of the Kashgais, is a superb horseman and marksman; he is a graduate of the agricultural college of the University of Reading, England, and took a degree in law at Oxford. Like other members of the tribe—"one big family"—Malek Mansur uses "Kashgai" as his formal surname. Lesser tribesmen, unable to afford ammunition, hunt without guns. On horseback, they flush the quarry repeatedly until the birds, too tired to fly, can be run down (page 812).

farewell banquet. We will invite kalantars from all the subtribes and have a real Kashgai feast."

Farewell Banquet—Kashgai Style

Nearly a score of tribal elders sat with us on bright carpets under the big tent for that last feast (pages 824 and 825). Down the center of the white cloth five king-size silver platters were spaced. One held a mixture of rice, fresh vegetables, and plums. Rice with raisins, pistachio nuts, and chicken giblets filled the second. Rice with cherries, lamb, and nuts was piled in the third dish; saffron crusted the rice that filled the fourth. The fifth platter was heaped with rice mixed with lamb and breasts of partridges.

Roast lamb, partridge, ibex, and mouflon were piled high on other plates. Cakes made of crushed dates and spices were served as dessert. After dinner I made a brief speech in the limited Turki I had picked up, thanking the Kashgais for their hospitality. It was a sad occasion, for we had come to feel at home with the tribe.

Malek went to a corner of the tent and returned with a beautiful Kashgai carpet, woven in muted shades of rose and blue and old gold. He spread it at our feet.

"This is a Carpet of the Khans," he told us. "The design is a family pattern, and it is never produced for sale. My wife worked on this carpet. In the history of our tribe we have given away only two others like it. This is for you and Jean, but it is not a going-away present. Instead it is a gift of welcome. You have become one of us. This is to welcome you into the tribe."

Nasser Khan stood beside us. From his head he took the heavy felt Kashgai cap. Solemnly he put it on my head.

"Now you are a Kashgai," he said. "When next you come to our tents it will not be a visit, but a homecoming. Our tents are your homes. And where you spread your Kashgai carpet, there will be your Kashgai home."

Graduation by Parachute

For Navy Girls at Lakehurst, New Jersey, Commencement Is a Serious Step—and a Long One

By John E. Fletcher

With Illustrations from Photographs by the Author

ON A LONG, narrow table in front of Patricia Irwin lay 88 square yards of billowing white nylon cloth. This was the outfit she would wear tomorrow at her graduation exercises. Today she was smoothing and folding it as carefully as if her life depended upon it.

Tomorrow her life *would* depend upon it. For other students across the country, graduation exercises might mean speeches, flowers, processions in caps and gowns. But Pat Irwin, to graduate, would have to jump headfirst out of a plane hurtling through the air at 2,500 feet.

No, the United States is not training female paratroopers. Airman Pat Irwin, a Wave, is one of about ten women trained by the United States Navy each year, along with more than 300 men, in the Parachute Rigger School at the U. S. Naval Air Station, Lakehurst, New Jersey.

One Mistake Could Be the Last

Parachute riggers are the highly trained specialists who fold, pack, air, inspect, repair, and otherwise take care of the Navy's more than 30,000 parachutes now on "active duty." Any one of these parachutes may be called into use at any hour. When it is, it will mean the difference between life and death. Riggers *can't* make mistakes.

I had visited Lakehurst earlier to watch Pat Irwin as she studied the science of parachutes: how they are made, how they work, how to use them. Now, as graduation approached, I was here to watch her jump wearing a chute she herself had packed. This is the Navy's way of ensuring that its Parachute Rigger Airmen understand the importance of their work.

No one would urge Pat Irwin to jump, or push her from the plane if she lost her nerve. Keeping her nerve would depend on her confidence in the chute she was now folding. At her side worked another Wave, Sheila Rourke, her classmate and friend, who would also jump tomorrow. Together they folded the nylon canopy and its 28 suspension lines into a bundle 24 by 12 by 5 inches. Then they fitted it into a container and fastened the whole unit with three stiff metal pins. From these pins an all-important wire led to the rip-cord handle.

The last thing to go into the pack was the pilot chute, equipped with a self-contained spring (page 839). Tomorrow, when Pat pulled the rip cord, the pilot chute would pop out into the air, open immediately, and begin its work of pulling out the main canopy.

The whole folding job took Pat and Sheila about 45 minutes. Some of their instructors, with years of experience, can do it in 5.

Pat, a native of Tulsa, Oklahoma, came to Lakehurst after completing an aviation course at Jacksonville, Florida. Sheila, originally from Cosmopolis, Washington, had also been trained at Jacksonville. Like all the other riggers, both had volunteered for parachute work.

Every Airman Must Wear a Chute

The Parachute Rigger School at Lakehurst was set up in 1924, after the Navy had issued a regulation requiring all its airmen to wear parachutes at all times while flying. The first class, 11 students, studied only the packing and care of parachutes. By the time Pat and Sheila arrived last year, however, the course had been expanded to include considerably more than that.

In their 15 weeks of training the girls studied such things as the uses of oxygen in high-altitude flying; life rafts and survival equipment (which are often dropped by parachute); sewing and repairing of parachutes. As a preliminary to the final jump, they also took a 20-hour course in tumbling (page 838).

