

VOLUME LXXVII

NUMBER FIVE

# THE NATIONAL GEOGRAPHIC MAGAZINE

MAY, 1940

Special Map Supplement of Europe  
and the Near East

Salty Nova Scotia

With 30 Illustrations and Map

ANDREW H. BROWN

Tartan Tints New Scotland

21 Natural Color Photographs

New Map of Europe Records War Changes

Stone Idols of Colombia

Reveal a Vanished People

With 23 Illustrations HERMANN VON WALDE-WALDEGG

Old Ireland, Mother of New Eire

With 20 Illustrations

HARRISON HOWELL WALKER

When Irish Skies Are Smiling

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In Quest of the Golden Eagle

With 17 Illustrations

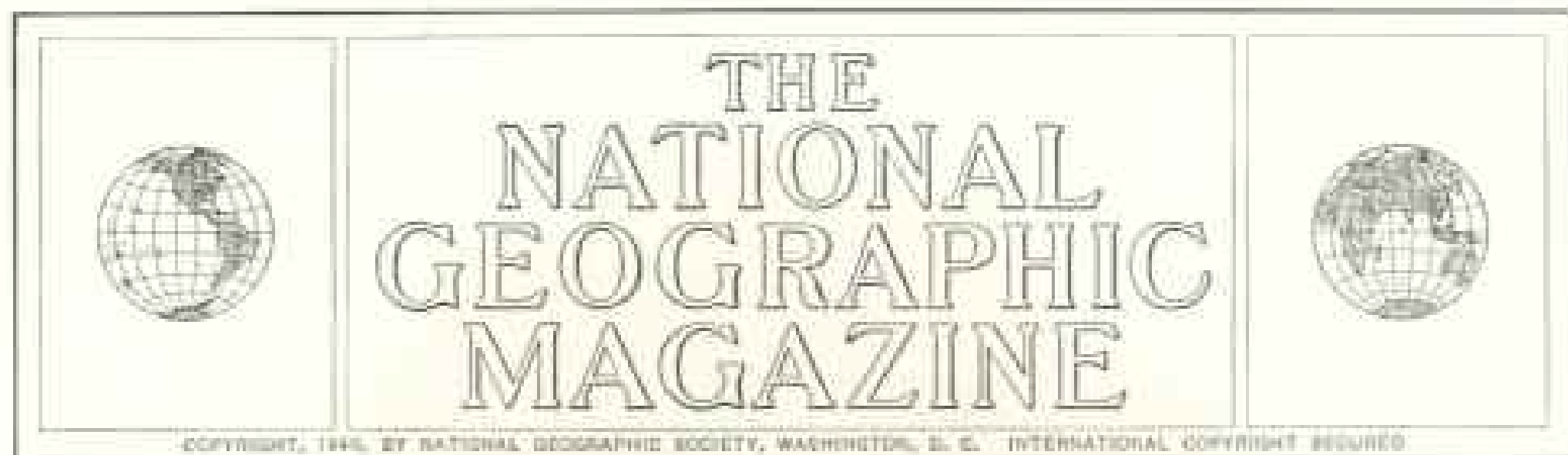
JOHN and FRANK CRAIGHEAD

Thirty-two Pages of Illustrations in Full Color

PUBLISHED BY THE  
NATIONAL GEOGRAPHIC SOCIETY  
HUBBARD MEMORIAL HALL  
WASHINGTON, D.C.

\$3.50 A YEAR

50c THE COPY



## SALTY NOVA SCOTIA

### In Friendly New Scotland Gaelic Songs Still Answer the Skirling Bagpipes

BY ANDREW H. BROWN

**S**EAGIRT Nova Scotia is the Atlantic outpost for Canada at war.

Grimly, but with patriotic zest, her people have assumed the fresh responsibilities arising from the position of their Province as the doorstep to the Dominion.

In Nova Scotian ports, as in other Canadian maritime cities, mine fields and submarine nets protect the closely guarded anchorages. Docks and gangplanks echo to the tramp of embarking regiments.

Yet beyond the busy water fronts the visitor to bonny "New Scotland" finds life going on in much the usual way, for Nova Scotians take events in stride. And on every hand he sees evidence of the rich heritage that links Nova Scotia with the motherland over the sea.

#### THE NEW "AULD COUNTRY"

Canada was still at peace when I went to Nova Scotia. A friend had written to me about the sunrise Province: "Here you'll breathe sea air that blends with breezes fragrant with spruce. You'll skirt granite headlands strewn with skeletons of forgotten wooden ships, and tack into quiet harbors under leaning sails.

"You can sit on old guns rusting in shattered forts and dream of long ago when the French and English fought bitterly for this land. You will find kilted men in gay Glengarry bonnets proudly bearing tasseled bagpipes upon which they still skirl their bold ancestral airs" (Color Plates I and XIII).

"Nova Scotia," I recalled, is simply Latin for "New Scotland." On a pocket map of the Province I checked names redolent of the homeland of Stuart kings: Lochaber, Glengarry, Argyle, and Culloden; Barra, Glencoe, Iona, Loch Lomond; Strathlorne, Skir Dhu, and Dundee.

Angus Macdonald is the name of the Premier, and MacMillan, McDonald, and MacQuarrie are the names of three members of his Cabinet.

Among 320 voters listed in one electoral district, Iona, I counted 205 McNeils. North in the Province I found so many McLeods, McLeans, McDonalds, and McNeils in some districts that last names are meaningless. Neighbors there are known to one another only by nicknames. Fathers' occupations or baptized names become children's surnames: Red Norman, Sarah Buttermilk, Johnny Postman, Freddie Bank, George Holy (son of "Holy" John).

"So Scottish is Nova Scotia," a traveler remarked, "that its Indians are even called Micmacs!"

Yet the modern fitness of its Latin name is only a coincidence.

Canada's sunrise Province actually was named "New Scotland" while French and Indians still held the land and 152 years before Highland settlers came to stay.

To Sir William Alexander, a Scottish gentleman of the Court, James I of England granted, in 1621, all lands lying between New England and Newfoundland, "to be



Photograph by John Mills, Jr.

"HOME IS THE SAILOR, HOME FROM SEA"

An old fisherman of Blue Rock, near Lunenburg, lives up to the line by Robert Louis Stevenson as he plays the organ for his wife in their cottage parlor. The man taught himself to play the instrument and on Sundays he is the church organist.

holden of us from our kingdom of Scotland as a part thereof."

"Nova Scotia" was the name used in the document conveying the grant.

But expeditions sent out by 140 baronets of Nova Scotia had scant success in the New World, and cession of the territory to France by Charles I in 1632 spiked the enterprise for good.

That the land thus prematurely named "New Scotland" should at last attract such an influx of Scots as to give wide sections of the Province a permanent Scottish stamp of blood and character makes of Sir Wil-

liam Alexander a first-rate prophet, even if matter-of-fact history dubs him only a fourth-rate colonizer!

But however Scottish the Province is, English blood predominates in its southern half. Large numbers of United Empire Loyalists and other settlers of English stock emigrated to that district from the American Colonies.

It was mid-July when we drove across the wide green marshes of the Tantramar, entering the Province by the strip of tidal meadow that binds the peninsula to neighboring New Brunswick (map, pages 580-581).

On a rise above the marshes stands the attractive border booth of the Provincial Bureau of Information. Here lawns, flower beds, and hedges

form a pleasing setting for a huge relief map of Nova Scotia, sunk below a broad walk and surrounded by a miniature ocean.

THE MYSTERY OF "MARY CELESTE"

From the New Brunswick border a curving pastoral road led us south to Parrsboro. I looked out from the steep shore there over the broad blue of Minas Basin. Partridge Island, hugging the Parrsboro hills, and purple, table-topped Cape Blomidon, eight miles south, are titanic "jaws" through which Minas Basin sucks in and spews out Fundy's surging forty-foot tides.



Photograph by W. R. MacAskill

KILTED LASSIES KICK AND POSTURE IN A HIGHLAND FLING

Dancers perform on one small spot with strict attention to form, grace, and gesture. These Scottish girls are competing in the Highland Games at Antigonish, an annual summer celebration. The lassie second from the left has won many contests; badges of victory stud her velvet jacket.



Photograph by Andrew H. Brown

"MY SOUL IS FULL OF LONGING FOR THE SECRET OF THE SEA,  
AND THE HEART OF THE GREAT OCEAN SENDS A THRILLING PULSE THROUGH ME"  
Longfellow's *The Secret of the Sea* is appropriate to this scene of breaking surf at Peggy's Cove.



Photograph courtesy Canadian Pacific Railway

#### CLUSTERS OF SNOWY APPLE BLOSSOMS FESTOON ORCHARDS IN EARLY JUNE

Every year Nova Scotia grows enough apples to fill a continuous line of barrels from New York to Chicago; the fruit is the Province's biggest agricultural export. Most productive area is the Annapolis-Cornwallis Valley, containing the largest aggregation of apple orchards in the British Empire. Early French settlers from Normandy introduced the apple to this region (page 585).

At Spencer's Island, west of Parrsboro, was built the famous *Mary Celeste*, which sailed from New York for Genoa in 1872 with ten persons, including the captain's wife and daughter. Weeks later, a British vessel, overhauling the staggering *Celeste*, sent a boarding party to find out why she was headed westerly, obviously out of control with but three sails set.

Not a soul was on board. The captain's wife had been sewing; a half-stitched blouse lay on the floor beside her chair. Ashes in the galley stove were still warm.

Gone were the chronometer, sextant, and ship's papers—and the yawl boat that had been carried across the main hatch.

Weather had been calm; the ship was almost dry and there had been no fire. It had not been looted by pirates. Not one of the missing persons was ever found.

The mystery of the *Mary Celeste* has become a classic that will be told as long as the tides run.

Rounding the head of Cobequid Bay, I passed through tree-shaded Truro, known as the hub of Nova Scotia. Roads and railroads radiate like spokes of a wheel from this busy town, with its 1,000-acre Victoria Park, a magnificent natural playground.

#### FREAKISH EFFECTS OF HIGH TIDES

Incredibly high tides are observed along the Minas Basin, particularly in the Noel Shore area; the difference between low and high tides at times amounts to 50 feet.

When the sea ebbs away from vessels moored at wharves, hull repairs below waterline are easily made. I watched lumber boats lie offshore at anchor for six hours waiting for the harbor to fill with water.



— Photograph by Robert Bendick

STILL TOO "GREEN" FOR THE GAFF, A BIG TUNA TURNS ON THE SURFACE

Gaffmen get set as the fisherman fights the giant bluefin's last run. The captain stands ready to grab the steel leader. Such battles off the Nova Scotia coast may last several hours and test the skill of even the most expert anglers. The present rod-and-reel record for this Atlantic species is held by John Manning of Los Angeles, with an 890-pound fish taken off Wedgeport.

Drowned at high tide, steep, muddy river banks along the Fundy shore are glisteningly revealed by the 20-to-50 foot drop of the moon-struck sea (page 587).

Small boys put to frolicsome use such high, slick slopes of red mud at Port Williams, south of the Basin. Down they slithered at greased speed from grassy brink to explosive ducking in the Cornwallis River.

Woe to the naked youngster who strikes a hidden clam shell!

On a breezy, peak-of-summer afternoon, when frisky lights and shadows played tag on village lawns, I came to Grand Pré. A memorial park lies between the gentle hillside where the old French hamlet stood and the lush, flat Great Meadow itself.

Acadian settlers, during the 17th and 18th centuries, put through a reclamation project that would be an outstanding engi-

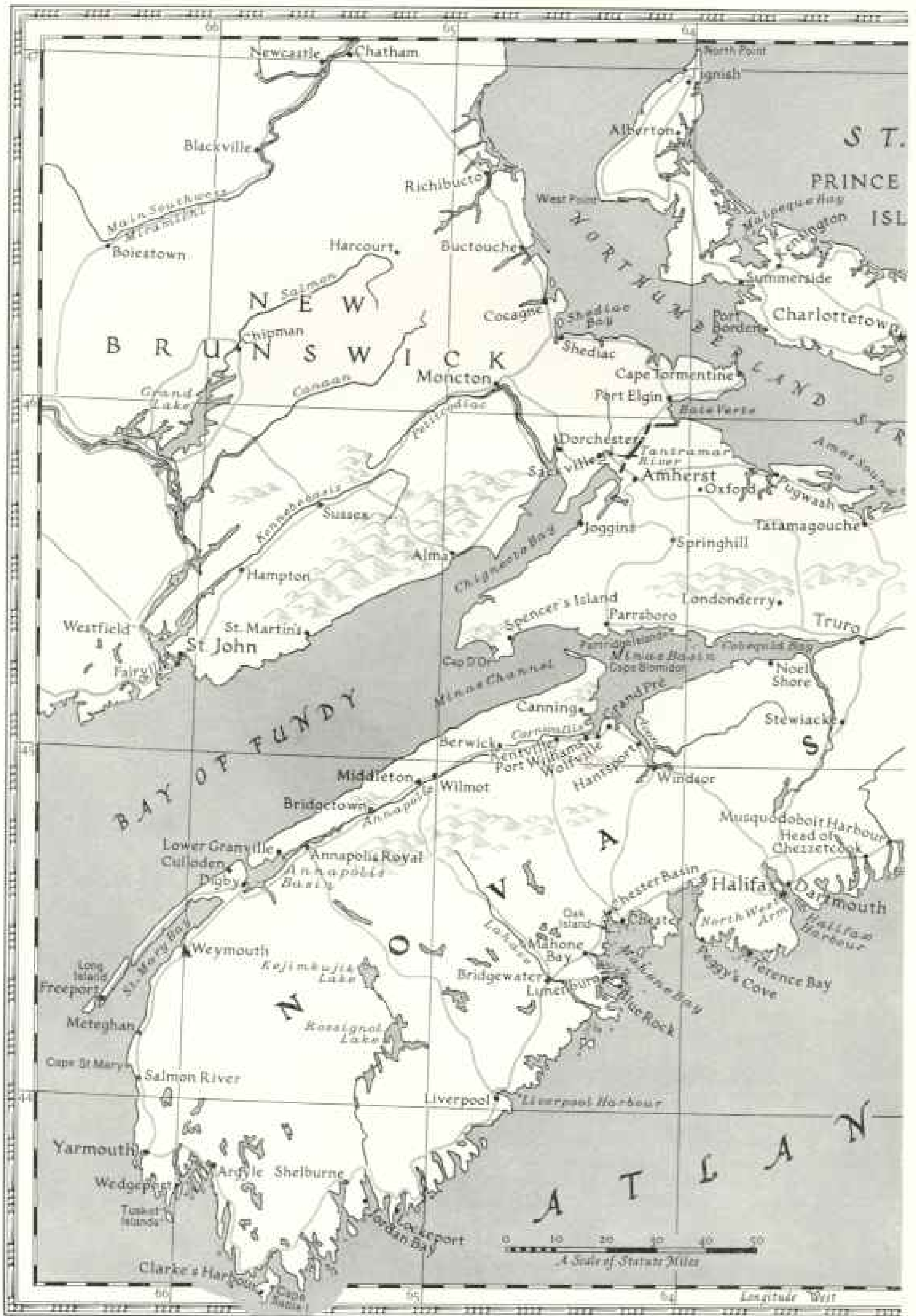
neering job even today. They diked the vast mud flats formed by Fundy tides at the mouths of the rivers that reach into the land from Minas Basin.

