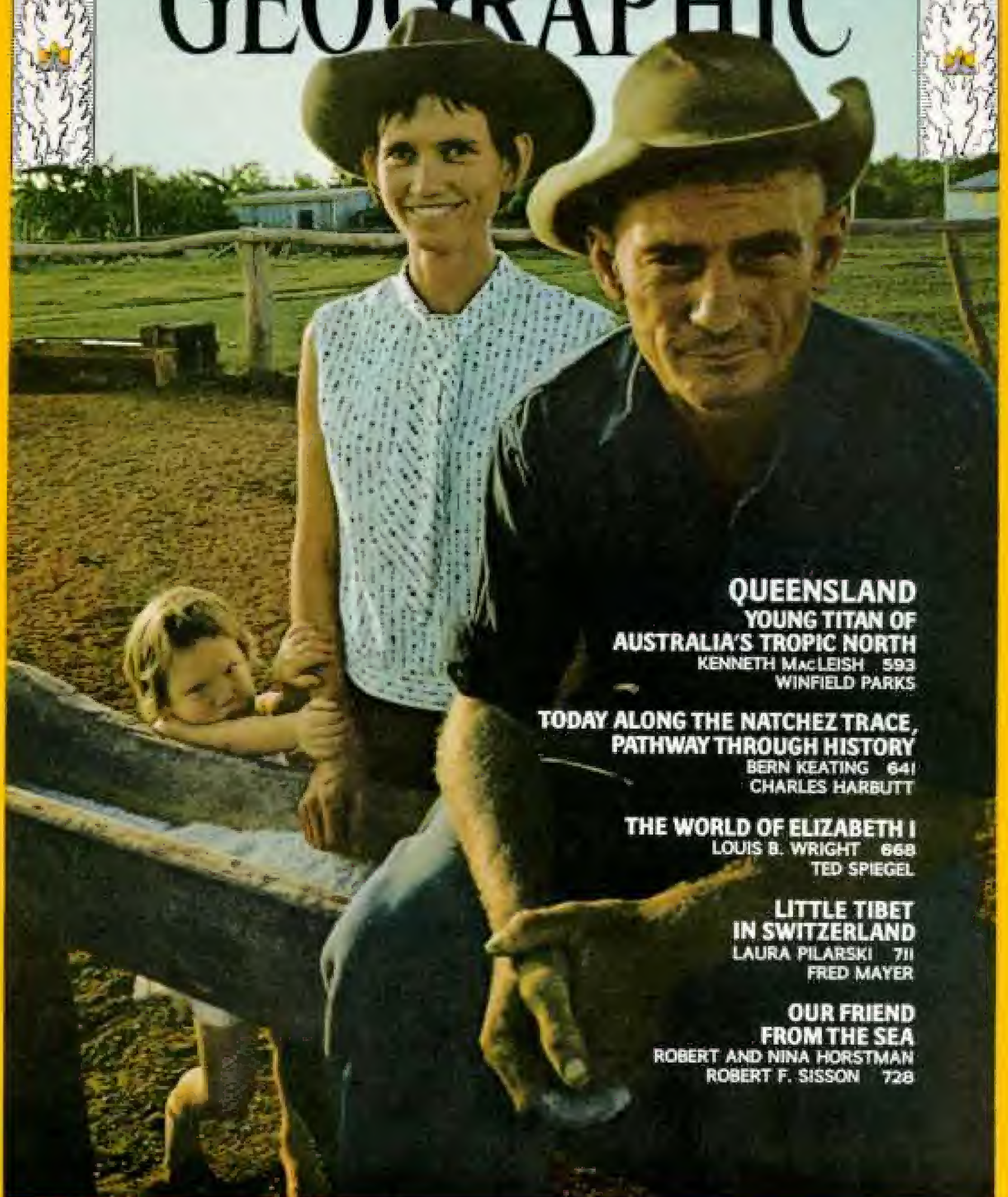


VOL. 134, NO. 5

NOVEMBER, 1968

NATIONAL GEOGRAPHIC



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COVER: Pioneers of the Australian outback, the Raymond Piggotts operate a Queensland cattle station, 60 miles by road from their nearest neighbors (pages 652-3).

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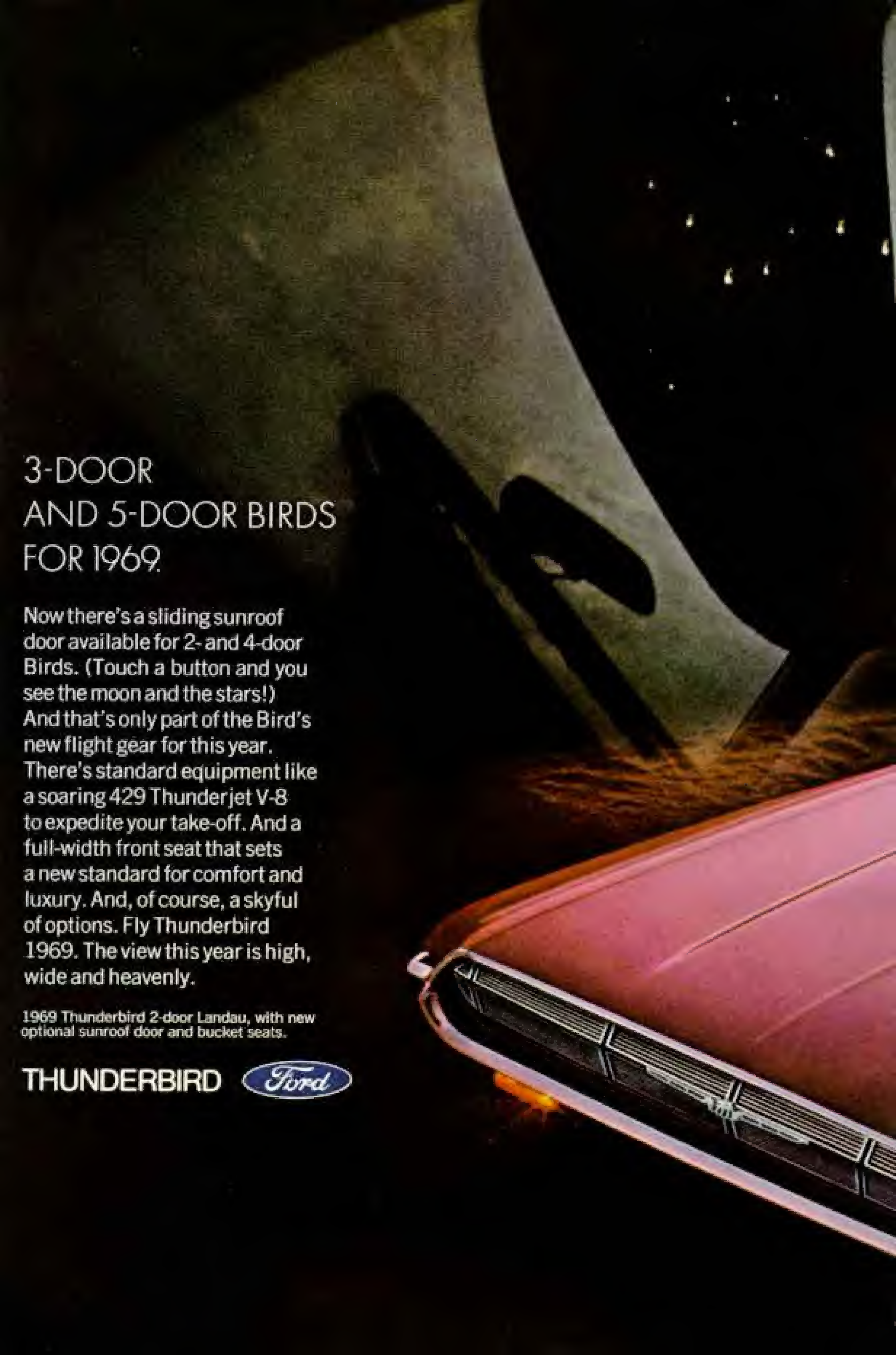
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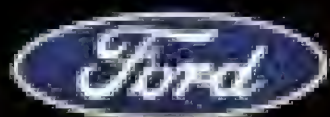


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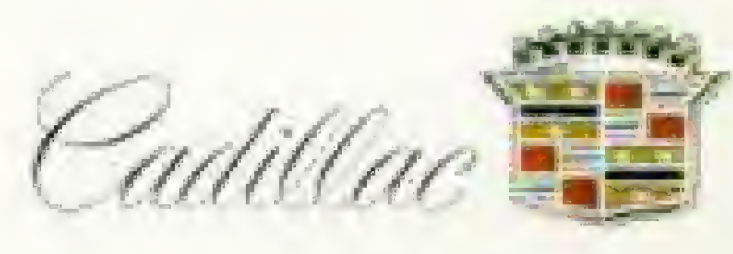
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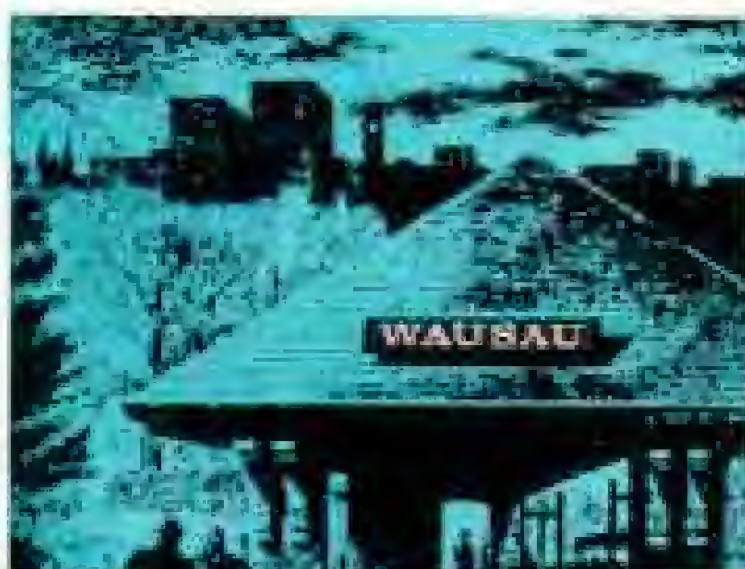
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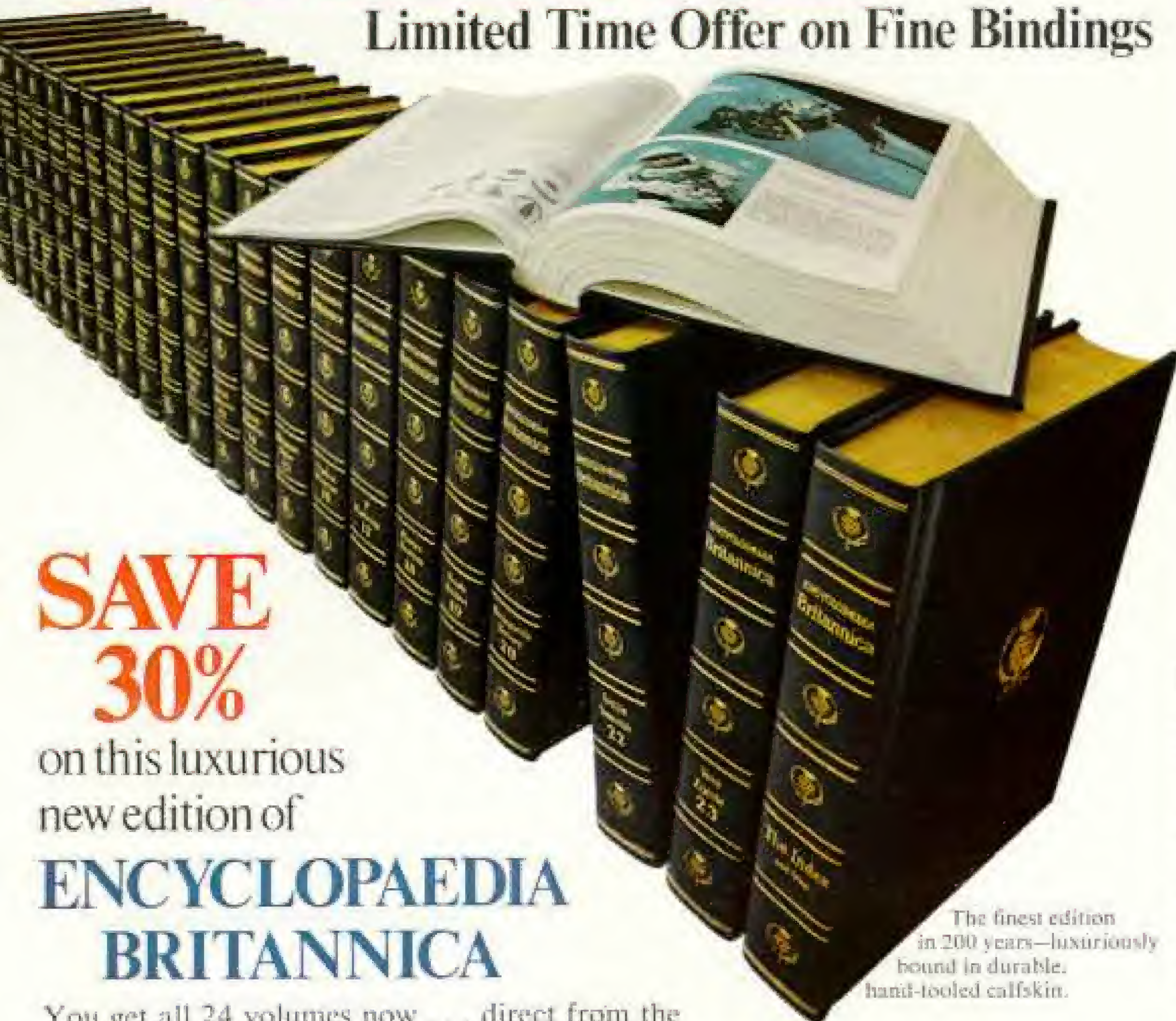
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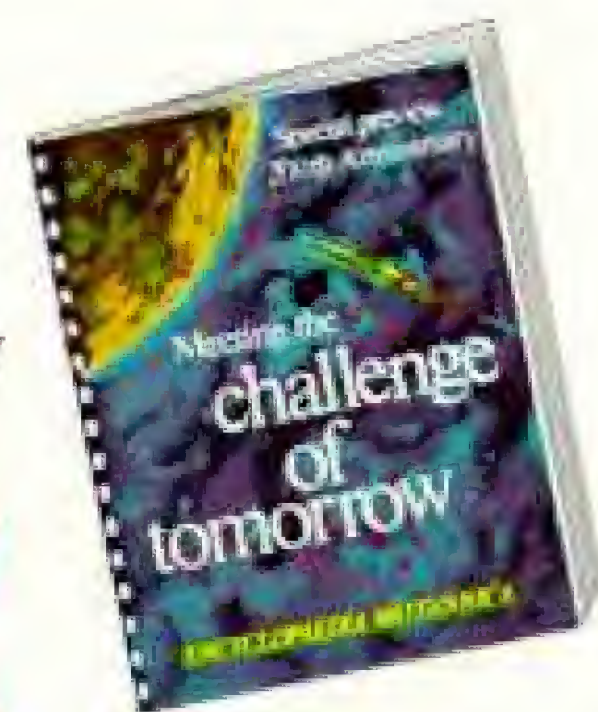
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On Corcoran Street in Washington, D.C., Mrs. Emmanuel Levine (left) and her neighbors—some black and some white—found homes all around them being condemned. They solicited private capital, restored, renovated... and before long, the homes were uncondemned. Then they turned a rubbishy vacant lot into a pocket park with playground equipment and a 48-foot mural by Lloyd McNeil of Howard University.

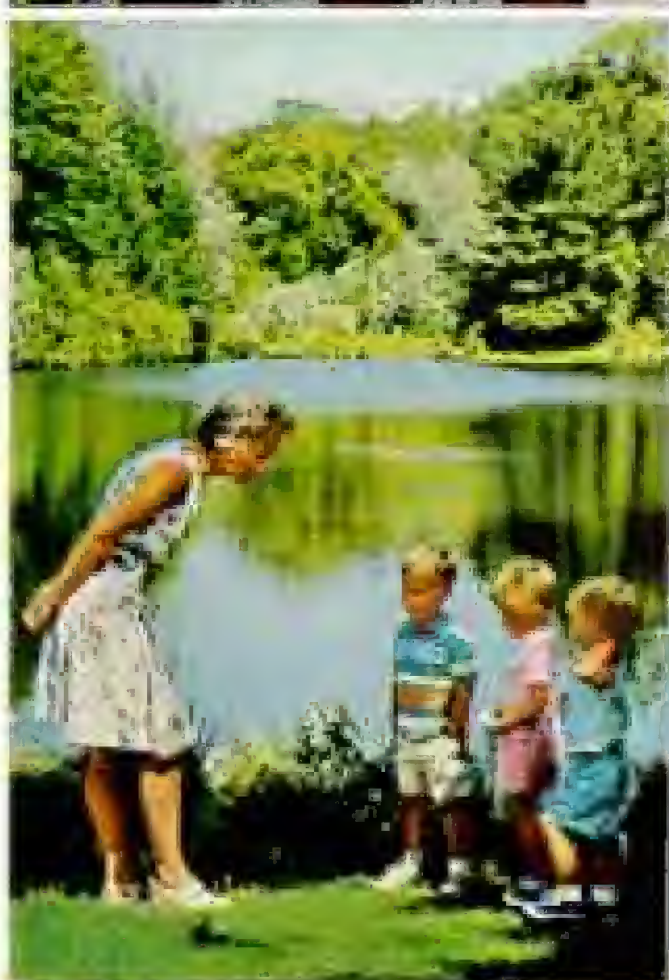
The Conservation Commission of Glastonbury, Conn., headed by Mrs. Elizabeth Brown (center, left), proposed a park for a still vacant parcel of land, but the project bogged down in debate. Voters became confused and the idea just about died until the League of Women Voters and others joined Mrs. Brown's group. Money was raised, a mail campaign launched and each voter contacted. The park won by a squeak, but now, the town wouldn't give it up.

When urban sprawl threatened Champaign and Urbana, Illinois, Mrs. Susan Stone (center, right), her neighbors and fellow members of the Champaign County Development Council Foundation stumped for open park areas, fought for better development planning and even went to Washington. Their masterpiece—planting miles of young shade trees along a major street—was financed, in part, by selling buttons saying, "Love Trees."

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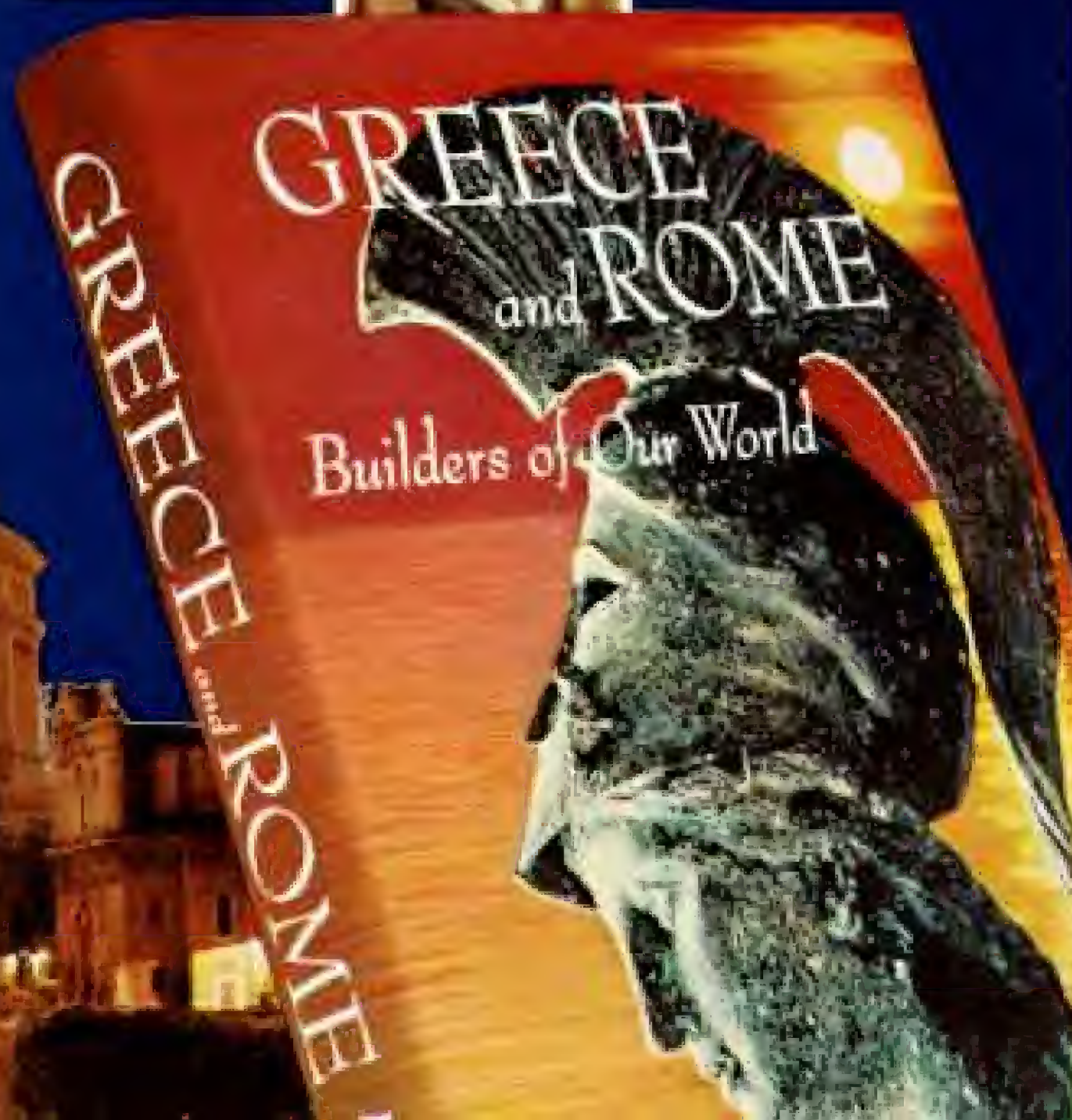
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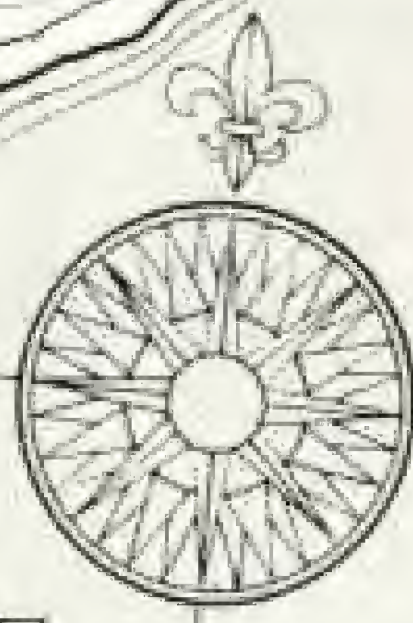
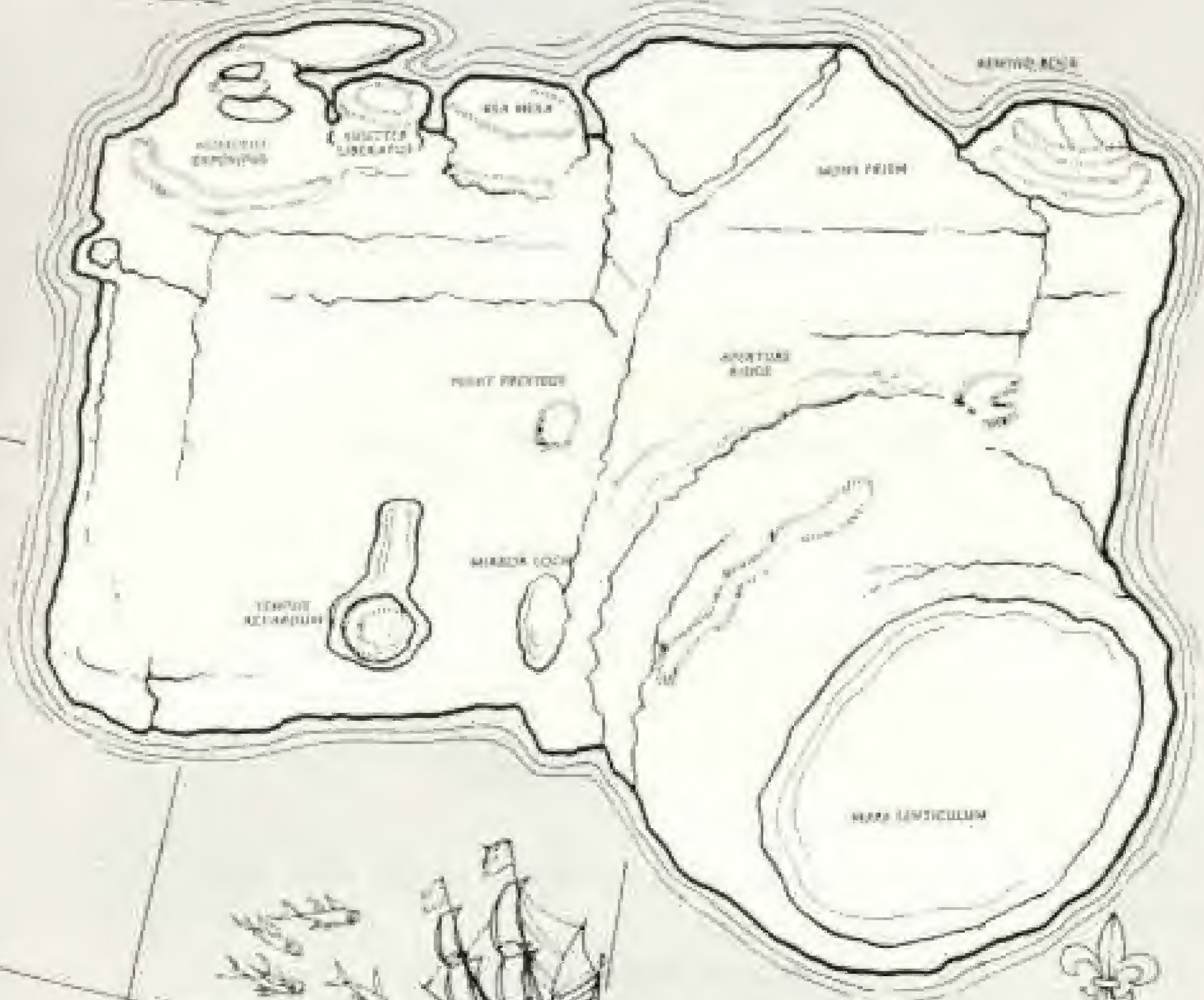
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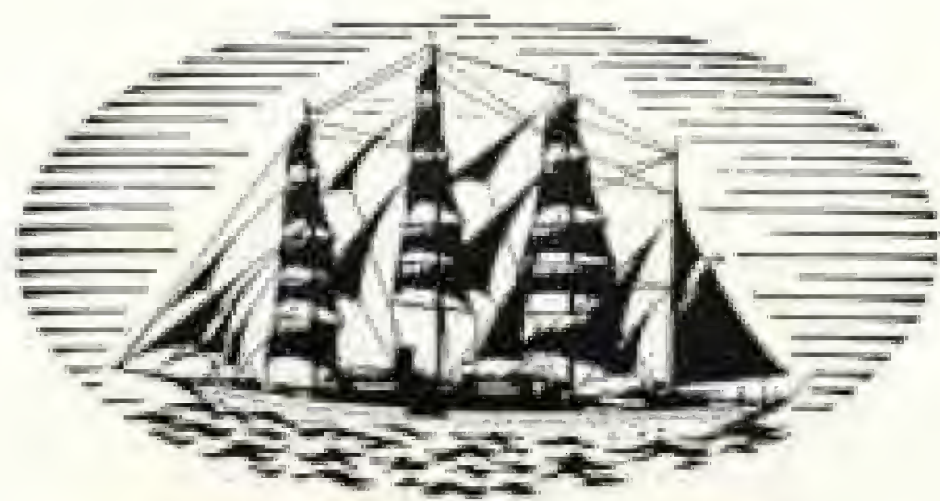
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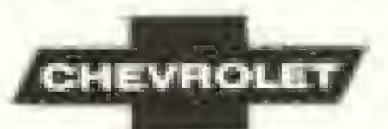
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 Leaving competition in the lurch is a way of life to Pontiac's ingenious engineers. And the swank Pontiac Grand Prix parked on this page ought to tell you they're living up to their image. Our '69 Grand Prix is so new, in fact, it's based on its very own, one-of-a-kind chassis that rides like it was designed for cruising, but built for cornering. That swooping hood (over six feet long, we hasten to add) covets an equally impressive department; 350 hp is standard, or you can order up to a

390-hp V-8. Floor-mounted, 3-speed stick is standard, but there's always the super-slick, 3-speed Turbo Hydramatic. If you want to order it. There's also an interior that suggests interplanetary travel, and the only other thing we can say about it is that it's also available in leather. As for the Grand Prix radio antenna: Ask your Pontiac dealer. He's the man to let you in on the automotive secret of the year.

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Queensland

YOUNG TITAN OF AUSTRALIA'S TROPIC NORTH

By KENNETH MACLEISH, Senior Assistant Editor

*Illustrations by National Geographic Photographer
WINFIELD PARKS*

ON A SUMMER'S DAY in December, when the edge of evening sweeps out of the Coral Sea to race the fast-falling night across Australia's tropic north, its fading glow illumines a succession of scenes so marvelously different that it seems impossible that a single stretch of country could contain them all.

In the blood-warm shallows of the Great Barrier Reef, great gravid turtles await darkness to come ashore and lay their eggs beneath fragile trees where terns murmur in their nests.

Sharks haunt the offshore channels.

The westering twilight next gilds a narrow coastal plain covered with rectangles of sugar cane. Several are afire; 40-foot flames roar across them, cleaning out weeds

and trash before the harvest (pages 618-19).

Smoke slides up the jungled flanks of the coastal ranges; there pythons, awaiting long-nosed bandicoots, swing like supple branches in trees where parrots bloom. Deadly black snakes coil on the moist forest floor, in ambush for marsupial mice.

Over the ridges, in a tableland as green as England, the waning day sends English dairy cows homeward across pastureland carved out of primeval scrub. But from the thickets doe-faced wallabies and fat, flight-

less cassowaries intrude upon a near-perfect vision of Albion transplanted. In a brook that could as well flow in Cornwall, a duckbilled platypus disports himself in nightmarish mockery of orthodox evolution.



Congenial koalas, bearlike marsupials, embrace at a preserve near Brisbane, capital of Queensland.





REVELING in roughhouse, burly stockmen pound across a rodeo arena at Toowoomba. As a pickup man reins in close, the rider of a half-wild steed swings off, supported by his mate's horse — the only way to dismount except by falling. Ever conscious of the challenge of their vast outback, Queenslanders exult in physical prowess and share a devil-may-care attitude toward danger.

Beyond the tableland the outback begins, and it reaches away westward for most of a thousand thirsty miles. Sheep graze in the nearer savanna, where dull, dejected eucalypts now cast lengthening filigrees of unsatisfactory shade. As the relentless dusk moves on, it comes at last to the Channel Country. Here, in a land like none other on earth, braids of dry, shallow streambeds spread in branching tracery across the naked land. This is the never-never, the back of beyond. West of here, beyond sundown, there is only desert.

Empty Outback Dominates Queensland

In all the vast expanse of the outback and the beyond live only 10 percent of Queensland's people (map, page 599). The state's population is distributed like its vegetation: Most of it lies close to the sea. And it is urban, or suburban. Yet the bush is where most of Queensland is, and no Queenslander ever forgets that. In its psychological impact, as well as its economic output, the empty inland dominates the populous coast.

About half the coastal contingent lives in Brisbane, the capital (pages 604-5). Brisbane is enormous—in area. At 385 square miles, it is fifth in size among the world's cities. Yet its population is less than 700,000. As you look down on it from the summit of nearby Mount Coot-tha, you learn some basic facts about Australians in general and Queenslanders in particular.

The city spreads outward and not (except in its very center) upward. Why? Because the Queenslander wants his own little house on his own bit of land. That so many have got exactly that proclaims a high standard of living. The bristle of TV antennas on the roofs and the heavy traffic in the streets clinch the point.

You notice another meaningful fact, that the thousands of private homes are similar (though almost never identical), with neither shacks nor mansions to intrude upon a picture of egalitarian affluence. There is evidence here to support the frequent claim that Australia is a classless society.

"We're all for the ordinary bloke," a Brisbane shopkeeper had told me, "not for the laddie who fancies he's better than the rest." To which a young intellectual added, somewhat ruefully, "What would one expect? We're a new country. We remember the frontier. We value effort and guts and loyalty more than shrewdness and success."

With mountains at its back, a sheltered bay before it, and a never-failing river to water it,



Brisbane (above) and Queensland © S. S. S.



Colorful as her feathered friends, a girl feeds rainbow and scaly-breasted lorikeets at the Currumbin Bird Sanctuary on the Gold Coast. Twice a day attendants supply visitors with plates of honey and bread to serve the little parrots, which flock in gay clouds to the feast.

A soldier in digger hat and khakis studies the tote board at a Brisbane race track. Australians call their military men diggers, from World War I trench fighting.