They learned that in basic principle the parachute had changed little since it was designed by the painter and scientist Leonardo da Vinci about four and a half centuries ago. Da Vinci's parachute remained only a curiosity for nearly 300 years. Its first successful emergency use was by a Polish balloonist in 1808, but not until World War I was its real value recognized.

Early parachutists jumped with their parachutes bundled in their arms, or, in some cases, packed in containers fastened to the plane or balloon. In 1919 the present type of free-fall, pack-contained chute was developed, and technical improvements have continued steadily since then.

Until recent years parachutes were made of silk and were susceptible to rot, mildew, and destructive stain. Today every thread, stitch,

and scrap of material, except hardware, is made of nylon, which resists almost everything except heat.

Even greater changes in parachute operation are taking place as a result of the development of high-speed, high-altitude jet planes.*

Flying at moderate speeds and at altitudes where there is enough oxygen to breathe, a normal person can safely jump from a plane, pull his rip cord, and float down.

But what about a jet pilot flying, say, 500 miles an hour? His ejection seat will explode him from the plane, but the parachute can't be opened at once. If it were, it might tear apart; even if it didn't, the sudden shock of opening could seriously injure the pilot. And if a pilot opens his chute much higher than about 25,000 feet altitude, he may freeze to death or die of lack of oxygen before he can reach the earth.

Navy and Air Force research teams have already solved some of these problems. Standard equipment in high-altitude flying, for instance, are parachutes in which the rip cord is actuated by a device that opens the canopy automatically at 15,000 feet.

Under normal conditions, the students learned, the great enemy of parachutes and of the men who use them is moisture. A damp parachute won't open quickly.

When a rigger has finished his course and is assigned to a station, an important part of his routine work is airing parachutes in special temperature-and-humidity-controlled lockers (page 836).

Properly cared for, a parachute is good for as many as 100 jumps.

Jump Day—and Jumpy Nerves

J Day began at 7:30 a.m. The students—there were 48 in the class jumping that day—showed their nervousness in different ways. One complained about butterflies in the stomach. Another, a girl, remarked that she "felt like Christmas." Still another complained she hadn't been able to find the eyelets when she laced up her boots that morning.

Pat Irwin was surer of herself than most. "I know I'll be scared to death," she said, "but I'll be stubborn enough to go through with it."

If some student did lose his nerve and fail to jump—and this has happened—it would constitute no disgrace. And, by long tradition, the incident would never be mentioned by others at the school.

Most of the students knew about the case of Airman X, a would-be rigger who went up doggedly on 16 consecutive "jump days." Each time, until the final minute, he was sure "this time I'll do it." He hasn't done it yet.

They were also familiar with the story of student B., a bride of a few weeks, who was about to complete the course. On J Day her husband waited on the ground, camera in hand, to get a picture they would someday show their grandchildren. He stood patiently through eight planeloads of jumpers, but never got the picture of his wife "hitting the silk"—because she never jumped.

Pat, like her fellow students, had drawn a number to indicate her plane and her turn to jump. She drew place 7 (out of 8) in the first plane.

Parachutes were strapped on and checked. The one she had packed was on her back, another in front just in case. Then she was ready to board the plane, a twin-engined R4D.

Experts Make Fancy Dives

As they roared down the runway, Pat, thin-lipped and determined, looked at her fellow students to see if their facial expressions matched the feeling in the pit of her stomach. She was relieved to see that they did.

Only the instructors, sitting one between each two students, looked calm. They must make at least one jump every 90 days to retain their classification as Parachutist, which brings them $50 a month extra pay.

After the first 20 or 30 times, jumping becomes routine. One of the Lakehurst instructors, a chief petty officer named, appropriately, J. R. Van Landingham, got so bored after 30 jumps that he started practicing fancy dives while he fell through the air. He now amuses himself, and gives onlookers palpitations, by going through a graceful one-and-a-half twist or a couple of full gainers on the way down.

But for the students, as the plane rose, so did the tension. Bill Begley, the jump master, lay on the floor of the plane, staring intently through the gaping hole where a door had been removed to facilitate jumping (page 842).