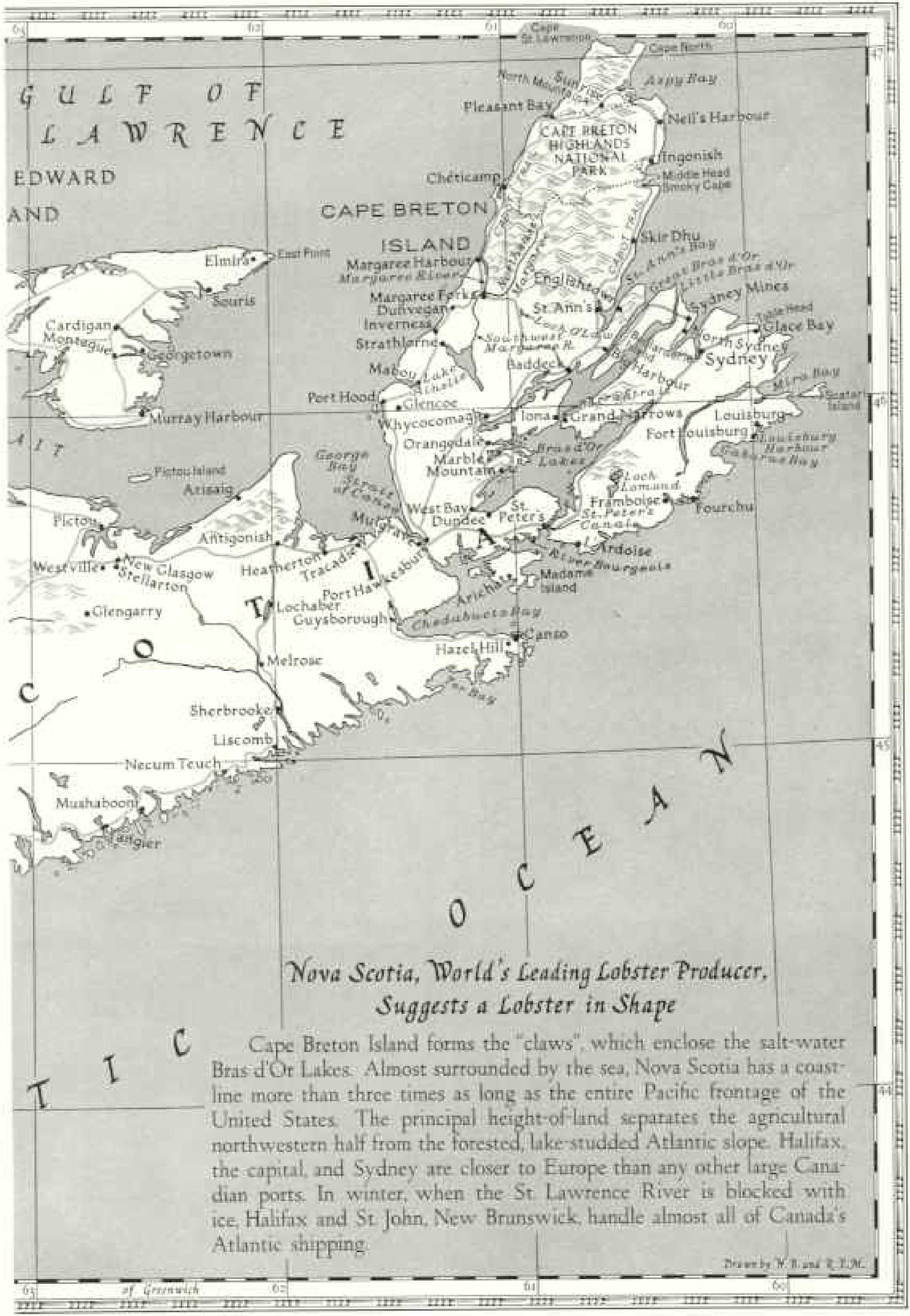
In 1755 the British expelled the Acadians from the country. Longfellow's *Evangeline*, metrical story of this exodus, tells history in memorable form, but the emphasis on British guilt in this tragedy is more the poet's than history's.

THE EPIC OF THE ACADIANS:

I looked at the bronze, life-size *Evangeline*, sculptured by a direct descendant of a pioneer Acadian family, and a conversation with Nova Scotia's Premier came to mind.

"For unquenchable devotion of exiles to their native land, what can compare with the trek of many of the Acadians back to



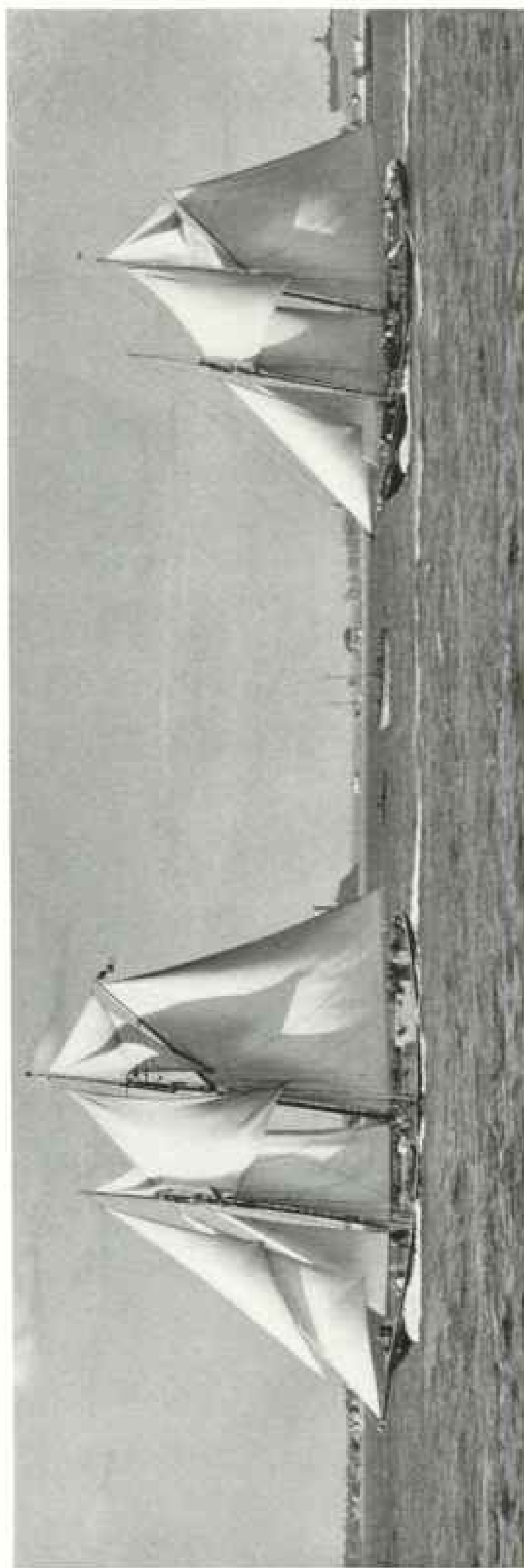


*Nova Scotia, World's Leading Lobster Producer,  
Suggests a Lobster in Shape*

Cape Breton Island forms the "claws", which enclose the salt-water Bras d'Or Lakes. Almost surrounded by the sea, Nova Scotia has a coastline more than three times as long as the entire Pacific frontage of the United States. The principal height-of-land separates the agricultural northwestern half from the forested, lake-studded Atlantic slope. Halifax, the capital, and Sydney are closer to Europe than any other large Canadian ports. In winter, when the St. Lawrence River is blocked with ice, Halifax and St. John, New Brunswick, handle almost all of Canada's Atlantic shipping.

Drawn by W. J. and R. J. M.

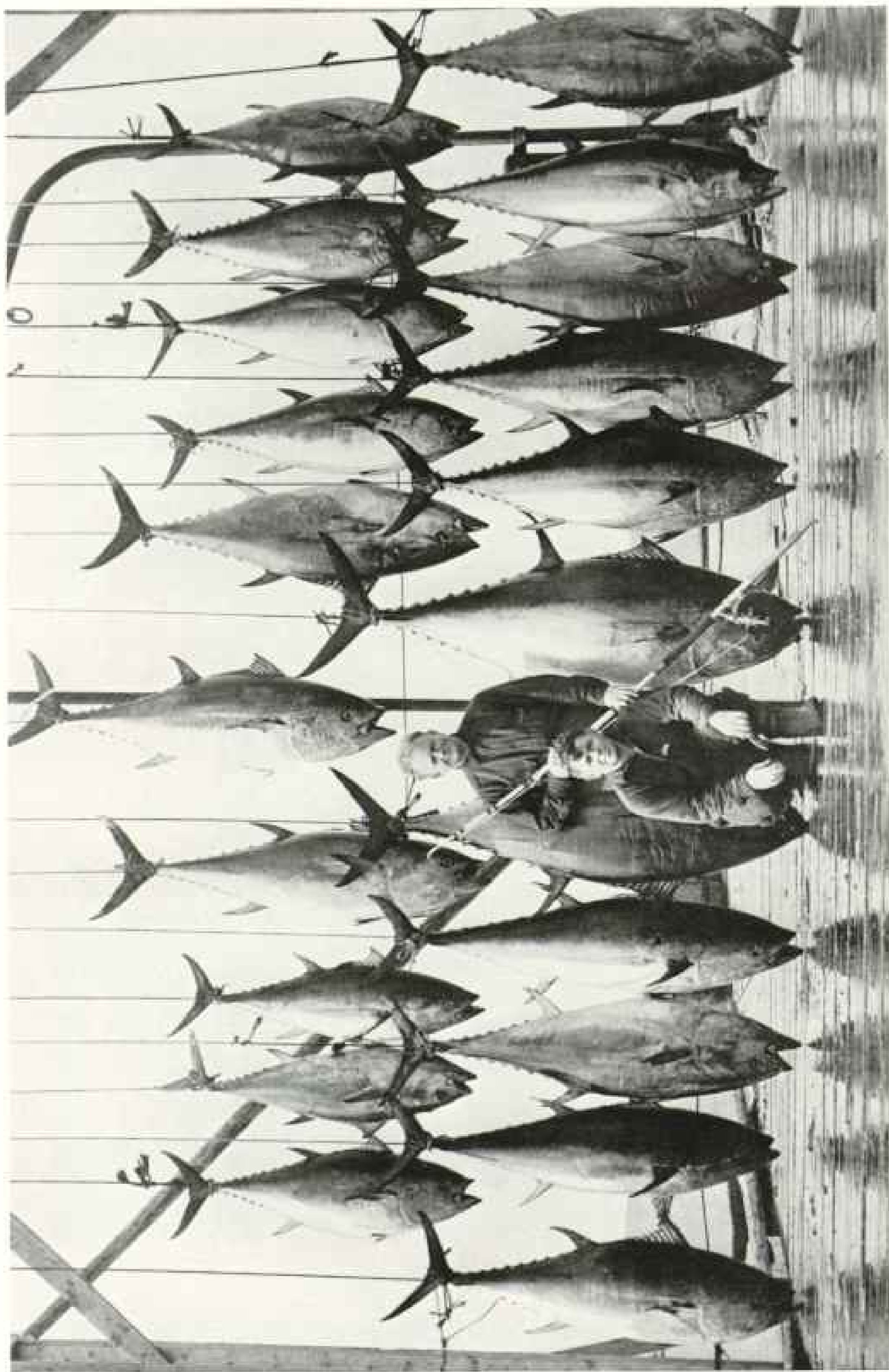




NOVA SCOTIA'S "BLUENOSE," BEHIND FOR THE MOMENT, CLOSES IN ON THE "GERTRUDE L. THEBAUD" OF MASSACHUSETTS Racing off Boston in October, 1938, the *Bluenose* won three out of five contests for the International Fishermen's Trophy. Photograph by Morris Rosenfeld.