Veteran's decorations attract admirers at Longreach; the Victoria Cross, highest of British Commonwealth medals, hangs at the far left. Townsfolk observe Anzac Day, April 25, which commemorates the World War I landing in 1915 of the Australian and New Zealand Army Corps at Gallipoli in Turkey—one of the most valiantly fought campaigns in recent history and one of the few Australians have lost.

Linda Piggott, age 4, soothes camera-shy Shirley Brumley, age 3, an aborigine, at the remote King Junction station, or ranch (pages 630-33).

Tiger prawns fill the hands of a freezer-plant worker in Karumba, base of a booming fishery on the Gulf of Carpentaria.



PHOTOGRAPH BY GUY LAWRENCE FOR LIFE

Brisbane, third largest of Australia's state capitals, has grown swiftly from the penal colony it was in 1824 and the village it had become 20 years later. The products of its immense hinterland—wool, meat, grain, minerals—flow through its port to the world beyond. It is the commercial and administrative heart of Queensland, the newest and potentially the richest of Australian states.

"Lunatic Soup" Slakes Queensland Thirsts

For all the city's size, Brisbane's urban core is not much more than a mile square. By ten o'clock at night its broad, clean streets are curiously quiet. The prow-nosed trams have ceased their clangor and most of the restaurants are closed. Queenslanders take their "tea" (dinner) early by European standards.

Yet there are strollers in the streets, peering into shopwindows decorated for Christmas with Santa's sleigh sliding on imitation snow, themselves seasonably attired for the hot Austral Christmas in shorts and sleeveless dresses. And the pubs, those assuagers of the Great Australian Thirst, are open.

I went into one, first pausing in the doorway and looking about so that I would know where I was when I came out into the night.

As I slid onto a stool the man beside me asked, "Are you bushed?"

"Why, no," I said. "Do I look that tired?"

"Bég yours, mate?" (My pardon, he meant.)

"I thought you might be lost. Bushed. Here, let me shout you a seven."

He called out the order, and a seven-ounce glass of "lunatic soup"—one of the few printable terms in Queensland's rich lexicon of beer—was placed before me. A minute later, as I was about to "shout" my benefactor back, a small drunken individual tottered in and stood speechless with shame.

The barmaid rescued him with hearty tact.

"Hot night, innit? You look a bit done up."

"'S right, lass," he said. Then, with desperate dignity: "I would like something to consume. Only. . ."

But the girl was already holding out a sandwich. "Take this, you'll be right."

The old man fumbled in empty pockets in an agony of embarrassment. Without looking up, my new friend spun a coin across the bar. The girl palmed it. "Not to worry," she said. "You'll pay another time."

The old man took the sandwich, nodding wordlessly, and shuffled out.

The girl held out the coin to my neighbor.

"I wasn't going to charge him," she said. "A man's got to eat, hasn't he?"

"Good on you," he said (it came out "good-onyer"), "but it's my pleasure."

I wandered the empty streets for a while longer, past the sedate offices of numberless banking and insurance firms and handsome government buildings whose Renaissance style was more enhanced than mocked by the lush tropical plants that adorned them. At last I hailed a cab.

The driver swerved to the curb, flung open the door—the front door, of course—and hollered, "Wherefore wilt thou?"

"Lennons," I said, naming the best of the city's old, established hotels.

"A fair dinkum pub, Lennons," he said. "My grandfather owned a piece of land just near there. Worth a ruddy fortune now."

"How much of it do you still own?" I asked.

"Ruddy nothing," he answered, grinning.

Gold Coast Offers the Good Life

In the days that followed I drove north, south, and west of Brisbane, a hundred miles or so in each direction, without ever leaving the Brisbane region. South of the capital, and extending down to New South Wales, is an area known as the Gold Coast (pages 608-9). Unlike the northern 80 percent of the state's

Queensland

FIRST SETTLED in 1824 as a man-made purgatory for incorrigible felons, Queensland has become a paradise for Australians



who love the clear, tropic waters that wash its wide beaches and Great Barrier Reef. The Commonwealth's northernmost state grows cane on its narrow coastal plain and diverse crops in its mild

uplands, and is a leading supplier of aluminum ore. Its Alaska-size outback contains cattle stations bigger than Delaware. The state's name honors Victoria, queen when the area separated from New South Wales in 1859 and became a colony.

AREA: 667,000 sq. mi.; second largest state. POPULATION: 1,718,000; third most populous state. ECONOMY: Beef, sugar, mining, wool. PRINCIPAL CITIES: Brisbane (pop. 568,000), capital, port, diverse industry; Townsville (pop. 61,000), port, copper refining.



140° 144° 148° 152°

NEW GUINEA PAPUA

Torres Straits Horn Island Cape York Fairweather Pass Mapoon Mission Cape York Peninsula Cooktown Leuwa King Junction (cattle station) Cairns Innisfail Townsville Charters Towers Mackay Rockhampton Gladstone Bundaberg Maryborough Gympie Nambour Toowoomba BRISBANE Gold Coast Ipswich Warwick Armidale Taree Broken Hill



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- Main Roads
- Other Roads
- Airfields
- Dry Salt Lakes
- Deserts
- Coral Reefs
- Intermittent Streams
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- Railroads
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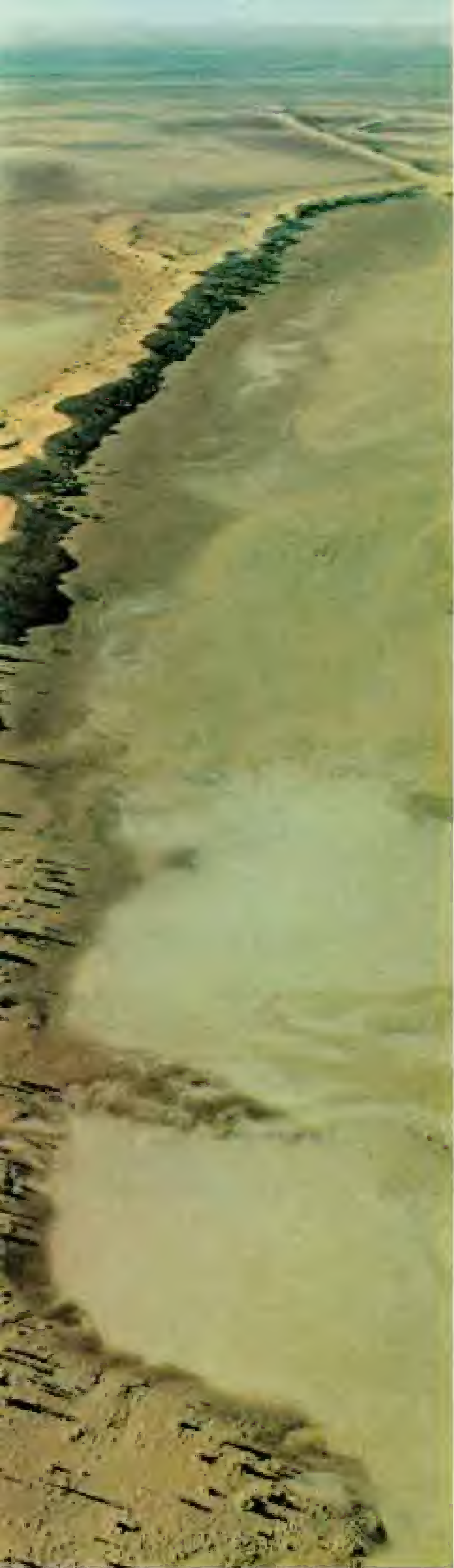
STATUTE MILES



Lingering lushness carpets Channel Country around an isle of sand. When seasonal rains swell distant headwaters, Cooper Creek floods this maze of shallow beds, and grasses sprout luxuriantly.



Like beaches between dry seas, dunes wriggle across a land parched by nine rainless months.



Also in the Channel region, these desiccated flats at Springvale leap to verdant life during the annual wet season.



APPROXIMATELY BY WINFIELD HARRIS © N.S.P.

Realm eternally awash, the Great Barrier Reef mottles the sea at Green Island, favorite outpost for tourists exploring the 1,250-mile coral rampart off Queensland's northeast coast.

Body English of a Sunday sportswoman coaxes her roll at Brisbane's Booroodabin Bowling Club, Queensland's oldest, founded in 1888. Tradition prescribes uniform and length of dress for this popular sport.

Extolling delights of the "Sunshine State," Brisbane parades on January 26—Australia Day—in honor of the first settlement of the continent in 1788. Iron railings lend a flavor of old New Orleans to the balconies of the Bellevue Hotel. From Parliament House, background, premier and legislators govern a sprawling state $2\frac{1}{2}$ times the size of Texas.



PHOTOGRAPHS BY NATIONAL GEOGRAPHIC SOCIETY



2,000-mile seashore, which is protected by the Great Barrier Reef, this coastal section is exposed to the open Pacific. Consequently the beaches are beautiful and the surf spectacular. Part of the coast is named Surfers Paradise.

Unhappily, the narrow strip of land along the beaches has become a crowded, sign-spattered resort region. It is clean and cheery and certainly expresses that Australian ideal: the good life for one and all. But it is also an example of totally unfettered enterprise in action. Everyone involved in its construction seems to have done precisely as he pleased.

Despite this apparently minor flaw, visitors spend some 70,000,000 Australian dollars a

year (about 78,000,000 U.S. dollars) in an atmosphere of hospitality which, in the words of one civic booster, "leaves men shaking at the knees." I partook gratefully of this and left, knees dutifully aquiver, for a nearby area which differs from it as central Iowa differs from Miami Beach.

Crops Thrive on the Darling Downs

Most of Queensland's small quota of good farmland lies in the state's southeastern corner, where almost every temperate or subtropical plant will thrive. Pineapples abound, as do less exotic fruits and vegetables. But the most spectacularly productive section of this

Heat-beating businessman awaits a Brisbane tram in shorts and walking socks—typical attire in an easygoing city where summer temperatures frequently reach into the 90's. Business deals often ripen in air-conditioned bars.

PHOTOGRAPHY © R. G. J.



Layer cake of glass, Brisbane's Tower Mill Motel blinks alight at dusk. Tourism booms as a big business in Queensland: Australians and foreigners flock to its golden beaches, teeming reefs, and pleasant tropical towns.



richly endowed region is the inland plain called the Darling Downs.

Not until 1827 did explorer Allan Cunningham discover the Downs. Despite his enthusiastic report on the area's richness and beauty, densely forested mountains deterred homesteaders for more than a decade. The settlers of the Southern Continent were slow to venture in from the coast, preferring at first to nibble nervously at the edges of the great unknown.

Today the Darling Downs ("Darling" is not an adjective but the name of an early governor) have been transformed into a neat agricultural mosaic. Most of their geometrically

perfect fields are planted to wheat and barley, silver-gold at harvest time. Combines were cutting dead-straight swaths across the land as I drove out to visit one of the Downs farmers, Sandy Speed.

Sandy's surname suited him well: Wherever he went, he ran. I galloped with him to a passing combine and climbed aboard it to have a look at the barley pouring into its hopper.

"Could be better," he opined. "Would be, too, if we'd had normal rain. We've got up to forty feet of topsoil here, and it hasn't needed fertilizer yet. At least we'll get a crop off it."

"How much of it do you own?" I asked. "Not much, about 2,700 acres. You'll see

very little land here that's owned outright. Less than 10 percent. Most people lease their holdings from the state, whose lands make up the biggest public estate in the world.

"Here's how it works. The government decides how much land a man needs to make a living. A stockman might get a thousand square miles. A wheat farmer might get a thousand acres. A sugar grower, maybe one hundred acres. Leases last for 30 years, and they don't cost much.

"When the leases are up, the state can cut up the leasehold properties into smaller

parcels, if ways have been found to make the land support more people. We've got a big, empty country here, and we have to fill it up. You know, 'populate or perish.'"

Sharks Haunt the Barrier Reef

It was time to leave the prosperous, populous southeast for the tropical north. I flew to Gladstone, 270 miles away, and boarded the rugged little motor vessel *Warana*, Sid Sayers, captain, for the Great Barrier Reef.

Already aboard were Ben Cropp, one of Australia's best underwater photographers,

Serpentine coils of the Brisbane River wind through Queensland's capital, stretching toward the horizon in an infinity of small suburban houses—pride of more than 668,000



and his mermaid wife Eva. With Ben's fast outboard skiff in tow, we set out at midnight for Fitzroy Reef, 60 miles away.

There is no island on Fitzroy Reef. Like most of the coral formations that make up the 1,250-mile length of the Great Barrier, Fitzroy is under water at high tide. But it offers protection from the long swells of the open sea.

In the morning light the clear green water of the lagoon looked tempting.

"Dead bottom, Ken," Ben said. "Let's take the skiff out to deep water. I know a bommie—a coral head—that's alive with fish. Big

ones. You'll usually see sharks there, too."

Well, you have to expect sharks in reef waters.* But Ben has a special affinity for them. He has killed hundreds.

"We're likely to see some bronze whalers," he continued. "They're the ones that do the most damage. Cheeky beggars. Usually they just come rushing in and shoot through. Got to watch them, though. They can be nasty. But no worry! Sharks hardly ever bother scuba divers."

*See "Sharks: Wolves of the Sea," by Nathaniel T. Kenney, NATIONAL GEOGRAPHIC, February, 1968.

Brisbanites. Beside the green Botanic Gardens, a sharp line marks the meeting of blue incoming tide and silt-laden river. Clump of skyscrapers rises in the city's business hub.

BRISBANE © A. J. S.



Not worrying at all, Ben aimed the skiff at the lagoon's narrow entrance and gave it full throttle. The Cropp High-speed Reef Navigation System offers a stimulating ride, but one which is not to be taken sitting down. As the boat bounds along at 20 miles per hour, the helmsman stands, bent-kneed, gripping his outsize engine, and the passengers stand, bent-kneed, holding on to lines attached to the bow. Thus braced in the position of water skiers, people in good condition can endure the pounding for as much as ten minutes.

Fifteen minutes later Ben slowed and began searching the mottled blue depths beneath us. Then the anchor went down. *Warana* was a speck on the horizon. There was no land for 10 miles.

I commented on this as I got into my gear.

"Well," said Ben, "there's solid rock where we're going. See you there."

Coral Bommie Teems With Life

I joined him 60 feet down beside a coral crag that jutted, house-size, out of the sandy sea floor. We could see a good hundred feet across a blue-gray seascape. Everywhere there were fish.

The bommie, created by pinhead-size polyps (as is the whole of the Barrier), attracted chisel-toothed parrotfish, angelfish, and other coral eaters to nibble at the lime-encased reef builders themselves. Fish-eating fish, snappers and groupers of many kinds, hovered under the bommie's ledges. Beyond the restless community of the coral head was the domain of the swift open-water fish—king amberjack, barracuda, shark—fish which could dart in from the featureless jade haze of the surrounding sea to kill and vanish again.

As often happens in such places, our sudden arrival brought schools of fish circling in to inspect us, staring as expressionlessly as only fish can. Silver drummers came within six feet of us. A pair of kingfish slid overhead. Blue-and-brown coral trout (a kind of grouper) left the ledges for a look.

For half an hour we explored the caves and crannies of the bommie, finding in small protected places delicate blossomlike corals of a

hundred kinds. Here each flower was an animal, or a colony of animals.

The sharks did not appear. In time our air gave out, reminding us that no human may be a permanent sojourner under the sea. Scuba gear serves as a short-term passport to a country beyond the realm of man.

Warana took us northwest to Heron Island that evening for a night ashore. Heron is a 42-acre dab of tree-covered sand on the edge of a 7,000-acre reef. As one of the few dry places on the Great Barrier, and one of two that are inhabited, it offers attractions that people travel long distances to enjoy (see painting of reef life, pages 610-12, and key, page 613).

To me, Heron's most appealing elements are its people and its birds. Most of the tourists are Australians, and they enjoy themselves so wholeheartedly that only a man with the soul of a Scrooge could fail to do likewise.

Heron's birds are notable mainly for their spectacular sounds. The exquisite little noddy terns, slate gray and crowned with platinum, jabber and twitter by the thousands in the small trees. Big shearwaters called muttonbirds scuttle about on the ground at night, yowling like children in despair and digging so many burrows that large trees tip over. The combined nocturnal noises are—or should be—out of this world.

Venomous Spines Arm Lionfish

We filled our air tanks at Heron and headed south for the Fairfaxes and Lady Musgrave, real islands but normally uninhabited. On the way we stopped to go fossicking (a handy Australianism meaning to poke about, looking for things) on the broad, level tidal flats of the reef around One Tree Island, where, among other shells, lustrous cowries, green-striped turbans, and a few venomous cones clung to the underside of dead coral slabs.

At the Fairfax Islands, whose position near the southeastern edge of the Barrier assures superbly clear water in any wind, we worked another deep bommie whose beauty was spiced by a tinge of menace. Here, motionless against the living stone, lay several wobegong sharks. These mottled creatures blend

Mending a behemoth's broken jaw: With sledge hammer and torch, workmen extract a man-size pin from the bucket of a mammoth drag line at the Moura coal mine. Pulled by massive chains leading from a cab as big as a barn, the bucket strips away 130-cubic-yard bites of overburden. One of the largest land machines in the world, the U. S.-made monster walks on huge shoes that take seven-and-a-half-foot strides. Rich deposits of coal, metals, and newly discovered oil and gas feed Queensland's industries.





perfectly with the reef and seldom leave it. But if any object comes too close, they lurch forward and seize it with tearing teeth.

Twice we came across butterfly cod, or lionfish, strange evolutionary exercises in over-elaboration. Handsome in their rococo way, they carry enough poison in their erect spines to make close-up photography a bit dicey; they will not pursue, but can thrust suddenly upward, spines at the ready. Later, Ben signaled me to a cave in whose dark depth a rhythmic motion caught my eye. It was made by the opening and closing jaws of a moray as thick as my thigh. I eased out backward, to keep my fluttering fins away from the big eel's mouth.

Of whalers we had seen none. But later, snorkeling with Eva in the shallows, I spotted

a sizable shark on the bottom and summoned Ben. He told Eva to nip down and take hold of its dorsal fin while he followed and photographed the action. Eva gulped, but dove. She caught the fin, and off went the big fish with Eva trailing along (pages 614-15).

When we regrouped, breathless, on the surface, Ben explained:

"That was a tawny shark. They *can* bite, but they don't."

"Isn't that nice," said Eva, and added, conversationally, "there's a bronze whaler behind you."

I caught a glimpse of a supple tail vanishing in the distance.

"As I say," Ben said, "they usually just shoot through."

(Continued on page 616)



PHOTOGRAPHS BY DAVID DIAZ (ARROW) AND ROBERT B. GOODMAN © R.F.A.

Thicket of rods sprouts on Kirra Beach as evening anglers cast for tailor, a scrappy fish of the Gold Coast.

Sea, sand, and sun merge in a peerless South Pacific playground on the Gold Coast, a 10-mile stretch of Queensland's southernmost shore. Great combers, perfect for surfing, pound the beach in thundering cadence. Ashore, a conglomeration of snack stands, luxury hotels, and neon-drenched night clubs provide their pleasures. These year-round allurements annually attract more than 1 1/4 million Australians.

In this view, a frothy crest sweeps toward Surfers Paradise, one of 18 bustling towns that blend into the single resort known as the Gold Coast.







Nature on a spree: the Great Barrier Reef

CREATURES of every shape and hue throng the coral rampart that forms Queensland's seaward shoulder. They play on a gigantic stage—the Great Barrier Reef—a maze of nooks, grottoes, and gay coral gardens in window-clear water. Built over the eons by trillions of tiny limestone-secreting polyps, the reef covers 80,000 square miles, the largest structure on earth that living organisms have built.

To create a pictorial catalogue of life on a

southerly reef, GEOGRAPHIC artist Ned Seidler consulted Keith Gillett, noted Australian photographer-naturalist. Among strange creatures in the foreground, a blue starfish (8) slides a grasping tentacle over a tiger cowrie (14); a poisonous marble cone (28) hides in its mottled shell. Beyond a moorish idol (27), a black-barred triggerfish (40) darts past a coral head, or bommie. In the distance lurk predators of the open sea—sharks, swift tunas, and a feared Queensland grouper which can weigh as much as 800 pounds and stalks divers like a cat teasing a mouse. Above the surface, shore birds perch on coral exposed at low tide, and a thieving frigate bird forces a gannet to drop its fish dinner, right.



DESIGNED BY NED SEIDLER. ILLUSTRATED BY JIM HARRINGTON. COLORING BY GORDON. PHOTOGRAPHY BY KEITH GILLETT.

KEY TO PAINTING

- | | | |
|--------------------------------|------------------------------|----------------------------|
| 1. BLUE-SLOTTED BUTTERFLYFISH | 24. RED EMPEROR (ADULT) | 49. BROWN UNICORN FISH |
| 2. BRAIN CORAL | 25. RED EMPEROR (JUVENILE) | 50. SOUTHERN BLUEFIN TUNA |
| 3. SINGLE-STRIPED ANEMONE FISH | 26. HAMMERHEAD SHARK | 51. BATFISH (JUVENILE) |
| 4. ANEMONE | 27. MOORISH IDOL | 52. COWFISH |
| 5. HERMIT CRAB | 28. MARBLE CONE | 53. BEAKED CORALFISH |
| 6. SPIDER SHELL | 29. SUNSET SHELL | 54. SEA CUCUMBER |
| 7. FLATWORM | 30. NUDIBRANCH | 55. REEF CLAM |
| 8. BLUE STARFISH | 31. RED ANEMONE | 56. BANDED HUMBUG |
| 9. BLOOD-SPOTTED CRAB | 32. STRIPED TOBY | 57. MEIWARDI COWRIE |
| 10. SPINY SEA URCHIN | 33. BLUE-SPOTTED STINGRAY | 58. STONY CORAL |
| 11. COMMON STARFISH | 34. BANDED WOBEGONG | 59. NUDIBRANCH |
| 12. LIONFISH | 35. KING AMBERJACK | 60. STAGHORN CORAL |
| 13. CHAMBERED NAUTIUS | 36. BIG-SPOTTED TRIGGERFISH | 61. JELLYFISH |
| 14. TIGER COWRIE | 37. QUEENSLAND GROUPEE | 62. BLACKTIP SHARK |
| 15. BLUE-GREEN DAMSELFISH | 38. HARLEQUIN TUSK FISH | |
| 16. LITTLE WARTY COWRIE | 39. RED-LINED TRIGGERFISH | A. ROSEATE TERN |
| 17. TURTLE WEED | 40. BLACK-BARRED TRIGGERFISH | B. CRESTED TERN |
| 18. SLATE PENCIL URCHIN | 41. PINCUSHION STAR | C. WHITE-CAPPED NODDY TERN |
| 19. GREEN TURTLE | 42. HUMPBACKED COD | D. SOOTY TERN |
| 20. ZEBRA ANGELFISH (JUVENILE) | 43. MUSHROOM CORAL | E. REEF HERON |
| 21. IMPERIAL ANGELFISH (ADULT) | 44. CROWN-OF-THORNS STARFISH | F. MASKED GANNET |
| 22. LUNARTAILED ROCK COD | 45. MORAY EEL | G. SILVER GULL |
| 23. BARRACUDA | 46. REEF OCTOPUS | H. WEDGE-TAILED SHEARWATER |
| | 47. LINED BUTTERFLYFISH | I. FRIGATE BIRD |
| | 48. CORAL COD | J. BROWN GANNET |

Mermaid and the monster: Eva Cropp, wife of Australian photographer Ben Cropp, grasps the dorsal of an eight-foot tawny, or Oriental nurse, shark, a normally gentle species of the Barrier Reef. Even so, shark authorities discourage such encounters.

ILLUSTRATION BY JIM HARRINGTON. PHOTOGRAPHY BY KEITH GILLETT.





(Continued from page 608)

Warana made Gladstone harbor late that night. Off our port beam a surrealistic scene glowed under strangely patterned lights. Here, on what used to be 1,200 quiet acres of rural real estate and swampland, the Queensland Alumina plant has come into being and gone to work (right). Completed last year but still expanding, the \$180,000,000 plant turns out a million tons of alumina per year. The white powder, from which aluminum is made, is carried away in the ships of its Australian, American, Canadian, and French co-owners.

Beside me, Sid puffed pensively on his pipe

as he guided *Warana* past ocean-going vessels. We watched a ship being loaded at the floodlit alumina dock.

"You know why all that's there?" Sid asked. "Because some big operators are digging up a whole country full of bauxite—aluminum ore—at Weipa, way out on the other side of Queensland on the Gulf of Carpentaria. Ships bring it here to us for processing. That bit of outback has nearly doubled our population in five years."

Warana slid along through the night, past another light-blazing edifice. "Look at that, now. A new coal dock, modern as they come

Beneath lowering monsoon clouds, miners' quarters stand among gangling eucalypts at Weipa, on the Cape York Peninsula. The new town sits on a bauxite field covering hundreds of square miles—one of earth's largest deposits of aluminum ore.



Mechanical maze, a huge refinery for Weipa bauxite gleams in the night at Gladstone on Queensland's east coast, 1,450



Loads coal from the Moura mine, a hundred miles southwest. That coal comes here on a brand new railroad built just to handle it.

"Makes me wish I was 20 years younger, that does. There's opportunities now, for a young bloke."

"Wake-up Service" Proves Effective

Despite the futuristic forms along its waterfront, Gladstone's main street retains a rural air. I checked into the elderly Grand Hotel (there's one in most Australian towns) and got one of its few rooms with bath. Therein I soaked away several days' incrustation of salt.

Then, lulled by cheerful hubbub from the pub below, I slept.

It was a short sleep. At 5:50 a.m. an unfeeling news vendor hollered "Pipers!" in the corridor outside. At 6 a clattering vehicle rolled down the hall, propelled by a lady who ushered in the new day with door-jolting knocks and glad cries of "Tay?"

Defeated, I skinned into my standard Australian costume of shirt, shorts, and sandals and went down to the standard Australian breakfast of steak, onions, potatoes, eggs, toast and jam, with cereal and kippers available as extras for anyone who was hungry.

sea miles from the mine. Owned by Australian, Canadian, U. S., and French interests, this plant runs round the clock, chemically digesting ore to produce alumina, a concentrate that yields the finished metal. Each year a million tons of the white powder flow down a mile-long conveyor to ships in Gladstone harbor, constituting one of Australia's most valuable mineral exports.



Tidal wave of man-lit fire sweeps through a sugar-cane field, clearing leaves and trash before harvest. A field hand tends the blaze near Mackay, Australia's "Sugaropolis." Bumper crops along 530 miles of tropical coast from Carnilla to north of Cairns help place Australia second only to Cuba among exporters of raw sugar.

My northward travels would take me eventually to Weipa, the source of Gladstone's bauxite (page 616). Just now my route lay up the coast of Queensland in the direction of Cairns, her northernmost city.

There is a lot of coast to cover on the east side of Queensland, as much as lies between Boston and Key West (map, page 599). But there are long stretches of sameness along the way, as well as progressive changes, that permit a few geographic generalizations.

Tropic Towns Huddle at River Mouths

Rockhampton, the next sizable town above Gladstone, marks the northern end of the southeastern farm country, and thrives on meat and mineral processing. Then the coastal plain narrows and, in places, vanishes completely. From here north it exists only in patches. These patches, with the rivers that created them and their harbors, are the settings for civilization. Each such expanse of level land has been cleared, and the cleared land is almost all in sugar cane.

Queensland's tropic towns are curiously similar in feel and general appearance. All have wide streets, small individual homes (mostly frame, iron-roofed, and raised high off the ground, out of the reach of termites), busy docks, playing fields, and public swimming pools. All make their living from sugar, tourism, and the handling of primary materials from the outback. Any Australian feels at home in any of them.

At Mackay, an enterprising resident, temporarily engaged in the taxi business, undertook to show me his town's claims to fame. These included its \$7,500,000 man-made harbor, with storage facilities for 400,000 tons of sugar, and its sugar mills. There are eight in the area, making Mackay the sugar capital of Australia.

As I sped down the checklist of civic accomplishments, I grew delightedly aware of the region's tropic flavor—the softness of air and stirring fragrances that grace the coast above Capricorn. In this fecund climate palms thrive, and bougainvillea, poinciana, and creamy frangipani line the simplest



suburban road. Perhaps the fact that man apparently originated in warm and moist environments has something to do with his fondness for gentle climates. Perhaps we are naturally tropic-tropic, in the sense that a sun-seeking flower is helio (sun)-tropic(seeking). In any case tropic-tropism brings hordes of tourists to Mackay to embark for its close-lying island resorts.

These islands are mountaintops projecting from the sea, and not part of the Barrier Reef. With their forested heights and beach-rimmed coves, they make superb vacation spots. One such is Lindeman Island. The Nicolson family raised cattle on Lindeman for decades, until it became evident that tourists were a better and more agreeable



ILLUSTRATION BY LYNN BELL © 1982

source of revenue than cows. A light plane took me there, and for a while I enjoyed a refreshing respite among parrot-spangled palms and unabashedly happy people. Then I rejoined the real world at Townsville.

Townsville is a good place to rejoin the real world. Bustling as it is with its 61,000 inhabitants, this second city of Queensland has a holiday flavor to it. Its homes are well tended, its public buildings impressive, and the tropics spread their luxuriant decor into the heart of town. Palms temper the tidy severity of the business blocks. Figs and fruit-heavy mangoes shade private gardens.

Ray Grimmer, a retired builder, gave me a quick tour of the docks, where lead and copper from the great Mount Isa mines far

to the west are shipped overseas, along with sugar, beef, and wool. He made sure that I saw the high points of his city and, finally, from the top of Castle Hill, the whole of it.

"I reckon there might be finer places," he said, "but she'll do me. She'll do me." And, veering sharply away from such dangerously fulsome praise, he made his point perfectly in a simple question:

"When're you coming back?"

"Casket" Fulfills Gamblers' Urge

As my northbound plane neared Cairns, the lowering sun deepened the vivid green of cane fields and reddened the rectangles of newly plowed earth. Forty thousand coastal acres send their sweet harvest to the state's



NETAWARE (ARMS) AND RITICRONE BY WINTFIELD PARKS © N.A.S.

most tropical city, whose district marks the northern end of the sugar belt.

Cairns would be my headquarters in the north. After checking into the modern and comfortable Great Northern Hotel, I went out for a look around. It was Friday night, and the town was as alive as it was likely to get.

The air in the streets had a hothouse quality. Strollers in the briefest of garments made their way along sidewalks protected from summer rains by overhanging storefronts. Booths flaunted bold signs reading "Casket"—not in reference to funerary furniture but to the state lottery, euphemistically called "The Golden Casket Art Union." (Queenslanders love to gamble; and what could be more democratic than a lottery?) The walkers watched each other, and in the cars nosed into the sidewalk, farmers in from the country watched the walkers.

I watched them all. Most of the faces were English, Scottish, or Irish, for Queensland's

Armchair warrior, Ion Redmond holds a ceremonial halberd that decorated a joss house; Oriental images and filigree enhance the two-room museum at the drowsy port of Cooktown. Some 20,000 Chinese streamed through here in the 1870's to work the rich Palmer gold fields and smuggle metal back to their homeland with the bones of fellow workers who died at the diggings.

"Right now the town is swinging"—so photographer Parks sizes up heat-numbered Normanton as aboriginal stockmen gather to chat. The surrounding shire embraces 26,360 square miles and a mere 1,900 people.

population is more than 90 percent British in origin. And these were British faces at their best: open, unsuspecting, the faces of people who live in a classless society—or at least act as if they do.

But here, for the first time, I noticed other faces in the crowd, brown faces with dark, deep-set eyes. These belonged to the Old People, the aborigines who had wandered Australia for at least 10,000 years.

Somehow these Stone Age folk reached this forbidding continent from Southeast Asia, bringing their half-tame wolf dog, the

dingo, and their simple tools and weapons. They entered a land that had never known the pressure of a human foot. And they walked lightly. They moved quietly across the centuries, changing nothing, themselves unchanging, until a hundred years ago.

The Old People had adapted themselves to the land. The white settlers were doing their best to adapt the land to themselves. A nomadic people could not exist on land that had suddenly become the property of invincible strangers. The long "walkabout" was over. And the aboriginals, masters of adaptation, are adapting again; not to a new country this time, but to a new culture.*

*Additional information about the changing status of these fascinating people can be found in *Australia and Vanishing Peoples of the Earth*, two of the four volumes in the National Geographic Society's 1968-69 series of Special Publications. For details on this series see the *Geographic*, June, 1968. Alan Villiers wrote understandingly of the aborigines in "The Alice' in Australia's Wonderland," *Geographic*, February, 1966.

CENTRAL HOTEL
COLD BEER

CARPENTARIA
SHIRE
COUNCIL

RIGHT





STITCHBORN © A. G. R.

Off to school, a lad shoulders his bookstrap at the Yarrabah reserve, where the government helps aborigines step from Stone Age to Space Age.

I walked back to the hotel under a satin sky full of strange stars. Starlings muttered sleepily from the shade trees, and flying foxes, those gigantic fruit bats, circled above the city's lights on whispering leather wings.

Cooktown Recalls Gold-rush Days

Cairns sits at the base of the immense and empty Cape York Peninsula, a Florida-like appendage about twice the size of Florida, which juts Equatorward to within 100 miles of New Guinea.