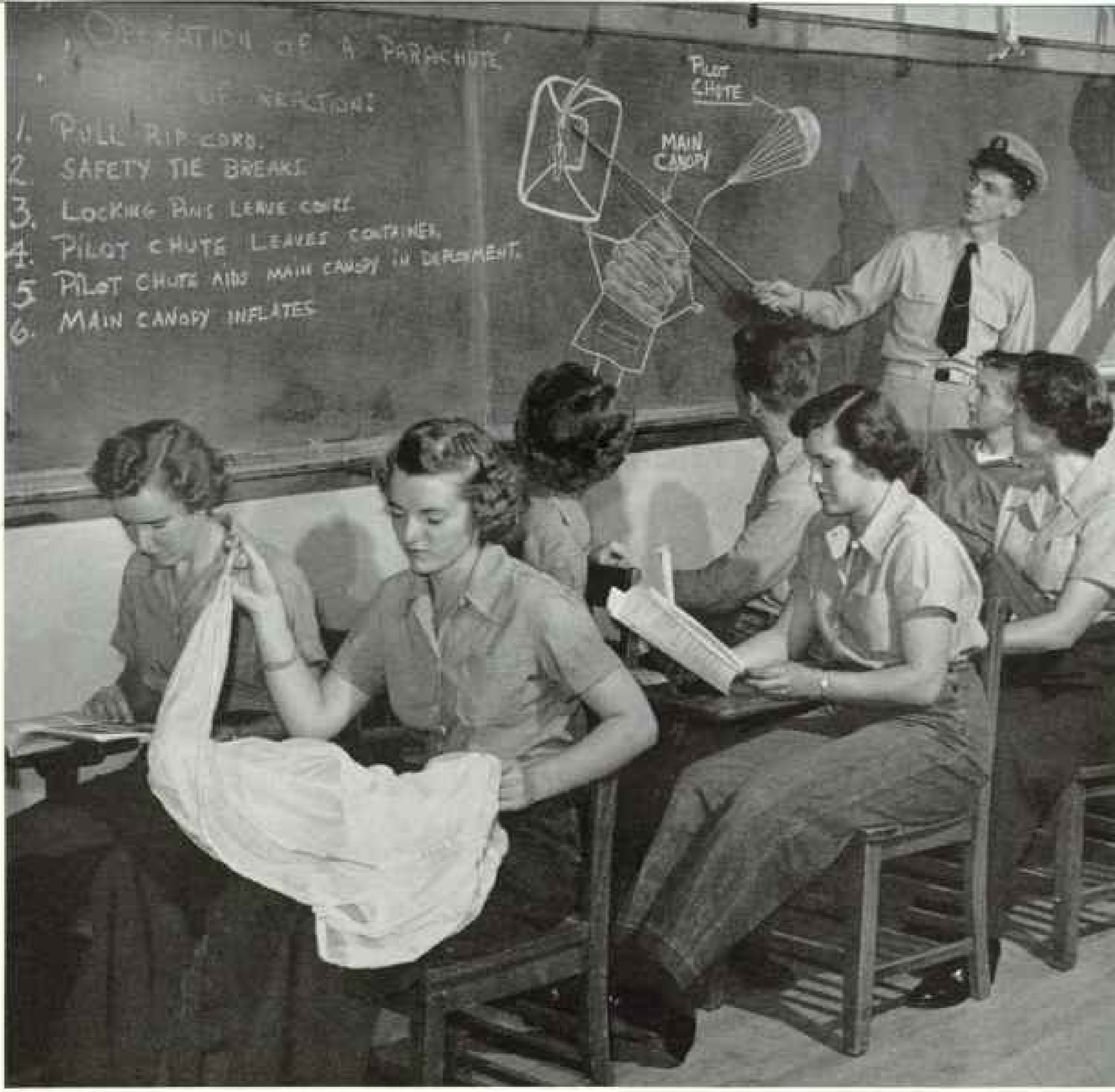
His job was to put the jumpers out where they would land in the "jump circle," an area cleared of trees and obstructions. As the plane made a preliminary pass over the circle, one man, an experienced parachutist, jumped. He was the "spotter." By watching his fall, the jump master could judge wind currents and drift.

Over the Circle and Out the Door

The plane turned and headed back over the circle. Bill got up from his position on the floor.

"Coming on the range!" he shouted. The students stood up, every eye on the jump master. He stood near the opening, one arm

* See "Flying in the 'Blowtorch' Era," by Frederick G. Vosburgh, National Geographic Magazine, September, 1950.



831

Lakehurst Waves Attend Class to Learn ABC's of Parachute Operation

During their 15-week course, men and women students are taught history, theory, maintenance, and construction of parachutes. Here, in a beginners' group, Airman Pat Irwin (foreground, right) learns six steps in the "chain reaction" set off by pulling a rip cord. Her Navy classmate inspects a pilot chute, the small parachute which opens first and pulls the big one after it. The instructor is a chief petty officer.

high above his head. Suddenly the arm snapped down.

"Go!"

Pat felt herself moving briskly down the aisle, saw the opening suddenly before her, and hurled herself headlong into nothingness.

When the spots stopped dancing before her eyes, she was dangling alone in the middle of a silence more intense than any she had ever known. Above her the white nylon chute she had packed was spread like a protecting roof.

As she floated downward, the Wave looked at her right hand, which should still be holding the rip cord she couldn't remember pulling. Her hand was empty. She had dropped the rip cord. By tradition, that meant she would have to stand treat at the celebration that night.

In what seemed like seconds—actually about three minutes—the ground was rushing up at her. As it thumped the bottoms of her feet, Pat remembered to relax and roll forward as she had been taught. Then somebody was pounding her on the back; others were helping her unfasten the harness still holding her to the collapsed chute.

An hour later she watched Sheila's parachute puff out in the sky. By the end of the day, the U. S. Navy had 47 new Parachute Rigger Airmen on its rolls (one Wave didn't jump), each of them willing to stake life itself on the job he or she had learned to do.