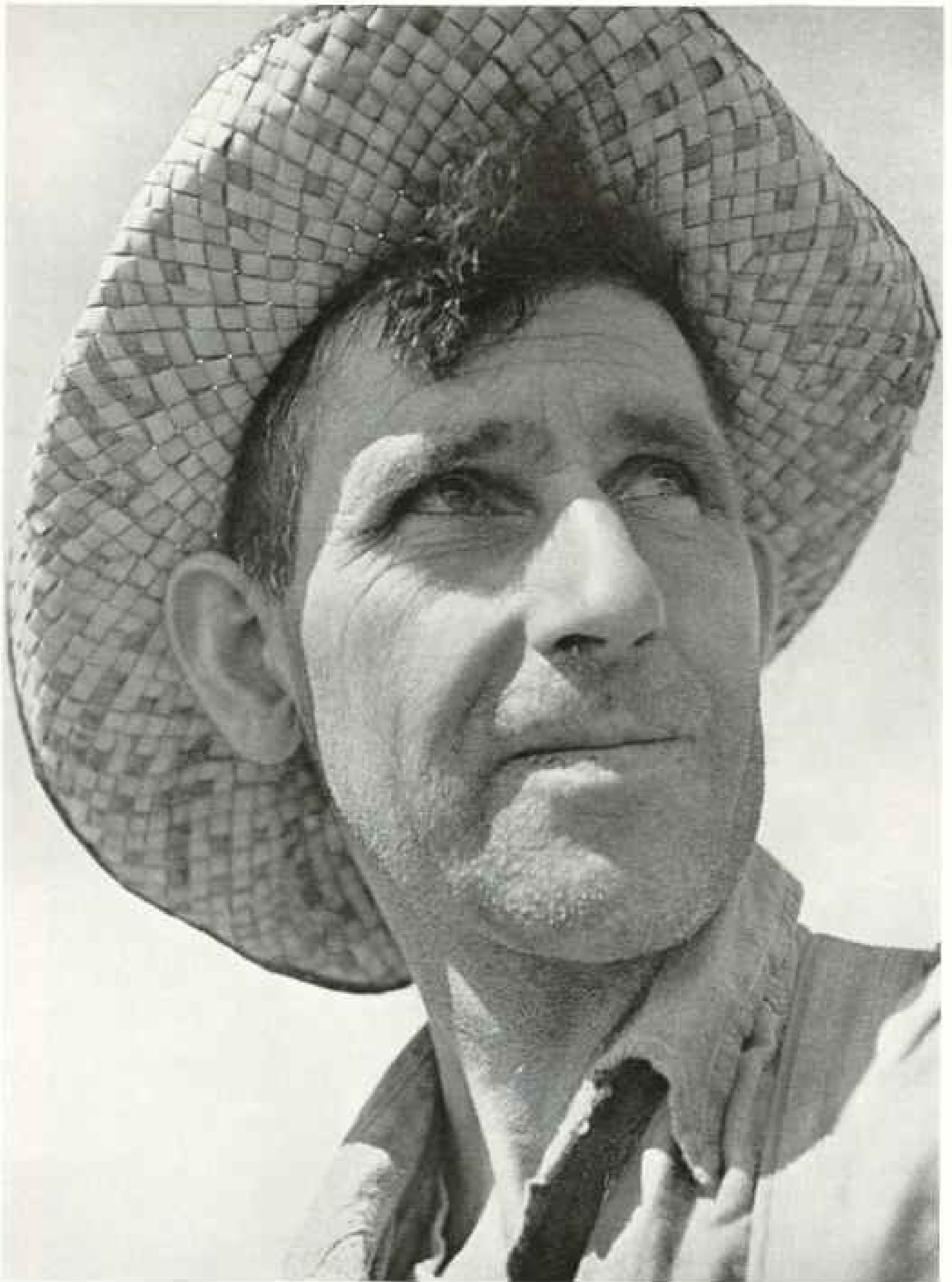


IN MID-CABER, BETWEEN NOVA SCOTIAN SEA AND CARIBBEAN STEW, CODDISH TAKES THE SUN-AND-AIR CURE. Fishermen at Ingonish, Cape Breton Island, spread out stacks of split and salted coddish to dry. Smoky Cipe rises in the left distance. Photograph by Frank H. Foster.



TUNA BY THE TON, CAUGHT IN EIGHT DAYS BY A SINGLE FISHERMAN, HANGS HIGH AT WEDGEPORT.

Michael Lerner of New York stands holding the rod with which he captured the 21 giant bluefins weighing a total of 3,677 pounds. The big prizes were hooked in the tide rips among the rocky Tusket Islands (pages 279 and 290).



Photograph by Herrmann from Pix

SMILING SKIES BRING DREAMS OF A BOUNTIFUL HARVEST

Roy MacNeil, a farmer from Windsor, is a descendant of the Scottish settlers who came by the shipload to the new frontier of Nova Scotia at the end of the 18th century. To help farmers increase the yield and quality of their crops, and improve their poultry and livestock, the Canadian Government maintains a Dominion Agricultural Experimental Station near Kentville in the Cornwallis Valley.



Photograph by Melville Bell Grosvenor

A CAPE BRETON YAWL SPEAKS THE DOOMED FOUR-MASTER "AVON QUEEN"

Off the coast of Nova Scotia, the yacht *Elsie* draws close to the big schooner, Bermuda-bound. Shortly after the picture was taken, in March, 1937, the *Avon Queen* foundered near San Salvador (Watling) Island in the Bahamas. Captain and crew of eight were rescued by the United States destroyer *Fairfax*.

Nova Scotia!" Premier Macdonald had said. "After the tragic expulsion of 1755, they were scattered throughout New England and even more distant regions. Courageously, groups of them threw meager belongings over their shoulders and began the wearisome journey back to the peaceful meadows from which they had been driven. For many women and children it meant a thousand-mile walk over long stretches where there were no roads, and the threat of Indian attack was constant.

"And when they reached their goal, what did they find? The fields their fathers had redeemed from the sea were occupied by Scots, English, and settlers from New England. So, perforce, they settled on less fruitful soil, content at least to be back in the homeland of their ancestors. There you'll find them today, in widely separated colonies throughout the Province, preserving intact their Norman tongue, customs,

and religion. Than this, our history records no more triumphant chapter."

Bright sunshine drenched the orchard-lined highway leading up the Cornwallis Valley and down the Annapolis on the day we traversed this "apple barrel of eastern Canada," the largest aggregation of apple orchards in the British Empire. Elm-crowned villages and armies of apple trees glistened green in the glow of the summer afternoon.

In an average year Nova Scotia grows about 2,200,000 barrels of apples. This fruit is the largest agricultural export of the Province; 75 per cent of the crop goes to British markets (page 578).

A PIONEER IN LIFE INSURANCE

At Wilmot, in the Annapolis Valley, Morris Robinson, founder of mutual life insurance in North America, was born in a log house in 1784. Robinson journeyed to New York when a young man and



Photograph by Herrmann from Pia

**A DIVE AT LOW TIDE WOULD BE A PLUNGE INTO MUD!**

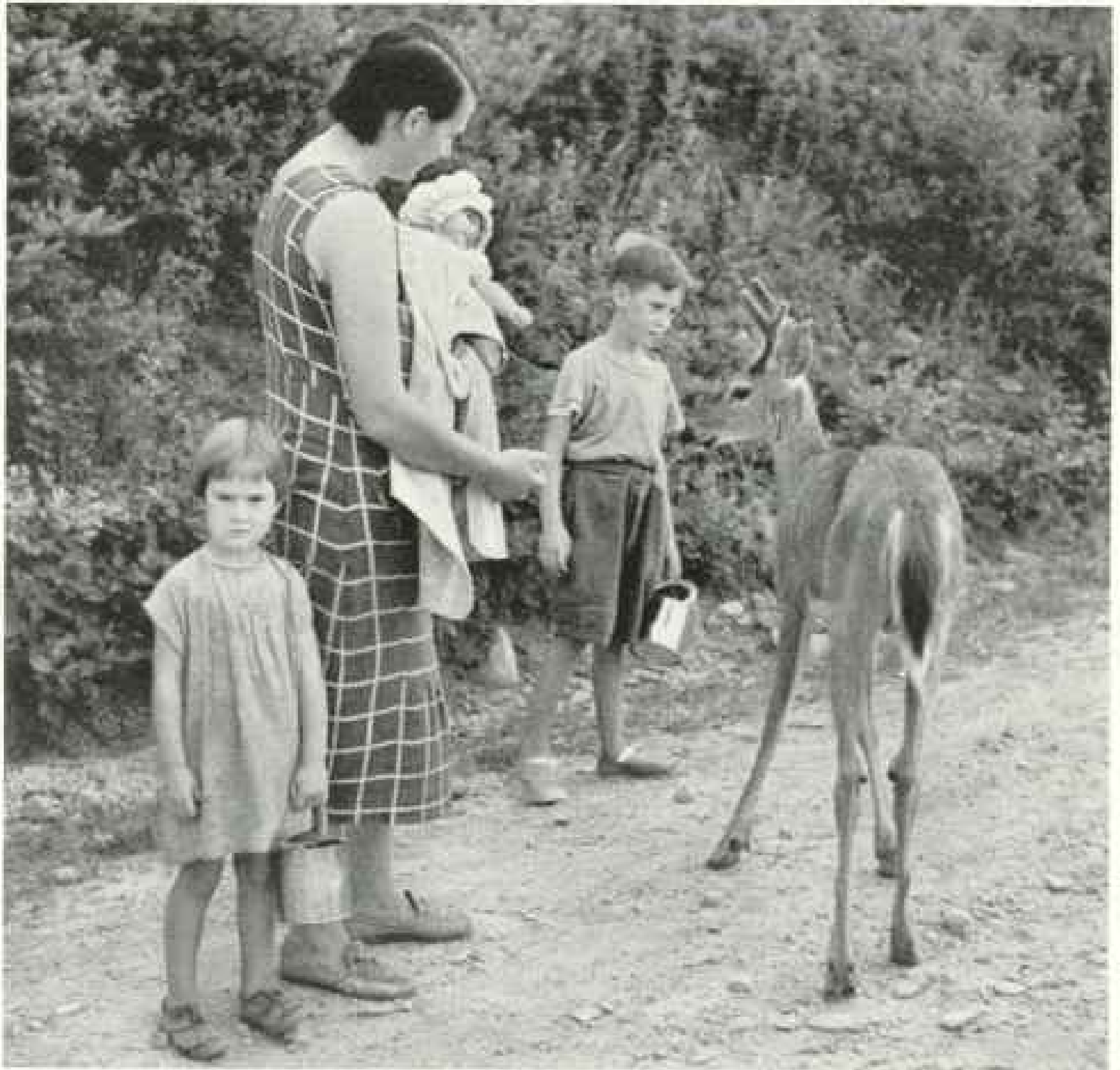
*Tautra*, a big Norwegian freighter, has moored in the lower Avon River at high water. Sailors enjoy a dip in waters which rush in from Minas Basin to reach phenomenal heights during spring tides. Along Bay of Fundy shores, the sea stages this spectacular evidence of the pull of sun and moon.



Photograph by Hermann from Pix

WHEN THE TIDE GOES OUT, THE SHIP LIES HIGH AND DRY

Sometimes there is a difference of more than 40 feet between high and low tide here at Windsor at the mouth of the Avon River (opposite). Heavy plunks sunk on the bottom provide a cradle for the ship. Where the harbor floor is nothing but mud, cables and hawsers prevent vessels from heeling at the wharves.



Photograph by Andrew H. Brown

A DEER GOES BLUEBERRYING WITH ITS ADOPTED FAMILY NEAR SHERBROOKE

Found starving by a hunter, the timid woodland dweller grew tame when this family fed it and gave it care. Now the four-legged friend follows its benefactors wherever they go.

for 19 years worked in the United States Bank.

Becoming interested in life insurance, he went to England to study the subject, and on his return organized the Mutual Life Insurance Company of New York. On the building at No. 56 Wall Street, New York City, is a tablet to his memory stating that there, on February 1, 1843, he established "the business of modern life insurance on the American Continent."

At Lower Granville, a few miles down-river from Annapolis Royal, I saw buildings being erected on the first site of the oldest permanent European settlement in the New World north of the Spanish possessions. It was there that Champlain and Poutrincourt, after an unfortunate first

winter on St. Croix Island (now Dochet Island), Maine, built their original *habitation* in 1605.

THE "AXIS OF A HEMISPHERE'S FATE"

Five years later, Poutrincourt moved the settlement of Port Royal from Lower Granville to the site now occupied by Annapolis Royal. Its modern name was given in honor of Anne, Britain's Queen in 1710, when the town fell to Colonel Francis Nicholson from Boston and came under British control for good. In the intervening century the old fort was taken and retaken eight times, and besieged on many more occasions (Color Plate II).

We sat, one evening, on a grassy outwork of the old fort of Annapolis Royal. While



Photograph by F. W. Baldwin

"NEW SCOTLAND" HAS MANY VISTAS THAT SUGGEST OLD SCOTLAND'S BANKS AND BRAES

From a canoe-birch grove, a silvery arm of a bay near Ingonish is seen winding inland among steep, green hills sprinkled with white farmhouses and fishermen's cottages. The spectacular Cabot Trail skirts these shores (page 614).

a band played martial music, I weighed the almost incredible fact that "on this pinpoint of space once rested the axis of a hemisphere's fate." Captured and recaptured by French and British forces, Annapolis Royal was a shuttlecock in their contest for a continent.

To offset wilderness depression, Champlain founded the continent's first night club. The "Order of the Good Time" fostered fellowship and gaiety, provided emotional relief for exiled men.

Each pioneer was Grand Master in turn, and each, in eagerness to surpass his fellows, spent days with net and musket collecting choicest fish and game, so that it was recorded that the tables "creaked

with all the luxuries of the winter forest."

Then, on the scheduled day, in they trooped—Poutrincourt, Champlain, Biencourt, Lescarbot, and the rest—"napkin over arm and steaming platter in hand, and sat down to such feasts of partridge and mallard, of roast goose and broiled venison, of beaver pasties and sturgeon and lark and caribou steak and trout that, as Lescarbot wrote, it was enough to make 'the belly-gods of Paris' envious."

After the feast, around the company passed the huge lobster-claw pipe of peace.