I wanted to look at the tip of the cape, which is the top of the continent, and at the singular pearling industry by which natives of Thursday Island, just off its shore, make their adventurous living. I was curious, too, about Weipa, the 20-million-dollar town and

mine built on a half-billion-dollar bauxite bed near the cape.

Although there are not 1,500 whites in the peninsula outside these two centers, there are enough travelers to and from both to warrant a three-times-a-week circuit of the "Top End" by a scheduled airline.

I boarded a northbound DC-3. On a sentimental impulse, however, I got off the plane at its first stop, a scant hundred miles from Cairns. This was Cooktown, a sort of inhabited memorial to great days gone by, where some 400 people live on the silent site of a roaring gold-rush town.

Capt. James Cook, first navigator to sail up the Australian east coast, made excellent use of the fine natural harbor at the place now named for him. He had discovered the Great Barrier Reef by running his ship *Endeavour* onto it on June 11, 1770. He was forced to limp into this sheltered river mouth for repairs.

Here he and his men saw their first dingo, flying fox, and kangaroo, then sailed on to Torres Strait, between Australia and New Guinea. There, from Possession Island, he claimed the east coast of Australia for Britain.

Cooktown itself came into being 103 years later, to prosper briefly and vastly as the port city for the new Palmer gold fields. Some 35,000 people were in the district before the end of a decade. Then the gold gave out, the adventurers left, and fires and cyclones wiped out most of the old houses. Jack Stewart, owner of one of the few remaining stores, showed me what was left.

"This place was a calico town [a tent city] in '73, but the next year big buildings were put up. There was a hospital—it's still standing. See that pub over there? That's part of the old Sovereign. Cyclone blew some of it away, so of course it's called the Half Sovereign.

"Looks like the place's been forgotten, doesn't it? But it hasn't. My oath! You couldn't buy a single one of those empty lots. Every last one is owned by somebody who's holding it until the tourists reach us. And they will, matey, they will."

I caught the next plane north and settled into a sun-silvered, precarious old pub of riotous repute called, naturally, the Grand. Thursday Island—"Thirsty Island," or "T.I.," as it is often called—is a frontier town, and the Grand suits it to perfection.

In its public and private bars, at any hour when a man might reasonably be seized with thirst, are jovial tospots of many hues, the

predominant shade being brown. For the native residents of T.L. and the other Torres Strait Islands are dark people, big, heavy, frizzle-topped. They are an independent lot, brave, bright, and skillful workers, but inclined to do things their own way.

This last characteristic colored their early dealings with the whites, whom they sometimes ate. It may also account for their enthusiasm for lunatic soup and other fluids less benign than beer. It influences them, too, in their choice of diving methods, which chilled this diving enthusiast's blood.

Through Neil Bruce, local manager for Pearls Proprietary Ltd., I learned something of pearling procedures.

"Our luggers travel under power until they get where they're going," he told me. "Then they drift under sail while the divers are down. Each diver has an air line, a safety line, and a line to his shell bag, in which he puts the oysters he picks up. He has a tender on deck to see his lines aren't fouled and to empty his bag.

"We put five or six divers down, spread out to cover a wide strip. They might work as deep as 40 fathoms—240 feet. And they won't wear a whole diving suit—just the helmet. Makes them feel freer, they say."

Pearlers Who Seek No Pearls

That evening, after a tremendous meal at the Grand, I found Neil, some of his competitors, and the administrator of the island, Con Reardon, communing over short beers. It seemed a good moment to collect more pearling lore.

"How many pearls does the average lugger collect in a season?" I asked.

"None," said Jack Zafer, representative of the Aucher Pearling Company. "None that we ever see, anyway. Pearlers don't find pearls except in the movies. The boats go for pearl oysters. Shell doesn't bring a good price, now that plastics have entered the button business, so we bring back oysters for our pearl farms here, where skilled Japanese technicians insert nuclei into them so that they will make pearls—cultured pearls [page 628]. That's the story from go to whoa."

I told Neil I wanted to follow a diver to the bottom and watch him work.

"As it happens, we've got one lugger left in port," he said. "If I can find you a licensed diver, we'll go to a nearby bed and show you how the deed is done."

Next morning at dawn a retired native skipper was sent out to hunt up a diver. Hours later, word filtered back: Our man had gotten bored looking for divers and was "on the turps." He had, as my informants put it, grogged on and fallen into the grip of the grape. He was, in short, snookered, plonked, full as a bull, and generally out of it.

But a diver was found nonetheless, and soon I was circling him 30 feet down as he trudged along the grassy bottom, a strange figure in high shoes and precariously balanced helmet. I had learned the importance of his shoes from the white skipper, who watched me put on my scuba gear and flippers. "Don't step on a stonefish with those things," he advised. "We'd hate to have to send you along to Weipa air-freight."

Red Pebbles Make Weipa Prosper

From the air Weipa looks like a section of skinned flesh. The drab eucalyptus scrub has been stripped away, along with its thin supporting film of topsoil; and the material thus exposed is nearly as red as raw meat.

An official of Comalco, the concern that operates the Weipa project, was waiting for me at the airstrip. He stood in the scant shade of a red-dusted Land-Rover parked beside a sardonic sign: "Surfers Paradise: 1,928 Miles."

"Blake Ward, Ken," he said, extending a tanned hand. "How's your head?"

"Beg yours?" I asked.

"Well, I mean to say, you're in from T.L., aren't you? Old Thirsty Island? Well, some of our blokes coming back from there require bed rest and absolute quiet until the effect wears off."

When I assured him that I was in relatively little pain, Blake led me step by step through the gargantuan but essentially simple processes whereby the eight-foot-thick layer of pebbly aluminum ore is dug up, transported, dumped, screened, washed, graded, and finally loaded into the hold of a ship docked at the end of a half-mile-long conveyor system. The ship would carry its 50,000-ton cargo around Cape York to Gladstone, 1,450 miles away.

The red treasure-trove has put Australia in the world aluminum market. It has also built a modern town on this wild shore, long rated as worthless.

I dined there in style that night, guest of Area Manager Peter McLeod, putting away a five-course meal served with good Australian wine in an elegant and air-conditioned dining



Industrial oasis in the outback, a vast mining complex at Mount Isa draws lead, zinc, silver, and copper from the red earth. Candy-stripe stack rises 503 feet above furnaces that smelt blister copper for refining in distant Townsville (right). Like blocks of Brisbane transplanted,

room where engineers of four nationalities discussed the lively arts as often as they did aluminum. Next day I got a lift back to Cairns in the Comalco company plane. Its pilot: Peter McLeod.

Prawn Bonanza Builds Karumba

During the next couple of weeks I spent part of almost every day in one light plane or another, exploring the outback. My first target was Karumba, once only a crocodile-and-pig-hunting lodge but now the center of a booming prawn industry.

I had located a reliable old single-engine Cessna and an equally reliable young pilot

named Garry Burnell to take me there. Karumba lies due west of Cairns, at the head of the Gulf of Carpentaria. I pointed the Cessna that way, happily polishing my rusty flying technique while Garry kept us on course across the monotonous landscape below.

Karumba has not yet had time to become a town. Its commercial heart is a freezing plant, and most of its few homes are house trailers hauled in during the dry season, when the one road to civilization is passable. The trawlers that supply the plant lie in the Norman River, when they are not away in the gulf.

But there is a sense of community here, a feeling of "mateship" based on the sharing



suburbs convenient to swimming pools, pubs, and bowling greens bring the good life to 18,000 Mount Isaans.



SMELTER INTERIOR AND FURNACE BY WURSELT PARRIS © R.S.S.

Copper wrung from Isa rock cascades from a smelter at Townsville, Queensland's second largest city. Furnace tapper controls metal flow to molds on a huge casting wheel.

of a richly promising adventure. There are prawn to be had the year round, and in the fall and winter months the catches are heavy enough to break the trawling gear (page 597).

Among the trawler skippers I talked to was Eddie Lane, an American, who had brought his boat, his wife, and his sons 12,000 miles from Atlantic shrimping grounds to share in the new bonanza.

"We're here to stay," said Eddie. "The fishing is great, and so are the people. I've got to admit it's a funny kind of place, though. Flat, barren, with clay pans all around that turn into lakes and swamps during the 'wet'—the summer rainy season. River full of sharks and

big crocs. But you ought to see this country after the wet, green and full of flowers."

I got up before dawn the next day and walked alone into the bush. In the cool of morning the creatures of the country foraged for food before vanishing into sheltering thickets to doze away the sun-scalded mid-day hours. A flock of scarlet-breasted king parrots followed me, darting from tree to stunted tree, chattering as they went. Here and there a wallaby ceased its browsing and reared high on its hind legs, thrusting out its delicate forepaws like protesting hands.

Ground-feeding galahs, pink and gray as the dawn itself, broke shrieking from the



Green mats of ripening sugar cane mantle the fertile coastal plain near Gordonvale;



RECORDED BY BENFELD PARK © NATIONAL GEOGRAPHIC SOCIETY

black patches are burned fields awaiting harvest. Dense rain forest drapes the ridges.



WIDE-ANGLE (ABOVE) AND EXTREMOME (RIGHT) BY WILFRED PERRO; EXTREMOME BY RENEEPI WALLISH © N.S.A.

On a floating pearl farm, a Horn Islander tends hanging baskets that hold gem-growing oysters.



Planting a seed for a necklace, a Japanese specialist opens an oyster and inserts a pellet of Mississippi Valley mussel shell, found to be the most successful pearl nucleus, or seed. Tongs prop the mollusk open. Set out in a Horn Island farm, the oyster will coat the seed with nacre, the iridescent stuff of pearls.

In a murky domain, a diver gathers oyster stock for a pearl farm off Thursday Island. Breathing air pumped from a boat, he can comb the sea floor down to 240 feet; shells ride up in the net bag.



ESTABLISHED BY NIPPO PEARL COMPANY, LTD.

Lustrous fruits of the oyster's toil spill from a shell at Nippo Pearl Company, Ltd., on Thursday Island. The irregular gems are called baroques. Australia's tropical waters nurture jumbo oysters that grow the world's largest cultured pearls.

dusty grass, then perched with other parrots, the white corellas, in a gnarled acacia. Doves and pigeons of many sorts—some topknotted, some tawny, some green as parakeets—darted over the scrub on whistling pinions. Lizards rustled in the dead leaves.

I paused too long beneath a ghost gum, watching a pair of big black cockatoos. The green ants that nested in the tree found me, and to their stinging was added the sting of the risen sun. Soon the bush was still.

Cattle Industry, Old and New

Our flight plan took us inland now to see a pair of cattle stations, representing between them the evolution of the beef industry in the north (following pages). The first, King Junction, was an old-fashioned holding, unfenced and unimproved. The second, Lakefield, was one of several American properties in north Queensland; there both land and cattle were being brought under control.

At King Junction one of the young ringers (as Queensland cowboys are called) told me something of how the station was managed.

"This land is as it's always been," he said, "scattered eucalypts and tropical tall grass. We work a thousand square miles, I reckon, and maybe 4,500 branded cattle. Some clean-skins [unbranded animals] too.

"We've got natural water here, ponds and springs. Water holds the cattle. When we go to muster [roundup], we know where to find the mobs [herds]. We bring the bullocks [steers] back here to the holding paddocks and ship the beasts out by road train—that's a big truck with several cattle cars hooked up to it."

"Do the dingoes give you much trouble?" I asked.

"Do they? My bloody oath! Too right they do. They take a lot of the calves. We shoot 'em and poison 'em, but you can't do away with 'em. Strike me! And brumbies, we have to shoot them too."

Brumbies are domesticated horses gone wild. They can be broken. But being riderless, they usually outrun a horse with a rider.

"No use killing a good horse to catch a wild horse. And each brumby eats more than a steer, so we kill 'em. Hate to do it, y'know. But if you're trying to make a go of a place like this, it's you or them."

At American-owned Lakefield, Don Stewart, the manager, led us into the tree-shaded homestead where aboriginal gins—the local term for native women—and an English housekeeper looked after his bachelor needs. They fed us well.

"We keep supplies for four months on hand," Don told us. "Our roads are out that long during the wet. But the airstrip is always dry. We seed pasture by air and fertilize by air. Costs a lot, but the results are worth it."

We piled into a pickup to see those results. This country, I learned, could carry as many as 12 head per square mile on improved land, as against only one or two on unimproved.

"There's bulk enough for the cattle here," Don said, "and the feed would be fine if our rain were evenly distributed. But we get 37 inches in four months and nothing for eight, so we have a nutritional drought even when there's water in the lagoons. The soil lacks minerals, so we have to feed additives.

"We've fenced the land, too. It's divided up into paddocks, four miles on a side, each with its own water supply. Makes mustering easier and lets us manage the stock better."

Rain Forest Becomes Prime Pasture

I'd heard of a third kind of cattle station in the Cairns area, one so different from anything I'd seen in Queensland or elsewhere that I was determined to have a look at it before heading west for the back of beyond. This too was an American operation, run by renowned King Ranch, Inc., of Texas. It involved no mere treatment of the land but its complete metamorphosis from rain forest into prime pasture.

On 51,000 acres near the coast at Tully, whose 180 inches of rainfall per year make it the wettest spot in Australia, some of the toughest jungle in existence is being bulldozed down, tree by tree, and burned over to produce open land. On the soil thus cleared, air-seeded African grass grows six feet tall in six months.

The less formidable eucalypt forest of the drier ground is simply torn down by a chain dragged between a pair of immense tractors. That land is burned over too; but it is then plowed and seeded to make pastures as smooth and green as those of Kentucky.

"This is just a small holding for Queensland," said the young assistant manager. "But it'll carry 25,000 head when it's all cleared. We have our problems, of course. I'll show you some."

He drove into an uncleared section and pulled up. I followed him into the green dusk of the forest aisles.

"See this? Stinging tree. The touch of it can make you sick for weeks. See that? Poison peach. Kills cattle. So does that lantana bush you saw along the road. There're snakes too,

In the misty cool of morning, stockmen, or "ringers," muster Shorthorns in a corral on King Junction station, run by the Raymond Piggotts (following pages). As the sun climbs, station work slows and finally ceases, picking up again with the relief of evening shade. Crossing heat-defying Brahmans with Shorthorns and Herefords, Queenslanders raise almost half of the 13 million beef cattle that make Australia the ranking exporter after Argentina.



bad ones. Seems like everything around here either stings, bites, or is poisonous. On top of that, we have to dip the cattle once a month for ticks.

"This sort of enterprise wouldn't do for the small man. Takes capital, and lots of it."

Mount Isa Sits on Mineral Wealth

So great are the distances of the far outback, and so forbidding is its terrain, that a fast, well-equipped, twin-engine aircraft is desirable, and an experienced bush pilot essential. Both these were to be found at Western Air Navigation Ltd., in Brisbane. My friend Barry Ker, its managing director, offered to fly me himself.

We covered a thousand miles the first day. During the last 800 of those miles we spotted just three settlements: Yet on the far side of



High-rise home for termites marks a refreshment stop for an overseer of Lakefield station. Called "magnetic antbills," the mounds usually have long sides aligned north and south, probably to catch the warmth of morning and afternoon sun. Some contain as many as two million termites—workers, soldiers for defense, and a prolific queen.



ASSISTED BY NATIONAL GEOGRAPHIC PHOTOGRAPHER WINFELD PARRO © N.G.S.

all that nothing lay the biggest city—the only city—in the interior of Queensland.

There had to be a reason for Mount Isa's existence, and there is. This metropolis of 18,600 rests on top of copper, lead, zinc, and silver ore deposits that average half a mile thick. The Mount Isa mine complex, one of the most highly mechanized in the world, is the largest single industrial enterprise in Queensland, and the town is there to serve it (pages 624-5).

There is a fascinating strangeness about Mount Isa's orderly underworld, where rock-eating machines creep about like great metal insects, and even the familiar form of man himself is altered by lamp-crowned helmets. All this was shown me by Pat Dalton, a mine guide, who knew what he was talking about and admired what he described.

Pat spoke of the many regions of rock through which we walked as "country." "This is copper country here." Or, "This is poor country along here; we've got to work hard to make mining worthwhile."

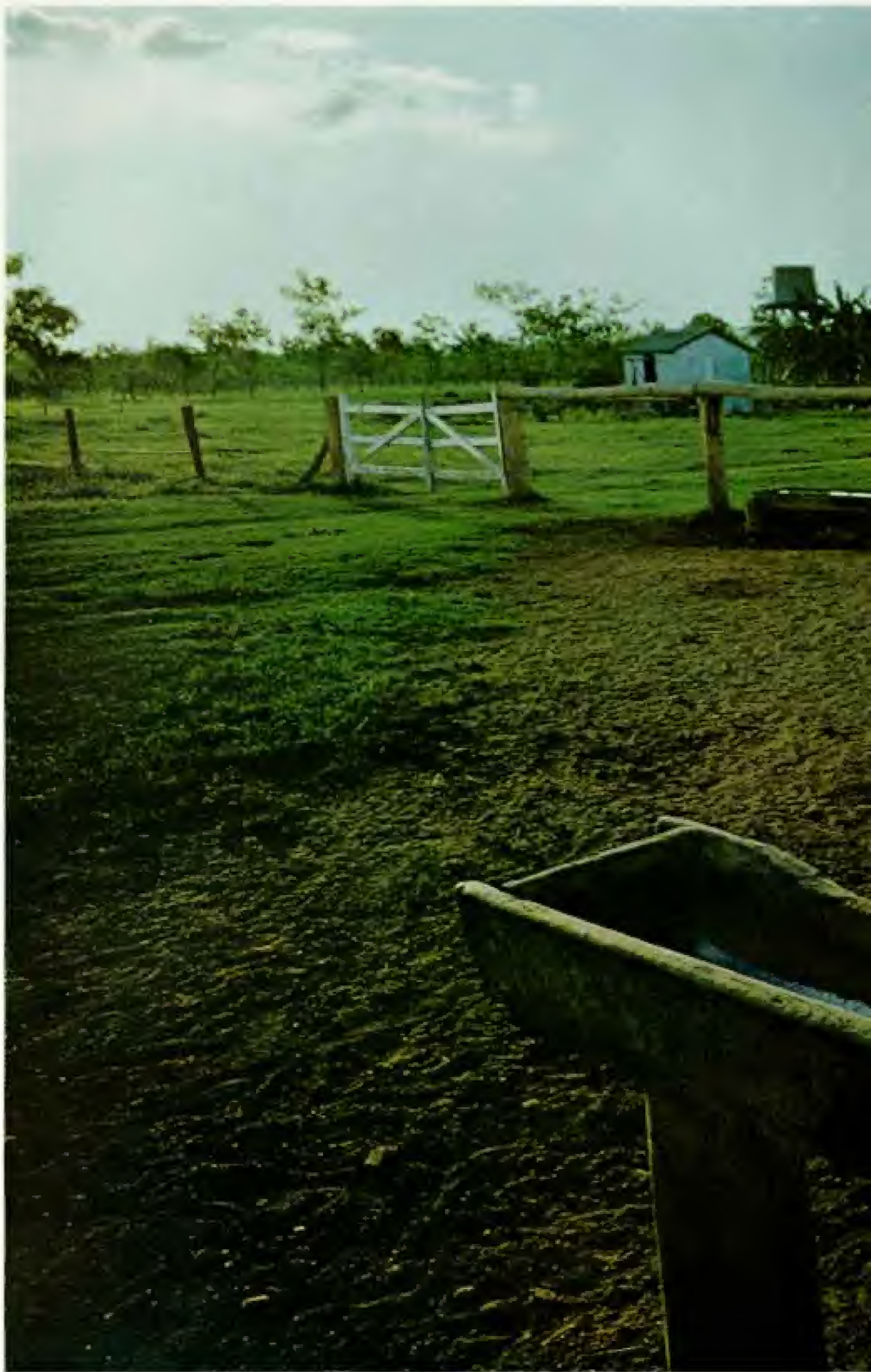
And work hard the men did, hurrying, cursing, exhorting each other.

"How do you get them to keep up this pace?" I asked.

Pat grinned. "Don't have to. Those blokes are on contract, not regular wages. The quicker they get a job done, the more money they've made per hour."

The town the mine built serves as headquarters for the famous Royal Flying Doctor Service and the School of the Air,* which

*See "New South Wales, the State That Cradled Australia," by Howell Walker, NATIONAL GEOGRAPHIC, November, 1967.



Australian Gothic: Their features reflecting the strenuous life of the outback, Raymond Piggott, his wife Jill, and their daughter Linda rest at a salt trough. Starting with only a lease,



PHOTOGRAPH BY WILFELD PARRIS © NATIONAL GEOGRAPHIC SOCIETY

a tent, and a frontier family's determination, the Piggotts hacked a homestead from the scrub and slowly built up a herd of beef cattle. Today they run 4,500 head on a range nearly the size of Rhode Island.

make life on the remote stations less hazardous and lonely. It also has all the amenities of other towns of its size. There are schools, churches, clubs, sporting facilities galore—including an Olympic-size swimming pool—and one of the best restaurants in Queensland. It is characteristic of "the Isa" that fresh milk is brought in by rail from herds 850 miles away.

South of Mount Isa and running down through western Queensland into South Australia is a land of extraordinary extremes

known as the Channel Country. As we flew over it toward Springvale, one of its oldest and best stations, I could see how it got its name.

It is a region of all-but-naked ground whose only trees line the banks of innumerable branching and rebranching streambeds. A watercourse here is not a river flowing between banks but a skein of interlocking dry channels resembling the strands of a raveled rope. Except, that is, during the wet (page 600).

The wet never actually deposits much rain



Refinement in a raw land eases the life of Colin and Sheilla Milson at Springvale station, in the Channel Country; books help fill the solitude of the outback. In the family for three generations, Springvale and two other Milson holdings encompass a Connecticut-size domain of 5,700 square miles and graze as many as 30,000 cattle. A much-decorated World War II pilot, Mr. Milson oversees the station from his own plane (right).

With 25-foot leaps, a doe kangaroo flees the author and Mr. Milson, pursuing by auto at 40 miles an hour.

Surveying a drought's devastation, Colin Milson, right, and pilot Barry Ker leave craterlike tracks on a dune that dwarfs the Cessna 182. Seemingly sterile, the fecund ridge at Springvale station will respond to rain with an instant growth of fattening grasses.



on the Channel Country, which gets less than ten inches a year. But it does swell the headwaters of the great "rivers" of the area, the Georgina, the Diamantina, and the Cooper.

The gradient of these streams is less than one foot per mile, so that instead of carving up the land surface, they deposit fine sediment on it. And they are so shallow that when they flood, thousands of channels merge into huge areas of almost static water that can cover more than eight million acres.

We came down to 100 feet for a closer look at the open stretches between the channel systems. Now, at the end of a nine-month-long dry period, the country looked like desert. But what we were seeing was more than the devastation of a normal "dry." There had not been a good flooding here for ten years, and the stock was suffering.

Not a blade of grass could be seen. The parched soil was bare, or blackened with dust-polished pebbles called gibbers. I saw no

635



ALBUQUERQUE (TOP); AND ESTUARINE (BOTTOM) BY WINFIELD PARSONS; PHOTOGRAPH BY CAROLYN WALLACE © N.S.A.





cattle, no birds, not even a solitary kangaroo.

"Shocking, isn't it," said Barry, who is not given to overstatement.

At Springvale station Colin Milson told us just how shocking it was.

"We've had to move several thousand head to other areas on 'agistment'—agistment is a fee paid to let our cattle graze someone else's land. And if the flooding doesn't start within a few weeks, the beasts will begin to die.

"My family owns three stations, for a total of 5,700 square miles, and up to 30,000 head of cattle. So far, despite the drought, we've been able to make a bit of a profit. Drought doesn't mean cattle dying of thirst, as you might think. We have plenty of water for our stock; we're on top of the biggest artesian basin in the world. When we drill for water, we get it—up to a million gallons a day.

"What drought means here is starvation. The land near the bores is flogged out, useless, and such feed as we have is scattered. But let us have even a bit of flood, and we've got feed galore. It's good feed, too. It doesn't just keep the beasts, it fattens them. I'll show you some that are shiny-fat right now, at the height of the drought."

"Send Her Down, Hughie!"

We fueled Colin's light plane from a drum, then took off for a running artesian bore some 20 miles away, whose endless outpouring made a luxuriant oasis of a shallow depression nearby. The sight of this abundance of water suggested the possibility of irrigation. But, as Colin explained, it would take thousands of bores to irrigate the huge parched areas involved. Such tapping of the underground reserves could deplete them permanently, and the mineral content of the water could eventually poison the land.

There were cattle here, well-fleshed and quiet. And in the water hole there were ducks, pelicans, spoonbills, cranes, and a black swan. The trees were white with cockatoos. But there was not a fistful of grass in sight. Every blade had been trampled or eaten.

"These beasts walk a long way for their

Restoring a fountain of life, a stockman near Normanton repairs a windmill that pumps water for cattle. Wind rigs by the thousands dot the outhack. Many bores require no pumping, however; the water rises to the surface from artesian basins that underlie a third of the parched continent.

fodder, these days," Colin said. "But this can be sweet country, you know. Just see how this one bore's brought everything to life."

I glanced at the pale, unpromising sky and muttered a suddenly remembered Australianism: "Send her down, Hughie!" It is, at least, an original way of asking for rain.

Before we left, Colin climaxed the warmest hospitality I had ever enjoyed with a bush-style picnic. Its site recalled Banjo Paterson's great song, "Waltzing Matilda": Like the jolly swagman, we sat beside a billabong, under the shade of a coolibah tree.

After lunch I walked away from the others for personal communion with the back of beyond. I climbed a low hillock. Suddenly it was as if there were no other human in the immensity of the interior, or ever had been.

There is a silence in that country like no silence I have ever felt. Even sound does not disturb it. The land's expanse is beyond perception. The eye tires in its probing of distance, as if seeing were an outpouring of energy. Sunlight is felt more as a force than as a radiance. There is no clear, strong color anywhere in all this stillness. The vault of the sky blazes blue, but this is not a living color.

It is not an antipathetic land, this country which has not changed its expression for 70 million years. It is simply primordial and indifferent. Here man is an interloper, an alien.

Next morning wind rose with the rising sun, and red dust dimmed the sky. We flew out fast, before the storm could pin us down.

Drought and Dingoes Plague Sheepmen

My travels up to now had taken me everywhere but to the central segment of Queensland, an 800-mile-long tongue of savanna woodland stretching northwest from the New South Wales border. This is sheep country. Here the thick-fleeced Merino produces a 96-million-dollar crop of wool, until recently the state's most valuable export, and now second only to the expanding beef industry.

Conditions have never been ideal for sheep in these eucalypt back blocks. High temperatures can mean high lamb mortality. Dingoes prey on the flocks despite the famed 3,500-mile dog fence, the longest fence in the world, completed in 1963 at a cost of more than \$2,000,000. Droughts can wipe out thousands of animals in a single season, and blowflies often infest those that are left.

But the land is so cheap, and there is so much of it, that good profits can be made for

all that—so long as the rest of the world wants wool. Drought and dingoes, well and good. But drought, dingoes, and depression mean hard times in the heartland. People don't buy wool when they are poor. Add to all this the competition offered by synthetic fibers, and you've got a situation that could frighten a timid soul.

Fortunately the wool growers of Queensland are not timid souls. They thrive on challenge. I met one such at Thylungra, a big sheep station a couple of hundred miles southeast of Springvale (following pages).

Ned Mildren manages its 813,000 acres, 70,000 sheep, and 30 hands for the Australian Estates Company Ltd.

We went out with Ned to look at his particular example of terrestrial indifference to man.

"There's not much grass, you'll notice," he told us. "But there's a lot of rubbish that sheep will eat instead. We're all right till the end of the year. Then, we sincerely hope it will rain." He said it without a smile.

Ned showed us well-fenced land, with big man-made pools set at the corners of rectangular paddocks so the sheep in each enclosure could drink. There were other paddocks, portable ones, in which sheep were held briefly while the yearling lambs were marked and castrated.

Odd and awkward bits of land abounded. "There's a stretch that would bog a duck when it gets wet," Ned said. "Over there's a clay pan; won't grow as much as a stove top, but it sheds all the rain that falls on it, so you get good feed round its edges. And over that way is gidgee-tree country. Useless standing up, but bulldoze 'em down and burn 'em a little and the sheep will eat the leaves. But only if you burn 'em."

He drove skillfully along twisted roads, a graying man grown old in the bush and wise in its ways. Toward evening we headed back down a dust-softened road with clouds of green budgerigars bursting across it like wind-driven leaves.

Ned dropped us at the airstrip with a brusque, fond farewell for Barry and a warm one for me. Though never demonstrative, the Queenslander, and especially the bushman, is capable of instant affection.

I taxied to the far end of the strip, turned, and took off. As I lifted the plane clear, he was still there, to see us safely on our way. Barry gave me the heading for Brisbane, and I set the engine controls for the long climb out.



Blizzard of dust powders a snowbank of sheep during a muster for auction at Thylungra station. Sold by the penful, almost 14,000 Merino sheep changed hands in 20 minutes to graziers enlarging their mobs. Despite heat and drought, Merinos thrive in a wool belt west of the Great Dividing Range.

Dried out after mustering, a station hand douses dust and heat at a beer bar, set up for the Thylungra auction in a shearing shed. A major social event in the lonely outback, the sale attracts families from hundreds of miles around. While the men bid on stock, the women eagerly swap news, and children play with seldom-seen friends from faraway stations.

STYLING: KYLEE AND SUZANNE BY MARFIELD PARIS © W.A.S.





"They're wonderful, aren't they?" said Barry. "I mean all of them, the bush people. They have to be, to live out here. A miserable, cranky type would never last in the bush."

Queensland Grows Tamer Toward the Sea

We flew on east across desolation which now seemed to me less sad. First mulga scrub, slate green over rusty soil, drowsing under the westering sun. It stretched away to every horizon, untouched by man's presence on what he likes to think is his planet.

But then, long before the coastal ranges signaled the nearness of our destination, the land began to change. And its changes were the work of man. We crossed the Condamine River, where the brigalow and thick-growing eucalypts once locked the land in silent forests. Now clearings broke the bush, as did tracts of level, brass-bright wheat.

Farther on, low hills once choked with

jungle wore pastures open to the sky, where the carcasses of fallen hardwoods rotted in seas of exuberant grass. Dusk met us as we crossed the Darling Downs, where homesteads sat solidly on that plow-tamed and generous country.

Brisbane's glow lit the sky beyond the range.

"Start letting down, Ken, about 500 per minute," said Barry.

I set up the descent and watched the big hills slide under us. A mile-long flaming serpent of bush fire writhed out of control on a slope below, an unnecessary reminder that the bush is not man's garden yet.

But beyond it the city's lights, shining like fallen stars upon the darkened land, etched out the broad contours of the capital. There, secure from the primeval night, five times as many Queenslanders as inhabit the whole awesome emptiness of the outback took their evening ease.

THE END



Today Along the Natchez Trace

By BERN KEATING

*Photographs by
CHARLES HARBUTT, Magnum*

THROUGH FORESTS, over mountains and deserts, across river fords, and around impenetrable swamps, land-hungry pioneers tramped out the trails of North America. The American epic rings with the names of these footpaths that became highroads of civilization: the Boston Post Roads, the Santa Fe and Oregon Trails, El Camino Real, the Wilderness Road—and the Natchez Trace.

Winding between Natchez, Mississippi, and Nashville, Tennessee, the Trace—old French for “a line of footprints”—played a great and turbulent role in America’s westward expansion. In weeks of wandering over the 500 miles of frontier road and the modern Natchez Trace Parkway that memorializes it, I crossed and recrossed the paths of men of destiny—above all Andrew Jackson, the dominant hero of Trace history. But I trod, too, in the footsteps of some of our country’s greatest roisterers and rascallions.

I began on a sunny autumn day on the waterfront of Natchez, for that was where most old Trace journeys started. Except for the buffalo and Indians whose hoofs and moccasins beat out the path long before Columbus, most of the early travelers of the Trace arrived in Natchez not by road but by river.

Beginning about 1785, they floated down the Ohio and Mississippi on rafts and flatboats loaded with the

Shadowed and moss-hung tunnel, a stretch of the original Natchez Trace still ruts the land near Port Gibson, Mississippi. Along this wilderness highroad—the link between Nashville, Tennessee, and Natchez, Mississippi, in the early 1800’s—marched trail blazers and traders, cutthroats and heroes, preachers, gamblers, slaves, and soldiers. Today, the old-time route lives again as the Natchez Trace Parkway.



RECONSTRUCTION BY CHARLES BARRETT. FACTORY EXTERIORS (RIGHT) BY NATIONAL GEOGRAPHIC

Elegance revived: Stanton Hall recalls the days when King Cotton ruled. Now each March the Natchez Pilgrimage opens to visitors 30 such antebellum mansions, including 18 that stood during the heyday of the Trace. Belles in crinoline and lace (opposite) glide through high-ceilinged rooms aglean

produce of their Ohio Valley: wheat and flour, hides and furs, tobacco, hemp, and barreled pork. Shut off from the Atlantic coast by the Appalachian Mountains, they came to sell in the world market opening out from Natchez and New Orleans.

Since they could not fight their way back against the Mississippi's swift current, they sold their craft for timber and walked or rode

horseback northeast to Nashville and their homes beyond. They were all called "Kaintucks," no matter from which bank of the Ohio River they hailed.