← Nylon Parachutes Get a Monthly Airing in a Dry Locker

Once every 30 days, whether it has been used or not, every Navy parachute is unpacked and hung full length in a special chamber with a temperature of about 70° F. and humidity of 54 percent. All naval air stations and aircraft carriers have equipment for this purpose.

After hanging 24 hours, chutes are ready for inspection and repacking. Here a Wave student rigger lowers a parachute slowly while her classmate carefully coils the nylon suspension lines to prevent snarling.

→ Pat and Classmates Watch the Instructor as He Checks a Chute

After leaving the dry locker, the parachute is stretched taut on a smooth-topped table, where each line and segment is checked for chafing, tears, and other signs of wear.

Folding comes next, starting with the canopy. Here an instructor (holding line) demonstrates the operation to the class; normally two riggers make a packing team.

The rigging kit (foreground) contains packing tools—an awl, a bag of shot used as a weight, and assorted hooks, bars, and pins which help in fitting the 790-square-foot canopy neatly into its container.

838

Learning to Land: Pat Irwin Tries a 6-foot Jump. Later It Will Be 2,500 Feet

Though a parachutist seems to float down slowly, he falls at about 19 feet a second. An improper landing may cause sprained or broken ankles, legs, or arms. The instructor tells Pat to relax and roll forward.

Pat Counts Gores Before Packing

A typical parachute canopy is made of 28 gores, or wedge-shaped segments, stitched together to form a cloth circle 28 feet in diameter. After folding the canopy, the Waves count to make sure they have the same number of gores on each side. Then they pack the chute, lines first, into the container.

The Pilot Chute Goes In Last, Comes Out First

With metal ribs and steel spring, the pilot chute is like an umbrella that won't stay shut. During a fall, it pops out of the pack first and pulls the main parachute after it (page 844).

Above, Pat and her partner connect the miniature chute to the top center of the main canopy. At right, folded, it is tucked into the container. Pulling the rip cord a fraction of an inch will release it.

Get Ready . . .

On "Jump Day minus one," Pat Irwin (right) and a classmate try on harnesses and chest protectors. Jumping gear includes standard football helmets. Armored housing over the left shoulder guards the all-important rip cord.

National Geographic
Photographer Ernest J. Cuttell

Stand By . . .

Jump Day: The plane, an R4D, comes into a shallow glide at 2,500 feet. As it approaches the jump circle, a cleared area where parachutists will land, jump master Bill Begley (center) gives the students last-minute instructions. Then he moves to the rear of the plane to signal the jump.

. . . Go!

Begley's fist is a blur as his arm snaps down. Eight jumpers are out the door and into space in as many seconds.


NAVY
LK-


STATES NAVY

< Students Leap from Plane Clutching Rip Cords in Both Hands. > One Pulled Too Soon

Coming in on the target—the jump circle—the pilot throttles down both motors and partly extends the wing flaps, slowing the plane to 110 miles an hour. At the signal jumpers pop through the door like links of a chain. At the start they are only a few feet apart, but the powerful backsweep of air quickly separates them; there is no danger of a mid-air collision (page 844).

On each student's back is a parachute he or she has packed. In case this fails, each also wears a smaller QAC (quick attachable chest) parachute. So far, in Lakehurst history, no student-packed chute has ever failed to open.

These two pictures, taken about a second apart, were made from a plane flying beside the jump plane. At top, the first three jumpers dive through the plane's open side, from which the door has been removed.