Three years ago the Order was revived to perpetuate a link with the earliest days. The late Lord Tweedsmuir, Governor General of Canada, held the office of Grand



Master. Visitors spending ten or more days in the Province, who register upon entrance and departure, receive certificates admitting them to America's oldest social club. More than 125,000, representing nearly all countries, now belong to the Order.

Capital of Nova Scotia from 1710 until the founding of Halifax in 1749, Annapolis Royal was the seat of the governor of the Province. It was also the heart of a district of "first things" in Canada.

The first water-power mill in Canada was constructed here to grind the colony's wheat and corn. Canada's first sailing vessel was launched on Annapolis Basin. Here Lescarbot wrote the first Canadian poem; Louis Hébert conducted the first apothecary shop; the first bricks were made. On June 24, 1610, twenty-one Indians were baptized by Père Flesche, of Port Royal, the first baptisms recorded in Canada.

Digby, near by, is the home of one of the world's great scallop fleets. From that playground of eastern Canada I motored through one of America's longest "Main Streets." For 30 miles along the shore of St. Mary Bay, Acadian villages stretch continuously and the French language is spoken almost exclusively.

#### TALL SHIPS FROM TALL TREES

Trees, mostly evergreens, still cover about three-fourths of Nova Scotia.

Abundance of timber decisively influenced the Province's 19th-century history. For two generations no other activity even approached the importance of shipbuilding. Almost every creek and cove of the Province, from 1840 to 1886, rang with the clamor of axes, hammers, adzes, and calking mallets, the rattle and strain of block and tackle.

Legions of shipwrights built toughness, speed, and grace into gallant windjammers that challenged swift-scudding Yankee men for dominance of deep-water trade lanes.

Ships, ships, and more ships! The demand for Bluenose vessels gave Nova Scotia, at the crest of its shipbuilding wave, 3,025 registered craft with a total tonnage of more than half a million. This meant one-and-a-quarter tons of shipping per capita of the Province's population, a holding then surpassing that of any other country in the world!

Donald McKay, designer and builder in Boston of the *Flying Cloud* and other record-breaking Yankee clipper ships,

learned his trade as a boy in his native Nova Scotia. I wandered through the log-littered Shelburne shipyard run by descendants of Donald's family who still build wooden coastwise freighters. On the stocks at Lunenburg, Meteghan, Mahone Bay, and Shelburne I saw wooden ships and sailing craft of 1939 taking shape (Plates XI and XII).

Each coastal town points to its scattering of retired wind-ship masters, honored survivors from a glamorous era. In sunny corners along the wharves and in shipshape farmhouse parlors these nautical patriarchs still sit and smoke and yarn away the hours.

In his little cottage office on the Yarmouth water front, within shouting distance of the wharf where big, fast steamers every week in summer discharge hordes of vacationists from the United States, we found Captain J. E. Kinney, in "retirement," managing his Marine Exchange in the midst of barometers, clinometers, clocks, lanterns, racks of charts, and pictures of old ships.

"What do today's sailors know of the discomforts endured aboard a windjammer making a western Atlantic passage during winter months?" asked Captain Kinney, in reminiscent mood. "Or weathering Cape Horn? Or running an easting down, when day after day and night after night you would be wading waist-deep in salt water, your oilskins tied at ankles and wrists with rope yarn; living on salt horse, hardtack, and bootleg 'coffee' (so-called!) with an occasional dish of dandy-funk, considered a luxury; and then turning in for a few hours' rest on a straw mattress, known then as a 'donkey's breakfast'!"

"A press report of a marine disaster in the old days was more than likely to say that 'the vessel foundered with a loss of 150 precious souls and 25 sailors,' evidently not willing to give Jack the benefit of a spiritual rating on his last voyage."

#### THE RIP, WHERE TUNA FEED

Swerving eastward from Yarmouth, we traveled the shore highway. A gradual sinking of the land through the ages etched out Nova Scotia's 300-mile-long southern edge with a fringe of bays, inlets, harbors, and coves—freckled with islands great and small—until the Province's whole Atlantic exposure looks like a jigsaw puzzle.

We came to Wedgeport, world-famous for its tuna fishing. Off this little Acadian village is the tide stream known as the

TARTAN TINTS NEW SCOTLAND



© National Geographic Society

Kodachrome by W. R. MacAskill

TO THE SKIRL OF THE BAGPIPES, SLIPPED FEET FLASH IN A HIGHLAND SWORD DANCE

The lass is ready to begin a series of fast, intricate steps within the angles formed by the crossed sword and scabbard. So nimble are her twinkling feet that not once will they touch weapon or sheath. Medals of victory in many dancing contests decorate one side of the girl's velvet jacket. Hairy pouches, called sporrans, hang from the waists of both performers in a festival at Halifax, Nova Scotia's capital.



© National Geographic Society

RIGHT TIMES ANNAPOLIS ROYAL WAS TAKEN AND RETAKEN BY BRITISH AND FRENCH IN THEIR STRUGGLE FOR NORTH AMERICA  
The officers' quarters at the old fort have been restored and converted into a historic museum. Port Royal was the name the French gave the site when they erected the first settlement near here in 1625; the British renamed it Annapolis Royal.

Photographs by John Mills, Jr.



Kontachrome by W. R. Mau, Ansell

**"SPOT" KEEPS WATCH FOR HIS NET-MENDING MASTER**

Clad in weather-beaten yellow slicker and black son'wester, this shore fisherman sits, with his Irish water spaniel beside him, repairing gear and yarning with cronies.



Kontachrome by John Mills, Jr.

**TWO OX-POWER IS SLOW BUT SURE IN LUNENBURG**

The pace of oxen is so leisurely that drivers sometimes fall back asleep into the sweet-scented hay. The animals plod on down the road, finding their own way home.

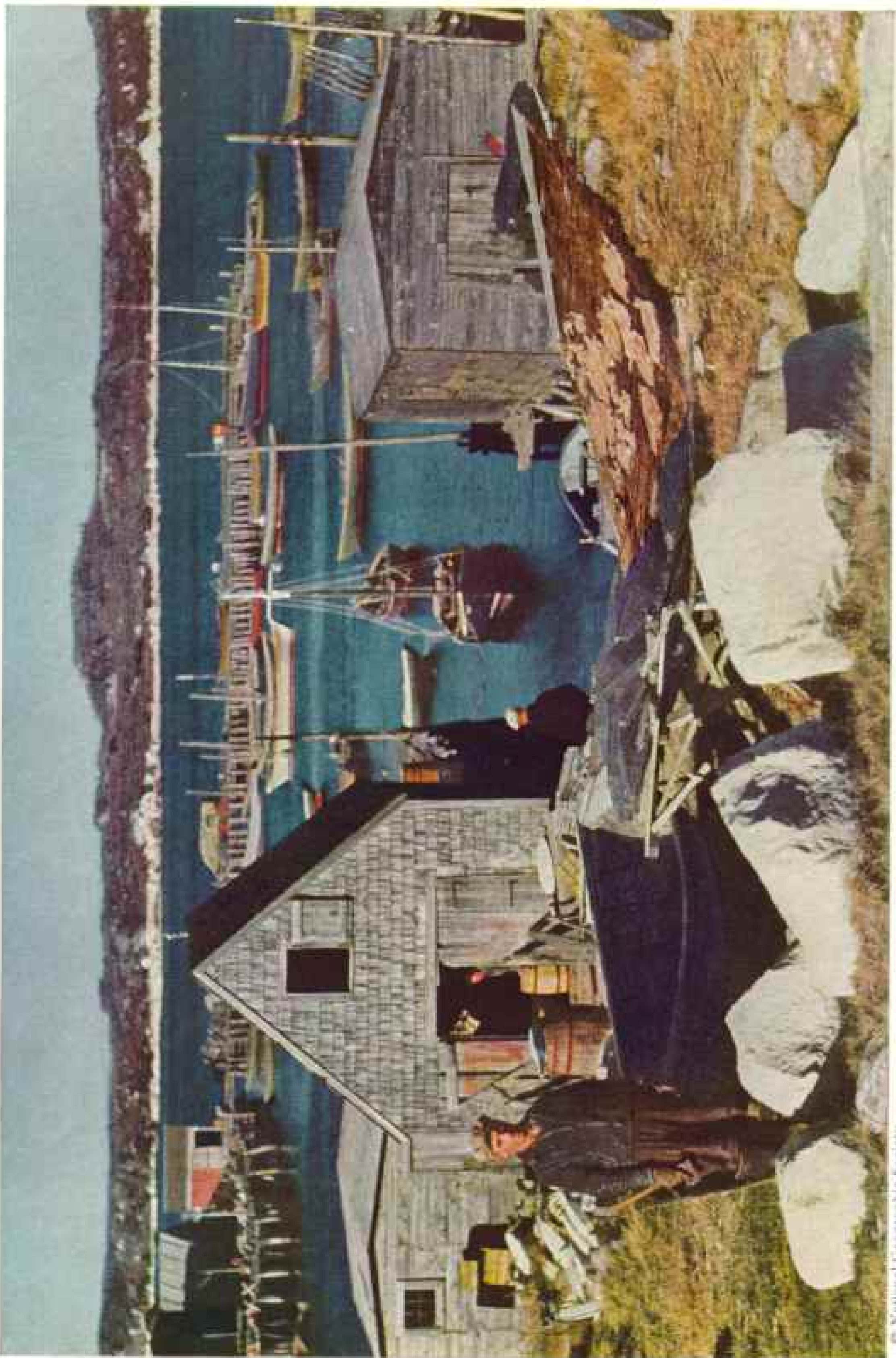


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GRANITE ARMS, POUNDED SMOOTH BY SURF, UNFOLD THE NARROW ANCHORAGE OF PEGGY'S COVE

Kodachrome by W. B. MacAskill

Gray clouds tend low as a storm brews on the rocky, dangerous Nova Scotia coast where reefs and shoals abound and the air is seldom free of salt spray.

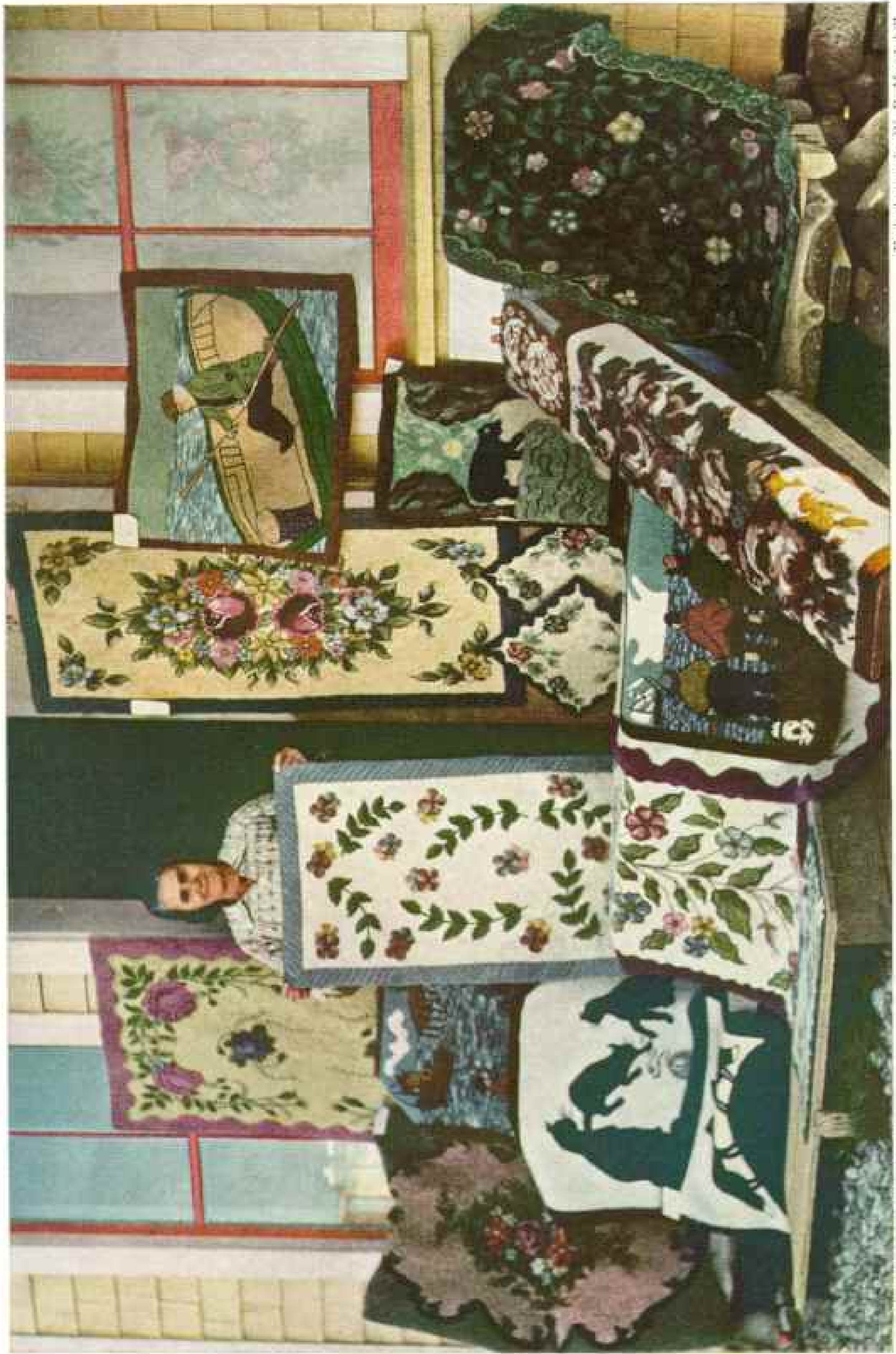


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Kodachrome by W. H. MacAskill

NEW SCOTLAND'S SEA FRINGE IS A FISHERMEN'S WORLD OF DORIES, MASTS, AND BREEZY BLUE DAYS

Split cod dry on slat racks, or "flakes" (right foreground) is as characteristic as the raucous cry of gulls.