One of the early Kaintucks to walk the Trace, after coming down the Mississippi as a flatboatman, was Thomas Lincoln, on his way home to marry Nancy Hanks in 1806. Their son Abraham took a similar flatboat trip in



with mahogany and silver from Europe. They speak of the long ago as yesterday. And time slips away.



Pillared and balconied, Stanton Hall rose in 1851. At another mansion, The Briars, Jefferson Davis in 1845 wed the beautiful Varina Howell, the "Rose of Mississippi."

1828,⁶ but by that time the Trace was dying. Abe returned on one of the ornate north-bound steamboats that made the dangerous wilderness journey no longer necessary.

At Natchez's modern river-port terminal, which opened in 1961, Marc Law, manager of the Natchez Boat Store, told me, "In the old days of rafts and flatboats, Natchez was one of the busiest landings above New Orleans.

The rivermen kept the town rocking till their money was gone. Then they hit the Trace for the long walk home.

"The river made Natchez," Marc said, "and the growth of river traffic after World War II put life back into the waterfront when it was threatening to shrivel up and blow away.

⁶See "Our Land Through Lincoln's Eyes," by Carolyn Bennett Patterson, *GEOGRAPHIC*, February, 1960.

Nowadays the port is unloading steel from Japan, Brazil, and Belgium, and loading lumber, soybeans, and wood pulp. Since we got the new port facilities, traffic has increased more than fifteen times—just about all the docks can conveniently handle."

The store's ship-to-shore radio crackled to life, and Marc penciled an order for supplies to be delivered to a passing towboat in mid-stream. "Soft drinks . . . chap sticks . . . cough syrup . . . deodorant . . . cookies . . . hand lotion."

"What do you suppose the tough old flatboatmen of 150 years ago would say about rivermen who use hand lotion?" Marc asked. "In those days boatmen had calluses like a bear's paw, and anybody who even combed his beard was considered a sissy."

Postmen Plagued by Frontier Perils

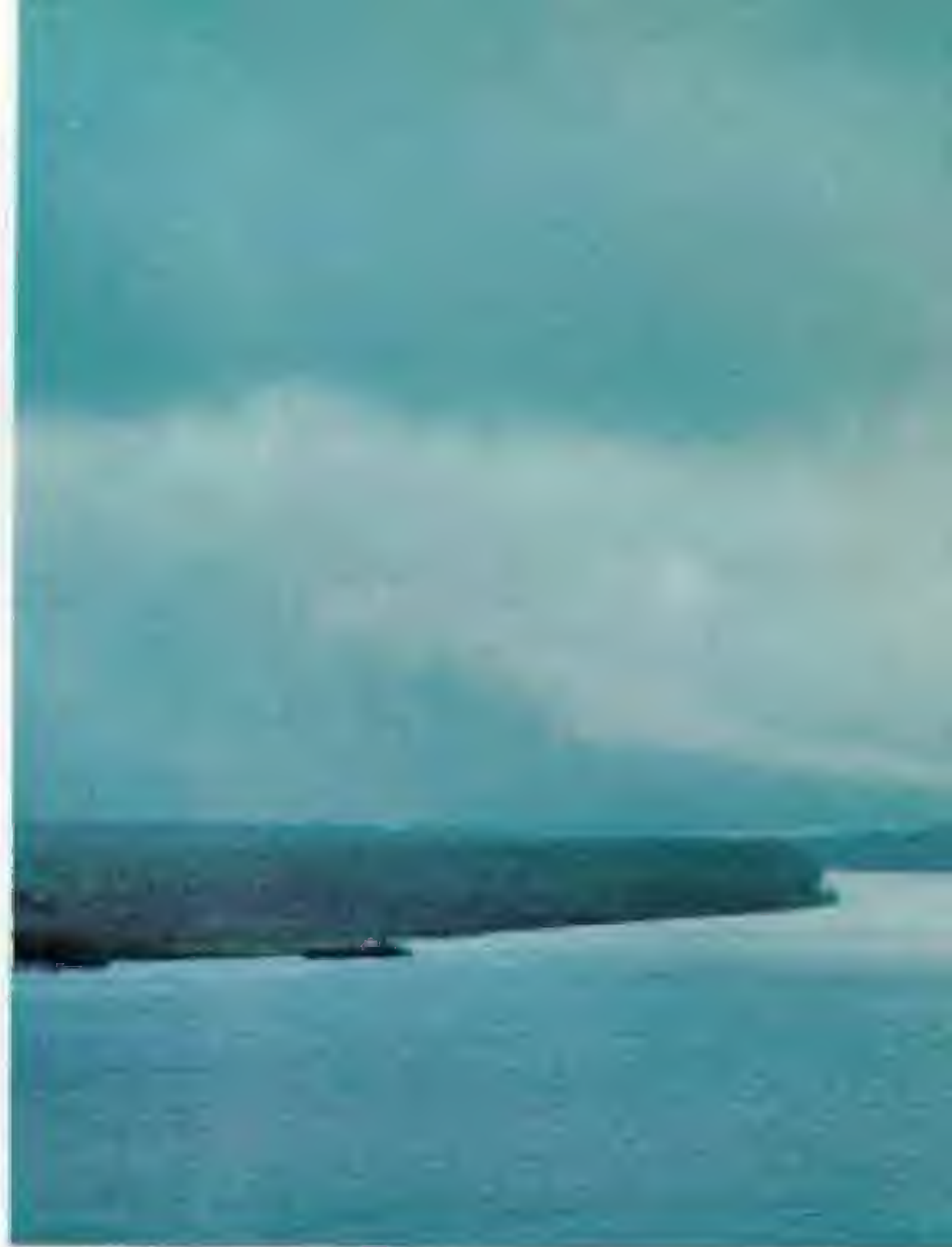
Those old-time raftsmen had to be tough, as did anyone who would travel the rugged Trace. The postriders of the Trace had a particularly unhappy lot. After Timothy Pickering, the Secretary of State, complained that mail took longer to get to Washington from Natchez than it did from Europe, the Trace became an official post road, and the Army undertook its improvement. But Army efforts at first went little beyond sawing down trees and slashing away encroaching brush. The postman's ride remained difficult and dangerous.

In Natchez in 1800 great excitement attended the arrival of the first Great Mail, as it was called. A delegation of dignitaries greeted the postrider as he galloped into town, and crowds pressed around as the postmaster opened the first overland dispatch case at King's Tavern.

Inside lay a sodden mass of pulp, all that remained of the mail after weeks of sloshing through swamps and muddy bayous. For years afterward the postmaster often had to announce, after awaiting the mail for six weeks, that "the rider is presumed lost," a victim of bandits, drowning, a broken leg in a fall from his horse, or any of a dozen other perils.

Despite the dangers and hardships of the Trace, the postriders and pioneers pressed on, wearing down the soft loess of the road so deep in places that a horse and rider could pass unobserved from the normal level of the land above (page 640). As well as the way home for rivermen, the Trace became the main way southwest for settlers beating a path to the Louisiana Purchase.

Even today vestiges of the pioneer trail are visible in many stretches as tree-lined depressions across meadows and along ridgetops.



Mississippi matriarch, the *Delta Queen* churns upriver past the Natchez bluffs. Before the steamboat, flatboatmen floated cargoes to Natchez or New Orleans and tramped home over the Trace.

Girls, gaiety, and gambling came to river towns on showboats. These high-school belles do a can-can on a museum boat at Vicksburg, Mississippi.





"Worst hell hole on earth," a Methodist evangelist called Natchez-Under-the-Hill in 1811 when it boomed with the two-fisted frolicking of rivermen. While crinolines rustled to violins in blufftop mansions, ruffle-skirted dance-hall girls stomped to raucous fiddles in the taverns and gambling dens below. Bilked by cardsharps and painted smiles, the rivermen—"dirty as Hottentots"—staggered drunkenly up the hill for the long hike home over the Trace. Along the way attacks of yellow fever, caught in the infested settlement, made them so thin and weak "they had to lean agin a saplin' to cuss."



CHARLES VERBAGEN'S HOME, NATCHEZ-UNDER-THE-HILL BY CHARLES VERBAGEN, MAGNUM © M.C.S.

They parallel, cross, and recross the Natchez Trace Parkway, a long, narrow Federal park with 311 miles of two-lane blacktop road running down the middle (opposite) Peak northbound travel in the old days reached 20,000 a year. Today 6,000,000 travel the route annually, and when the parkway is finally finished, the number will soar.

The parkway's completion by the National Park Service will fulfill an old dream. Tentatively begun in the mid-1930's, this project to create a scenic road reaching back into an era of frontier life continues despite wars and crises. Year by year, more paved stretches materialize in Mississippi, Alabama, and Tennessee (map, pages 648-9).

Along the way a Park Service staff of more than a hundred has restored an early tavern, raised historic-site markers, and added picnic areas complete with free firewood. Every so often turnoffs enable motorists to visit preserved segments of the sunken old Trace. Park officials stand ready to inform visitors on Trace history—both human and natural.

Here and there you run into unfinished parkway sections, and neither terminal stretch has been completed. But already enough parkway has been paved to introduce the auto traveler to virtually all the history of the Trace country. With only a small effort I visited every inch of the Trace, old and new, by automobile, jeep, horseback, and on foot.

Fighting Lady Keeps a "War Room"

Among other things, the modern Trace represents more than three decades of single-minded struggle by Mrs. Roane Fleming Byrnes, President of the Natchez Trace Association in Mississippi (page 651). Mrs. Byrnes received me in her Natchez home, Ravensside, at midmorning in a floor-length velvet gown adorned with a superb red-and-white candy-striped camellia blossom. Her soft accent and manner belied the iron under the velvet glove—the iron that has persuaded two generations of state and Federal officials that paving a few more miles of the Trace Parkway offers the easiest way out.

In her study, papered with hand-tinted

photomurals of Trace scenes, I saw the pen Franklin D. Roosevelt used to establish the Natchez Trace Parkway in 1938 and a plaque honoring Mrs. Byrnes on completion of her first quarter-century as Trace Association President. In the pantry, while she mixed us the traditional mint juleps of Natchez hospitality, I studied the strip map of the Trace she has pasted on the wall.

Federal and state highway engineers drop in regularly to savor a julep and to ink in portions of the parkway paved since their last visit. The atmosphere is decidedly that of a war room, with progress charts and strategy maps, and it fired my enthusiasm to explore the Trace old and new.

Barbary Coast of the Rivermen

In Natchez-Under-the-Hill, which lies on the riverbank beneath a 200-foot bluff (preceding page), I rummaged for relics of the great days of the old Trace. Once the hangout of boatmen with the proceeds of a year's hard labor jingling in their pockets, the riverside town attracted gamblers, cutthroats, and thieves—the scum of the Mississippi Valley—who preyed on the pleasure-bent rustics from the Ohio River Valley backwoods.

An orchestra of drunken Indians, producing an ear-piercing cacophony on cane flutes and drums made from iron kettles, serenaded rafts floating into port. Once ashore, boatmen walked muddy streets between gambling houses, saloons, poolrooms, and brothels. Buzzards scavenged everywhere by day, and at night perched along the ridgepoles, ominously watching the rowdy scene below.

Today most of the wicked old town is gone, devoured by the Mississippi. Undercutting the soft loess, the river carried away saloons, dance halls, and whole streets. What little remained was saved by the U. S. Army Corps of Engineers, who in 1908 began a bank-protection project. The Engineers further retarded the bank caving in 1933, when they dug a cutoff across the narrow neck of a loop in the river, straightening the course of the current.

I found a few houses still standing from the wild old days, but they are crumbling, sagging

Solid ribbon for a loose braid of trails, the Natchez Trace Parkway replaces the road "12 feet in width and passable for a wagon" ordered in 1806 by President Thomas Jefferson to improve the old footpaths. For today's parkway, the National Park Service cleared underbrush and opened vistas, but kept the roadside natural. Free of commercial traffic and billboards, the parkway gives priority to pleasure driving. It rolls with the land, edging creeks and rivers; evergreens keep the mood of summer all year.



The Natchez Trace

FROM PATH TO PARKWAY

LINKING YESTERDAY AND TODAY, the Natchez Trace Parkway follows the route of pioneers and traders. From mansion-bedecked Natchez, the road leads to Emerald Mound, ceremonial site of Mississippi Valley aborigines. At Mount Locust, travelers slept three in a bed, luxury in comparison to Indian stands. Of those, often mere lean-tos, a wayfarer wrote in 1815, "Camping out is far better."

All along the way, picnic sites, campgrounds, and nature trails provide glimpses of flourishing wildlife that seeks sanctuary in the protected areas. The academy at French Camp stands near the site of a one-time mission school for Indian children. An unfinished section of the parkway stretches from Tupelo to within ten miles of Colbert Park, named for George Colbert, a frontier entrepreneur. The next completed section ends near Meriwether Lewis Park, where the famed western explorer died, many believe by his own hand. From here, the adventurous can thread back-country roads along the route of the old Trace to Nashville, and experience a sense of frontier travel. Centennial Park in Nashville marks the end of the Trace. But history-lovers will continue to the Hermitage, Andrew Jackson's home.

Historic site ● Visitor center ●
Campground ▲ Picnic area ▲

Old Trace —

Natchez Trace Parkway

Completed — Planned —

PAINTED BY WILLIAM H. BROWN

COMPILED BY DENISE W. HEATH

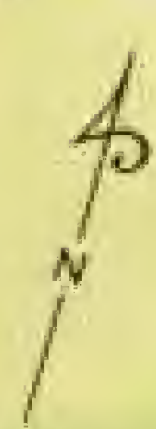
GEOGRAPHIC ART DIVISION

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STATUTE MILES



ARKANSAS
LOUISIANA



MOUNT LOCUST STAND, sole survivor of more than 50 early-19th-century inns and shelters that lined the route, offered accommodations to Trace travelers. Restored in 1950 by the National Park Service, Mount Locust looks today as it did in 1820.

FLATBOATMEN floated down the Mississippi River to Natchez and New Orleans where they sold their boats and cargoes, then hiked home along the Trace.

ANDREW JACKSON and his soldiers camped on the site of Kowichucko's court square during the war of 1812. On the homeward march the tough general, who gave his horses to the sick, carried the sobriquet "Old Hickory."

JACKSON preserves the history of the Natchez Trace in museum exhibits displayed in the old Mississippi State Capitol, now restored.

MAJORITY EMERALD MOUND, built by a vanished Indian culture, spreads over almost eight acres.



THE HERITAGE Andrew Jackson's home burned in 1828 and was rebuilt within two years, during the seventh President's second term.



MERIWETHER LEWIS PARK contains the graves of the co-leader of the Lewis and Clark Expedition that carried the American flag to the Pacific coast.

Mariwether Lewis Park (Site of Grinder's Stand)



THE HERMITAGE

FRANCHISED BY THE U.S. GOVERNMENT, George Colbert's ferry service commanded the crossing of the Tennessee River.



MOUNT LOCUST STAND



ANDREW JACKSON

MERIWETHER LEWIS

SOLDIERS WORKING ON THE TRACE



ABORIGINAL INDIAN AT EMERALD MOUND



RIVER FLATBOAT



LEFT: JAMES GARDNER FOR NATIONAL GEOGRAPHIC; RIGHT: COURTESY OF U.S.D.A.

With hammer and pencil the Trace Parkway moves ahead. Hard-hatters build forms for its Tennessee River bridge. Nashville engineer draws plans for the Tennessee Highway Department, which buys rights of way. Tennessee, Alabama, and Mississippi turn the land over to the Federal Government for roads.

dangerously out of plumb, even melting slowly in the winter rains, for they were built of poorly baked bricks. A fading sign on a deserted ruin advertises the Jesebel night club; nearby is the Blue Cat. Built in the early 19th century, both kept night life under the hill lively right into the 1930's.

Prohibition never bothered them, and ferry passengers waiting for the next boat to Louisiana would duck in for a fast drink or a try at the dice—and often miss three ferries in a row. But when the bridge opened in 1940 and the ferries went out, an era ended. Jesebel and the Blue Cat have entertained their last roisterers.

I mounted the bluff to the upper city, where I met Chandler Jordan, Chairman of the Natchez Planning Commission. He carried a sheaf of plans for a proposed restoration of Natchez-Under-the-Hill.

"Most of the tourists who come down the Trace know about the sin city," he said, "so we plan to build an ersatz Iniquityville to satisfy curiosity without impairing morals.

"Up and down the Trace you're going to find that the new parkway is stimulating commerce, just as the old post road did. There's hardly a Trace community that doesn't have some historical restoration plan to attract travelers," he told me.

We drove about Natchez, a city intoxicated with its history, visiting buildings that still stand from the days when the old Trace was booming. At The Briars, built in 1812, Jefferson Davis, later President of the Confederacy, wed the beautiful Varina Howell, "Rose of Mississippi." In 1798, the Duke of Orleans, later King Louis Philippe of France, visited Connelly's Tavern during a trip down the Mississippi. Rosalie, completed in 1820, became General Grant's headquarters when the Union Army occupied Natchez.

During the annual spring festival known as the Natchez Pilgrimage,* originated by Mrs. J. Balfour Miller, thousands inspect the interiors of the old houses. Year round,

*See "History Repeats in Old Natchez," by William H. Nicholas, NATIONAL GEOGRAPHIC, February, 1949.

Queen of the parkway, Mrs. Roane Fleming Byrnes greets National Park Service Ranger Lloyd Whitt, an ally in a victory—the transferring of 11 more miles of right of way for the Natchez Trace Parkway. The stretch is a key link now under survey near Natchez. By this month 311 miles of two-lane paved parkway will have been completed. Some 6,000,000 tourists and other motorists now travel the Trace each year.

Mrs. Byrnes has campaigned with Southern charm and determination for the re-creation of the old road during the 33 years she has been President of the Natchez Trace Association, Mississippi Division. She has buttonholed Congressmen for appropriations and soft-talked state highway officials into buying land for rights of way.

"During the Depression," Mrs. Byrnes jokes, "we kept interest alive by entertaining state legislators with moonshine and meatloaf."

Her close colleague and friend through the years, Malcolm Gardner (background, to left of Park Service plaque) served from 1938 to 1967, first as the parkway's acting superintendent and then superintendent.

Mrs. Byrnes gives much of the credit for promoting the parkway to members of the Natchez Garden Club and the Pilgrimage Garden Club.



PHOTOGRAPH BY CHARLES HARRITT, NASHVILLE (C) R.S.C.

several mansions rotate the daily duty of receiving visitors.

"Beginning in the Depression, the hostesses of the grand mansions, instead of permitting them to decay, refurbished them to their former splendor, opened them to tourists, and established one of our most important industries," Mr. Jordan explained.

"Soon even the smallest businesses were benefiting from all the visitors, and now the whole community is behind these ladies. Naturally the Trace Parkway is helping this history boom."

Aaron Burr Was Tried on College Lawn

Six miles east of Natchez, in Washington, capital of the Mississippi Territory during the heyday of the Trace, stands Jefferson Military College (page 655). There, Jefferson Davis studied, and in a church on the campus the state constitution was written. Unfortunately, the college has been forced to close because of financial anemia.

Two venerable live oaks of enormous

spread flank the entrance. Beside the drive a marker proclaims that Aaron Burr, in 1807, sat under these trees during a hearing on charges of treason and conspiracy to separate the western American territories from the Union. This was seven years after his election as Vice President of the United States, and three years after he had killed Alexander Hamilton in a duel.

The territorial grand jury refused to indict him, and he became the lion of Natchez society, though he remained under arrest and bound by the judge's orders not to quit the district. Burr fled anyway, disguised as an ill-clad rustic. The same night, however, a sharp-eyed attorney, Nicholas Perkins, spotted Burr's polished boots, penetrated the disguise, and had him arrested for the \$2,000 reward. Burr was acquitted in Richmond, Virginia, but his trial became a personal disaster; his name was blackened for life—unjustly, many historians now believe.

Five years after Burr's Mississippi hearing, during the War of 1812, Maj. Gen. Andrew

Jackson with 2,070 Tennessee militiamen camped near Washington, Mississippi, while on the way to guard New Orleans against the British. Here Jackson received the stunning order from Washington, D. C., to dismiss his militiamen, 500 miles from home, without pay or supplies.

The redheaded frontiersman raged, then set about organizing the long walk home to Nashville. He commandeered wagons for the sick, spent money from his own purse for supplies, even gave his horses to ailing soldiers and walked. The forlorn band straggled home, their commander suffering every privation of his soldiers without complaint. The men, marveling at the toughness of their frail-looking chief, called him Old Hickory, a nickname that stuck for life. It was to be justified again when he finally did get to New Orleans, and

there, in 1815, with the rawest of troops, smashed a veteran British army.

North of Washington I left the Trace briefly to visit another, earlier landmark of the Jackson saga. With Thomas Freeland, a retired Trace engineer, I drove into a pasture where Bayou Pierre once emptied into the Mississippi. Andrew Jackson bought land there in 1790 and built a log house overlooking the bayou and the river.

Andrew Jackson Takes a Wife

Now the only sign of the river, which long ago wandered off in its capricious way, is a long, quiet pond. But a brick cistern and a chimney foundation show where the extinct town of Bruinsburg, at Bayou Pierre, carried on a bustling commerce in the 19th century.

Here, at the bayou, Jackson owned a trading



Head Start on the Trace. A first-grader reads for his teacher, Mrs. Genevieve Newell, in Greenlee School near Kosciusko. He and 60 others attended the school's first Head Start Program for underprivileged youngsters. Later, in first grade, "they stood right out," said Mrs. Nettie Baber, their principal. "They had found themselves while the others were still drifting and wondering."

Immersion by the Trace: "I baptize thee Willie Lee McGee," pronounces the Reverend Walter Logan of the Mount Olive Missionary Baptist Church, near Natchez. Bibles in their saddlebags, missionaries and circuit-riding preachers traveled the route, with threats of brimstone and hopes of paradise. "We had a cry and a shout," wrote evangelist Lorenzo Dow, "a weeping, tender time."



ESTABLISHED (PHOTO BY CHARLES HERRITT, NASHVILLE) © R.L.S.



post, made plans for a race track, and did a little slave trading. But his horizons reached far beyond the Natchez District. Between Natchez and his northern base in Nashville, he shuttled the Trace on enterprises that ranged from land deals to military campaigns.

In the spring of 1791, the 24-year-old Jackson appeared in Bayou Pierre country escorting a Nashville beauty. She was Rachel Robards—Mrs. Robards, in fact, though separated from her husband and being sued for divorce.

"She was irresistible to men," a woman admirer reported. "Lustrous dark eyes, beautifully molded form, full red lips." (Those lips, incidentally, often puffed on a pipe in the frontier manner, and as she grew older, she developed a taste for fine cigars.)

Another friend called Rachel "the gay and lively Mrs. Robards, the best storyteller, the best dancer, the sprightliest companion, the most dashing horsewoman in the western country."

Mistakenly thinking the divorce had been granted, Rachel and Andrew married and spent an idyllic honeymoon at his Bayou Pierre log cabin. When they learned Rachel had still been married to her first husband at the time of their wedding, they had to repeat the ceremony in 1794.

In later years political opponents who dared sneer about Rachel's virtue paid dearly. Friends once held





back Jackson from caning the Governor of Tennessee for disrespectfully mentioning what Jackson called "her sacred name." He demanded satisfaction from a celebrated pistol shot for a drunken quip about Rachel's honor; then, because he was himself a mediocre marksman, he coolly held his fire and suffered a wound inches from his heart to gain time for a careful—and, as it proved, lethal—aim at the scandalmonger's midriff.

Lonely Grave for a Ride-and-tie Man

From the site of Andrew Jackson's trading post, Mr. Freeland and I returned to the old Trace. Centuries-old trees met above the deeply sunken road, while their snaky roots held up the soft banks. Spanish moss hung down into the dank gloom. The air carried the punky smell of a rotting forest floor.

We emerged from the woods near Port Gibson and followed the old Trace right through town, where it serves as the main street. Continuing north, we came on a lonely grave that Mr. Freeland had found in the forest when he first surveyed the Trace Parkway in the early 1930's.

"An old Negro woman was rocking on the porch of the nearest cabin," he said. "I asked her who was buried there.

COLLEGE COURTESY OF AMERICAN HERITAGE, WASHINGTON, D.C.



Empty of students but full of memories, Jefferson Military College stands abandoned at Washington, Mississippi, first capital of the state and birthplace of its constitution. Here Hudson Chadwick paints a scene familiar to naturalist-artist John James Audubon, who taught art in the village in 1822.

Sun-dappled bald cypresses wade in a swamp along a Park Service nature trail northeast of Jackson. From hideouts deep in such morasses, outlaws and renegade Indians once preyed on Trace travelers; black waters often hid a victim's body, slit open and weighted with stones to sink it.



Drums in the twilight beat for Choctaws shuffling in a friendship dance at the annual Indian fair in Philadelphia, Mississippi. The lands of the Natchez, Choctaws, and Chickasaws lay athwart the old Trace. From the early 1800's, travelers on the Trace stayed at Indian

She recalled her great-grandmother told her it was a ride-and-tie man."

A ride-and-tie man, she explained, was a Kaintuck who had lost most of his money at Natchez-Under-the-Hill, and who joined another boatman to split the cost of a horse. One mounted in the morning and rode till noon, while the other walked. After lunch the morning rider tied the horse to a tree, and,

leaving it for his partner, walked till the afternoon horseman caught up with him. Then they camped for the night. According to local gossip, the old woman said, one member of this team got tired of walking and appropriated his partner's share of the horse by means of a knife in the dark.

That treacherous murder—if it really happened—was only one of thousands of dark



REPRODUCED BY U.S.C.

stands, or primitive shelters. But later the Treaty of Dancing Rabbit Creek forced the Choctaws westward to present-day Oklahoma. The few left in Mississippi today hope to revive their old prerogative and open a tourist park at Ross Barnett Reservoir near Jackson.

and bloody deeds along the old Trace. The money carried by boatmen on their way home from the Natchez market attracted gangs of venomous cutthroats.

Little Harpe Played Grim Music

In the early 1800's the most dangerous robber band, headed by a Revolutionary War veteran named Samuel Mason, worked the

Trace from a hideout in a canebrake east of Vicksburg. Mason's most vicious sidekick was a desperado named Little Harpe, who had a price on his head in Kentucky for 38 proven murders. Governor William C. C. Claiborne of the Mississippi Territory posted a \$2,000 reward for the band's capture and sent soldiers to scour the woods for it. Mason and his followers slipped across the



PHOTOGRAPH BY CHARLES ARBUTHNOT, MAGNUM, ESTABLISHED 1950

Mississippi River to the Spanish side, where they shifted their tactics to boarding Natchez-bound rafts and heisting whatever they found of value—after massacring all hands to remove witnesses. Finally the Spanish governor surrounded their camp and took in the entire band for trial at New Madrid, in what is now the State of Missouri.

Bandits Get an Unexpected "Reward"

At Jackson, Mississippi's capital, just east of the Trace, I read the verbatim account of the Mason gang's trial in the handwriting of the original court reporter. Miss Charlotte Capers, Director of the state's Department of Archives and History, dug up the vellum-bound ledger for me. From behind the fading brown ink, florid penmanship, water stains, and legalistic gobbledy-Gallic of the manuscript emerged a lucid story of dishonor among thieves.

The redoubtable Mason and the dreaded

Little Harpe tried to curry favor with the court by sniveling detailed accounts of each other's misdeeds. Between them they cleared up the unsolved crimes of three years of piracy on Trace and river. They even revealed the identity of their informant in Natchez, a respected merchant named Anthony Glass. It was he who spied on travelers in local taverns and slipped word to the bandits when an especially well-beeled party of Kaintucks left for Nashville and home.

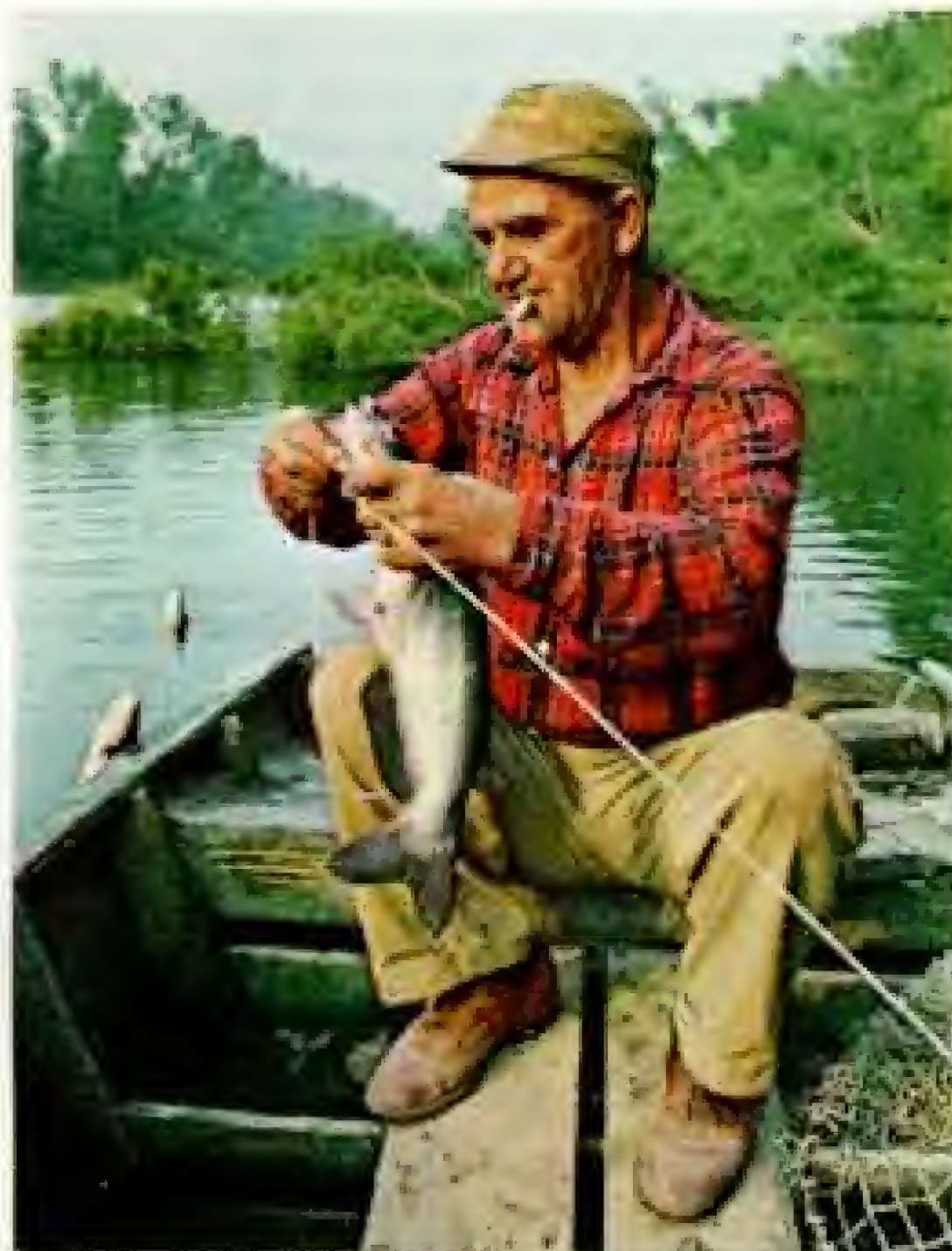
Because most of the crimes had been committed within American jurisdiction, the whole band was extradited to Natchez. But on the way the culprits escaped and hid in the woods. Harpe and another robber, brooding over their leader's treachery, waited till Mason fell asleep, then drove a tomahawk into his skull. They lopped off his head, and, with impressive gall, carried it to the nearest courthouse to collect the reward "for removing a threat to the peace of Mississippi."



PHOTO COURTESY OF N. ARTHUR STEWART (L) & S.

Concrete umbrella, a Natchez Trace Parkway bridge shades picnickers beside the Tennessee River. Here the river swells into Pickwick Lake, a water-sports resort.

Paths of glory for Meriwether Lewis ended at this Natchez Trace grave. On his way to Washington in October, 1809, the western explorer stopped at Grinder's Stand. In the predawn hours two pistol shots, apparently by his own hand, mortally wounded him. He begged for death, crying, "I am no coward, but I am so strong, so hard to die." His friend President Thomas Jefferson saluted Lewis for "courage undaunted, possessing a firmness and perseverance of purpose which nothing but impossibilities could divert. . . ." A paraphrase of these words marks the stone shaft, sheared as a life cut off in its prime.



Barrier to frontiersmen, boon to fishermen, Bayou Pierre yields catfish on a trotline. Early-morning anglers may starile a beaver or raccoon, two of the Trace's old-time residents again on the increase.



They were recognized and hanged. Their severed heads were stuck on poles beside the Trace as a warning to other transgressors.

Ten miles northeast of Jackson a dam across the Pearl River has backed up a 30,000-acre reservoir, which flooded the Trace, old and new, and required rerouting the parkway.

Jackson has grown from a tiny trading post, known as LeFleur's Bluff in old Trace

days, to a city of 266,000, Mississippi's largest. On some weekends it seems as if the entire populace has taken to the water for fishing, sailboat racing, or poking about in streams, bays, and inlets.

The lake and its fleet of inland sailors has suggested to the 3,600 Choctaw Indians left in Mississippi how finally to make some profit out of the Trace their ancestors first trod out.