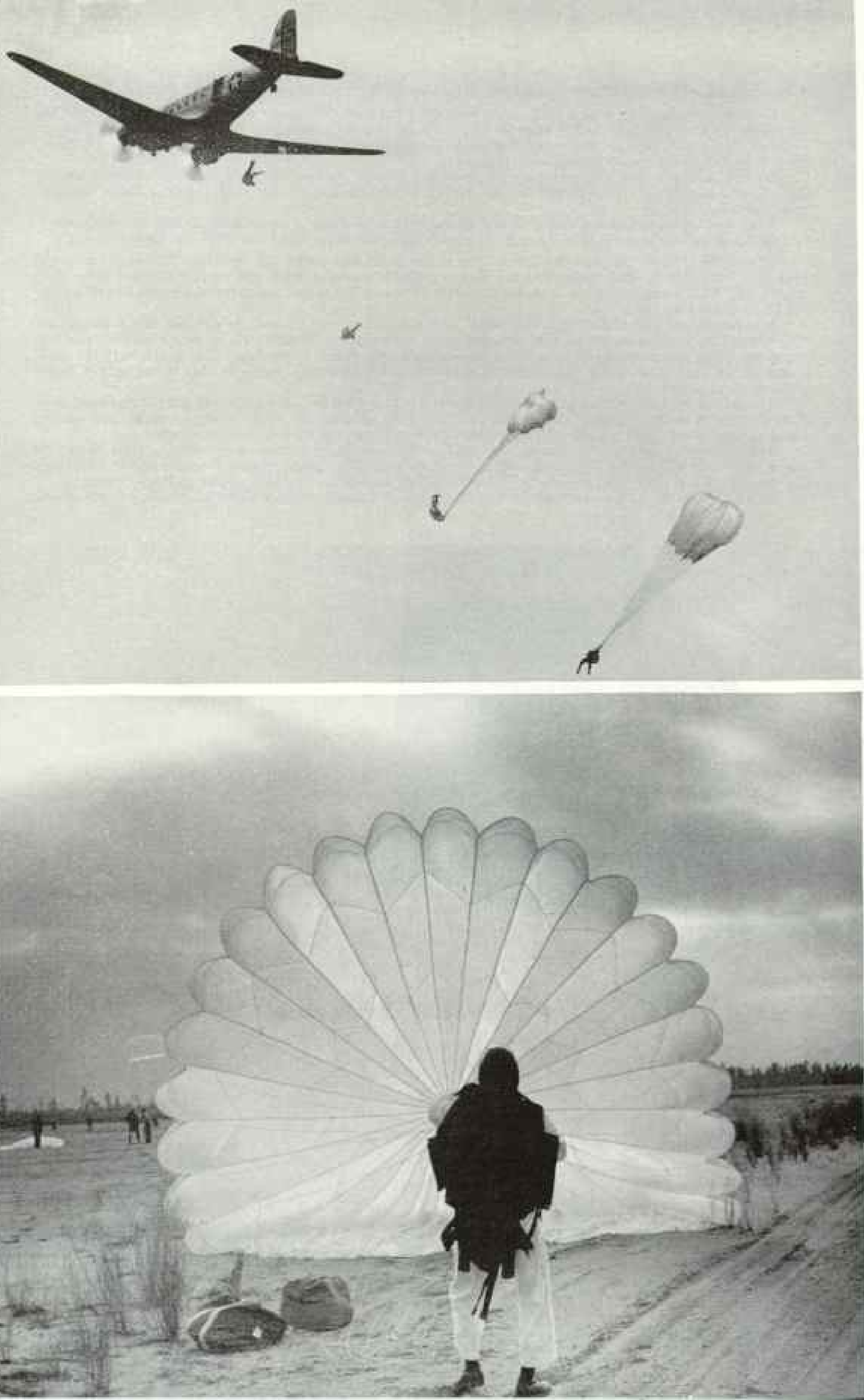
Lower: The last of the three has fallen clear of the plane and pulled the rip cord. The position of the parachute, almost horizontal, shows that the jumper pulled it too soon, while still moving forward faster than downward. This is not dangerous at such a moderate air speed, but causes uncomfortable oscillation or swinging like a pendulum.

In a few seconds air rushing into the "skirt" of the parachute will cause it to puff out like a mushroom. This initial inrush of air builds up high pressure inside the canopy. To allow air to escape without bursting seams or tipping the chute, Navy parachutes are equipped with a vent in the top. This is a hole in the exact center of the canopy, normally four inches in diameter, but ringed with elastic so that it can stretch under pressure to 18 inches.

As students float down, they are watched from below by a "talker," an experienced jumper equipped with a mobile public-address system. His amplified voice calls students by name, reassures them, and advises them how to "steer" their parachutes (by pulling on shroud lines) to land in the jump circle.

The talker also watches for damaged parachutes. The day these pictures were made, a seam ripped on one of the students' parachutes and an entire gore came out. The talker spotted it and instantly instructed the jumper: "Open your second chute!" The student landed safely, with both chutes still functioning.

"NATTU" on the plane stands for Naval Air Technical Training Unit, which runs the Lakehurst school.



845

Flurries of Jumpers Come Floating Down on Lakehurst Graduation Day

High in the air, five parachutists tumble from their transport (opposite, upper). One, only a black speck, pops from the door. Just under the ship a heels-up student pulls her rip cord, and the pilot chute flutters out, a white spot against the wing. A confident instructor below her gains downward speed before opening his chute, while the other two canopies are already puffing open.

The airman (above), as the earth rushes up at him, "slips" his parachute by pulling the shroud lines. Just before he lands, he will release the lines, letting the canopy spread suddenly to ease the shock. The jumper on the ground battles the mild breeze; a stiff wind would jerk him off his feet.

Safely landed, a student (opposite, lower) braces himself as a breeze bellies his chute. He tries to collapse it by tugging the bottom shroud lines to spill the air out the top. Two parachutes used by earlier jumpers are stowed in bags near his feet.

Said Pat Irwin After Her First Jump: "It Was Terrific! I'd Like to Do It Again!"

Like most Lakehurst student riggers, Pat got jittery as her parachute course moved toward its climax. In the final days, one question loomed in their minds: "Will I have the nerve to jump?"

Of the students in Pat's class, only one defaulted. All the rest leaped and landed safely, thereby qualifying as Parachute Rigger Airmen. Without at least one actual jump, Navy authorities believe, no amount of theoretical training can make an expert parachute rigger.

After graduation, Pat and the other Waves in her class moved on to stations at Navy airbases; some of the men were assigned to aircraft carrier duty on the Seven Seas. Wherever they are stationed, they function as experts on the care, repair, maintenance, and operation of parachutes. Every rigger must not only keep all chutes entrusted to him in perfect condition at all times, but must also be willing, at any hour, to prove his confidence in each parachute—by jumping with it.