© National Geographic Society

Kodachrome by W. R. MacAskill

VIVID HOOKED RUGS HUNG OUT FOR SALE SPLASH ROADSIDE HOMES WITH COLOR

Nova Scotian hooked rugs commonly bear flower or animal patterns, or motives suggesting the sea. Many of the finest examples of this work are made by Acadian women of Cheticamp, Cape Breton Island.



Konlahtomes by John Mills, Jr.

**LOOPS OF YARN, HOOKED THROUGH BURLAP, MAKE A RUG**

With her left hand, under the frame, a matron of Cheticamp beads colored wool to the hook. She pulls the loop up through the backing a fraction of an inch, then repeats the process, following the design outlined in charcoal. Her daughter helps with the big rug.



© National Geographic Society

**BASKET WEAVING SUPPORTS A MICMAC MATRON**

Artificial flowers are also sold in this Indian handicraft shop at Heatherton. The baskets are made of dyed and natural-colored strips split from ash. Nova Scotia's few remaining Micmacs work as guides, fishermen, and curio makers.





Kodachrome by W. R. MacAskill

"COLOR GUARD—ATTENTION!" NOVA SCOTIA HIGHLANDERS DRILL IN WINDSOR

These cadets of King's Collegiate School are enrolled in a military training corps. The flag at the left is the Union Jack; the other the college ensign. For overseas service, Canada's Highland regiments discard their kilts and don regular army uniform.



© National Geographic Society

Kodachrome by John Mills, Jr.

MASSIVE GUNS OF THE HALIFAX CITADEL NEVER FIRED A DEFENSIVE SHOT

The guide shows a visitor a cannon at the old fort, which was never attacked. Ramparts, gun emplacements, and chimneys date from the end of the 15th century, when an earlier Duke of Kent, Queen Victoria's father, was commander of the garrison.

Soldier's Rip, which swirls about the rocky Tusket Islands. Thousands of tuna running from 100 to 900 pounds feed here on mackerel and herring. The big bluefins are found along the Nova Scotia coast as far north as St. Ann's Bay in Cape Breton.

During early summer, anglers with ordinary salmon tackle take fighting pollock in the shallow coastal waters with such simple lures as bits of red or white flannel.

Numberless smacks, schooners, and launches of the fishing fleets shuttle in and out of Nova Scotia harbors to the nearest ocean shallows, called "banks," where cod, haddock, halibut, hake, and pollock feed and multiply.

At Liverpool, in a huge mill, I saw soupy cooked and chewed-up pulpwood run into two machines like laundry mangles that reeled off a square mile of paper every ten hours! A large freighter alongside was loading a cargo of newsprint for my hometown *Washington Post*.

I lingered in trim, opulent Chester, where green land and opalescent sea are splashed with white houses and white sails, where in summer automobiles bear license plates from half a hundred States and Provinces.

Motor launches carry cargoes of curious visitors to Oak Island, just offshore, where for more than 140 years men have dug for buried treasure. Sometime in the long ago, clever engineers of unknown nationality are supposed to have made a cache of buried gold protected by secret water channels, and these channels have frustrated every effort of more than twenty organized treasure-seeking expeditions. Yet the hunt goes on. New shafts are being sunk, new drillings made, and new hopes strengthen the enthusiasm of the workers.

#### HALIFAX, DRAPED OVER HILLS

We sped on to Halifax, capital and largest city of Nova Scotia.

In 1749 Edward Cornwallis, cousin of the Revolutionary general, sailed into a harbor that the redmen called Chebookt (Mighty Haven), and built Halifax to protect English settlers from French and Indians and to scare off privateers from raids on New England shipping.

Halifax is draped over hills. A squat, gray-walled citadel, never attacked, caps the highest summit (Color Plate VIII). Standing there, we looked eastward to ship-packed piers, thrust, like teeth of a giant comb, into the harbor. Its deepwater,

natural roadstead, one of the world's finest, could hold the whole British Fleet.

Thirty-six lines of steamers connect Halifax with ports of the North American coast, Europe, the West Indies, Central and South America. Wheat, hay, apples, fish, coal, lumber, and beef sink freighters loading here to their Plimsoll marks.

Sir Samuel Cunard, founder of the British steamship company that bears his name, was born in Halifax. On the day in 1840 when his *Britannia* completed her first Atlantic crossing from Liverpool to Boston in the phenomenal time of 14 days and 8 hours, Cunard is said to have received 2,000 invitations to dinner.

The old city had the first public school, the first newspaper, the first printing press, the first Protestant church, the first public gardens, the first dockyard, and the first post office in the Dominion. Those early settlers liked sports, too, for the first hockey in America was played at Halifax on the first skating rink in Canada. Halifax also had Canada's first tennis court.

#### 2,000 KILLED IN 1917 EXPLOSION

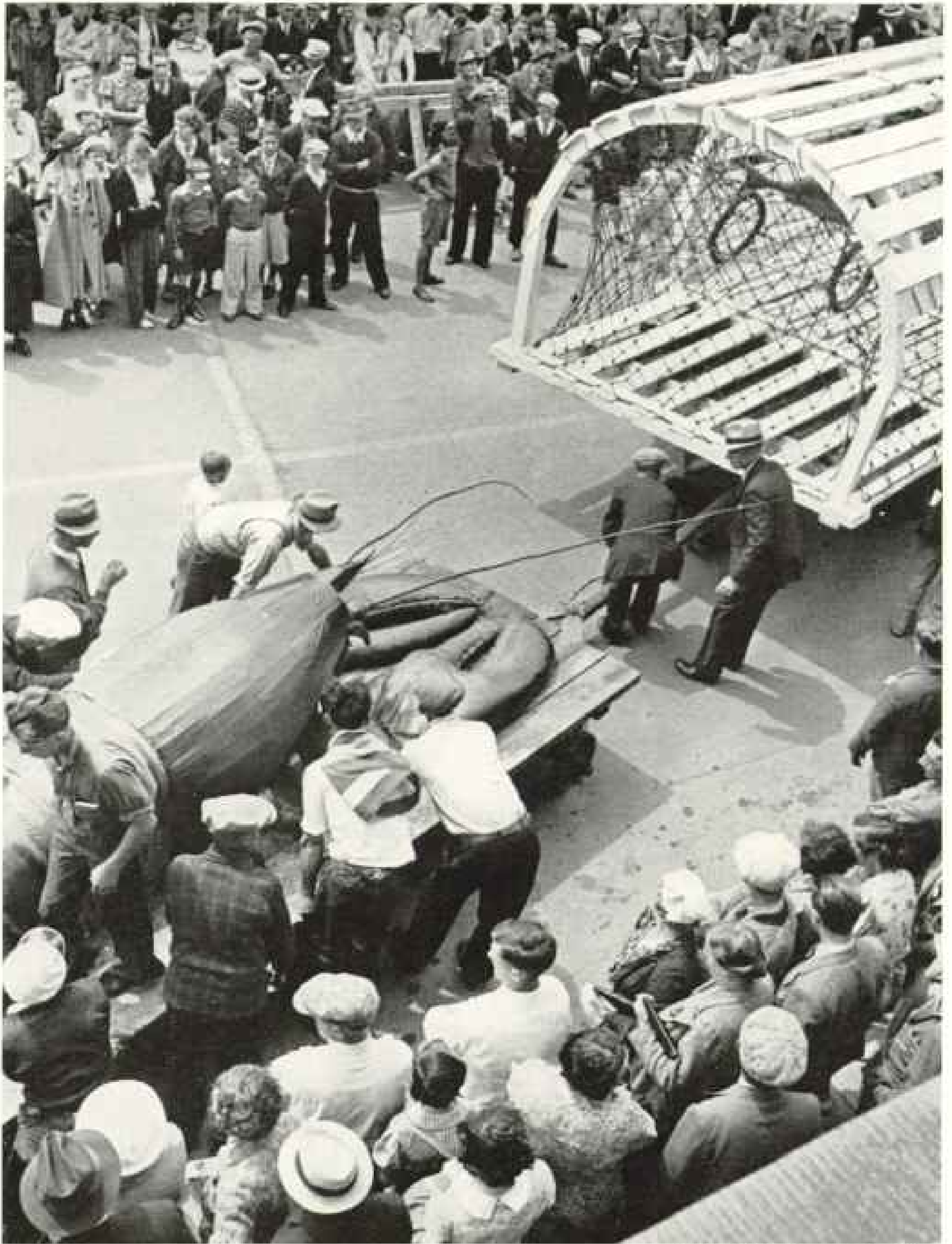
Northward we looked to a waterside section of the city, rebuilt since the 1917 TNT explosion when, in a single moment, nearly 2,000 persons were hurled into eternity, 6,000 maimed or blinded, and \$35,000,000 worth of property destroyed.

The steamship *Mont Blanc*, loaded with picric acid, benzol, and thousands of tons of trinitrotoluene, was rammed by the *Imo*.

Windows were broken in Truro, fifty miles away. The concussion was felt even in distant Cape Breton Island. In woods across the city we saw the one-ton shank of an anchor blown three miles by the explosion (page 605). Violently uprooted by the blast, a six-inch gun landed miles away in one of the Dartmouth lakes.

On the Halifax water front sprawls the plant of the Maritime National Fisheries Company. When one of the big steam trawlers is in, as on the day of our visit, docks and dressing rooms look like an anthill kicked by a careless foot. Standing teams of men worked at long tables, under batteries of brilliant lights. They slit cod and halibut, split the fat fillets from the backbones, and tossed the clean fish steaks into boxes, whence they were snatched away to be smoked or frozen.

We sampled small, salty cubes of smoked salmon that tingled on the tongue. Nothing



Photograph by Herrmann from Pix

#### LOBSTER IS KING AT THE PICTOU CARNIVAL

Floats representing a gargantuan lobster and a giant pot are drawn through the streets of Pictou in the parade climaxing the annual Lobster Fisheries Carnival. Boat races and trap-building contests are also held. There is dancing in the streets, and kilts twirl in time to music of many bands. Announcements are made of the largest lobster catch by one man during the year, and of the biggest single crustacean taken.

here is thrown away. Precious oil from cod livers is extracted on the fishing boats at sea. Fishbones and waste are dried and ground into a rich fish meal fed to livestock and poultry.

#### 50 MILLION POUNDS OF FISH

About fifty million pounds of fish pass through this one plant every year. From mid-September until the end of Lent, the rush is never-ceasing to supply fish for dinner tables as far away as Cincinnati, Baltimore, and Winnipeg.

Noble old Province House, the "Capitol" of Nova Scotia, is an august island of the past in a sea of up-to-the-minute banks, shops, and office buildings. This Georgian masterpiece contains the Premier's office, the Legislative Assembly chamber, and the Legislative Council chamber. Here I saw mantelpiece moldings showing Caribbean corals, shells, and seaweeds—motifs brought from the West Indies, in the old days, along with sugar and rum. Door frames bore plaster eagles that had been be-headed by some patriot of the King who saw in them symbols of threatening Yankee power.

Nova Scotia is proud of her places of learning and of her many sons who have attained fame in politics, in science, and in the scholastic world.

Two of Canada's greatest premiers—Sir Charles Tupper and Sir Robert L. Borden—were Nova Scotians.

The war crisis of 1939 found able Nova Scotians holding three of the most responsible positions in the Dominion: Norman Rogers, as Minister of National Defense; J. Layton Ralston, as Minister of Finance; and J. L. Hsley, as Minister of National Revenue.

The Premier of Nova Scotia, the Honor-



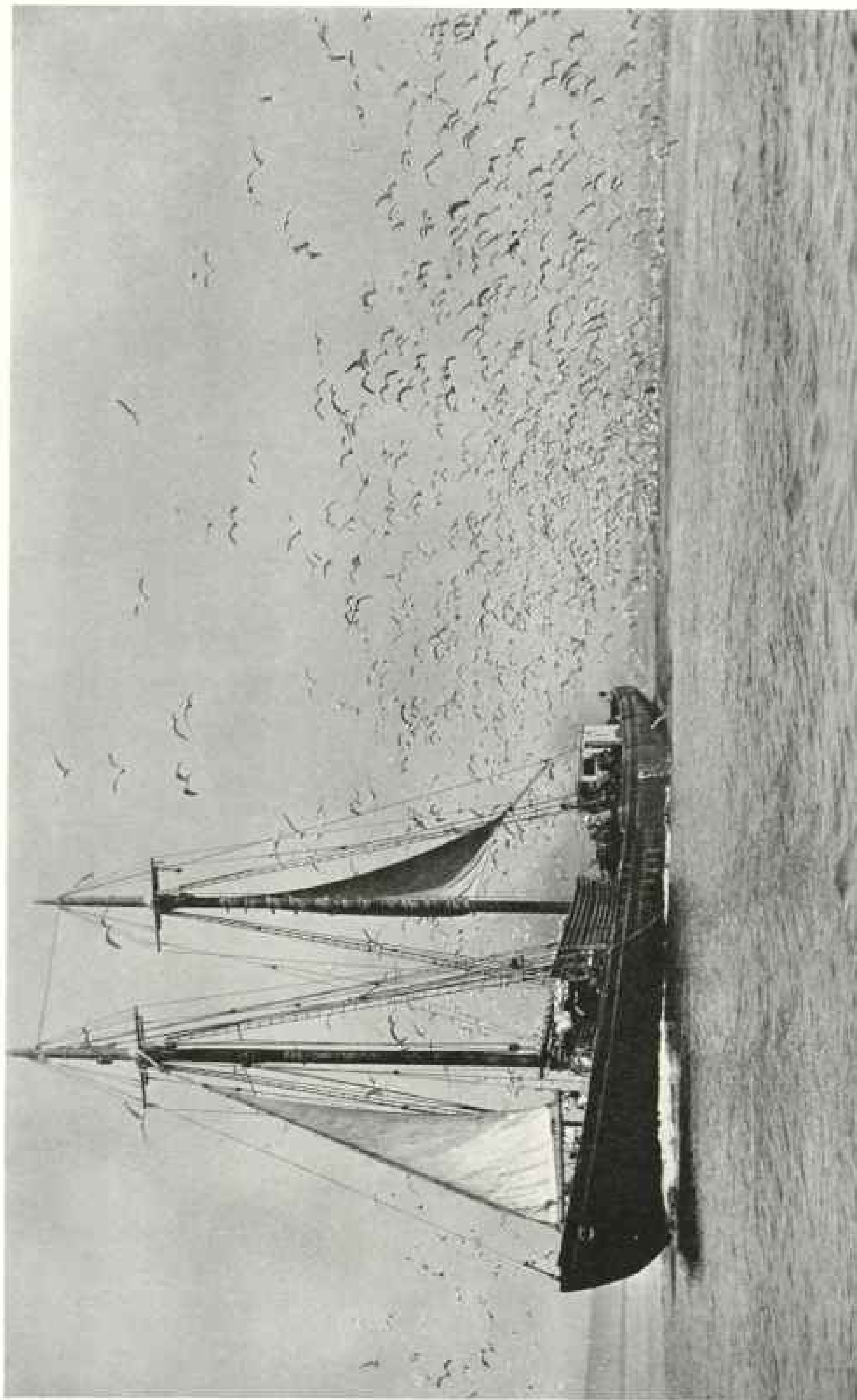
Photograph by Charles Martin

#### GIANT'S CLOTHES MAKE A SCARECROW OF A NORMAL MAN

Angus MacAskill, the Cape Breton Giant, was born in the Hebrides in 1825 and grew up in Cape Breton to the amazing height of seven feet nine inches. This man of average size has put on some of the Giant's clothing—a 14½-inch boot, a coat and vest cut for his 425-pound body, and his huge silk topper. "A lighthouse among lampposts," MacAskill toured the United States with the midget, Tom Thumb, and in England was received by Queen Victoria. He died in 1865 at the age of 38 and was buried at Englishtown.