660 Fields spread like golden corduroy near the "Notchey" Trace in back-country Mississippi. Here,



Once this great tribe owned two-thirds of Mississippi. Now many of the Choctaws earn a precarious living sharecropping for white planters around Philadelphia, east of the Trace. I went there to see James D. Hale, Superintendent of the Choctaw Agency, about the plight of these Indians.

"When the Choctaws signed away their rights in Mississippi in 1830 and moved to

Oklahoma," said Mr. Hale, "about a thousand elected to stay behind and farm the section of ancestral land promised them in the Treaty of Dancing Rabbit Creek. But few got any land, and even those who did lost it through crooked business deals. So the modern Choctaw owns almost none of the vast country he once ruled.

"But suddenly things Indian have become chic," Mr. Hale went on. "The Choctaws want

in contrast to a tractor revolution sweeping the old cotton kingdom, the mule still has his day.

661

ILLUSTRATION BY CHARLES HERRITT, MARCH 1941



to profit from the vogue by leasing 461 acres of shoreline between the reservoir and the Trace Parkway for an Indian pleasure park."

The proposal calls for some non-Indian attractions: a marina, lighted golf course, trap-shooting range, and motel. But there may also be an Indian village and museum, a zoo for North American wildlife, and a playing field for stickball, the Choctaw version of the almost universal Indian game we call lacrosse. With the Trace Parkway, optimists foresee a million visitors stopping here each year, spending millions of dollars.

"This part of the Trace was first called the 'Path to the Choctaw Nation,'" Mr. Hale said. "It will put health back into the tribe if the Trace becomes a path to the Choctaws again—and travelers bring plenty of wampum."

Wildlife Abounds Along the Trace

I re-entered the parkway at Ofahoma—"Red Dog" in Choctaw—named for an Indian officer of Andrew Jackson's army whose Choctaw braves fought beside whites against rebellious Creek Indians. Despite the Choctaws' loyalty, Jackson as President pushed through the treaty that stripped them of their ancestral lands and exiled them to Oklahoma.

At French Camp, 38 miles farther and a scant quarter mile off the new Trace, sunken portions of the old Trace run right through the town. The Choctaw chieftain Greenwood Leflore, who traded away his tribe's lands to Andrew Jackson, was reared in French Camp by his French-Canadian father and half-breed mother.

There I saw the carriage in which he rode to Washington for palaver on Indian matters. And out came the inevitable plans, too: to reconstruct the trading post and tavern Leflore's father ran, and restore the graves of several of Jackson's Tennessee militiamen who died on the Trace.

Forests cover much of the country around French Camp. Parkway authorities post warnings about deer crossings, and with reason. Half-tame herds ramble across the road in astonishing numbers. I saw one old jalopy make a 180-degree skidding turn to keep from hitting a magnificent buck that did not quicken his pace even when the smoking tires shrieked an alarm.

In the 70 miles to Tockshish, I glimpsed three kinds of hawks coursing, a red fox trotting across a meadow in midday, and three does and an eight-point buck crossing the

road. Once a covey of quail ran into the highway, became confused, and milled about, forcing me to stop till they straightened out their directions and departed.

Starting up again, I found the traffic ahead abnormally slow. After I had passed the fourth automobile built in the 1930's, I had the eerie feeling that a time machine had shot me back to my youth. A glimpse of myself in the mirror dissipated that happy delusion, so I decided that an antique-car club was holding a rally. At Tupelo the column of lovingly tended old cars turned into the yard of the Natchez Trace Inn, and I joined the drivers in the dining room.

Jack Dalton of West Point, Mississippi, President of the Mississippi Antique Car Club, told me the Trace Parkway makes an ideal road for vintage-car tours. Besides the respect for all things antique stimulated by the Trace, parkway traffic regulations favor the old cars. Rangers firmly enforce speed limits, and commercial traffic is banned, leaving the relatively narrow roadway uncluttered by hulking trucks.

The babble in the dining room was spiked with the technical jargon of driver-mechanics who must struggle to keep beloved but cranky antiques rolling. Above the noise a feminine voice complained of a husband's overzealous devotion to his hobby.

"Just past Jeff Busby Park the car boiled over again. We had used all our water, so he poured the picnic wine into the radiator. It was only an unpretentious little Moselle—but after all, how much can you pamper a stack of crotchety iron?"

The Legend of Snowball Branch

A few miles north of Tupelo, I hit a gap in the paved parkway and detoured till I picked up the pavement again 11 miles east of Iuka, Mississippi, on the south side of TVA's Pickwick Lake. Nearby, a half-Scot, half-Chickasaw chieftain named George Colbert used to run a tavern and a toll ferry across the Tennessee River (map, page 649).

Colbert got the ferry franchise in 1801 in return for an agreement, in the name of his tribe, to let the U. S. Army improve the Trace through Chickasaw lands. The improvements reduced the journey from Natchez to Nashville by about 100 miles, but travelers paid through the nose for it at Colbert's bottleneck.

Colbert's ferry is mercifully gone, replaced by a parkway bridge. Fifteen miles beyond, in

Cypress Inn, Tennessee, I met R. S. Banks of the U. S. Bureau of Public Roads, who has spent 31 years helping design and build the parkway. He offered to guide me on the last lap, saying, "You'll find me like most Trace buffs—loquacious and inaccurate."

About 20 miles from Cypress Inn, Mr. Banks pointed to a sign marking Snowball Branch and said, "I've even contributed to the folklore of the Trace. Old maps labeled the stream Stovall Branch. But when I made soil surveys here in 1940, a heavy snow lay on

Ocean.* As a reward, Lewis had been appointed governor of the pioneer territory, but now, accused of financial irregularities by a jealous assistant and Pecksniffian government bookkeepers, he reached Grinder's Stand deeply depressed.

His first night at the inn, the 35-year-old Lewis was found shot in body and head. Despite the ghastly wounds, he lingered painfully until almost dawn, begging his servant to end his life and crying, "I am no coward, but I am so strong, so hard to die."



EXAMINING BY CHARLES HARBUTT, WASHDC © N.A.S.

Pioneer heritage personified: 79-year-old Mrs. Lucy Inman of Leipers Fork, Tennessee, widow of a blacksmith, mirrors the strength and character of women along the Trace. "There have been Inmans in Trace country," she says, "for I don't know how many generations."

the ground, so I nicknamed the creek Snowball Branch. The name stuck. Already I've heard half a dozen reports on the origin of the name, and old man Stovall is long forgotten."

Near the end of the paving, we reached the site of Grinder's Stand, an old Trace hostelry. Here in 1809 Meriwether Lewis stopped on his way to the Nation's Capital to give an accounting of his governing of Upper Louisiana.

Only three years before, Lewis had returned in triumph from co-leadership of the Lewis and Clark Expedition, sent out by President Jefferson to find a land route to the Pacific

Three people who were at Grinder's Stand at the time, including the owner's wife, told of thus finding him. From their accounts, relayed by letter, Jefferson concluded that Lewis had committed suicide.

Only four decades later did stories begin to circulate about mysterious murder. To this day, historians debate the question. But the unfortunate Lewis had indeed suffered a mental breakdown earlier on his trip, had been deprived of gunpowder the week before to

*See "Following the Trail of Lewis and Clark," by Ralph Gray, *GEOGRAPHIC*, June, 1953.

prevent his trying suicide, and in his dying words, according to the witnesses, admitted that he had "done the business."

At Grinder's Stand today, a broken stone shaft erected by the state in 1848 over Lewis's grave symbolizes his death in the prime of life (page 659). Carved on it are words adapted from Jefferson's eulogy of his friend and trusted lieutenant: "His courage was undaunted. His firmness and perseverance yielded to nothing but impossibilities . . ."

The finished Trace Parkway now runs only 12 miles beyond Grinder's Stand. From the end of the paving, Mr. Banks and I drove on to the Duck River. Farther north, a sportsman from near Nashville, Joe Dickinson, and his wife Billie Frank were waiting with horses to ride the rest of the old Trace with me.

Part of this section is a country back road, and the Daughters of 1812 have clearly marked it with historical plaques. Trees crowd to the edge of the wagon ruts but refuse to grow in the hard-packed old road, which some of the local folk, perhaps keeping an approximation of the original French pronunciation, call the "Notchey" Trace.

In this hilly region the Trace split into a lowland route for the dry season and a ridgetop road for times of flood. We rode along the ridge, pausing at the occasional clearing to gaze over the rich bottomlands below.

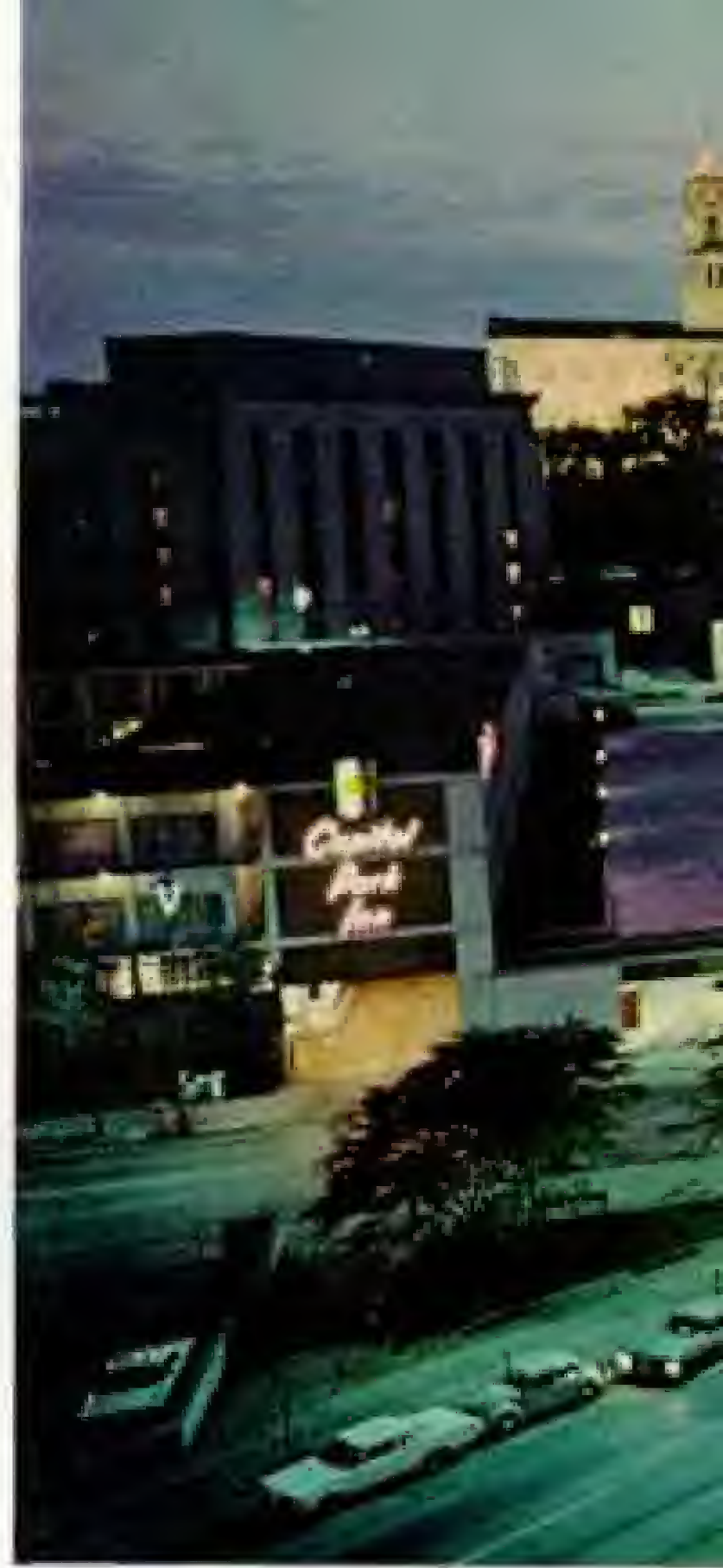
Shortly I was dining with the Dickinsons in their house, built by the same Nicholas Perkins who recognized Aaron Burr at the other end of the Trace country, bringing about his arrest and trial in Richmond. After a day on horseback in the open air, I fell disastrously off my diet with country ham, grits, red-eye gravy, biscuits, and molasses—much the same sturdy fare fed to travelers on the old route.

Trace Still Sears Suburban Lawns

In Nashville, historian Stanley Horn joined me on the outskirts of town, where the old Trace runs down a bridle path and through a Thoroughbred-breeding farm. From there it skirts Nashville's steeplechase course, built during the Depression with Federal funds. To critics who were scandalized by such a frivolous use of public money, supporters reportedly replied that the track was a democratic institution because it would "provide the common people the pleasure of watching the rich break their necks."

Mr. Horn led me deeper into the city, pointing out vestiges of the Trace running across suburban lawns, backyards, and streets. An astonishing number of expensive-looking houses

At trail's end, "Music City, U.S.A." A lavender evening washes Nashville, Tennessee, touching its circular auditorium and floodlit State Capitol. But an old-time traveler might well feel at home with the sound of the city. In the tradition of James Gamble, who fiddled on the Trace 175 years ago, Nashville rates as the Nation's country-and-western music capital; its studios supply tapes for half the phonograph records sold in the United States. Among them: the comic songs of Lanza and Oscar, stage names of Johnny Sullivan, left, who died last year, and his brother Rollin, here performing at the Grand Ole Opry House in a Saturday-night show broadcast from Nashville for 43 years.





STYLING: (FOLLOW) AND RESEARCHING © NATIONAL GEOGRAPHIC SOCIETY





Hero of the Trace, Andrew Jackson made the road the stage for a love story full of pathos. He courted the “irresistible” Rachel Donelson Robards after she separated from her husband. Marrying her near Natchez in 1791, he brought her up the Trace, man and wife in “the understanding of every person in the country.” But, unknown to the Jacksons, the divorce from Robards was not

are built of hand-adzed logs in the style popular on the Trace in the 18th and 19th centuries. In a few yards, including Mr. Horn’s, the out-buildings are authentic log houses from the Trace, moved to save them from the bulldozers of subdivision developers.

The Hermitage: a Monument to Love

We followed the old road to Centennial Park, where we saw an ancient oak that once shaded a blacksmith shop at the Trace’s end.

But Trace country does not really end there. It ends in the quiet graveyard at Andrew Jack-

son’s Hermitage, 13 miles east of town, where the Trace’s most famed frontiersman lies beside his beloved Rachel.

The Hermitage is a monument to Jackson’s love for his wife. Their first home on the site had been a simple group of weathered log houses, two of which still stand. To these the Jacksons returned after a triumphal procession up the Trace following his victory over the British in January, 1815, at the Battle of New Orleans.

In 1819, wanting something grander for Rachel in her old age, he started with a two-



SCULPTURES BY CHARLES HARRIS, WASHINGTON (TOP LEFT) AND S. ANTHONY STEWART; PORTRAIT COURTESY THE HERMITAGE, © U.S.A.

final, and though they later remarried, scandal plagued them. For a lifetime, Jackson defended his wife's honor with pen and pistol. In his last days at the Hermitage (center), he wore her miniature by day and at night placed it on his bedside table with his spectacles and Bible. Her tomb bears his tribute: "A being so gentle and so virtuous, slander might wound but could not dishonor."

story brick house, then over the years developed it into the stately Hermitage we know today. Rachel never saw it finished, though the formal garden east of the Hermitage is maintained just as it was laid out under her supervision.

From Wilderness, a Smiling Land

Rachel lived to see Jackson elected the Nation's seventh President in 1828, but she died before he moved into the White House. The heartbroken old soldier buried her in a corner of the Hermitage garden.

When he returned to the Hermitage after his Presidency, he sat each evening beside her tomb. He said, "Her memory will remain fresh as long as life lasts." On June 8, 1845, at the Hermitage, life ended, and Jackson went to lie forever by Rachel's side.

At the quiet Hermitage the turbulent days of the old Trace seem far away—but only because fighters like this old warrior tamed the wilderness, and their beloved women brought gentleness and civilization into the raw new country, converting it to the smiling land it is today.

THE END

The WORLD *of* ELIZABETH I

By LOUIS B. WRIGHT, Ph.D.

Former Director, Folger Shakespeare Library, Washington, D. C.

Photographs by TED SPIEGEL

A BLUSTERY AUGUST WIND, blowing across the marshy plain of Tilbury, whipped the pennants streaming from lances and tent poles. In the center of the English camp a regal woman sat a mettlesome horse, her red hair glowing in the sun, a silver breastplate glinting over her white velvet gown. In hushed ranks around her, some 6,000 men at arms strained to catch the resolute tones of her voice.

"I am come amongst you. . ." she said, "resolved, in the midst and heat of the battle, to live or die amongst you all; to lay down for my God, and for my kingdom, and for my people, my honor and my blood, even in the dust. I know I have the body but of a weak and feeble woman"—the ranks stirred as she seemed to rise in the stirrups like a warrior—"but I have the heart and stomach of a king, and of a King of England, too; and think foul scorn that Parma, or Spain, or any prince of Europe should dare to invade the borders of my realm; to which, rather than any dishonor shall grow by me, I myself will take up arms; I myself will be your general, judge, and rewarder. . . ."

The lusty cheers and shouts of that small army have resounded through English history. In August of 1588 the great Queen, in the fifty-fifth year of her life and the thirtieth of her reign, faced a moment of mortal peril in a manner that helps explain why the latter part of the 16th century is known as the Age of Elizabeth.

The Queen's army would see no action in this crucial confrontation; the immediate threat of invasion would end with the destruction of Spain's "Invincible Armada." And with this triumph England would rise into the first rank of European powers. For three centuries her ships would rule the waves. Her adventuring seamen would open the way to colonization of North America that would stamp the new-found continent forever English in thought and tongue. Elizabeth's merchants would penetrate the Far East and pioneer trade routes in every sea.

The Age of Elizabeth was a period rarely equaled for exuberance, courage, and accomplishment—an age pervaded by expansiveness of

"Mirrour of grace and Majestic divine," poet Edmund Spenser sang of Queen Elizabeth I, who catapulted 16th-century England to a peak of glory and gave her name to an age. In this court portrait, the ermine clinging to her sleeve symbolizes royalty.







Like a sinister shadow, the hulking Tower of London haunted young Elizabeth's thoughts, because of the "Prison in't for men disloyall"—and for women accused, as the fate of her own mother reminded her. In 1536, only three years after Queen Anne Boleyn bore Elizabeth, Henry VIII charged his wife with treason, committed her to the Tower, and then to death on the block.

mind and spirit, hope and action. The Elizabethan felt that the world was his oyster and he held the knife to open it.

Much that is vital in American culture stems from the Elizabethans. Their ships explored the finite earth just as our astronauts probe the frontiers of space; the questing spirit is the same. It is a legacy the Elizabethans have left us.*

When Elizabeth I spoke her defiance at Tilbury, her kingdom was expecting a blow from Europe's most powerful military force. Twenty years of cold war between England and Spain had finally blown hot. His Most Catholic Majesty, King Philip II of Spain,

had sent out from Lisbon an Armada, already acclaimed "the Invincible," of 130 ships bristling with 2,500 guns and manned by 27,000 sailors and soldiers.

Philip's practical purpose was to eliminate the English naval threat on the flank of his supply lines to the Spanish Netherlands and to retaliate for Elizabeth's allowing her corsairs to prey upon his shipping; his ideological intent, to punish Protestant England for apostasy from the "true religion."

Even now, so far as the English knew, the vast flotilla was engaged by their fleet some-

*See "The British Way," by Sir Evelyn Wrench, NATIONAL GEOGRAPHIC MAGAZINE, April, 1947.



Years later Elizabeth herself endured confinement (page 675) amidst the maze of royal apartments, torture chambers, armory, and battlements that had grown up around the White Tower, left center, begun by William the Conqueror in 1078. Today visitors shudder at grim tales of the ancient fortress, as told by a Yeoman Warder (below), wearing the crown of royal service and his own war ribbons.

PHOTOGRAPH ABOVE: THE ENTICEMENT BY JAMES P. BEANE © N.S.S.

where in the Channel. At Dunkirk, across the Strait of Dover, Spain's celebrated general, the Duke of Parma, was poised with—according to an exaggerated report—5,000 horse, 55,000 troops, and several hundred barges. With the support of the Armada, Parma planned to invade and crush Elizabeth's Protestant realm. Only her hastily provisioned navy could stop them.

Through the long August days England anxiously awaited definite news of the conflict in the Channel. It was known that at first warning, on the afternoon of Friday, July 19 (by the Julian calendar), the Spaniards were already off The Lizard; that the





Lord Admiral, Charles Howard of Effingham, with Sir Francis Drake and other proven seamen, had managed to warp out of Plymouth's harbor against the wind the same night; that they not only had thus escaped being bottled in port by the enemy, but had succeeded, by dawn of the 21st, in tacking to windward of the Spanish fleet. The weather gauge was theirs: Drake and Hawkins and Frobisher had the Spaniard where they wanted him.

The first burst of optimism, however, had gradually dissipated through the week that followed. For all their faster ships, longer-range guns, and superb seamanship, the English had not been able to turn back, or even to break into, the tight formation of the Armada. Each report by fast pinnace from the Lord Admiral increased the anxiety of the Privy Council.

"We durst not adventure to put in among them," wrote Howard, "their fleet being so strong." After heavy gunfire had been heard for hours off the Bill of Portland on July 23, an urgent message came "praying Your Lordships to send us powder and shot forthwith."

The Armada continued its inexorable advance up the Channel toward the fateful rendezvous with Parma. Putting in at last to Calais, a mere seven leagues from Dunkirk, the Duke of Medina Sidonia, commander in chief of the Spanish fleet, dropped anchor to await the general.

The wind was strong against the Armada, and Howard saw his chance. At midnight of Sunday, July 28, when the eastward tide was at its flood, "it pleased my Lord Admiral to appoint certain small ships to be fired . . . and let drive with the flood amongst the Spaniards. Which practice, God be thanked . . . caused the Spaniards to let slip their anchors and cables, and confusedly to drive one upon another." The Armada formation was broken at last. Broken, but not beaten.

The next day, off Gravelines, the English moved into close range with deadly effect—while ammunition lasted. Then a southwesterly freshened, and the crippled Armada, running before it, disappeared into the mists.

No Englishman doubted that the enemy would regroup and return. Rumors flew that Parma would cross to Margate on the next flood tide. Reports of a Spanish victory swept Europe. And Englishmen hurried to their coasts and rallied around their Queen at Tilbury Camp.

While Elizabeth waited amid the troops of her favorite commander, the Earl of Leicester, the danger which had so nearly brought disaster to the island kingdom passed. Thanks to English seamanship, storms, and luck, the Armada called Invincible limped home in tattered remnants around the north of Scotland. Of 125 Spanish vessels that had entered the English Channel, only half got back to Spain. At least 17 foundered on the coast of Ireland, where thousands of soldiers and sailors perished.

FEW HISTORIANS and fewer tourists now bother to visit Tilbury, a drab cluster of buildings, docks, and slips for freighters 22 miles down the Thames from London, across the river from Gravesend. For me, however, it was the first stop of a journey into a fascinating and formative age. For the next several weeks I would travel England in search of evidences of Elizabeth and her times.

"Tilbury? Power station, sewage farm, not entirely salubrious over at Tilbury," commented Mr. R. S. F. Stanley, who keeps the
(Continued on page 678)

The Author: Dr. Louis B. Wright, a Trustee of the National Geographic Society, is the type of "universal man" Elizabethans most admired. Author and editor of books on Shakespeare, Elizabethan and Stuart England, and Colonial America, he has had careers as professor, historian, librarian, journalist, and executive, acquiring 27 honorary degrees along the way. He retired last June after 20 years as Director of the Folger Shakespeare Library, one of the most effective collections in the world for the study of Elizabethan history. He shared his vast knowledge with GEOGRAPHIC members in "The Britain That Shakespeare Knew," May, 1964. Now, at 69, Dr. Wright is beginning another career, as a full-time author.

Master sailor of uncharted seas, Francis Drake taught English sea dogs to gnaw at Spanish sea power and lunge wherever treasure glittered. He astonished England when he sailed into Plymouth's harbor in 1580—the first Englishman to circle the world. His Golden Hind sagged with silver bars wrested from the ships of Spain's King Philip II. Calling him "Dragon" and "Master Thief," Spain demanded restitution. But Drake's Queen smiled, accepted her lucrative share of the venture, and knighted the navigator. On Plymouth Hoe bowlers beyond his bronze statue play a game which, tradition says, Drake stayed to finish before setting sail to face the Spanish Armada.



RESEARCHING COURTESY TRUSTEES NATIONAL NAVAL MUSEUM

The Armada Jewel, a gold locket, shows the Queen in profile. She probably gave it to Sir Thomas Heneage, Treasurer at War during the fight with Spain.



Let tyrants fear," Queen Elizabeth cries to her troops at Tilbury, "I am come . . . to live or die amongst you all." Thus she answered the challenge flung by her archenemy Philip II. The King's plan: to send an "Invincible Armada," 130 sail strong, to Dunkirk to escort the Duke of Parma and 30,000 Spanish troops on a massive invasion of England.

On July 20, 1588, Philip's "floating fortress" anchor off The Lizard, but the English slip out to trail the fleet, engaging it four times. Off Calais, English fire ships panic the enemy, who





DEPARTING CHRISTIAN III. LADY'S CHURCH, SAMPSON, KING'S LION, BRONZESCOPE BY BATES LTD, ENGLAND © B.A.S.

cut cable and run. Next day the English bombard until Spanish blood flows from the scuppers. With a change in the wind, Philip's men flee north.

Meanwhile, Robert Dudley (page 693) marshals an army at Tilbury Fort. False rumors say Parma crosses the Channel. In a stirring voice Elizabeth inspires her forces. The panel above depicts the weeks of action.

Not until later would England learn that the Armada had fallen victim to gales, fog, and rocks; only half the vessels limped home. Today off the Giant's Causeway, divers recover trappings of the galleon Girona, including this gold escudo coronado.



*Highway to England's heart, the Thames
meanders past the docks of Tilbury under
the haze of London's industry. Where the
double-moated, star-shaped Tilbury Fort stands,
Elizabeth exhorted her troops to meet the
expected Spanish invasion. Little could she
have anticipated this supreme moment of a
triumphant reign when, 34 years earlier, as
heir apparent and suspected traitor, she
suffered in the Tower of London, the "doleful
prison" of her mother's downfall.*

676 EXERCISES BY THE SPIEGEL, HANNOVER (1811) IN A.S.





keys to St. George's Church at Gravesend. He volunteered to show me around the old church. Three and a half centuries ago Pocahontas, returning to Virginia from her triumph at the English court, died on board ship and was buried here.

Despite Mr. Stanley's unflattering opinion of Tilbury, I boarded a ferry called *The Rose* and landed near the spot where, on that Thursday, August 8, 1588, Queen Elizabeth had stepped from her flag-decked barge.

The glory that Elizabeth saw has departed. In bright sunshine she had walked between serried ranks of soldiers, while cannon boomed from the grim blockhouse that Henry VIII had built to guard the Thames. In the May drizzle, I picked my way from the gray landing stage along a muddy path that led to the old fort (preceding pages).

A voice at my elbow brought me back to the 20th century: "Very 'istoric, this place," the voice said. "Show yer about fer two bob."

A wizened Cockney who looked old enough to remember Elizabeth gave me a toothless but ingratiating grin. "Queen Elizabeth, she were 'ere, right 'ere where yer standin'. A stout woman, she were, six foot an' more; could whip any Frenchman come ashore."

"Don' yer listen to 'im," a passing woman warned, "'e's crackers."

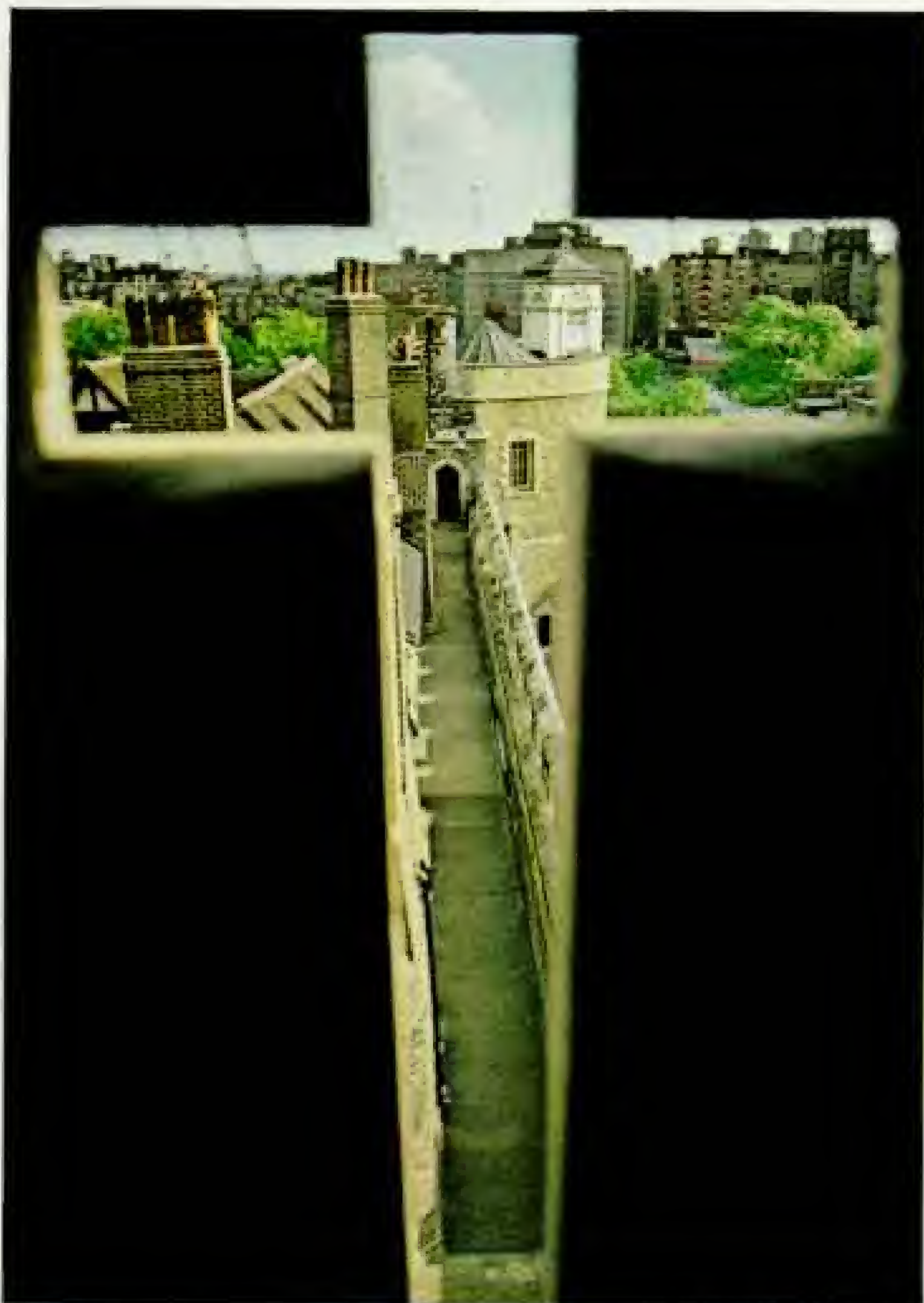
I gave my would-be guide a shilling, glad to know that tradition still lingers about Tilbury.

Eighteen miles up the Thames from Tilbury lies Greenwich, where Elizabeth's story began. I made the trip downriver from London's Westminster Pier on a rare day of golden May sunshine. Our little launch ploughed a long

furrow through the murky current past Bankside, where water taxis once scurried to and fro with customers for the Shakespearean drama at the Globe; past Wapping Old Stairs, near which pirates were staked at low water and left until three tides had washed over them. Then came Deptford, where Sir Francis Drake had moored the *Golden Hind* after he had sailed her around the world.

Along this same stretch the Lord Mayor and the

Committed to the Tower
 at 20, Princess Elizabeth exercised under guard on this narrow walkway outside the Bell Tower, seen through a cross-shaped arrow slit. Meanwhile, her Catholic half sister, Queen Mary Tudor, pondered whether Elizabeth had played a role in the violent Protestant rebellion of 1554. Much suspected but never judged guilty, Elizabeth finally exchanged this prison for house arrest in a series of country mansions.



aldermen of London made a pleasant passage in ceremonial barges on Wednesday, September 10, 1533. Their destination, too, was Greenwich, to attend the christening at Grey Friars Church of a baby girl with a wisp of red hair, born the previous Sunday to Queen Anne Boleyn and King Henry VIII.

Only memories and a green vista leading to the river remain at Greenwich to remind one of Elizabeth. The elegant palace that stands there now was designed by Inigo Jones in the succeeding reign of James I, near the spot where Raleigh is said to have spread his cloak in the mud. I spent a pleasant hour strolling over the grounds of the National Maritime Museum in Greenwich, thinking of those first days of the infant Elizabeth.

Henry had hoped for a son; both physicians and astrologers had foretold a male heir, and the King had ordered in advance the announcement of the birth of a prince. Already he had one daughter—enough—born of his first queen, the Spanish Catherine of Aragon. He contrived to divorce Catherine, even though he had to endanger the old Anglo-Spanish alliance and break with the Church of Rome. When another girl arrived, Henry's disappointment knew no bounds.