Southwest Asia Again Makes History

New National Geographic Map Shows Where Modern Crises Erupt Among Scenes of Man's Earliest Civilizations

WITHOUT the arts of writing, cartography, arithmetic, and the wheel, all invented or first used in Southwest Asia, the map of that vital area which accompanies this issue of the NATIONAL GEOGRAPHIC MAGAZINE could never have been compiled, printed, and distributed.

More than 2,000,000 copies of the National Geographic Society's timely new 10-color map of Southwest Asia (and including most of Egypt, Anglo-Egyptian Sudan, and Ethiopia in Africa) have been printed for the benefit of The Society's members throughout the world.*

Viewed down the vista of history, no area on earth is as important as this, for here our history began. Here a stylus first marked Mesopotamian mud tablets with ancient records and laws in wedgelike script. Here the intricacies of thought and the rhythms of poetry were recorded on Egyptian papyrus or the parchment of Pergamum (Bergama) in present-day Turkey. Here the granddaddy of all known maps was incised on Mesopotamian clay 4,500 years ago.

Southwest Asia was not only the nursery of our civilization but also our linguistic primer. Be it Sanskrit, Hebrew, Arabic, Persian, Greek, Hindi, or Urdu, Southwest Asia gave things their names, gave thought its vocabulary.

Even the heavens yielded up their secrets to the inquiring mind of ancient man. Here the swing of our sphere around the sun was first measured; here the seasons were tamed to almanac and calendar.

No other area has been such a laboratory of human geography. Here man and environment have wrestled, in some of the earth's most fertile valleys and most forbidding deserts, since history began.

Science Pushes History Backward

On the shores of the Caspian Sea, beside Mesopotamia's twin rivers, the Tigris and Euphrates, on the storied shores of the Nile, and along present Pakistan's northwest frontier, the horizon of history is being pushed steadily back by deep-delving archeologists.

At Jarmo, 30 miles east of Kirkuk, archeologists of the University of Chicago's Oriental Institute believe they have found the earliest human settlement so far discovered. They estimate that this "world's oldest village" thrived between 5000 and 6000 B. C.

This vast region between the Western Desert in Egypt and the Chindwin Valley of Burma is a land of extremes: among the richest and poorest, highest and lowest, driest and wettest.

In Arabia's Empty Quarter, even a vulture would have to carry a canteen—and every camel does. In parts of Assam, enough rain falls in a year to float the largest U. S. Navy aircraft carrier, fully loaded, with room to spare beneath her keel. In one bumper year, 1861, there was more than twice that much—1,041.78 inches.

Curving around the northern frontiers of India and Pakistan, the highest mountains on earth isolate India more surely than do its seas. Through the passes have moved mighty armies, tribesmen's annual forays for food, and sun-helmeted explorers seeking Lhasa in the vast, silent seclusion of Tibet, now in the hands of Red China.

Only the finding of the frozen bodies of two British mountain climbers, last seen nearing Mount Everest's summit in 1924, may reveal whether its 29,002-foot pinnacle has yet been conquered by man.

A tiny blue spot, partly hidden by the magic name "Jerusalem," marks the deepest dimple in the face of Mother Earth, and a salty, scabrous dimple it is.

Like a syrup kettle in a Vermont maple sugar camp, the Dead Sea contains a thick fluid from which the water of ages has been evaporated. A cruel sun focuses its unclouded glare into a desolate depression nearly a quarter of a mile below sea level and five and three-quarter miles lower than Mount Everest's lonely peak.

Five Faiths Began Here

Mighty as are Nature's forces, they are matched by man's desire to fathom them and to worship their Creator. No great religion on earth is alien to this area. Most were born here. Buddha grew up on the foothills of the Himalayas. Hindustan's sacred Ganges, flowing past the bathing ghats of Banaras (Benares), bears away the ashes of Hindus of many castes. Abraham's Ur and Hebron, Jesus' Bethlehem and Golgotha, Mohammed's Mecca and Medina are near neighbors in this southwest part of Asia.

In the small inset map, the breadth of the Moslem world is compared to the relatively tiny size of Texas. Roughly one man out of

* Members may obtain additional copies of the new map of Southwest Asia, India, Pakistan, and Northeast Africa (and of all standard maps published by The Society) by writing to the National Geographic Society, Washington 6, D. C. Prices in United States and elsewhere, 50¢ each on paper; $1 on fabric; Index, 25¢. All remittances payable in U. S. funds. Postpaid.

every four on earth lives in the area shown by the main map. Every day more than a third of these bow toward Mecca, the lodestone of 370,000,000 human compasses magnetized by the testimony: "God is great. There is no god but God, and Mohammed is his Prophet. Come to prayer!"

In Turkey the Faithful face south, in Ethiopia north, in Libya east, and in the Philippines west.

Mecca Once Center of Idol Worship

Focus of millions of prayers is the Kaaba at Mecca, once a pagan shrine. In the year 622 Mohammed was forced to flee from Mecca, then a center of idol worship. Today Moslems date their era from that flight, or Hegira. To them, September 21, 1952, is the first day of 1372 A. H. (Anno Hegirae, Year of the Hegira). Since their lunar year is about 11 days shorter than our solar cycle, the Moslems have gained 42 years since the Hegira.