able Angus L. Macdonald, gracious, extremely capable, and a veteran of the Great War, was born at Dunvegan, Cape Breton Island. He is the sixth son of nine living sons and three daughters. He was elected Premier of Nova Scotia in 1933, and re-elected in 1937 by an overwhelming majority.

I found the main highways newly paved throughout the entire length of the Province. The Honorable A. Stirling Mac-Millan, Minister of Highways, has ably directed a titanic project in road building,



Photograph by W. R. MacAskill

A WELCOMING CLOUD OF SEA GULLS ESCORTS A LUNENBURG SCHOONER, HOMEWARD BOUND FROM THE BANKS

Crews often dress cargoes of cod or halibut at sea, throwing buckets of waste overboard to the delight of screaming gulls. Most of these vessels now have auxiliary power. Dories are tightly nested on deck.



Photograph by Andrew J. Brown

**LIKE A LEAF ON A BREEZE, THIS ONE-TON ANCIENOR SHANK WAS BLOWN THREE MILES BY THE HALIFAX EXPLOSION**

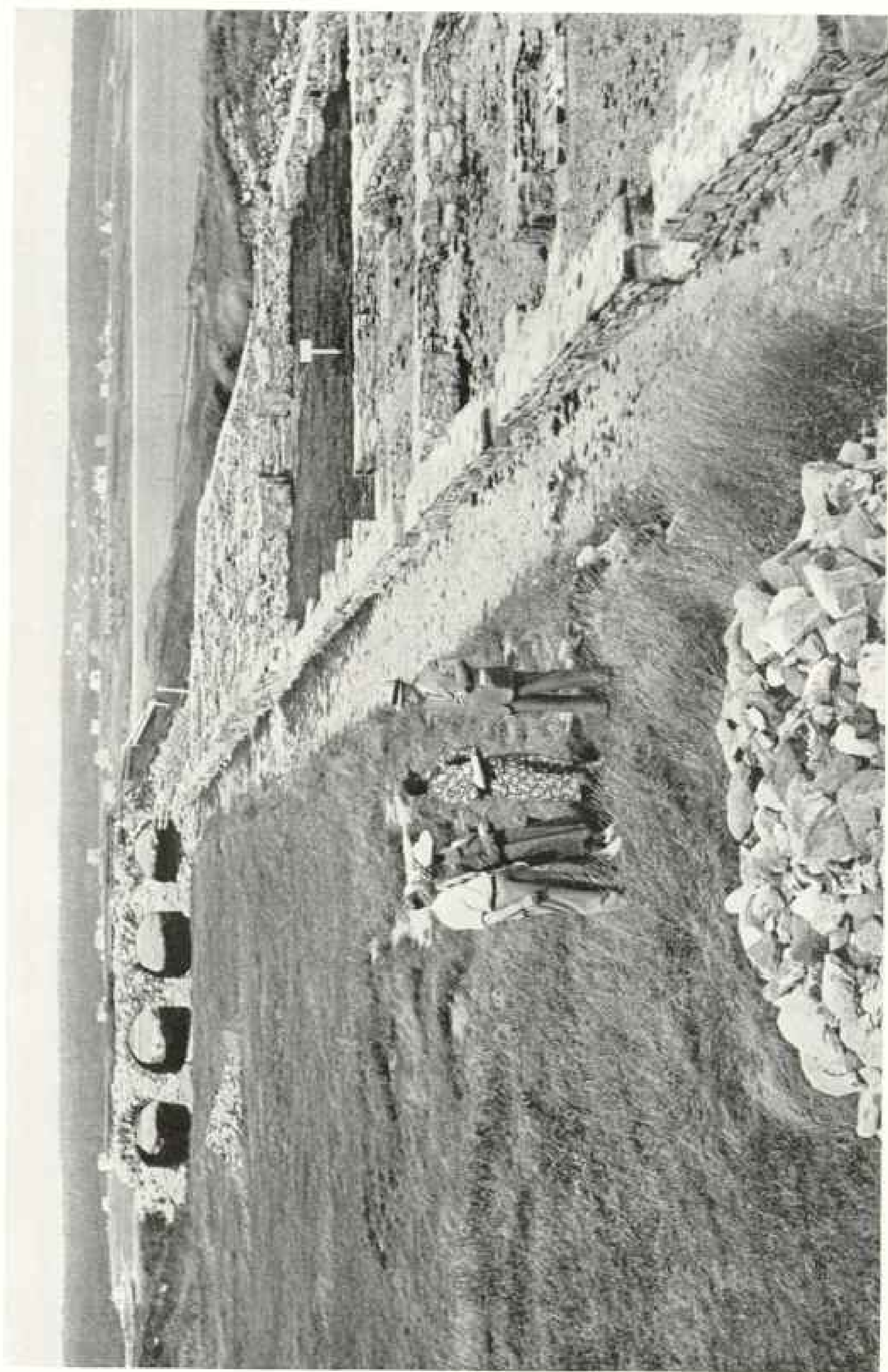
In woods above the North West Arm lies this ponderous proof of the terrific force of the TNT explosion of 1917, when an ammunition ship was rammed in Halifax Harbour. Fire set off a devastating blast which killed almost 2,000 persons, wounded 6,000, and flattened a whole section of the city (page 599).



Photograph by Robert Bendick

**THREE LITTLE GIRLS FROM CHÉTICAMP, CAPY BRETON ISLAND, FIND PULLING WOOL A SOFT JOB**

Touze-headed French Acadian youngsters pull out the raw wool by hand, after it is washed, to align the fibers roughly before they are carded. Hanks of the bright-colored, hand-spun yarn lie beside a box containing balls of the fluffy stuff from which are made the fine hooked rugs of the region. (page 613).



Photograph by Andrew H. Brown

ONLY CASEMATES AND FOUNDATIONS RECALL THE MIGHT OF LOUISBURG, ONCE KEY TO FRENCH POWER IN NORTH AMERICA

France built this walled city and fortress between 1717 and 1745 on the east coast of Cape Breton Island. It was believed invincible, but New England volunteers and a British fleet captured it in 1745. Returned to France by treaty, Louisbourg was again taken by the British and then demolished (pages 614 and 623).



Photograph by Gilbert Griessman

WINNER GETS THE LAST CHAIR, LOSER THE LAST LAUGH, IN "GOING TO JERUSALEM," PLAYED AT AN ACADIAN PICNIC IN CHÉTICAMP





Photograph by John Mills, Jr.

IT'S ONLY A STEP FROM PILES OF PULPWOOD TO FINISHED PAPER

Boys of Pictou play on the peeled logs stacked for shipment. By boat, truck, and railroad, tons of the four-foot spruce, hemlock, and balsam fir sticks are sent to newsprint mills within Nova Scotia, in other parts of eastern Canada, and the United States. Pulpwood is usually cut in winter.



Photograph by Melville Bell Grosvenor

RAIL UNDER, "ELSIK" BEATS UP CHEDABUCTO BAY

Heeling to starboard in a fresh breeze, the yawl scuds along toward the Strait of Canso, the deep-water channel separating Cape Breton Island from mainland Nova Scotia. Vessels bound for Quebec use it as a short cut to the Gulf of St. Lawrence. Atlantic cables from Europe land near here at Hazel Hill.



FINISHED AT LAST!—ACADIANS ROLL UP THE LARGEST RUG EVER HOOKED AT CHÉTICAMP

As many as ten women and girls worked on the rug at one time, the less experienced devoting themselves to solid-color areas and background. With several always on the job, it took six months to fashion this masterpiece, designed by Lillian Burke of New York and made to order for a Virginia home.



Photograph by John Mills, Jr.

ROPES AND PULLEYS LIFT COAL MINERS' CLOTHES TO THE RAFTERS

In the dressing room of a big coal mine at Glace Bay, workers shed their grimy garments at the end of their shifts. After hanging the clothes on hooks, they hoist them up out of the way (page 614).



Photograph by H. W. Kain

#### THREE TOSSES FOR THE WINNER OF THE STAR BOAT RACES

Every August yachts from all Nova Scotia, and often from the United States, gather at Baddeck for the Bras d'Or Yacht Club Regatta (Plate X). Winning skippers and their crews are given a ducking in the harbor and are tossed by fellow sailors before receiving their coveted trophies.

a task made difficult by the severe frosts of winter, varying soils, rocky coastal districts, and marshy areas.

#### HIGHWAYS BEDDED WITH SALT

These new roads are the first on the continent to be built with salt under all pavement. Thirty tons of salt have been laid under each mile, irrespective of the nature of the subgrade. The salt acts as an anti-freeze.

Fathers of modern Halifax made abundant and tasteful provision for play. Rocky shores, pines, and forest paths of Point Pleasant Park remove one quickly from the city's stress.

In summer Halifax people throng to the North West Arm, a deep dagger of the sea running three miles into the city's flank. There, by sun and by moonlight, we swam, sailed, and paddled with other tanned thousands.

Driving east from Halifax, we rolled past fenced fields, through black forest and along the brink of seaward bluffs.

Fifteen miles out of the capital city, a big bull moose leisurely stalked across the highway a few yards ahead of us.

Lonely fishing villages huddle on narrow clearings between rolling gray sea and deep forest, running back almost unbroken for 40 miles. In winter, wealth in pulpwood is cut in the woods and stacked beside frozen streams to await spring breakup and the drives down to mills or shipping ports.

Places still go by old Indian names: Chezzetcook, meaning "flowing in many channels"; Musquodoboit, translated "rolling out in foam"; Mushaboom, "hair of the head lying there"; Necum Teuch, "beach of fine sand."

Antigonish, a little tree-shaded town, home of St. Francis Xavier University and center of Nova Scotia's fast-spreading co-operative movement, was known to the red-men as "place where branches are torn off the trees by bears gathering beechnuts."

#### THE LURE OF CAPE BRETON ISLAND

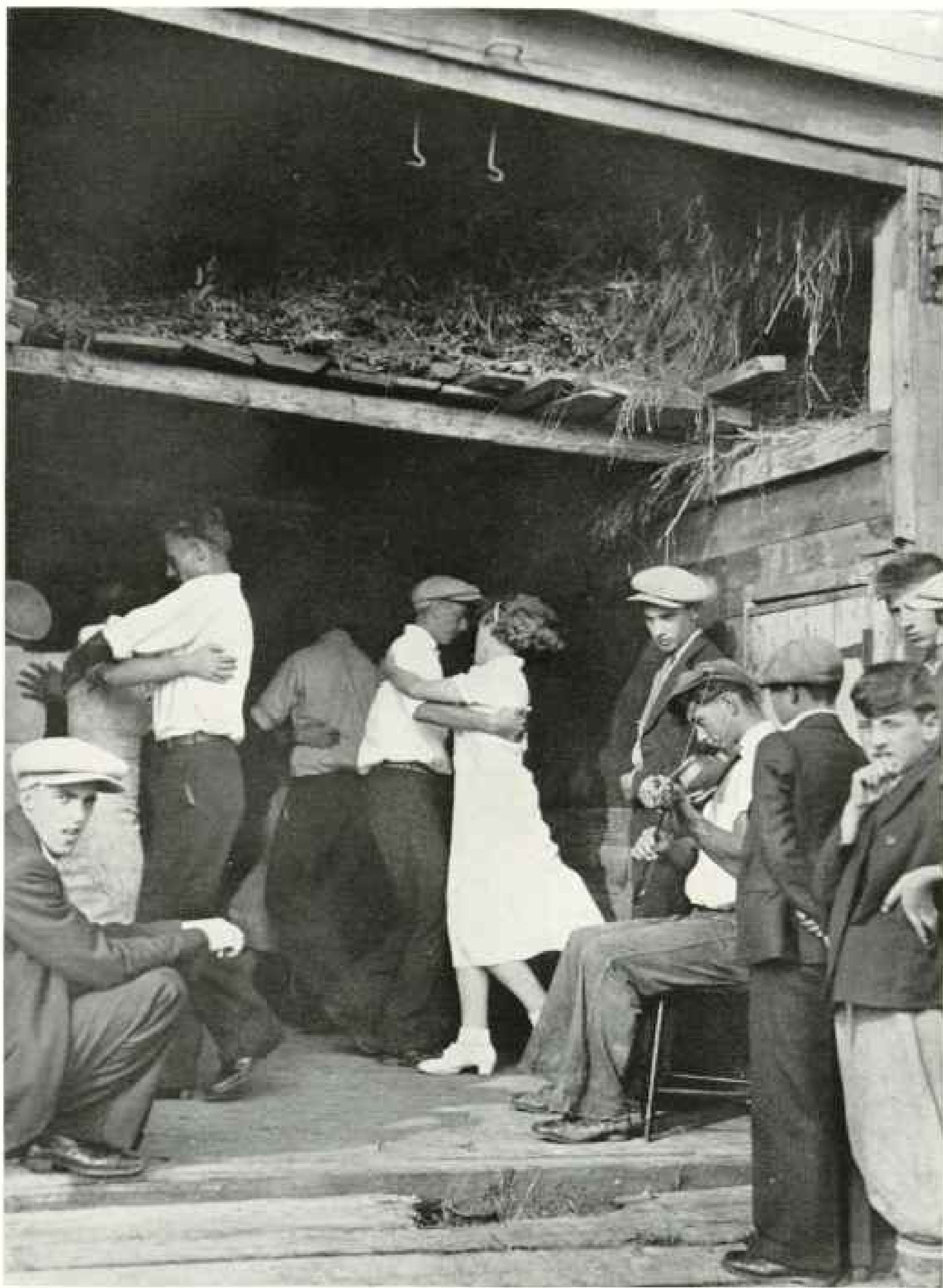
My car and I, on a ferry's broad back, crossed the swirling Strait of Canso to Cape Breton Island. It was hail to the land of square dances and Gaelic songs, of milling frolics, spinning contests, misty glens, the realm of giants, shipwrecks, heroes, and weird fireside tales!