But the new Princess was christened with all

royal pomp. Thomas Cranmer, Archbishop of Canterbury, stood as her godfather. In the play *Henry VIII*—which is attributed to Shakespeare, but which many of us believe was written in collaboration with another playwright—Cranmer utters a glowing prophecy:

This royal infant—Heaven still move about her!—
Though in her cradle, yet now promises
Upon this land a thousand thousand blessings . . .
In her days every man shall eat in safety
Under his own vine what he plants and sing
The merry songs of peace to all his neighbors.

Much turmoil was to ensue before the prediction came true. But as our boat glided homeward, the battlements of the Tower of London seemed at repose in the late spring sunlight—as though forgetful of the dark events in Elizabeth's early life.

Accused of treason to Henry, Anne Boleyn

"A very witty and gentyll young lady," said her Clerk of the Closet. "Proud and disdainful," muttered a playmate of Elizabeth, about 13 in this portrait. But all agreed the red-haired girl possessed great intelligence. Studying under the Protestant tutor Roger Ascham, she mastered French, Italian, Spanish, Greek, and Latin. Her broad grasp of affairs of state awed two generations of foreign diplomats.



went to the block on Tower Green on a May morning in 1536, leaving to fate her two-and-a-half-year-old daughter. Henry thoughtfully imported a French headsman for the event. Anne, awaiting death in her chamber just off the Green, remarked: "I heard say the executioner was very good—and," she laughed as she added, "I have a very little neck."

The next day Henry married Jane Seymour—third of his six wives—and a year later she satisfied him with a son. Thus Elizabeth, with a young half brother who was heir to the Crown and an older half sister, stood a long way from the throne. The way would seem longer still when, as a young woman, she followed her mother to the Tower.

IT WAS A QUIET SUNDAY MORNING, with few tourists at hand, when I entered the precincts of the famous Tower. Begun by William the Conqueror and added to in subsequent years, the massive fortress throws a 12-towered rampart around the White Tower in the center (pages 670-71). Many an aristocrat languished there.

As I stopped at the spot on Tower Hill where noble heads had rolled in ages past, I noticed that workmen had recently planted the grassy plot with gay spring flowers. The turbulent times of young Elizabeth seemed in odd contrast.

Upon Henry's death, Elizabeth's half brother, a sickly lad nine years old, succeeded as Edward VI. The management of the affairs of the realm fell to Protectors, first to Edward Seymour, Duke of Somerset, then to John Dudley, Duke of Northumberland, father of Leicester and a vastly unpopular ruler. They vigorously pushed forward the cause of Protestantism. Archbishop Cranmer introduced his *Book of Common Prayer* and all others were suppressed. Parliament required the churches to use it in their services and made attendance compulsory.

After six years, the Edwardian Reformation ended with the death of the young King. Elizabeth's half sister, Mary Tudor, daughter of Catherine of Aragon, came to the throne as an ardent Catholic. Within months, a new Parliament had repealed the religious decrees of the old. Mary's victory seemed complete when she announced her intention of marrying Catholic Prince Philip of Spain.

Young Elizabeth, an auburn-haired and direct young woman of 20, was caught in the web of intrigue that surrounded these changes. Unknown to her, Sir Thomas Wyatt, who championed Protestantism, plotted to place Elizabeth on the throne. Wyatt's revolt against Mary faltered at the gates of London when citizens loyal to their new Queen held the city against him. Though Elizabeth maintained her innocence, Queen Mary had her brought to the Tower.

On the rainy Palm Sunday of 1554, the pale-faced and frightened princess was taken by barge to Traitors' Stairs. At

Captive in rose-bowered seclusion, Elizabeth whiled away the hours in the Old Palace at Hatfield during Mary's reign. Weaving a lace garden hat and this pair of gloves, she picked the bounty of the Hertfordshire estate—lavender, gooseberries, and roses, such as these filling the basket. When in November, 1558, Mary died, Elizabeth's childhood friend Robert Dudley galloped here to her side—among the first courtiers to cry, "Long live the Queen!"









Cheering Londoners create a passage of triumph from the Tower of London, beyond the church spire, for Sir Francis Chichester on July 7, 1967. The 65-year-old sailor won the hearts of his countrymen by circling the globe alone in a 53-foot ketch. Fittingly, Elizabeth II knighted him with Sir Francis Drake's own sword.

Four centuries earlier, Elizabeth I on her coronation procession set out from the Tower to the sound of trumpets, with an entourage of 1,000 horse. She swept through decorated streets, pausing to accept a nosegay from a poor woman, a recitation from a child. The Queen returned their love with "a most smiling countenance for everyone."

At Westminster she took for her own the royal crown, sceptre, and orb (right). Her ornate signature graced the statute books of England for the next 44 years.



Elizabeth I

sight of the grim portcullis of Traitors' Gate, she refused to enter and sat down on the wet stone steps.

"Here lands as true a subject as ever landed at these stairs," she declared. "Before Thee, O God, do I speak it, having no other friend than Thee alone."

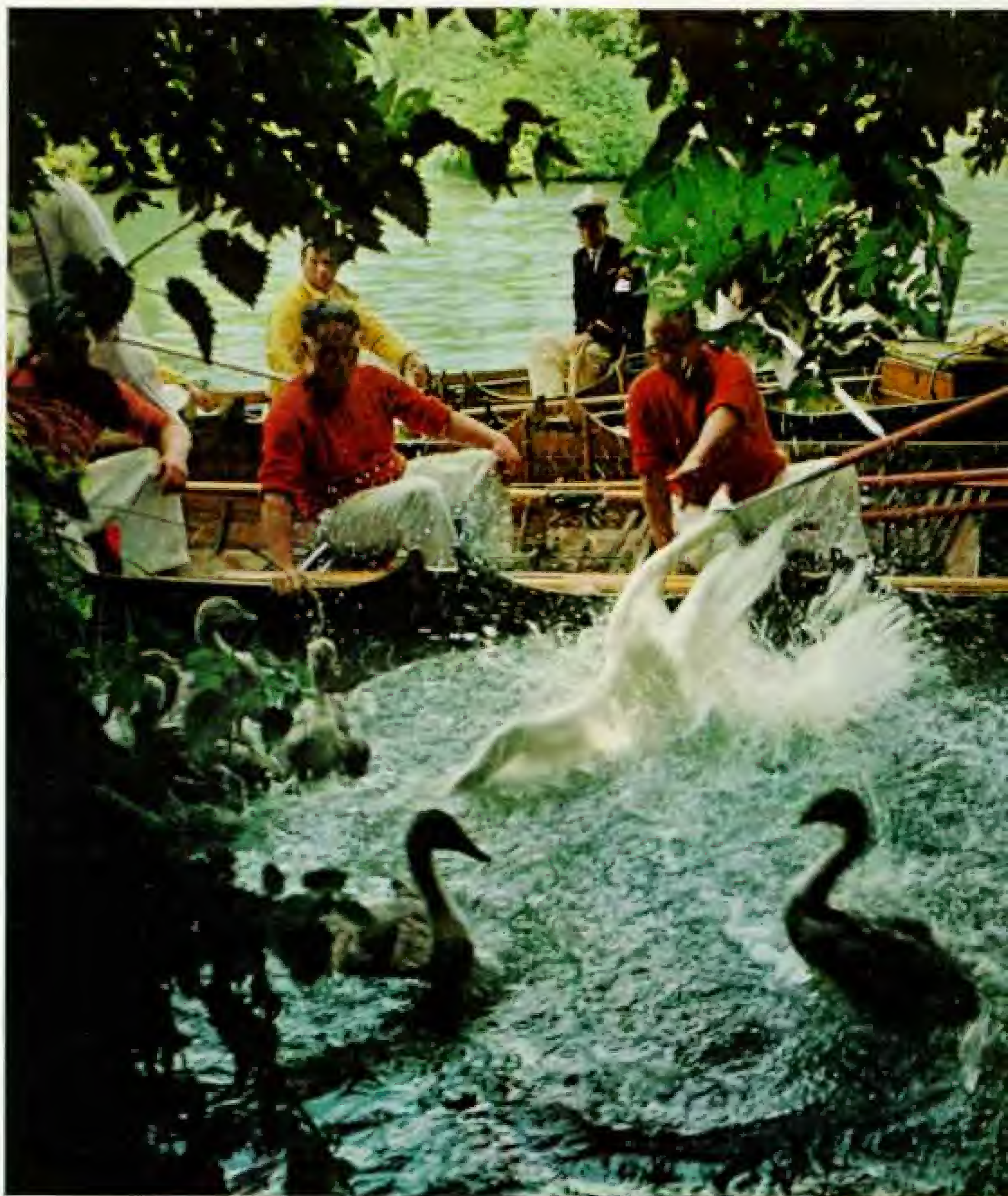
Only when one of the gentlemen attendants began to weep did Elizabeth change her mind. Berating him for giving way to his emotions when he ought to have been comforting her, she strode ahead and entered the Bell Tower, not knowing whether she would ever emerge alive.

Though unconvinced of Elizabeth's innocence, Queen Mary declined to heed the advisers who wished to execute her sister. After two months of uncertainty, Elizabeth was released from the Tower and confined in an old royal palace at Woodstock. On an idyllic spring day, I followed her road.

EIGHT MILES NORTHWEST of Oxford, the little town of Woodstock slumbers with its memories and its ghosts (map, page 692). Tourists by the busload, it is true, disturb its peace at intervals, for nearby stands the entrance to Blenheim Palace, where Sir Winston Churchill was born. Not far away, in the churchyard of the village of Bladon, he lies buried.* But tourists with other memories also come to Woodstock.

Great beeches mottled the ground with shadows as I strode across fields toward the River Glyme and the site of the palace where the young princess Elizabeth had been kept a prisoner. I contended with a herd of red Devon cattle for a sight of the spot, marked now only by a stone cairn. A contemporary historian reported she scratched a verse with a diamond on a windowpane at Woodstock: "Much suspected, by me / Nothing proved can be, / Quoth Elizabeth, Prisoner."

*See, in the AUGUST, 1965, *GEOGRAPHIC*: "The Churchill I Knew," by Dwight D. Eisenhower; "Be Ye Men of Valour," by Howard La Fay, and "The Final Tribute," by Carolyn Bennett Patterson.



In the spring of 1555 Mary had Elizabeth brought from Woodstock to Hampton Court, where she remained in close custody for a few weeks. At length Elizabeth was allowed to move to Hatfield, in Hertfordshire, where she had spent much of her youth.

It is pleasant to think of Elizabeth waiting the turn of fortune's wheel in this attractive spot 18 miles north of London. The great house that tourists visit was built after Elizabeth's death. But a portion of the Old Palace

where she lived still stands. The estate is now owned by the Marquess of Salisbury, a lineal descendant of Lord Burghley, Elizabeth's most trusted adviser.

After breasting the tide of traffic, I relished the peace of the gardens at Hatfield. Tulips glowed in vivid beds, and lilacs in full bloom hung over the walls of the sunken garden. Miss Clare Talbot, Lord Salisbury's librarian, an old friend, met me as I entered.

"What are you up to?" she asked.



ENLARGED BY TED SPIGEL, SPONG BULLFRETTE © P.A.B.

*M*aking a royal splash, a swan protests its "upping" by Her Majesty's Swan Keeper Frederick Turk. Unmarked adult birds are Crown property, as in the days of Elizabeth I. Tagged ones belong to the Vintners and Dyers Guilds of London. At the July swan-upping on the Thames, men sent by the Queen and the two guilds take up the birds to identify the parents and claim the cygnets.

splendor of Nicholas Hilliard's "Ermine" portrait (pages 668-9).

Contemporaries described the Queen as being of medium height, slender, straight, and "of majestic carriage." Her godson, Sir John Harington, who had known her displeasure, wrote that "when she smiled, it was a pure sunshine that everyone did choose to bask in if they could. But anon came a storm from a sudden gathering of clouds, and the thunder fell in wondrous manner on all alike."

Down a long lane from the great house, the weathered stump of an ancient oak marks the spot where the young Princess was sitting in 1558 when she received the news that she was now Queen of England.

Queen Mary had drained the last drop of bitterness before her death. Instead of being quick with child, she had developed a malignant tumor. Though she had struggled for her faith and burned some 300 heretics, her God seemed to have turned His face from her. Early in the morning of November 17, 1558, Mary heard the mass celebrated in her room and, after the elevation of the Host, she gasped and died. Thus ended the hope of a Spanish Catholic succession in England.

NO SOONER had the herald at St. James's Palace shouted, "The Queen is dead. God save the Queen, Elizabeth of England!" than a lithe and sinewy young man mounted a snow-white horse and dashed to Hatfield. Robert Dudley, released from the Tower a few years before, wanted to be first with the news. An old friend of Elizabeth's, he had been imprisoned with his four brothers when a family plot that would have forestalled Mary's accession had failed.

Although the official messenger outran him, Elizabeth noted her handsome friend among the first to kneel before her, and shortly afterward named him Master of the Horse, a title that he never relinquished. Created Earl of Leicester in 1564, he served his Queen devotedly for the rest of his life (page 693).

"I am in search of Queen Elizabeth," I explained.

"Jolly good, she's all over the place," Miss Talbot assured me.

After this introduction, I was not surprised to find Elizabeth's garden gloves, and even her silk stockings, at Hatfield House (pages 680-81). A painting of the horse she rode at Tilbury dominates the grand staircase, and she herself looks down from the walls with her invariable majesty, culminating in the



Elizabetha

Imagined and real, exotic animals and scenes adorned Elizabethan maps that inspired this chart. Tattooed Indians, upper left, met Raleigh's expeditions to America. Splendor of India's Mughal Empire, lower left,

Handing 1595 etc. 1599, showing Duke's Voyages, mentioned in the Geographicall

Discoveries of the Indian Ocean, South

Based on the

WORLD that

WORLD that

The WORLD that

ated the East India Company. The
Maurice Company, merged by Jean
the Terrible, right, opened Russia
to trade with England. The victory
over the Armada, lower right, be-
added the birth of English sea power.

and researched by *David H. Fisher*. *John Haywood Library*. *© 1955*



ELIZABETH *knew*





At Hatfield, in the great hall of the red-brick section of the Old Palace, with its huge oaken beams arching above, tourists now sip their tea or order a lunch of steak-and-kidney pie. Here the 25-year-old Queen held her first Privy Council meeting.

Already this slip of a girl displayed the judgment of men that would characterize her whole career. To be chief counselor, she chose William Cecil, later Lord Burghley. Elizabeth told Cecil: "This judgment I have of you, that you will not be corrupted with any manner of gift, and that . . . you will give me that counsel that you think best." For the next 40 years Cecil worked faithfully to conform to the Queen's good opinion (page 692).

Far away on the horizon another queen heard the news of Mary's death and laid claim to the English throne. Mary Stuart, descended from a daughter of Henry VII, had inherited the Scottish crown as a week-old infant. Now she was 16 years old and married to the Dauphin of France, soon to become King Francis II. Promptly they assumed the arms and style of Queen and King of England. While a regent ruled in Scotland and the Reformation gained

Enchanted with decoration, Elizabethans popularized a distinctive architecture, exemplified by the half-timbered walls of Little Moreton Hall near Congleton. Arrow slits in castle walls gave way to leaded glass windows; defensive moats became ornamental lakes.

Ornate and spacious, Hampton Court Palace belonged to Cardinal Wolsey until Henry VIII fancied it. Taking possession, the King added a tilt yard, bowling alley, archery butts, and a tennis court still in use. He also built new rooms "with no imaginable order, as the English merely look to convenience," according to an Italian visitor. Since Henry remodeled the arch in the foreground while Elizabeth's mother lived, posterity calls it "Anne Boleyn's Gateway."

strength under the preaching of John Knox, Mary remained in France, a staunch Catholic and a potential danger to Elizabeth.

A contemporary wrote this gloomy note of the state of England as Elizabeth prepared for her coronation: "The Queen poor. The realm exhausted. The nobility poor and decayed. Want of good captains and soldiers. The people out of order. Justice not executed. . . . The French king bestriding the realm, having one foot in Calais and the other in Scotland. Steadfast enmity, but no steadfast friendship abroad. . . . If God start not forth to the helm we be at the point of greatest misery that can happen to any people, to become thrall to a foreign nation."





*B*ountiful vines of Kent grow hops for English beer; Flemish immigrants introduced the crop in the 1520's. In September, harvesters strip the flowers, or hops, which, dried and added to mash, impart mild bitterness to beer. Elizabethans consumed quarts of "bere" at breakfast, dinner, and supper. The Queen was once "very farr out of temper," Dudley wrote, for want of good beer for her retainers.

*"T*he Golden Fleece," Elizabethans called wool, then England's principal commodity. A Devonshire man, with power shears, clips his whiteface stock.



In such a plight a young woman, burdened with the cares of state, drew upon her own inner wisdom and became the master politician of Europe. But first she had to win her own people; and she calculated every move to that end.

Elizabeth rode down from Hatfield to London on a November day accompanied by a thousand lords, ladies, and gentlemen. Well-wishers crowded the way to see the pretty, red-haired young Queen. At every appearance she charmed them.

On January 14, 1559, the day before the coronation, all London turned out to see her. She did not disappoint them. Dressed in "a royal robe of very rich cloth of gold" she was carried on a litter by two mules draped in gold brocade. Footmen in red velvet jerkins marched around her, and Robert Dudley, her new Master of the Horse, rode behind on a black charger. Horsemen in jewels (glittering so brightly, reported the Mantuan ambassador, that they cleared the air of snow clouds) preceded the Queen's person.

Today vast banking and commercial buildings replace the shops and dwellings that Elizabeth passed. A frieze of medallions lining the building of The Hongkong and Shanghai Banking Corporation reads "London, India, Burma, Ceylon, Malaya." The foreign names would have astonished her, though they proclaim the reaches of an

empire that had its beginnings under Elizabeth (map, pages 686-7).

That empire would be built on many foundations, but among the strongest of them were a sound economy, the avoidance of dangerous alliances, a settlement of the religious question that would preserve national unity, and effective sea power. All four made early claims on Elizabeth's statesmanship.

Young and eligible, how was she to avoid a matrimonial alliance with one or another of the princes of France, Sweden, Austria, and Russia, who sought her hand and her kingdom? An heir was a prime necessity for the stability of the realm, but to choose a husband

was to invite the animosity of other suitors.

Even Philip II of Spain, lately the spouse of her half sister Mary, thought of sacrificing himself once more on the British altar: A kingdom might be won, a heretic saved. After much soul-searching, Philip proposed—through his ambassador.

Because memories of drafty palaces and dark, damp days in England still haunted the Spanish King, he instructed his ambassador to tell Elizabeth that she could not expect him to stay much in England. To the humorless ambassador's puzzlement, this information seemed to amuse Elizabeth, who laughed out loud and gave evasive answers.





"This scept'red isle . . . This other Eden," wrote William Shakespeare, sharing Elizabeth's sentiments about her kingdom (above). To the Queen her small realm seemed immense. Arriving at Bristol, 118 miles from London, she thanked God for her preservation "in this longe and dangerous journeye."

Men to match a Queen

Elizabeth possessed "a high gift for picking able men to do the country's work," as Winston Churchill wrote. And she knew how to command. "Lucid, modest, and just," William Cecil, Lord Burghley, far left, served as Elizabeth's chief counselor for 40 years. Together they set England's goals: no war, no waste, no Rome. When Cecil died in 1598, his talented son Robert, at left, succeeded him as advisor. Robert carried on "with his hands full of papers and his mind full of matter."

To keep Robert Dudley by her side, Elizabeth named him Master of the Horse and later Earl of Leicester (top right). She came close to marrying him, but, as a shrewd Scot observed, her "spirit cannot endure a commander."

Sir Walter Raleigh (center) proved so versatile that a 17th-century historian did not know whether to call him "statesman, seaman, soldier, learned writer, or what you will." He organized colonizing ventures to America that gave a vast territory the name Virginia for the Virgin Queen.

Trying to groom Robert Devereux, Earl of Essex, for service to the state, Elizabeth found he had "a nature not to be ruled." He lost his head after an attempted coup against the Queen.



WILLIAM CECIL



ROBERT CECIL



ROBERT DUDLEY, EARL OF LEICESTER



SIR WALTER RALEIGH



ROBERT DEVEREUX, EARL OF ESSEX

Until her middle age Elizabeth used marriage as a political weapon, but kept her own counsel. Her famous remark to Parliament was undoubtedly politic: "I am already bound unto a husband; which is the Kingdom of England." More in keeping with her temperament, however, was her private declaration that she would have no husband "who would sit at home all day among the cinders." Much less would she have one who would attempt to dominate her Tudor will.

SINCE RELIGION created the most inflammatory issues, the Queen determined that the English Church would follow a middle course. The settlement reached by Parliament in 1559 established a national church broad and flexible enough for both Protestants and Catholics—or so Elizabeth hoped.

Sympathetic to Protestantism, the Queen never achieved complete harmony but managed to curb fanaticism and to avoid persecution. She was unwilling, she said, to "make windows into men's souls." In 1570 the Pope excommunicated her, and, later, Jesuit missionaries swarmed into England. The government, fearing subversion, prosecuted them for treason, not heresy.

When it came to the development of English sea power, Elizabeth showed equal singleness of purpose. The visible reminders of this important achievement are to be found in the West Country, the home of her hardy sailors and some of her favorite courtiers.

Hardly a town in the West Country lacks some association with the explorations and the high adventures of the Age of Elizabeth. Not even road builders and suburban developers have spoiled the rolling hills where sheep graze as they did in the days of Drake and Raleigh.

In 1574 the Queen made a memorable visit to Bristol. Whitsunday found me there, too. Almost completely rebuilt after the destruction of World War II, the modern city nevertheless evokes the whole history of British maritime enterprise. Ships still moor in docks used for 500 years and more.

A port second only to London in Elizabethan times, Bristol had long sent sailors into the Western Sea, some think even before Columbus. Certainly from Bristol sailed John Cabot in 1497, under orders from Elizabeth's grandfather, Henry VII. Upon Cabot's discoveries in the North Atlantic, Elizabethan England rested her claim to a portion of America.

Queen Elizabeth visited the church of St. Mary Redcliffe, where the seamen who sailed from Bristol to America prayed before their departure and gave thanks for a safe return. This church Elizabeth called "the fairest, goodliest, and most famous parish church in England." As I did, she may have



Where Elizabeth reved, boys play ball beside crumbling Kenilworth Castle in Warwickshire. Each summer Elizabeth set out on a progress to "view the estate of the country," where "every nobleman's house is her palace," wrote a contemporary. Here in July, 1575, Leicester feted the Queen for 19 days at a probable cost of \$3,000,000.

Clocks were stopped when she arrived—time stood still. Guns saluted, fireworks flared in a "blaze of burning darts," 320 casks of beer washed thirst away. Amid halloos of huntymen, Elizabeth hunted deer with bow and arrow.

Country people, costumed as nymphs, sibyls, gods, and goddesses, recited their tributes, "proper poetry in English rhyme and metre." Perhaps 11-year-old William Shakespeare walked over from Stratford upon Avon to mingle with the well-wishers and observe the pageantry.

"God be thanked, she is very merry," wrote Leicester during a summer progress. In this painting, believed to show the Queen with Leicester, the courtier keeps her in good spirits, lifting her in a high-leaping lavolta. Temperate in food and drink, Elizabeth was addicted to dancing. Even at 66, she tried a dance called the Spanish Panic—but in the privacy of her room.



seen there a whale bone brought back by Cabot and now hanging above the entrance to the American Chapel.

To visit Plymouth, a hundred miles southwest of Bristol, is not only to recall the sailing of the *Mayflower*, but also to bring back tales of Elizabeth's sea dogs. Francis Drake stands in bronze defiance on Plymouth Hoe (page 672), and behind him men and women still play bowls on the green where, according to tradition, Drake and the Lord Admiral Charles Howard finished their game before sailing out to meet the Spanish Armada.¹⁰

For years English privateers had preyed upon Spanish commerce, taken Spanish gal-

¹⁰See, in the NATIONAL GEOGRAPHIC: "We're Coming Over on the *Mayflower*," May, 1957; "How We Sailed the New *Mayflower* to America," November, 1957; and "Coves to Cornwall," August, 1961, all by Alan Villiers.

leons when they could, and traded surreptitiously with Spanish colonies in the New World, though such trade violated Spanish law. The Spanish ambassador complained and threatened. The Queen always had a bland reply: She could not control unruly seamen on the high seas, she would try again, and she would threaten to hang the lot of them from the nearest gibbet if she caught them in acts of piracy. She never did.

Her temper was displayed, however, when a merchant-adventurer, John Hawkins, who had traded successfully along the Spanish Main, returned from a voyage empty-handed and quoted Scripture to explain his failure:

"God's death!" exclaimed his sovereign. "This fool went out a soldier and is come home a divine!"

Just eleven miles north of Plymouth lies

PAINTING FROM THE COLLECTION OF YVES SAINT-LOUIS, S.A., RENAISSANCE PERIOD, 1550, FRANCHISE BY TEO SPINEL, RAPHO GULLINNETTE © S.S.S.



"The play's the thing," Shakespeare cried and made it so. For his tragedy Macbeth, first performed in 1606, Paul Scofield and Vivien Merchant here rehearse their roles as the usurper and his lady at the Royal Shakespeare Theatre at Stratford upon Avon. Master English dramatist of all time, Shakespeare crowned England's golden age of literature. He stood at the center of giants: Edmund Spenser with his allegorical epic, Christopher Marlowe with blank-verse tragedy, and Ben Jonson with satiric comedy. "Never have men written more nobly," says author Louis B. Wright. "Never has lyric poetry or drama interpreted the emotions and actions of men and women more brilliantly."

Buckland Abbey, which Francis Drake bought in 1581, when he had looted sufficient treasure from Spanish ships to become a country gentleman. Today Buckland Abbey, a museum, sleeps in its green valley, gay with rhododendron when I was there.

Among the West Country mariners, none surpassed Drake in daring and enterprise. In 1573, with a landing party, he had ambushed a mule train carrying Philip's treasure across the Isthmus of Panama and got away with 100,000 pesos of gold. Raiding along the Main, he had taken many a Spanish ship before 1577, when he conceived an even bolder scheme to enrich himself and the Queen and to annoy the Spaniards. He would sail around the tip of South America and pillage defenseless Spanish towns in Chile and Peru of their treasure. In a secret audience, Drake laid his plan before the Queen and, apparently, received her blessing for the enterprise—in return for the lion's share of the loot.

Not for nearly three years did Drake return, and then with only one ship of the five that had put out from Plymouth on December 13, 1577. But that one, the *Golden Hind*, could barely make headway, so heavily was she laden with gold, silver, jewels, silk, and spices when she put in toward Plymouth Hoe.

Drake had sailed her around the world, he had pillaged Callao, the port of Lima, he had visited the Spice Islands and gathered priceless information for future traders. Characteristically, his first words after completing the epic voyage were: "Is the Queen alive and well?"

Elizabeth commanded him to bring his ship around into the Thames, and at Deptford, on April 4, 1581, on his own quarterdeck, she



dubbed him knight. If the Spanish ambassador needed any further proof that Elizabeth no longer feared his master, this honor given the "great pirate" supplied it.

ANOTHER INVETERATE ENEMY of Spain was Walter Raleigh (page 693). When the dashing Devonshireman came to court in 1581, he had already served as a volunteer in a Huguenot army in France, taken part in a mysterious "voyage of discovery" with his half brother Sir Humphrey Gilbert, and fought against Irish rebels. Tall, handsome, and rakish looking, sometimes wearing



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a gold ring in one ear, he captured the Queen's fancy and found himself Captain of her Guard. He was knighted in 1584.

Sir Walter Raleigh's birthplace, Hayes Barton, still nestles in a meadow between hills of shimmering green near Budleigh Salterton. The picturesque thatched and gabled farmhouse looks much as it did in his lifetime.

Raleigh had dreamed of founding colonies that would checkmate the Spanish advance in the New World. He sent out two captains who explored the coast of what is now North Carolina and brought back such enthusiastic reports that he named the whole land Virginia

after the Virgin Queen. Indicative of his favor with the Queen was the charter granted him to colonize even those lands claimed by Spain. By this time Elizabeth was almost ready for open war with her old enemy.

Events in Europe had been building toward a climax. In 1568 the Netherlands revolted against Spanish rule. In 1572 the St. Bartholomew's Day massacre of Protestants sent France on a bloody course of religious war. The mantle of Protestant leadership was falling upon Elizabeth's reluctant shoulders.

But Philip II was a cautious man; he waited and weighed all the circumstances. If he

overthrew Elizabeth, there sat Mary Stuart, nearest heir to the English throne, widow of a French king and certain to bring England and Scotland into the orbit of France. That would not serve Spain's interest. He would bide his time.

Fate, however, had moved to alter the situation. Mary married her cousin Henry Stuart, Lord Darnley, and gave birth to a son, James. But she tired of Darnley and fell in love with the Earl of Bothwell, who helped plot the murder of her ailing husband at Kirk o' Field just outside the walls of Edinburgh: There on the night of February 9, 1567, while Mary pretended to console the sick Darnley, Bothwell supervised the placing of a charge of gunpowder under Darnley's room and exploded it when Mary left. On May 15 he married Mary in the Palace of Holyroodhouse.

Driven out of Scotland by her irate subjects, Mary took refuge in England. Bothwell fled to the continent and died in a Danish prison. Elizabeth found her "cousin of Scotland" an acute embarrassment. To give Mary liberty in England would antagonize Elizabeth's Protestant subjects and endanger her own safety. So Mary became Elizabeth's prisoner, living for the next 19 years under house arrest with various titled families. The center of several conspiracies against Elizabeth, Mary at last involved herself in a plot to assassinate the English Queen. Parliament demanded the Queen of Scots' life.

WITH GREAT RELUCTANCE Elizabeth had Mary removed to Fotheringhay in Northamptonshire and placed on trial for treason. With even greater reluctance, Elizabeth at last signed the warrant for her execution. On a bitter day, February 8, 1587, in Fotheringhay Castle, Mary of Scotland was beheaded.

When I visited the little town, intermittent clouds darkened the sky, and a cold wind cut to the bone. No one stirred. Only a few ravens flapped across the churchyard. I could imagine the ghosts of both Mary Queen of Scots and Queen Elizabeth flitting through the aisles of the old parish church. Elizabeth had visited this church in the 1570's, and here Mary's body was brought after the execution.

Fotheringhay Castle no longer exists. Mary's son, King James I, let it go to ruin, and now cattle graze on the green mound where the grim 12th-century fortress stood.

Although Mary's death removed a cause of subversion and danger to Elizabeth, it opened the door to another hazard. Philip II no longer

had to worry about a Francophile succession to the English throne. He could now get on with the "Enterprise of England"—the destruction of Elizabeth and her heretic kingdom. At once he ordered the assembling of the great Armada, which sailed against England the next year. But victory rode the banners of Elizabeth's seamen. A new national spirit burst forth, evoked in a great national literature.

Of all the counties of England, Warwickshire probably attracts more tourists than any other—with good reason, for in Warwickshire lies Stratford upon Avon, William Shakespeare's birthplace and the home to which he retired. Both business and pleasure now took me to Stratford—performances of *Henry IV*



*I*sland of olden ways, Laxton still farms with the open-field system customary in Elizabeth's time. The government now owns the land, once property of the Lord of the Manor. Tenants are allotted scattered plots in large unfenced fields, so that all share both good and poor. After harvest a farmers' jury inspects the strips and levies fines for careless practices. Each December, farmers attend a Court of the Manor, where one pays a small fine (right). Proceeds go to the Ministry of Agriculture and to the jury for drinks.



PHOTOGRAPHS BY TED SPINKS, RAPHAEL SCHLEGELTTE (BELOW) AND ADAM WOODFORD © N.S.S.





*P*oet and cavalier, Sir Philip Sidney epitomized England's Renaissance man. With Spenser and Shakespeare, he popularized the love sonnet, introduced from Italy. At 32, fighting on a Dutch battlefield, he saw a fellow officer riding unprotected by leg armor. Sidney removed his own to share the same risks, an act that cost him his life.

*W*ith this lock of her hair, the graying Elizabeth bestowed favor on the young poet. Sidney, on bended knee, offered her a verse:

*Her inward worth all outward show transcends,
 Envy her merits with regret commends;
 Like sparkling gems her virtues draw the sight,
 And in her conduct she is always bright.
 When she imparts her thoughts, her words have force,
 And sense and wisdom flow in sweet discourse.*

BY PERMISSION OF HER MAJESTY THE QUEEN, FROM THE COLLECTION OF HER MAJESTY THE QUEEN, RESIDING AT WINDSOR, PROPERTY OF THE EARL OF PEMBROKE & C.



Strange and lovely curios delighted Her Majesty. Here her ornate clock-salt does the same for visitors at the London auction where it recently fetched \$20,530. Miniature soldier points to the hour on the white sphere atop the gilded saltcellar. At court banquets, the most favored guests sat "above the salt," near the head of the table.

Her subjects vied to give such gifts to the frugal Queen. One New Year's list ranges from silk purses full of gold to a "pye of quinces."



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and the annual trustee meeting of the Shakespeare Birthplace Trust that preserves the antiquities of the town. But I wanted first to restudy the visit made by Queen Elizabeth to nearby Kenilworth in the summer of 1575.