In areas colored green on the inset map, six men out of seven are Moslems. In Albania, Syria, the Anglo-Egyptian Sudan, Sinkiang, Malaya, and British Borneo, a majority consider the Koran as the Word of God. Inside the Soviet border, which cuts across the map from Romania to Sinkiang, the republics of Azerbaijan, the Turkmen, Uzbeks, Kazakhs, Tadzhiks, and Kirgiz are predominantly Moslem. In the yellow area, in which from 3 percent to 50 percent are Moslems, numbers run into many millions. By special permission this inset map is based on the excellent new *Atlas of Islamic History*, by Dr. Harry W. Hazzard of Princeton University.

In an area of many diverse peoples, Islam proved a unifying force. It enabled men of many tongues to gather in Mecca and intone the same sacred syllables that Moslems believe came from the throne of Allah.

After 7,000 years of prehistory and history, recorded in potsherds or in the technical tomes of anthropologist and archeologist, mankind here is still in a state of flux.

The Three Easts: Near, Middle, and Far

Until regional commands in global war spread their terminology over the earth, the west half of Southwest Asia was known as the Near East. This was to distinguish it from the Far East, toward which Marco Polo turned Europe's envious eyes even as the Crusades faded out.

Later the term "Middle East" was coined, and the armies of Britain's Middle East Command in World War II included sharp-shouldered recruits from Bengal's jute swamps and mustachioed warriors from Rajasthan.

National Geographic Society cartographers include Turkey, Cyprus, Syria, Lebanon, Israel, Jordan, Iraq, Iran, Egypt, and all the states, sultanates, protectorates, and sheikdoms of Arabia in the Near East.

Under the term "Middle East" are grouped Afghanistan, Pakistan, India, Nepal, Bhutan, Sikkim, and Ceylon.

When the Suez Canal was opened, it was to facilitate mail and cargo service between industrial Europe and the raw materials of Asia. To fuel the steamers, coal heavers at Port Said developed a basket chain which filled the ships as smoothly as an endless belt. Now fuel is itself a cargo. Tankers carry it from the Persian Gulf to an oil-thirsty world. Almost one-sixth of the world's oil now comes from Near East wells.

In 1923 the first motorcar triumphed over the Syrian Desert between Damascus and Baghdad, a feat which led to the organization of a trans-desert service. In 1950 a 1,068-mile pipe line began to spew forth its oily flow into steamers near the ancient port of Sidon. On the new map, a beaded black line marks its route from Abqaiq to the Mediterranean shore of Lebanon, the Phoenicia of ancient times.

Pipe Lines Lie Under Camel Routes

Alternate sizes of American-made pipe—so that the 30-inch could be telescoped inside the 31-inch for transport—have been X-rayed for faults, smeared with such bitumen as calked Moses' basket amid the bulrushes, and buried in part in a machine-dug trench through wastes where only camel pads had trod.

Where inflated skins once floated tribesmen and early English travelers down the Euphrates, passenger airplanes now thread the skies. Airports on Beirut's red sands, Damascus' desert, Basra's palm-fringed plain, and Bahrein's flats welcome planes from points which Jason, the Phoenicians, Vasco da Gama, Magellan, and many another navigator tried to reach over seaways.

The mechanical birds fly above ancient barriers of sea and mountains, but the quest is still the same. For to the east dwell millions of humble folk, patient enough to gather jute and rubber, rice and tea. And to the west lie the busy factories of Europe, hungry for raw materials, eager for markets.

Railway, road, canal, oil field, and pipe line mark the petty conquests man has made in his ancient home. But as the monsoon sweeps in across the Indian Ocean and the dust storm blankets the golden domes of Baghdad's Kazimain, Mother Earth is still the master. She still sets forth the glory of gem, the reward of food, the challenge of unclimbed peak. She still starves her children, sweats the brow of struggling man, and arouses the passions of men and nations.

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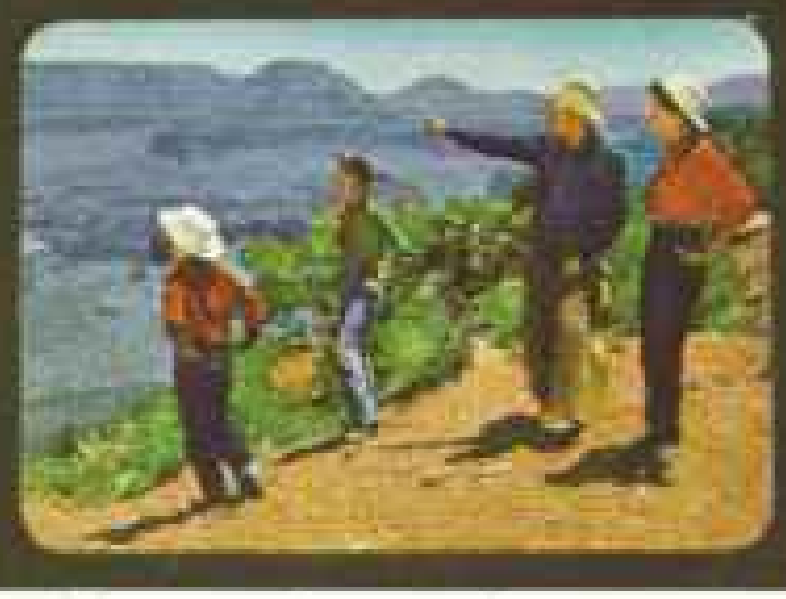