Photograph by Melville Bell Grosvenor.

USING THE FORETOP OF AN OLD WRECK FOR DIVING BOARD, A BOY SOARS THROUGH THE AIR

In a split second he will plunge into the cold waters of Sydney Harbour, Cape Breton. Other lads have made a line fast to the windjammer's forestay, which they use as a swing. During the World War the United States Navy maintained air stations at near-by North Sydney and at Halifax.



Photograph by Gilbert Gouvenot

FARMERS AND FISHERMEN SWING THEIR PARTNERS AT A CAPE BRETON BARN DANCE

Scent of newly harvested hay in the loft above takes the place of the perfume of roses at a summer party in Chéticamp. These folk are French-speaking Acadians, many of them descendants of refugees expelled from Nova Scotia in 1755. The exiles later returned to the Province and established new settlements (page 579).



*Photograph by Gilbert Gouvenot*

ALEXANDER GRAHAM BELL OFTEN GAVE A HAND AT HAULING DOWN HIS HUGE KITES.

One of his kites lifted Lieut. Thomas Selfridge, U. S. Army, 168 feet above the waters of Great Bras d'Or in December, 1907. In his laboratory at Baddeck, the inventor of the telephone conducted many kinds of experiments. His former office is now a museum where many of his models and ingenious devices are preserved (opposite page).

Driving north to Baddeck, we followed roads clinging to the shores of the Bras d'Or Lakes, whose name means "arms of gold." Broad waters, christened thus aptly by French pioneers, so deeply invade the emerald land that Cape Breton has been termed "a lake surrounded by mountains." Tapping the ocean only through two narrow northern channels, the big salt lakes, like the Mediterranean, are almost tideless (Plates X and XIV).

Our road wound from West Bay through Marble Mountain, Orangedale, and Whycomagh, past magnificent waterscapes and through lovely wooded stretches where a doe and her fawn gazed at us from a shady aisle. Across the lake waters rose mountain sides of intense, harmonious color; near at hand green arms of land stretched lazily into a surface of turquoise blue. Curves followed curves. Tops of spruce trees descended in terraced beauty, down and down, to a beach of white sand.

#### BADDECK, A SHRINE OF AVIATION

Baddeck, straggling beside its snug harbor, is the heart of a rolling farming district. The little white town—so full of "Mac"—preserves ancestral Scottish customs. Yet today's villagers, talking between houses by an electric current over wires, may recall personal memories of one of America's most tireless heroes of progress—Alexander Graham Bell, the telephone's inventor.

A deep bay separates Baddeck from the high, jutting peninsula of Beinn Bhreagh (Gaelic for "beautiful mountain"), Dr. Bell's home for several months of every year from 1886 until his death there in 1922 (Plate X).

Branches of fir, maple, beech, and birch so thickly overarch the cool woodland road slanting up to Beinn Bhreagh that we, ascending it, could not see the sky. On the hillcrest Mrs. Gilbert Grosvenor, elder daughter of Dr. Bell, led us out upon a high meadow. Against a background of dark evergreens she showed us the granite boulder marking the modest inventor's grave with the simplicity he requested:

Alexander Graham Bell—teacher—inventor.  
Born in Edinburgh March 3, 1847. Died—a  
citizen of the U. S. A., August 2, 1922.

When Dr. Bell came to Cape Breton he had already invented the telephone. But his restless, inquiring mind quickly found new problems. Steep fields had been cut out of forest on the hill's flanks. Dr. Bell, confident years before planes first flew that

man would get into the air, used to sit there in his curious three-walled tapering shelter. Impatiently he would pull on a black pipe as he watched assistants fly huge experimental kites, seeking a new type of heavier-than-air machine that would soar self-propelled.

Often, in high winds, the kindly, white-bearded gentleman would jump up from his chair and stride out to add his weight to the long line reining in one of his bucking cloud-scrappers.

Far below us, unrolling from the foot of Bell's "beautiful mountain," stretched wide waters often churned to foam in earlier years by the 70-mile-an-hour speed of the hydrofoil boat designed by him and his colleague, the Honorable F. W. Baldwin. Hull out of water, it ran on ladderlike "stilts" made of flat metal vanes. Under way, it resembled a long-legged water bug running for life.

Curious relics in a little wooden hillside museum show the diversity of Bell's interests—from planes and speedboats to breeding twin-bearing sheep and trying to chart the paths of colliding molecules!

#### OLD FRANCE IN THE NEW WORLD

The elm-dotted Margaree Valley cradles the last part of the road from Baddeck to Cape Breton's west coast. Twigged with tributary brooks, the river's two branches merge at Margaree Forks. Flood-deposited sands there are trampled by salmon anglers from far and near (page 624).

For rural charm of wooded hills and lush hay flats and grainfields, the lower Margaree Valley has few peers.

From Margaree Harbour through French villages north to Chéticamp, our road skirted the brink of sea cliffs. Inhabitants here are of Acadian descent; language, devoutness, and vivacity have been handed down from Norman ancestors. We threaded carefully among horses, oxen, cars, and children along Chéticamp's main street.

#### RUG-HOOKING GROWS TO STATURE OF AN INDUSTRY

Rug-hooking, a native handicraft in Chéticamp, has been expanded to an industry under the guidance of Miss Lillian Burke, a New York designer. Garish, hard colors have been replaced with soft-toned pastels; stark, angular designs exchanged for graceful antique motifs of flowers, animals, and birds, or classic patterns (p. 608).

Scatter rugs are made and 18-by-36-foot



masterpieces to order for fine homes from New England to the Deep South!

Next morning we swept on up the coast. The Cabot Trail, lifting abruptly from the Gulf of St. Lawrence, paralleled the cliff-walled shore, skimming up and over wooded steeps until we were on a high, airy plateau. Our road wound through lofty spruce-clad hills and deep valleys until, suddenly, we plunged down, down, down!

Back beside the sea at Pleasant Bay we startled deer standing by the roadside. These graceful creatures are extremely plentiful throughout Nova Scotia, and in Cape Breton it is not unusual to see eight or ten in one group.

Near by at Cape North, on the island's northern tip, the first successful transatlantic cable was moored to the North American mainland in 1867.\*

The Cabot Trail, named for early voyagers to mainland North America, girdles the Cape Breton Highlands National Park on three sides. Leaving Pleasant Bay, the Trail ascends North Mountain, overlooking a billowing sea of evergreens, then descends gradually to the Atlantic shore at Neil's Harbour, huddled starkly on bare rocks. Jagged granite parapets receive the agelong onslaught of the sea and there is ever the drumming of surf and the salty tang of flying spray. South now, the Trail wound to the mountain-guarded double bay of Ingonish (page 589).

#### A NEW PARK BECKONS VISITORS

Here are the administrative headquarters of the new park. On picturesque terrain the Dominion Government is constructing one of the finest golf courses of eastern America, designed by the famous golf course architect, Stanley Thompson.

Fishing, boating, bathing, hiking on park trails, and motoring are among the varied opportunities for play.

Animal and bird life in the 390 square miles of park area is protected by watchful authorities. White-tailed deer, snowshoe rabbit, black bear, beaver, wildcat, red fox, otter, muskrat, mink, and weasel are native to the region. Ruffed grouse, ducks, and water fowl are common. Trout and salmon are found in the streams.

Hulking Smoky Cape is the Trail's last barrier. In massive grandeur, it towers more than a thousand feet sheer above the sea, and often is split halfway up by a fleecy

cloud which gives it its name (page 582).

From Ingonish to the Trail's end at Baddeck the residents are mostly of Highland descent. Here can be heard the old Celtic tongue that hurled defiance at Caesar from the shores of Britain two thousand years ago—a tongue that has sounded the war cries of the clans on many a battlefield of the British Empire.

Near Big Harbour we drove beneath snowy cliffs of gypsum, sharp contrast to the green woods.

#### MINES BENEATH THE SEA

Submarine coal mines lured us from Baddeck to Glace Bay. There the Dominion Coal Company's No. 1 B Colliery runs out more than three miles under the sea. In an elevator we dropped 670 feet from the minehead, built within fifty-five yards of the ocean shore (page 608).

The bituminous coal seam, seven feet thick, parallels an undersea dome of rock layers shaped like the fore part of a shoe.

"Miners say they sometimes hear the clunk of anchors and rattle of chains on the ocean bed above," mine inspector McEachern told us with a straight face. "Once a colliery superintendent phoned down that a small freighter was sinking in the bay. He asked men below to listen close to hear the vessel strike bottom, so salvagers would know where to dive."

McEachern added that perhaps these tales were slightly exaggerated! On the average, there are more than 400 feet of rock between mine workings and ocean floor.

Newly dynamited coal we shoveled into a car may have become coke for Sydney blast furnaces; or perhaps heated boilers of a transatlantic liner clearing Halifax for Liverpool; or possibly supplied gas to bake breakfast biscuits in Montreal.

From Table Head, just north of Glace Bay, Marconi sent the first wireless message across the Atlantic in 1902.

South from Glace Bay we drove to historic Louisburg.

The tale of lost French influence in North America contains no more brilliant or pathetic chapter than the story of the ancient fortress of Louisburg (page 604). From wilderness it rose to brief magnificence on a rocky Cape Breton headland thrust into gray Atlantic surges.

Eager to assert her New World rights, France, from 1717 until 1745, poured her people's fortune into Louisburg's walls and bastions, barracks and storehouses; into a

\* See "The Charm of Cape Breton," pages 34-60, NATIONAL GEOGRAPHIC MAGAZINE, July, 1920.

TARTAN TINTS NEW SCOTLAND



THE NOSE OF THE OX IS "RUDDER" FOR THIS RIG

A cheerful Cape Breton farmer steers the beast with tugs on a nose ring instead of on a bit in its mouth. The heavy wooden yoke is attached by chains to the pole shafts of the hay rake.



© National Geographic Society

Kodachromes by John Mills, Jr.

MOTORISTS! BEWARE OF JAYWALKING COWS

Up to her neck in tansy, a Holstein bossy grazes by the roadside. Dairying and stock raising are important industries in Nova Scotia; butter and cheese are exported to England.