Few other English sovereigns loved their countryside so well as Elizabeth I. When summer came, Elizabeth's thoughts, like those of Chaucer's storytellers, turned to pilgrimages. She let her subjects know in advance when she determined upon a progress, as these summer junkets were called. Entertaining the Queen and a vast horde of retainers might spell bankruptcy, but few noblemen dared decline. Only occasionally did a subject feign illness or claim that his "poor house" could not provide suitably for Her Majesty.

The most famous of all her progresses took place in 1575, when the Queen and an enormous retinue made a triumphal journey through Northamptonshire, Warwickshire, Staffordshire, Worcestershire, and back to Woodstock in Oxfordshire. Such a trip required from 300 to 400 baggage carts and more than 1,000 horses. The Queen rode in a handsome coach, with outriders and her Master of the Horse, the Earl of Leicester, in close attendance. But not even royalty could keep out dust or prevent carts and coach from miring in the mud.

The impressive ruins of the Earl of Leicester's castle at Kenilworth (page 694) today provide only a faint clue to the grandeur that Elizabeth saw when she arrived on Saturday evening, July 9, 1575. To make her 19-day visit memorable, Leicester lavished a fortune, estimated at nearly \$3,000,000 in modern money, on pageantry that excited the whole

countryside. William Shakespeare, then only 11, might well have trudged the 13 miles from Stratford to see the marvels.

From a floating island ablaze with torches on an artificial lake half surrounding the castle, the Lady of the Lake greeted Queen Elizabeth with a flattering speech and a bit of Arthurian legend. Gigantic trumpeters sounded "a tune of welcome" and, after a parade of silk-clad nymphs and sundry allegorical figures, the pageant closed with "a delectable harmony of hautboys, shawms, cornets, and such other loud music."

Day after day, pageants and shows grew more extravagant. Even bearbaiting, a folk entertainment that Elizabethans particularly relished, was royally magnified. In the outer courtyard, a swarm of mastiffs was turned loose on 13 bears. Robert Laneham, a protegee of Leicester, left us this description: "It was a sport very pleasant . . . to see the bear with his pink eyes leering after his enemy's approach, the nimbleness and watch of the dog . . . if he were taken once, then what shift, with biting, with clawing, with roaring, tossing and tumbling, he would work to wind himself from them."

THE ELIZABETHANS had an insatiable appetite for drama, which provided them with stirring entertainment, moral instruction, and historical information. Shakespeare reflected this theatrical fashion, but he gave to his plays a universality that made them meaningful to all ages. Although *Hamlet* follows the pattern of blood-and-thunder murder plays that kept audiences on the edge of their seats, Shakespeare



Crown of a career, Burghley House rises in solemn grandeur beyond fallow deer roaming the park. Built by William Cecil, Lord Burghley, near Stamford, the



ROADWORK BY THE SPEEDY. RAPID GUYSONETS © S.A.K.

palatial manor welcomed Elizabeth for deer hunts and dancing. Today the Marquess of Exeter, a direct descendant of Burghley, opens its lavish interior to summer visitors.

Legacy of Elizabeth

*P*roud of their heritage, Britons live among reminders of Her Majesty's day. At Speakers' Corner in Hyde Park, London, Franciscan Father Michael Halliday (right) holds out his finger and preaches: "This is not a sausage. It is not a bag of minced meat, all higgledy-piggledy jumbled together, but a careful combination of bones, flesh, nerves, and muscles, so marvelously coordinated it indicates the existence of a Designer." Head of the Church of England, Elizabeth did not persecute Catholics or Puritans as long as they did not threaten the security of the state.

Students consult a master at Harrow (center), chartered by Elizabeth in 1572 as a grammar school for the boys of Harrow parish near London. Its graduates have included the poet Byron and Winston Churchill, who was considered a dunce for his struggles here with Latin.

A grinder (far right) thins the blade of a kitchen knife at Sheffield, a center for steel cutlery since the Middle Ages and a supplier of swords for Elizabeth's courtiers.



turned it into an immortal philosophic drama.

In nearly every crisis in English history since Shakespeare's time, *Henry V* has been read and performed to remind Englishmen of their heritage. King Harry's speech to the soldiers before Agincourt still quickens the pulse of all who share in that spiritual legacy:

This day is called the Feast of Crispian.
He that outlives this day, and comes safe home,
Will stand a-tiptoe when this day is named.
We few, we happy few, we band of brothers;
For he today that sheds his blood with me
Shall be my brother.
And gentlemen in England now abed
Shall think themselves accursed they were not here,
And hold their manhoods cheap whiles any speaks
That fought with us upon Saint Crispian's day.

The world that Shakespeare described in his plays lacked perfection, but it was a courageous, not a whining, world. Elizabethans never cringed with fear, nor did they waste precious time in self-pity. Treatises instructed men in the art of dying with dignity. Raleigh on the scaffold ran his thumb along the edge of the headsman's ax and wryly commented: "This is a sharp medicine, but it is a sound cure for all diseases."

Sir Philip Sidney (page 700), poet, novelist, courtier, diplomat, and soldier, fighting the

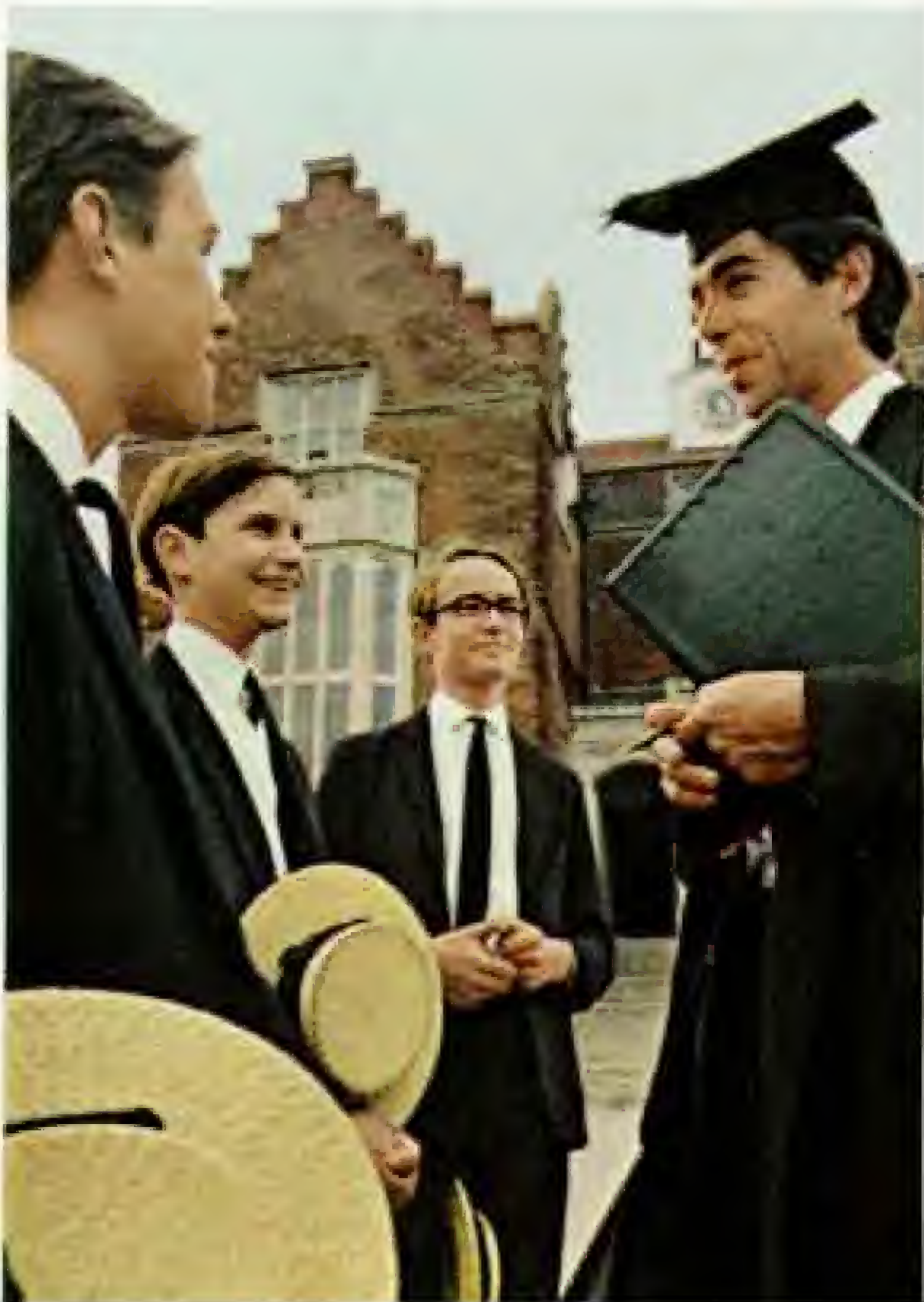
Spaniards in the Netherlands in 1586, received a wound from which he died three weeks later. Lying on the field, he demonstrated his nobility of spirit by giving water offered him to another wounded soldier, saying, "Thy necessity is yet greater than mine."

THE ELIZABETHANS showed as much zest for life as courage in the face of death. They had work to do and a world to win. Since the early Middle Ages, Englishmen had been content to trade primarily across the Channel, but now the larger world beckoned.

In 1553, a few years before Elizabeth's accession, Richard Chancellor braved the Arctic waters and reached Moscow, opening a lucrative trade in furs, beeswax, tallow, and ship timbers. In 1561 Anthony Jenkinson completed an overland journey through Russia to Bukhara, establishing trade with Persia. Dr. Faustus spoke for many in Christopher Marlowe's phrases:

O what a world of profit and delight,
Of power, of honor, of omnipotence,
Is promised...

The literature of the time expressed the belief that man could reach the stars.



PHOTOGRAPHS COURTESY OF THE NATIONAL ARCHIVES

My tour of Elizabethan England was now nearing its end. On my way back to London I made a final visit to a great architectural monument of the age, Burghley House in Northamptonshire (pages 702-3). Home of Elizabeth's most trusted councilor, it symbolized for me the recessional years of the Queen's long reign.

William Cecil, Lord Burghley, had served England and Queen Elizabeth wholeheartedly for 40 years. He had built two great houses, Theobalds in Hertfordshire and Burghley House in Northamptonshire, near Stamford, so that he could properly entertain the Queen and her traveling court. Theobalds has disappeared, but Burghley House stands as a reminder of the Lord Treasurer's hospitality to his sovereign.

In his last illness, in 1598, Queen Elizabeth visited him and fed him with her own hand. This womanly act of a great Queen was recorded in a letter from Burghley to his son and successor, Robert Cecil:

"Though she will not be a mother, yet she showeth herself by feeding me with her own princely hand, as a careful nurse; and if I may be weaned to feed myself, I shall be more ready to serve her on the earth; if not, I hope

to be in heaven a servitor for her and God's church." He added a final injunction: "Serve God by serving of the Queen."

Other faithful figures of Elizabeth's youth had passed one by one from the stage. In the year of the Armada, Leicester had fallen ill. But he had written cheerfully to his Queen that he was "hoping to find [a] perfect cure at the bath," and signed himself, "Your Majesty's most faithful and obedient servant, R. Leicester." One week later he died.

After Elizabeth's own death the letter was found in a jewel box beside her bed. On the folded paper was written in the Queen's hand, "His last Letter."

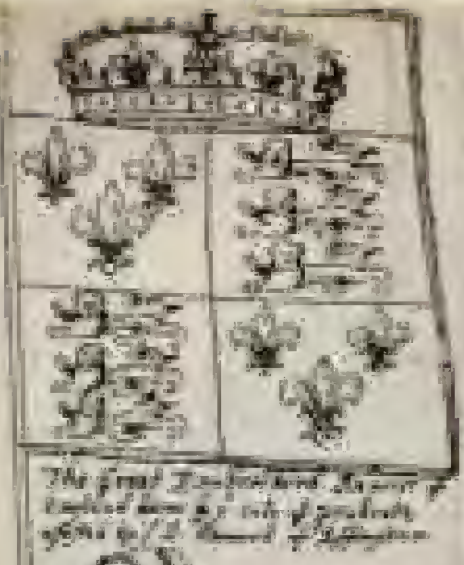
BOTH HAWKINS AND DRAKE had died of disease on an abortive expedition to Panama and Puerto Rico—Hawkins in 1595 and Drake early the following year. Even the old archenemy departed when death claimed Philip II in 1598 after a reign of 42 years, but the war with Spain dragged on until James I made peace in 1604.

Troubles multiplied toward the close of Elizabeth's reign. The Queen, growing older, had no clear successor, and who could tell what fate held in store for the kingdom? Fear

Lord Rivers - & the English
Ambassador - & his
attendants

The French Ambassadors

The French Ambassadors of
France



Robert Talbot - Secretary
of State - & his
attendants



The Charriot drawn by 4 Horses - with
rich cloths - & the canopy covered with
gold & silver - & the representation - The canopy
borne by 6 Knights



The Lady Marston of
Northampton - & her
attendants - & the
Bishop of Durham - & his
attendants

The Mayor - & his
Council - & his
attendants

Countess of Arundel

Countess of Arundel

The
Jan





The Duke of Cornwall
The Lord Chamberlain
The Lord Treasurer
The Lord High Steward
The Lord High Constable
The Lord High Admiral
The Lord High Treasurer
The Lord High Chamberlain
The Lord High Steward
The Lord High Constable
The Lord High Admiral



The Duke of Cornwall
The Lord Chamberlain
The Lord Treasurer
The Lord High Steward
The Lord High Constable
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The Lord High Steward
The Lord High Constable
The Lord High Admiral



The Duke of Cornwall
The Lord Chamberlain
The Lord Treasurer
The Lord High Steward
The Lord High Constable
The Lord High Admiral
The Lord High Treasurer
The Lord High Chamberlain
The Lord High Steward
The Lord High Constable
The Lord High Admiral

of civil strife when the herald would cry, "The Queen is dead," made even stout-hearted Englishmen shiver.

For four years running, the harvest failed and poverty and unemployment multiplied. Factions rent the Established Church. Revolt broke out in Ireland, always a trouble spot. And from Ireland came the final crisis in Elizabeth's personal, as well as public, life.

When Elizabeth had to choose a commander to fight the rebellious Earl of Tyrone in Ulster, she sent Robert Devereux, the Earl of Essex, a handsome, spoiled young courtier to whom she had shown great favors (page 693). He left London on his way to Ireland on March 27, 1599. After months of failure, he returned to London in late September against the express orders of the Queen.

Without changing into court attire, bespattered with mud, he dashed to Nonsuch Palace and into Elizabeth's presence while she was dressing. Convinced that his enemies surrounded the Queen, Essex had returned to justify his actions in Ireland and to rid the court of those hostile to him.

Despite his disobedience and uncere- monious entry, Elizabeth retained a deadly calm. She knew Essex was the darling of the hotheads. She would hide her time. Not till the following summer did Essex receive a reprimand from a special commission. He was stripped of his offices and continued under arrest at the Queen's pleasure. By August the Queen allowed him freedom but banned him from court.

Bitter and angry, Essex plotted re- venge. On Sunday, February 8, 1601, with a handful of armed followers, he rode from his house in the Strand into

Her last procession, Elizabeth's funeral cortege wends toward Westminster Abbey in 1603 in this age- stained drawing. Barons, carrying massed banners with the coats of arms of her predecessors, surround the Queen's body, encased in lead and drawn by horses. A riderless steed and weeping noblewomen follow. "Down is that Sunne which oft did shine so bright," wrote a subject, and all England joined in mourning.

the city in an attempt to rouse the citizens of London to rebellion. Instead, he found the city gates shut upon him.

Although he managed to return to Essex House by way of the river, he surrendered that night to Elizabeth's loyal forces. The Essex rebellion had failed, but it left her a saddened and sorrowing Queen. For his senseless treason Essex was beheaded in the Tower yard on February 25, 1601.

Today Essex Street and nearby Devereux Court are the only places that commemorate his name. Even Essex House, which stood opposite the Church of St. Clement Danes, seemed to be cursed. It was torn down and replaced by other buildings. An office building that occupied the site before World War II was destroyed by bombs on May 10, 1941.

Passing the bleak spot on a gray day, I felt a symbolic sense of the dark clouds that hung over England in the last years of the Queen's reign. The death of Essex, last of the dashing courtiers who had fascinated their sovereign, marked the end of an era.

Queen Elizabeth kept a stout heart despite her sorrows. She never lost her wit or fire. During her last illness at Richmond, Robert Cecil ventured to tell the failing Queen that to content her people she must go to bed.

"Must!" Elizabeth retorted. "Little man, little man, thy father, if he had been alive, durst not have used that word."

Through the first three weeks of March in 1603 the 69-year-old Queen grew weaker. Propped upright among cushions, refusing medicine and food and bed, she sat waiting for the inevitable. Members of the Privy Council visited her and asked if she approved James VI of Scotland—the son of Mary Stuart—as her successor; she touched her head, it was reported, to show her assent.

On the evening of March 23 the Queen sent for Archbishop Whitgift, who knelt and prayed for her. Early on the morning of March 24, the eve of the Feast of the Annunciation of the Blessed Virgin, Elizabeth breathed her last.

The great Queen left to her successor a country that had grown from a provincial island kingdom into a world power. She had braved the strongest military force of her time

—that of Spain—and survived with honor. Her captains sailed the seven seas with impunity—and sometimes with impudence. Her merchants traded to the ends of the earth and brought back the wealth of the Indies. Already pioneering spirits were laying the foundations of empire that would take tangible form in the next reign.

Early in her own reign, Sir Thomas Gresham, a financial wizard, had established the credit of the nation by insisting upon a sound currency. Elizabeth's government had fostered trade and industry, and the prosperity of England was the envy of other countries. No era in English history had produced such a galaxy of brilliant writers, whose works would be read by all the world for generations to come. Materially and intellectually England came to maturity under the aegis of a Queen who understood better than any other sovereign who ever occupied her throne the art of ruling with wisdom.

THERE HAD OCCURRED an episode that helps to explain her greatness. In 1601 Parliament, in response to growing criticism of the Queen's practice of granting monopolies, headed for a constitutional conflict with Elizabeth, an event she had avoided for a lifetime. She informed the Speaker that she herself would institute reforms and that no Crown-granted monopoly would be continued unless justified by law.

A grateful Parliament crowded the Council Chamber at Whitehall to thank their sovereign. Their Queen—and who could remember when she had not been Queen?—addressed them for the last time.

"Though God hath raised me high," she said, "yet this I count the glory of my crown: that I have reigned with your loves. . . . It is my desire to live nor reign no longer than my life and reign shall be for your good. And though you have had, and may have, many princes more mighty and wise sitting in this seat, yet you never had, nor shall have, any that will be more careful and loving."

These words, remembered to this day as the "Golden Speech," were a fitting public end to a golden age—the Age of Elizabeth.

THE END

At peace for the ages, Elizabeth I rests under her marble effigy beneath the royal coat of arms in Westminster Abbey, London. Speaking for the past and the future, William Segar, a herald, wrote this of the Queen, "your Raigne most happie both for victorious Armes, and flourishing Arts . . . shall remaine glorious to all posteritie."





Little Tibet in Switzerland

By LAURA PILARSKI

Photographs by FRED MAYER

IN THE CIRCLE OF WARMTH punched in the deep, frosty cold by a blazing fire, the celebrants threw pinches of flour in the air and exchanged greetings for the New Year. Then they went indoors and danced, alternately stomping and shuffling to the twangy beat of Oriental music. Finally they raised glasses of chalky rice beer in a toast.

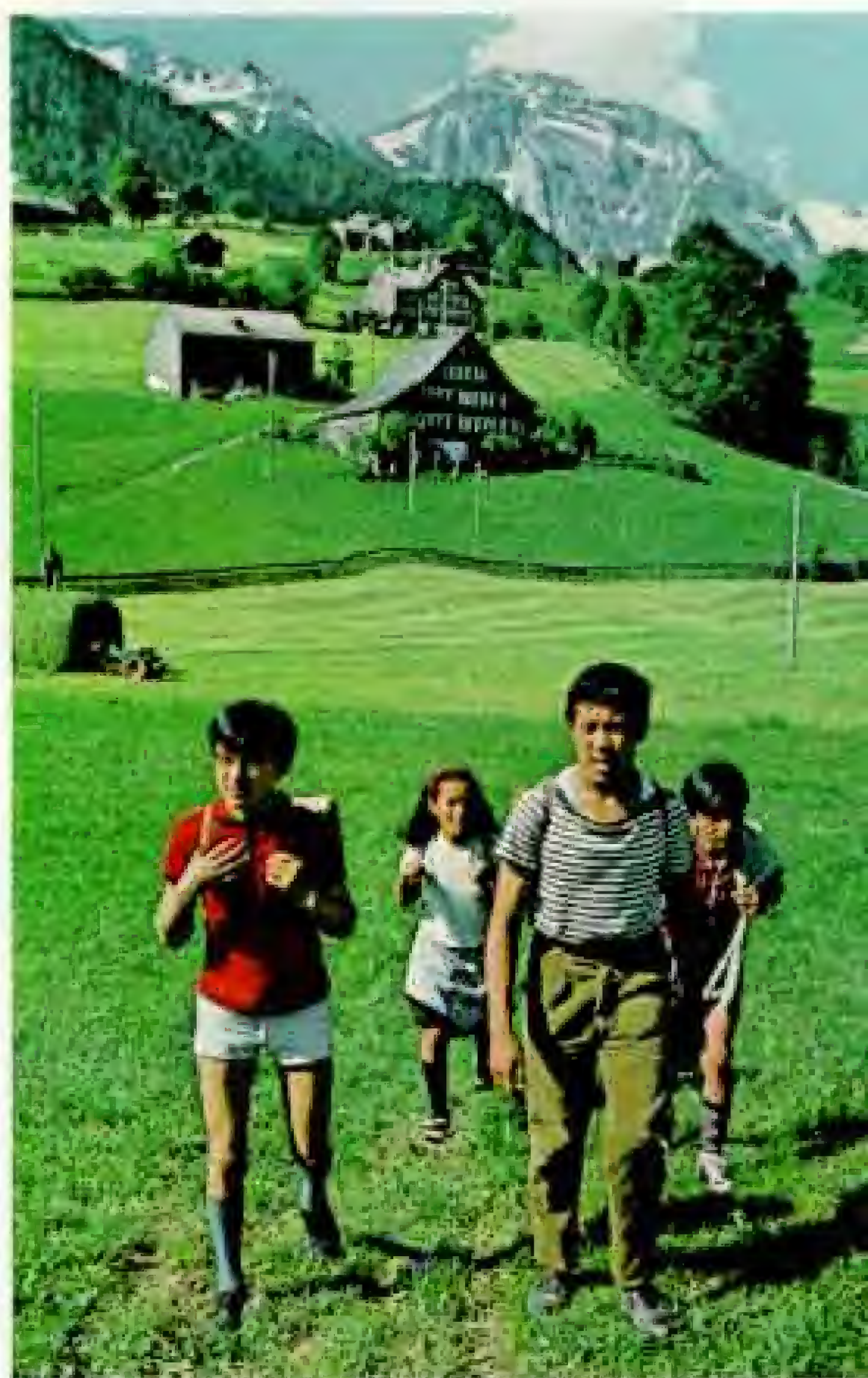
Indeed, on that February morning in a land of snow and mountains, they greeted the Tibetan New Year with all the gaiety traditional on the occasion. But with one difference: These Tibetans, refugees from the oppressive rule of the Chinese Communists, marked the observance in Switzerland, after a journey of some 6,000 miles from their storied homeland.

Thus I stood in snow-mantled foothills of the Alps, not the Himalayas, and watched as the exiles gave festive form to bright hopes for the Year of the Fire-sheep, 2004 by the Tibetan calendar. The ceremonial fire burned not on a plain where yaks and stunted ponies grazed, but in the orderly yard of a housing project in the orderly Swiss village of Rikon.

I first joined the Tibetans that morning in a room filled with flickering stabs of yellow light coming from butter lamps on an altar, each consisting of a wick stuck in a vessel full of butter. Seated cross-legged before the altar heaped with fruit and pastry, the refugees offered numerous supplications to Buddha; then they called for the outdoor ceremony to begin.

"This makes five times I celebrate here the start of another year," an elderly Tibetan told me as he watched the rites.

The old man reminded me that nearly ten years ago, on a March night in 1959, a group of Tibetans spirited their god-king, the Dalai Lama, out of Lhasa for fear Communist authorities in the capital planned to imprison or kill him. Numbed by the cold and gales, they struggled over one mountain pass after another, sometimes at altitudes above 15,000 feet.



TRAVELERS (COURTESY AND PHOTOGRAPHY BY F. MAYER)

Like new shoots transplanted to a fertile field, Tibetan children thrive in Switzerland. These four youngsters, schoolbags on their backs, hike to class in Unterwasser.

Separated from his homeland, a Tibetan boy in traditional dress celebrates the New Year in Münchwilen (opposite). The wall hanging, painted by a Swiss girl, portrays the Potala in Lhasa, palace of the Dalai Lama, exiled god-king of Tibet. More than 600 refugees from that Communist Chinese-occupied land find new life and hope in Switzerland.



712

STOCKPHOTO © A.S.A.

Exhausted but smiling, a Tibetan father, Sonam Norbu, struggles into Kathmandu, Nepal, in 1959, with the youngest of his five children, Nawang Thupten, riding papoose-style. Like the Dalai Lama and thousands of others, they fled the increasing oppression of Chinese Communist rule. The boy's mother died on the grueling trek across snow-clogged Himalayan passes to Nepal; his father succumbed to dysentery soon after arrival. The desperate plight of the Tibetans prompted a number of Swiss citizens to band together and sponsor resettlement of refugees in their country in multifamily units called homesteads. The first group to fly to Switzerland from Nepal included Nawang and his brothers and sister.

Today most Tibetans arrive from refugee camps in India. One of a recent group selected for resettlement, young Tenzin Norbu (below) tastes the wonders of an airplane cockpit during the 4,500-mile flight from Bombay to Zurich.



STOCKPHOTO BY PAUL WERTZ © A.S.A.





FOGACURONE © N. K. S.

Freedom from hardship brings a glow of health to Tashi Tsering, here cycling with a blond playmate. Like the other Tibetan children, he adapted with ease to his new home. The youngsters quickly learn European languages and do well in other studies.

Tibetan children have reached Switzerland not only as part of the homestead plan but also under separate programs for waifs. Dr. Charles Aeschmann initiated a project that placed 150 in Swiss foster homes before it was halted upon request of the Dalai Lama. His Holiness feared that such children would almost inevitably lose their Tibetan heritage. An additional 41 youngsters became residents of Switzerland's Pestalozzi Children's Village, established as a home and school for World War II orphans. Many other homeless young Tibetans remain in a nursery school in India under the supervision of the Dalai Lama's sister.

"At times, when they are in the snow and sun, they pull their hair across their eyes to keep from going blind," he continued, reaching over his shoulder as if to pull at the braid that no longer hung down his back.

When the caravan finally reached India, the Dalai Lama, too ill by this time to walk or ride a horse, straddled a *deo* (part cow, part yak) and in that way lumbered across the Indian border. To date more than 80,000 Tibetans have followed their god-king into exile in India, Bhutan, and Nepal.

Swiss Offer Homes and Jobs to Far-off Refugees

As news of the tragic flight spread, free people throughout the world responded with expressions of sympathy. In Switzerland, the sympathy took two forms of direct action.

The Swiss Office of Technical Co-operation became interested in helping the refugees find work. It set up three handicraft centers in Nepal, and wool carpets of delightful Tibetan color and design began to appear in Western markets and find appreciative buyers.

A more dramatic scheme came from a group of Swiss nationals—Alpinists, industrialists, civic leaders, and others. They formed the Association for Tibetan Homesteads, an organization for resettling Tibetans in Switzerland by groups. Each group would be under the administrative care of a local "home leader" chosen by the Swiss Red Cross, and under the spiritual care of a Tibetan lama. Jobs, and in some cases housing, were assured by factory owners and other industrialists.

Typical of those who pioneered the program is Ruedi Schatz, an industrialist who served as the original president of the association.

"What bothered me most," Dr. Schatz said, "was that here were people alone in their distress; there were no friends standing by to help."

Dr. Otto Wenger, now association president, told me that the homestead program began in 1961 and has brought some 420 Tibetans to Switzerland.

Meanwhile, a separate program to aid Tibetan children was spearheaded by another Swiss industrialist, Charles Aeschmann. Under the auspices of that effort, 150 youngsters were placed in private foster homes, while 41 others were settled at the famed Pestalozzi Children's Village in Trogen.*

The children at Pestalozzi were the first Tibetan refugees to settle in Switzerland. Dr. Aeschmann figured that the charm of the youngsters would melt any early resistance among the Swiss to the program. He figured right.

"After being exposed to the children, what serious opposition could there be?" a Berne businessman remarked to me. "They could make a compassionate man out of Ivan the Terrible."

Similarities in the climate and topography of Tibet and Switzerland work in favor of the program. But

*Photographer Alfred Lammer recorded this unique children's village in Switzerland for the August, 1959, *Geographic*.



Welcomed to a high land not unlike their own, Tibetans dwell in 10 homesteads scattered across eastern Switzerland. The homestead at Unterwasser closed a year ago when Tibetans moved to other villages that offered factory jobs. This past September in Rikon the refugees joyfully opened a new cultural center, the Tibetan Monastic Institute, staffed by five lamas personally selected by the Dalai Lama.

Inveterate visitors, Tibetans go calling on Sundays. Here a group strolls in Samedan.

what, I thought, of the language barrier, the devotion to Buddhism in a Western country where red-robed lamas are more distinctive than divine, and the wide gulf between the customs of the new arrivals and their hosts?

I put some of the questions to a Tibetan grandmother in Münchenwil, a village in the northeastern corner of Switzerland. I first saw her as she walked along a country road that meandered through gently swelling farmlands and orchards freighted with apples and other fruits. She walked noiselessly in soft-soled shoes, her long blue skirt teased by the wind, strings of coral bobbing above her dark blouse, a belt of silver girdling her waist.

At last she turned in from the road and paused beneath an apple tree in front of Tiheterheim (Tibetan home), a single-story L-shaped wooden building near Münchenwil. "Grüezi," she said to me in the Swiss-German dialect, meaning "I greet you." She ushered me into the house where brewing tea scented the





air. Preschool children giggled in the corridor.

"At first there was loneliness," she said. "I even missed India, because there I was closer to the village in Tibet where I was born. But my children and grandchildren are here with me, and I am happy now."

Resettlement of the refugees in homesteading groups helped ease many of the problems, she said. "Together, we can hold on to some of the old while learning the new. Now you must have tea before you go."

Yak Butter Gives Way to Oleo

She meant butter tea, a beverage best described as an acquired taste for the non-Tibetan. Tea leaves first are boiled in a solution of salt, and sometimes soda, after which yak butter (usually rancid in Tibet) is added and the whole mixture churned.

With the absence of yaks in Switzerland, the refugees turned to regular butter. Whatever the source, the product is essential to the Tibetan way of life, not only for use in lamps and tea but also occasionally as a hairdressing. The cost of butter raised a problem at first, but now, guided by newly acquired supermarket savvy, Tibetans in Switzerland find that oleomargarine meets their needs.

The next day, in Zurich, I entrained for Chur, gateway to the high Alps, where I transferred to a narrow-gauge line that carried me to Samedan, a community of 2,000 persons just 11 minutes away by train from fashionable St. Moritz (map, page 714). At an altitude of 5,670 feet, Samedan lies surrounded by mountains cloaked in fir and pine. In the distance, glistening like a white jewel, towers the Piz Bernina. No matter in what direction I turned, the scenery pressed down on me with the full weight of nature's unfettered grandeur.

A group of Tibetans settled in Samedan in 1963, using as living quarters a three-story hotel purchased for them by a civic club. Six families and several bachelors and monks share the house. A Swiss nurse called *avila* (Tibetan for "aunt") serves as home leader.

In the custom of their adopted world, the Tibetans greeted me with a handshake. Chatting with them in English or German, I sensed

a shyness and reserve; they seemed puzzled by my interest in them. They were polite, however, answering as many of my questions as they could.

Khacha, 58, a monk, was obviously the oldest one present. His face was sharply chiseled, with leathery skin pulled tight over high cheekbones, and he wore a beard of no more than a dozen long strands. Over tea he told me something about himself.

"Almost all my life I lived in monasteries. For 20 years I studied. The other years I served. In my last monastery, in the Kham region of Tibet, there were at least 50 rooms and thousands of butter lamps to care for.

"Yes, I am pleased to be here. I cannot go back to Tibet because there is no freedom there now, but perhaps in another life. . . ."

Another life! How often I would hear that expression as I traveled through Switzerland, talking with Tibetan refugees. As their religion has it, one dies to be born again, until nirvana is reached. Thus, by Buddhist reckoning, the Dalai Lama is more than 500 years old, the reincarnation of all his predecessors.*

Holy Men Hold Nonreligious Jobs

Devotion to their religious beliefs remains strong among the refugees, I found, but certain departures from strict doctrine have taken place. Perhaps the most significant change finds monks and other holy men among the refugees now holding down nonreligious jobs. Khacha, for instance, works for a printing company, whereas in Tibet his full time was given over to serving a Rimpoche.