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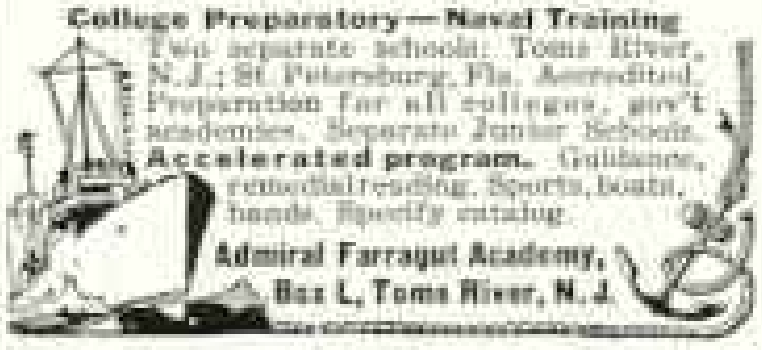

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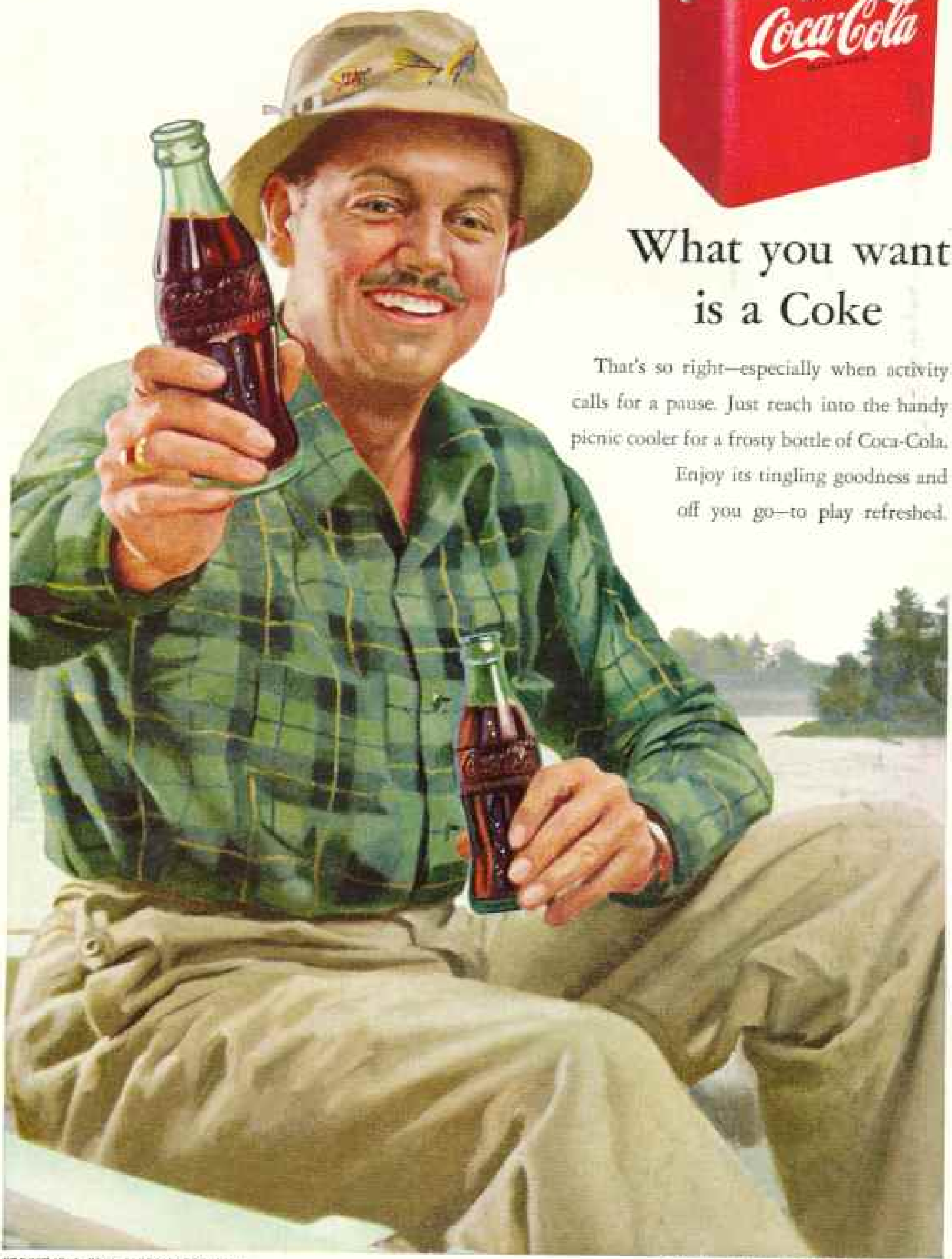

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