Under the Tibetan form of Buddhism, known as Lamaism, a person identified as a Rimpoche is revered and honored, having progressed beyond the status of monk through reincarnation. The Rimpoche whom Khacha served in Tibet also immigrated to Switzerland and came to settle in Samedan. His name is Lamdark.

"I was taken from my parents at the age of three and installed in a monastery," Lamdark himself told me in German. "Such actions are taken after a determination, as was the case

*See "My Life in Forbidden Lhasa," by Heinrich Harrer, NATIONAL GEOGRAPHIC, July, 1955.

Yak herder turns to machines. Sonam Hreythar, who formerly wandered Tibet's high plains in search of pasture, now works in a metalware factory in Rikon. The Swiss thought the refugees, many of them nomads, would prefer farm work, but the Tibetans eagerly sought jobs in small manufacturing plants. Delighted with their new skills, they sometimes stay past the closing whistle and must be sent home.



Casting offerings upon the boughs, a monk welcomes the New Year on a February day that often corresponds to the Chinese New Year. Smoldering evergreens cook the mixture of flour and butter. A touch of Tibet flutters at upper left—the refugees string prayer flags from homes and trees in the prim Swiss villages, beseeching the blessings of kind spirits and spreading the word of Buddha upon the wind.



FRACARONE © NATIONAL GEOGRAPHIC SOCIETY

with me, that the child is a reincarnation. To do this, certain guides are used."

I recalled having read of some of the signs watched for when a child is examined for religious worth: the prominent ears of a Buddha, significant body markings, such as moles, the ability to select certain religious objects from among a large collection, or to recognize certain people in a crowd.

After eight years in a monastery in Lhasa, Lamdark became a spiritual leader in the Kham region.

Monastic Life Now Only a Memory

"Here in Switzerland," he said, "the adjustment to a new language and culture was difficult at first, but not now. Life is pleasant. Health conditions are good, we can work for good pay, and there is a full life."

Lamdak wore gray slacks, a plaid shirt, and lounging slippers. On a chain around his neck hung a small portrait of the Dalai Lama. The furnishings of his room in the homestead included an altar gleaming with gilded Bud-

dhas, a radio, tape recorder, and television set. He has a job as an usher in a movie theater in St. Moritz. While in India he married, further removing him from monastic life.

The longer I visited with these Tibetans, the more I was made aware of their successful adjustment to a new life in a new country. Such is not the case for some refugees.

At the homestead in the village of Waldstatt, I saw one young man of about 25 sitting alone, huddled over a child's writing table and whispering German words over and over.

"He's had a bad time," one of his friends told me. "Whenever he sees many people together, he becomes very afraid."

The troubled Tibetan was one of a handful who had required psychiatric treatment since arriving in Switzerland. He had great difficulty understanding his changed circumstances. Obsessed with saving money to buy lamaist prayers for his future life, he ate nothing but onions and bread for three months. He took to hiding his earnings because he could not comprehend the purpose of banks.



Umbrella of friendship shelters two young girls—a Tibetan, left, and a Swiss—on their way to school.

Bargain hunting in a supermarket replaces shopping among the street vendors in Lhasa. Butter for ceremonial lamps and Tibetan tea soon gave way to cheaper oleomargarine.

Eagerness to excel and a knack for sports lure a young Tibetan to practice ice hockey in Samedan. Tibetans also picked up skiing quickly; after two years a boy in Waldstatt became a village champion.



HEADPHONE (TOPPED LEFT) AND CATERING BY FRED WATKIN © W.E.S.





Camraderie and joy of life beam from the faces of boys born half a world apart. Blond Martin Niederer and dark-haired Penpa wear the blush of the outdoors,



SCHMIDTKE © NATIONAL GEOGRAPHIC SOCIETY

following an outing for Tibetan children near Zurich. To help the children preserve their heritage, Swiss foster parents have organized special Tibetan schools.

"In Tibet," his friend continued, "he worked as a servant to a farmer. He comes from a poor family, and as a boy he was gored by a yak. Lost an eye. He now has a glass eye, and that pleases him. Still, he has many problems."

I tried to talk to the disturbed young man, but he looked at me with a haunted expression and went on repeating his German words in a mournful litany of learning.

I found, however, that Tibetans for the most part adjust extremely well to life in Switzerland. Too well, perhaps.

"While we want them to be a part of the Swiss scene, we are anxious too that they not lose their very special cultural identity and heritage," said Miss Rosmarie Schwarzenbach, social worker with the Swiss Red Cross in Berne.

Miss Schwarzenbach, who became involved with the program when the Red Cross agreed to take on many of the responsibilities, said the Tibetan adults can apply for Swiss citizenship after 12 years of residence, as provided by federal law.

"Our eventual hope," she added, "is to



STACORONICO © N.S.A.

Treasure of the exiles, Buddhist scriptures pass from family to family in Münchwilen. This father teaches his son both the sayings of Buddha and the Tibetan language. Exiles report that hundreds of thousands of ancient volumes in Tibet's great monasteries have been destroyed by the Red Chinese, who use the parchment for shoe soles or wrapping paper.

Feather-light loads of ceremonial scarfs drape a Tibetan bride, left, and groom in Unterwasser. Beneath the flags of Switzerland and Tibet, they greet wedding guests and accept gifts. The Swiss civil ceremony precedes simple Buddhist rites. Miss Tashi Peldon, who had been living in England with other Tibetan refugees, met her new husband, Sonam Tenzin, soon after resettling in Switzerland.



have the Tibetans develop as self-sufficient families, able to support themselves completely and live independently." Some families, I found, are already living on their own, either in apartments close to their homestead or in other villages.

At the time Miss Schwarzenbach was preparing to receive 48 new settlers, most of them related to Tibetans already in Switzerland.

"I have 300 requests from Tibetans now in the country, asking that relatives be permitted to enter," she said. Selection of those allowed to immigrate rests with a Swiss

Red Cross doctor and the Dalai Lama's Office of Home Affairs, an organization established in India to aid Tibetans in exile.

"Come along and meet our newest group," Miss Schwarzenbach offered.

Into the cosmopolitan scurry of Zurich's Kloten Airport stepped the refugees, solemn and tired after their 4,500-mile journey from Bombay. They arrived in traditional Tibetan dress, the women wearing the jumperlike *chupa* in full-length style, and the men in a knee-length version of the same garment. Silk blouses, hand-woven aprons, colorful jackets,





felt boots, and fur caps completed the garb. They carried their few belongings in sacks or wrapped in pieces of cloth, and yet the jewelry in their possession included many old and precious pieces. "We try to hold our jewelry, even when all else is lost, for it means much to us," one of the refugees told me in the English she had learned in India.

Families Reunite With Formal Bows

More than anything else, though, they came bearing the accouterments of their religion. A frail woman, probably close to 70 years old, twirled a wooden prayer wheel, allowing it to slow down but never to stop. The children clutched framed photographs of the Dalai Lama wrapped in white ceremonial scarfs. Some of the men held hand-size altars encrusted with gold and silver, in each a figure of Buddha rested on a field of rich red material.

Family members separated many years showed little emotion at the reunion, and that

surprised me. No crushing embraces, no tears; rather, with hands folded in prayerful repose, they bowed to one another and murmured words of greeting. For most of them—all, I dare say—the long journey was their first by air. They were surrounded by photographers and journalists. Some had no relatives to meet them. Yet they showed no fear.

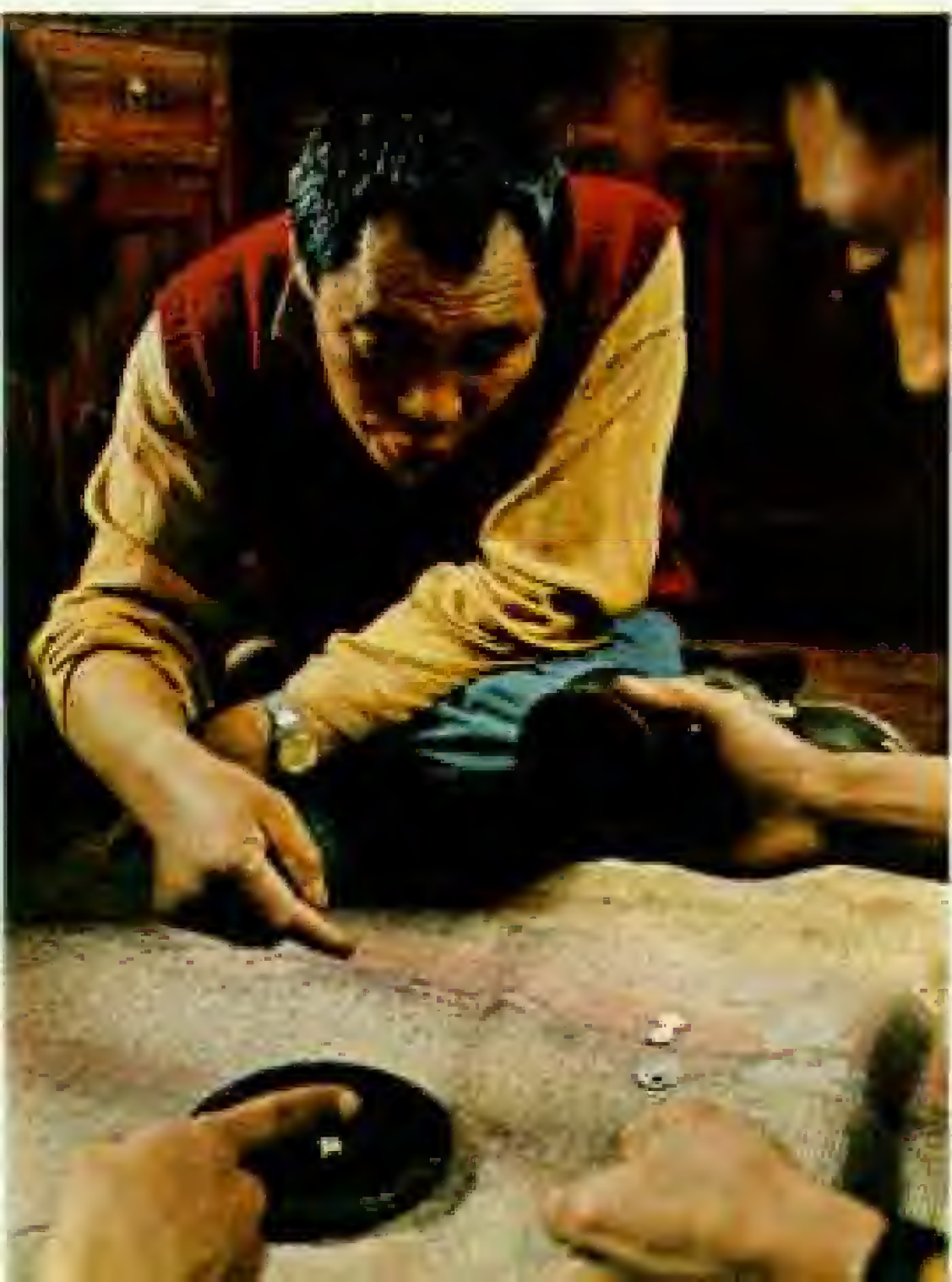
I knew that most of the men among the new arrivals would want to work in industry. Although many of the Tibetans worked as farmers in their native land, they stubbornly avoided taking to the fields in Switzerland. As a result, the resettlement program has produced an economic dividend for Switzerland by helping to fill a labor shortage in that thriving country.

"The men say they must learn new skills," a Tibetan woman told me as she dusted a large pendulum clock, its stilled hands resting at the hour, I later learned, at which the Dalai Lama crossed the border into India. "And



Fascination of television makes a set the prize of a home in Samedon. An altar holds offering bowls and a picture of the Dalai Lama. Although Tibetans quickly adjusted to mechanical conveniences, other customs, such as banking, puzzled them. Persuaded to deposit their earnings, they shrewdly marked their notes with X's, then protested when withdrawals did not produce the same money.

Ravioli—Tibetan style: Rabgay, once a monk in Tibet, likes to cook. Making moos-moos, he pats out dough to be stuffed with pork, veal, and onions.



Spare-time favorite, the ancient Tibetan game of *rho* absorbs these players. With a shake of the dice, they move markers, such as the old perforated Tibetan coin, clockwise along a wide arc of stones or beads. The first to reach the end wins.



they know that jobs in industry pay better.”

The last Tibetan homestead I visited, at Oetwil am See, near the Lake of Zurich, numbered 17 refugees, all living in a 300-year-old farmhouse. I arrived when the home leader, a young Swiss social worker, was taking a distress call from a local optician.

“We have a group of Tibetans in the office, and they all want to buy glasses,” he told her.

“Well, sell them glasses,” she replied.

“But they don’t have prescriptions, and I’ve tested their eyes. They don’t need glasses.”

The home leader drew a long breath and

said: “The men believe glasses add a certain dignity, and they notice a lot of people wearing them. Even more important, you know, His Holiness the Dalai Lama wears glasses. So please, since they have the money and want to buy glasses, let them!”

I waited for the Tibetan men to return from the optician’s office. They entered the house smiling and laughing, tenderly touching the rims of their new spectacles—just plain glass, of course—as if to make certain they hadn’t disappeared. Now they wear the glasses on Sunday when, dressed in their



COURTESY OF FRED WATTS © 1983

traditional robes, they walk with their families through the quiet hills:

One aspect of resettlement—the placing of homeless Tibetan children in foster homes—was discontinued because Tibetan leaders, including the Dalai Lama, feared the youngsters were in danger of losing their spiritual and cultural legacy.

I talked with some of the foster parents, and they admitted encountering difficulty in keeping the youngsters interested in their far-away homeland.

"The children want to be as much like

Whispering airs of a mountain pasture lure two Tibetan boys to fly their model gliders above Unterwasser. Soon more of their countrymen will arrive from India, as jobs and housing become available. The Swiss Government has agreed to accept a total of 1,000

their Swiss counterparts as possible," a foster mother told me. "A few lose their knowledge of the Tibetan tongue or even refuse to speak it after a while."

Erwin Wullschleger, a Swiss businessman who very early wrestled with the problem of how to keep his foster son tied to his Tibetan heritage, told me that he and other foster parents decided to organize a Tibetan school in the Zurich area. They found a schoolroom they could use, and soon 55 Tibetan children living in northern Switzerland were enrolled for monthly sessions.

The classes were conducted by a lama, using a textbook in German entitled *The Little Tibetan*, prepared and printed in Basel by foster fathers. Four such special schools for Tibetan refugee children now function in different sections of Switzerland.

Far From Home, a Second Life


Mr. Wullschleger and his French-born wife welcomed their foster son, Thubten, into their suburban Zurich home in January, 1963.

"He's a sixth-grader now," the foster father said. "You should see him on the soccer field; he's the goalie, you know. Soccer and school, he likes them both. And yes, he skis, too." He related this information with warm, expansive pride.

Thubten showed me his room, where he had arranged an altar, set with artificial flowers, on top of a small bureau. A large Tibetan flag hung above his desk. From a special hiding place, he carefully retrieved a prayer book printed in a Tibetan monastery. Someone gave him the book, he said, just before he left his native land.

I watched Thubten as, with reverence and pride, he wrapped the volume in a piece of rose-colored silk. Here, surely, was his treasure. That he would forget it in the excitement of attending school, playing soccer, and growing up in a world full of good things seemed unimportant. I knew that in years to come he would rediscover the book, and, holding it, would fill his mind with memories of the day he crossed the border into India to begin, like his fellow refugees, a promising second life within a single incarnation. THE END

Our Friend From



WEARY OF WANDERING in icy seas, Shag accepts a lift ashore from Nina Horstman. Adopted in Maine just after birth and never confined, the 18-month-old wild harbor seal divides his time between excursions along the Atlantic coast and land-based life at the Horstman home in Longport, New Jersey.

the Sea

By ROBERT and NINA HORSTMAN

Illustrations by National Geographic Photographer ROBERT F. SISSON





Part-time pet spends an evening at home playing with Tami Horstman, 7. Lack of external ears helps distinguish this true seal (*Phoca vitulina*) from the sea lion, its look-alike kin. Male harbor seals grow to six feet in length and weigh as much as 250 pounds.

Slithering over a shell-strewn beach, Shag returns for a reunion with his foster family, whose picture window gives them a seal-lookout station. A ramp, now replacing porch steps, enables Shag to reach the second floor. Hind flippers prove useless on land.



OUR THREE CHILDREN, all ardent anglers, had been surf-fishing since sunrise. They were reluctantly responding to my wife Nina's call to breakfast when a tiny dot, rising on the foam beyond our jetty, stopped them. Less-educated eyes would have dismissed the speck as a resting gull or a bit of flotsam. But the youngsters recognized an old friend and shrilly announced his arrival. Shag, the wild harbor seal in our lives, was home after a three-day sojourn at sea.

Within six minutes we were all in wetsuits, waiting at water's edge to greet him. Diving out of sight, he surfaced again on the crest of a close-in wave. Then, holding his front flippers tight to his sides, he body-surfed onto the beach. He lay there for a moment, a built-in grin on his bewhiskered face, then let the next big wave wash him back into the sea. Even though the hour was early and the season winter, we plunged in after him, for Shag

expects a swim with us whenever he returns.

Graceful and swift in water, Shag finds land travel awkward and slow. Nonetheless, he shortly followed us ashore, humping up his special ramp to the back door of the house. Then, flippering over the threshold, he flip-flopped into the living room for a long sleep before an open fire. This day was beginning as many have since we adopted Shag.

Just What a Seaside Family Needs

We live year-round on a boomerang-shaped bit of beach in Longport, New Jersey, six miles south of Atlantic City. Here our rambling turn-of-the-century house lifts three tiers above the tides. Hundreds of gulls wheel and scream around us. Winds wail, waves crash—and we love every sound, for we are an ocean-oriented family.

With three lively children, four dogs, a cat, a crow, some gerbils, and miscellaneous other



pets, I felt our household was large enough. Nina thought otherwise. Her heart was set on adding a seagoing mammal to our menagerie. A porpoise? But it couldn't come ashore.

"Why not a seal?" she suggested one morning over coffee. Occasionally seals do visit the Jersey coast; some even range as far south as North Carolina.

"I don't mean one we'd confine," she continued, pressing her case. "Ours would always be free to go and come as it pleased." We decided to defer a decision until spring.

That winter we read every book we could find on the subject of seals and consulted many experts. Most of them warned that a wild seal would leave us and never come back.

One man, we knew, had succeeded where others had failed. Harry A. Goodridge of Rockport, Maine, raised a young harbor seal and then released it in 1961. It has now summered in Rockport Harbor for seven years.

We contacted Mr. Goodridge, and he agreed to a May meeting in Maine to help us capture a baby seal. Many pups, deserted by their mothers or separated from them by stormy seas, die of starvation; early capture and proper care give some a better chance for survival. Thus we acquired a 25-pound male only a few days old. We named him Shag—Harry's initials prefaced by the letter S.

Early Feeding Proves a Problem

Unfortunately no one seems to specialize in seal pediatrics. And from published reports, we have concluded that no two seals behave exactly alike. So in raising Shag we listened to everyone and tried almost everything.

Someone suggested bottle feeding. The experiment failed.

"Try a hole cut in a rubber boot," a friend said. "It will look and feel like his mother."

We did, forcing formula out through the



Splashing in the surf, the Horstmans' Great Dane and golden retriever frolic with Shag,

Moment of mutual admiration comes

hole with an ear syringe. Shag knew the difference and refused to dine. In his hunger he began sucking on the furniture, rugs, even the ears of our miniature dachshund, a rather seal-like creature herself. Then he tried a new target—my mother's ankle.

Mother, with us for a brief visit, acted with admirable speed and wisdom. Saturating a sponge with a blend of heavy cream and egg yolks, she began dribbling the mixture down her stocking. Shag sucked it in as fast as it reached her anklebone. My leg served as a substitute mother seal until he stopped nursing some ten days later.

Even with this rich diet, Shag was losing weight. We were advised to put him on solid food immediately. But he spurned even the smallest bit of fish. Nina soon wearied of this nonsense. Rolling Shag onto his back and sitting astride him, she pinned him to the floor. When he snarled in protest, she crammed a sliver of mackerel down his throat. Swallowing reluctantly, he looked surprised, then pleased. From then until September, when he began foraging for himself, he willingly took from our hands seven pounds of fish fillets a day.

Ocean-born Creature Rejects the Sea

Since a harbor seal knows by instinct how to swim, we began putting Shag into the ocean as soon as we brought him home. He did not desert us as the experts predicted. Quite the contrary. Even when we herded him into deep water, he raced for shore, obviously preferring his land-based home and human company to a lonely life at sea.

Again Nina made the break-through—by inventing a game of water tag Shag could not resist. As she splashed through the surf, he would follow, gently wrapping his front flippers around her leg when he caught her. The sport became a family affair, and Shag would stay and play—but only as long as we were with him. Thus he came to enjoy—with reservations—his true environment.

One August evening Shag refused to follow us out of the water.

"He's still so young," said Nina, in her anxious-mother voice. "Hadn't you better pick him up and bring him in?"

"No," I answered. "He's lived with us long enough to know where his home is. If we really want him to be free, now's the time to start."





whose canine features and playfulness led the family to call him "dog of the sea."

for Nina and Shag, who likes to have his stomach scratched at such times.

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ILLUSTRATION (LEFT) AND PHOTOGRAPHY BY ROBERT J. BRISOR © R.J.B.





KIMBERLY WELLS © NATIONAL GEOGRAPHIC SOCIETY

Declining a handout from beach-strolling nuns—he eats only fish—Shag sun-bathes at the water's edge. Most strangers know little about seals. Some, finding him asleep on shore, try to push him back into the sea to revive him, yet he need not stay wet to survive. Others, seeing him dozing on the ocean's swell, attempt to rescue him. This tug of war abated when the Horstmans publicized the seal's natural habits.

Safe on the sun porch, Shag relaxes with Nina and Bob Horstman. Contented now, this creature of the sea will soon go adventuring again. The Horstmans will not discourage him, since they decided from the first to give him complete freedom. Open nostrils and ear holes close when he submerges.

Seal in the cellarway means Shag came home last night. If he returns after lights-out, he sleeps in the basement until hunger drives him out fishing again or morning noises above entice him to join the family circle. Few laws protect the harbor seal, also known as the common or sand seal. Many are killed for sport and because some consider them a threat to commercial fishing. In their search for food, seals sometimes damage nets but, conservationists contend, they do not seriously deplete the types of fish sought by man.

That night we left our basement door open so he could find shelter if he wanted it. He was not inside the next morning, but telltale trails in the sand said he had been there. His days of close chaperonage were over.

As fall approached, Shag's absences became longer. We began to fear for his safety, for Shag, seeking companionship, may come ashore anywhere, hump to the nearest human, and quietly drop off to sleep.

Thus far we had avoided publicity, feeling it would only attract people to pester our pet. Now a close call changed our minds.

Although Shag had been gone all day, we were not alarmed—not, that is, until we learned by chance that a young seal, napping on the beach at nearby Ocean City, had been netted by a fisherman who planned to sell his unusual prize. It was Shag, all right, and had we not rescued him promptly, he might have spent the rest of his days in some far-off zoo.

We decided then that if people knew a pet seal was cruising the coast, we would be informed promptly when Shag was sighted. The newspapers and radio stations were most cooperative, and we now have helpful Shag spotters along the Jersey shore. Many have





PHOTOGRAPH BY NATIONAL GEOGRAPHIC PHOTOGRAPHER KENNETH L. COOPER © N.G.S.

learned, however, that he does not like to be petted by strangers. He enforces this hands-off policy with a warning growl or snap.

Hurricanes, like humans, can prove hazardous to little seals. When storm warnings went up in September a year ago, Shag was already at sea. The wind-lashed Atlantic turned white, and still we scanned it in vain for a familiar black dot. Then came the grim news that Shag was waging a desperate battle to come ashore half a mile up the beach; a surf-battered sea wall blocked his way.

When I arrived, the odds seemed hopeless, but I had to try to save him. Tying a rope around my waist and trusting my life to willing hands that held the other end, I dropped over the wall into murderous seas. I had almost coaxed Shag within reach when a monster wave hit us both, crashing me against the concrete and sending our terrified seal out into open ocean. I did not see how he could survive such punishment. Miraculously he did survive—by moving up to Margate City, the next town north, and beaching where no sea walls hampered him.

Now it was fall, and the annual run of big striped bass brought hundreds of surf casters

to our shore. Shag delighted in trailing, not touching, their colorful lures. This playful habit frustrated many a dawn fisherman who, thinking a real whopper was lunging after his line, reeled in to find a fishless hook in his hand and a friendly seal at his feet.

Snappishness Suggests an Inner Struggle

As autumn waned, our seal, like the bass, began searching farther afield for the great schools of mullet that frequent our coast. By early winter, he was treating us like strangers, growling and snapping at our touch. There seemed a look of antagonism in his normally kind, unblinking eyes. Was Shag torn between two worlds—one of safe domesticity, the other wild, uncertain, but truly his?

We began to believe the experts who had said the venture would end in failure. Days away stretched into a week, then more. Yet each time we gave Shag up for lost, he returned—sometimes tunneling with great effort through deep snowdrifts to reach his cellar hideaway. Still he wanted no part of us.

One day in late January, when ice still frosted the jetty, I saw Shag swimming near the shore. I had no hope he would be friendly

Perky female pup, acquired to interest Shag, feeds from a syringe. No one knows exactly when seals reach breeding age. It may be two years for her; three or four for him. Pups arrive in early spring or summer, following seven and a half months of gestation.



DETACHMENT (ABOVE) AND BOUQUINING (© H.S.L.)

Surfer of all seasons, Shag rides winter waves returning from several days at sea. Young seals often travel long distances in their first few years but stay close to breeding grounds once they mate.

but donned a wetsuit, waded into the surf, and started a game of water tag. Shag, full of enthusiasm, joined in immediately, streaking and porpoising around me. He again became a good-humored member of our household, following Nina as she did her chores, frolicking on the beach with our dogs and children.

As fall again gives way to winter, we wonder if his long absences will begin anew. Or if the female seal pup (above) we acquired this summer, as we had Shag the year before, will anchor him more firmly to our hearth.

Naturally we would like to see a second

generation of seals come of this pair, but of course neither has yet reached breeding age. As if making the most of his bachelor years, Shag spends almost every night out on the tides. By day, his friendship with the newcomer grows—even now we can see them swimming together well beyond the breakers. We realize the risks in this relationship, for Shag, with another seal at his side, may find life ashore less satisfying and turn his back on us forever. In the meantime, we can only wait—and watch—and hope that this wild creature, raised in freedom, will not desert us.

New map of Canada's Mount Kennedy area

WHEN THE CANADIAN GOVERNMENT in 1965 named a 13,905-foot peak for the late President John F. Kennedy, world attention focused on a remote corner of the Yukon Territory. But no large-scale map of the region existed. Now, thanks to a research project directed by Dr. Bradford Washburn of the Boston Museum of Science, and sponsored by the museum and the National Geographic Society, **The Massif of Mount Hubbard, Mount Alverstone, and Mount Kennedy** has been charted in unprecedented detail. On a scale of two inches to the mile, the new map reflects the skills of Swiss cartographer Paul Ulmer, who studied hundreds of aerial photographs to interpret rock structure and glacial detail, and Tibor G. Toth of the Society's cartographic staff, an expert in relief shading. Copies may be obtained from the National Geographic Society, Washington, D. C. 20036, for \$1.00 folded, or \$1.50 rolled, plus 15 cents for postage.



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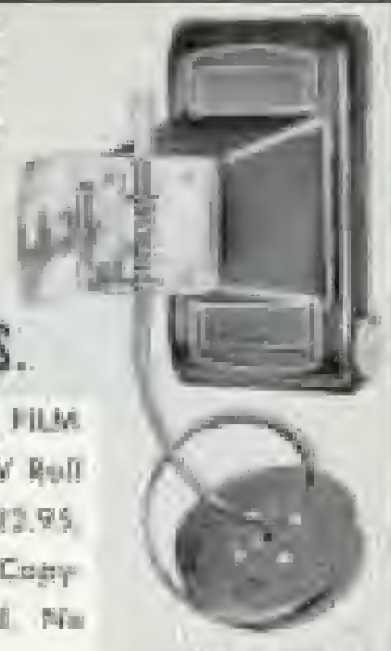
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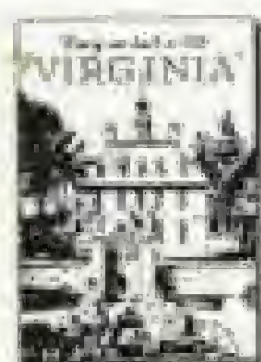
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By the fifties, things were different. There were twice as many cars. And a new word had entered our vocabulary. Smog. The car's contribution to this phenomenon had become a

problem to be taken very seriously. Rightly so.

By 1978, there will be six times as many cars on American roads as there were in the late twenties. Will the exhaust problem be six times worse? The answer from Jersey's affiliate, Esso Research, is a resounding no. Here are a few incontrovertible facts.

Air pollution from cars reached its zenith last year. We have now passed the turning point. Despite the car population explosion, total exhaust emissions will go down this year—further down in 1969—and further and further down in all successive years.



problem than they were in 1928.

By the early eighties, the unburned gasoline exuded by each car will be less than half an ounce a day. Little more than you need to fill a cigarette lighter.

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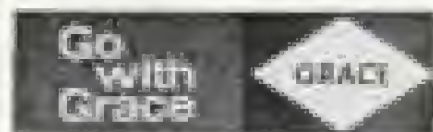
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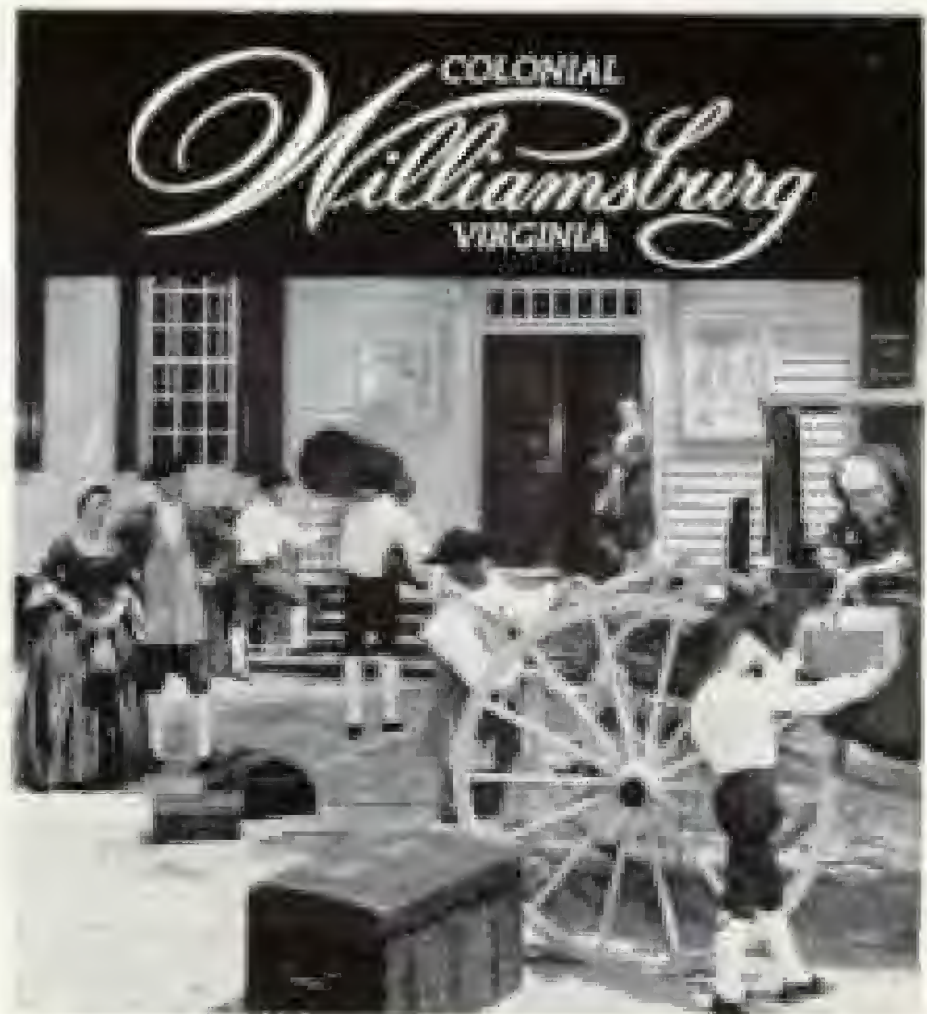
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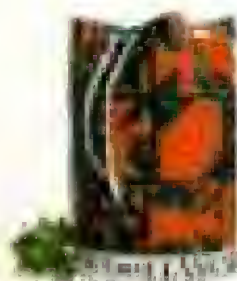
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And open it next July.***



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A call to your Travel Agent or United Air Lines will fix everything.

You'll get everything in one neat package—jet tickets, hotel rooms, sightseeing trips, rental car—the works. You can charge it all with your United

Credit Card—and pay for it easily, by the month.

Frosting on the cake: your Travel Agent even has a colorful Hawaiian beach bag to slip your tickets in and put under the tree. It's yours for next to nothing.

Go ahead. Surprise your wife with Hawaii for Christmas. It costs a lot less than you think—and it pays for your vacation next year, too.



"Happy Christmas."
"Happy 4th of July, Dear."