© National Geographic Society

Kodachrome by Melville Bell Grosvenor

RAINBOW DINGHIES SCUD AWAY FROM THE STARTING LINE IN A RACE ACROSS BADDECK BAY

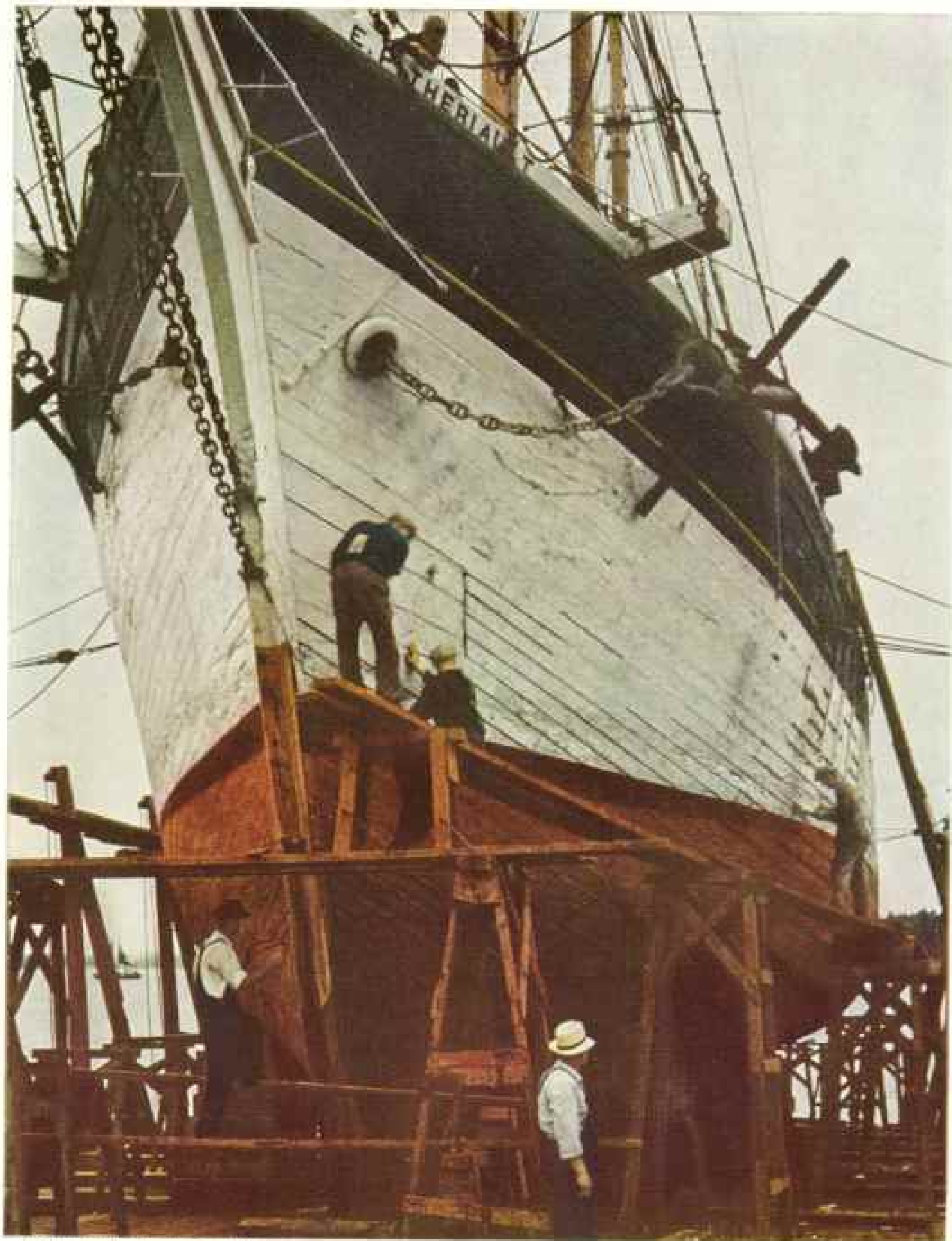
From ice here, in the winter of 1929, an airplane built by Alexander Graham Bell's Aerial Experiment Association and piloted by John A. D. McCurdy took off on the first flight in the British Empire. (On the low point of Beinn Bhreagh (Gaelic for "beautiful mountain") in the background stands the house where Dr. Bell passed many summers in study and experimentation. Ideal for sailing and yachting are the waters of Cape Breton's almost titleless, salt Bras d'Or Lakes. The lighthouse marks the entrance to Baddeck Harbour.



Kodachrome by John Mills, Jr.

A SCHOONER TAKES SHAPE AT LUNENBURG; NOVA SCOTIA SHIPS HAVE BROUGHT WORLD-WIDE FAME TO BUILDERS AND CREWS

© National Geographic Society



© National Geographic Society

Kodachrome by John Mills, Jr.

A REPAIR CREW DOES A JOB OF FACE LIFTING ON THE OLD THREE-MASTER,  
"E. P. THERIAULT"

Her seams are being calked with oakum and tar on the marine railway at Lunenburg. Two hundred German and Swiss families founded the town in 1751-1753. During the shipbuilding boom in the middle of the last century, Nova Scotia led the world in tonnage of shipping in proportion to population. Almost every bay and cove had its bustling shipyard (Plate XI).

TARTAN TINTS NEW SCOTLAND



SEA BREEZES KEEP PUTTERS COOL AT PICTOU.

A water hazard on this course is called Waterloo. A company of settlers from Philadelphia founded the town in 1767. A few years later began the tide of Scottish immigration to the Province.

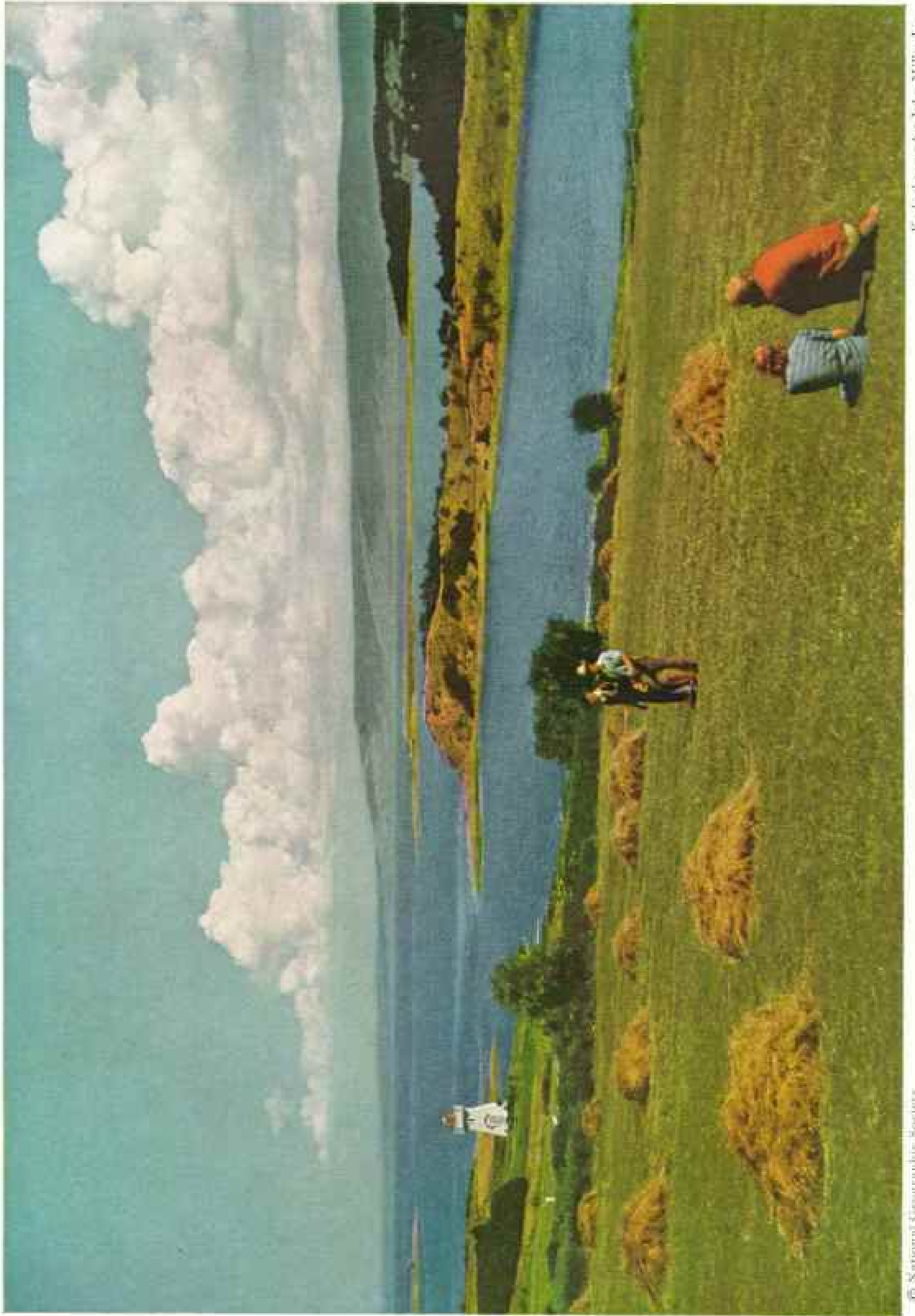


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Kodachromes by John Mills, Jr.

STRUTTING BAGPIPERS ARE THE HIT OF A CAPE BRETON FESTIVAL.

Proudly arrayed in tartan kilts, trim jackets, and rakish caps, Highlanders play their haunting melodies at an exhibition in Baddeck. Thousands of Scottish Nova Scotians still can talk and sing in Gaelic.

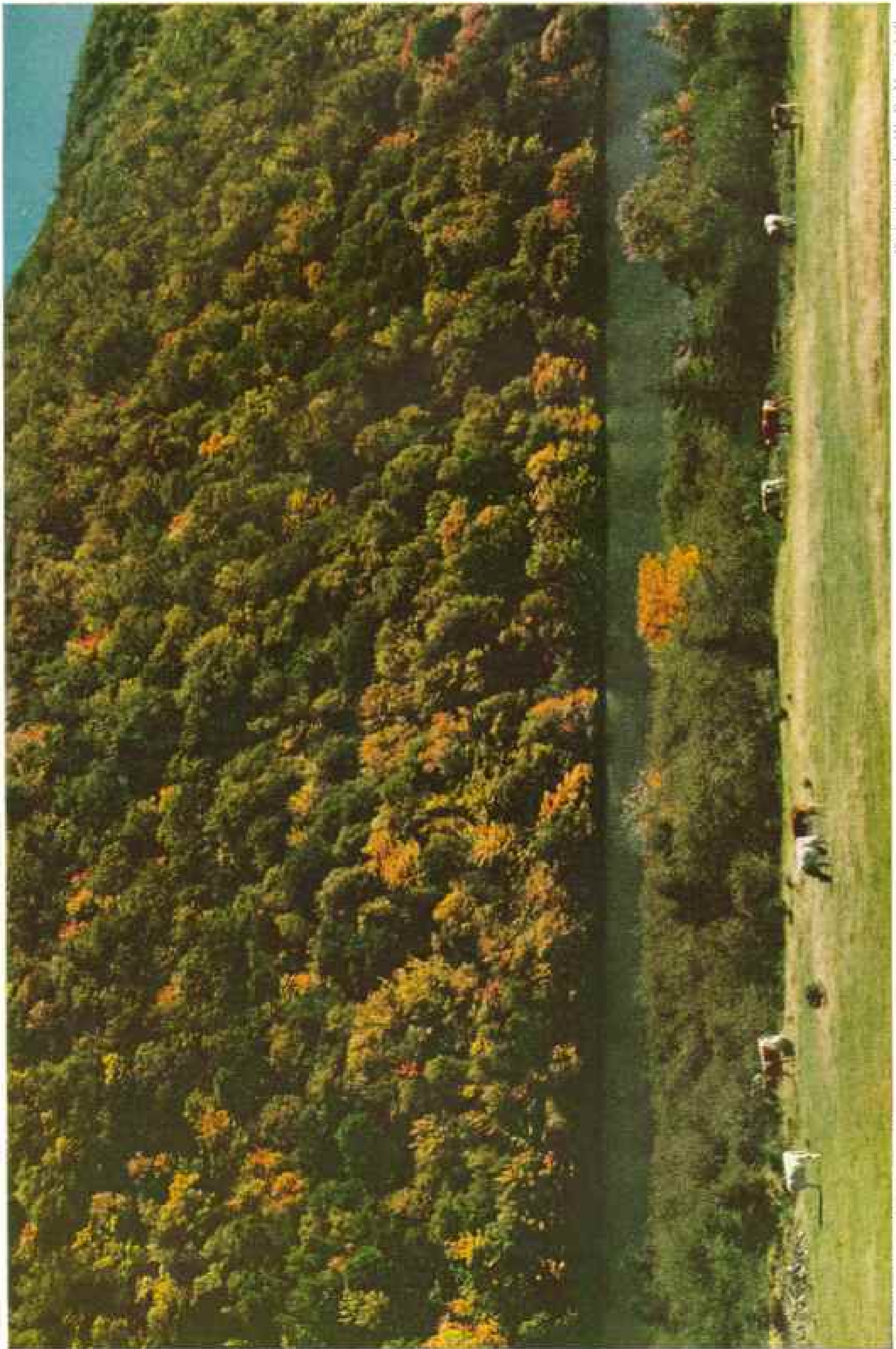


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Kodachrome by John Mills, Jr.

A GLORIOUS DAY ON THE BRAS D'OR; SUCH A SCENE INSPIRED FRENCH EXPLORERS TO NAME THE LAKES "ARMS OF GOLD"

Clear skies prevail over the lakes, though fogs may shroud the ocean coast beyond the hills to the right (Plate X).



© National Geographic Society

Kodachrome by W. R. Manshall

AUTUMN FROSTS SET WOODED SLOPES AFLAME WITH COLOR ABOVE TRANQUILL LOCH O'LAW

Steep Three Sisters Mountain rises across the lake from the Cape Breton road linking Baddeck and Margaree Valley, famed for its salmon fishing.





© National Geographic Society

Kodachrome by Robert Bendick

HANDS THAT SPUN THE WHEEL IN NORTH ATLANTIC SEAS NOW WHITTLE  
LILLIPUTIAN SHIPS

Captain J. E. Sullivan of Meteghan puts the last touches on a model of the brigantine *Florida*. The four-masted barkentine in the doorway is a miniature of the *Rebecca McDonald*. The originals of both vessels were built in Meteghan, the *Rebecca M.* as recently as 1918. This craftsman is one of many Bluenose sailors who keep old memories alive by building models of the sleek windjammers that won numerous transoceanic speed records for Nova Scotia crews and ships.

citadel, hospital, chapel, and even a theater. This fortress had to be at once invincible and a merry place to live!

Behind false security of walls believed impregnable, the gay garrison was infatuated with lace cuffs, powdered wigs, wine, and their ladies' eyebrows. Attack? Impossible!

But in New England old fears and rivalries, aggravated by raids of Louisburg privateers on British shipping, were thought reasons good enough for attacking the French in their tight little wilderness metropolis. Aroused colonists found a leader in William Pepperrell, and soon between three and four thousand men were ready to march at his heels. Commodore Sir Peter Warren came up from the West Indies with the British fleet, ready to assist.

Sailing from New England in sloops, schooners, and other craft in the spring of 1745, this band of raw volunteers captured the French stronghold after a brief siege. The French flag was kept flying for weeks after, and twenty rich prizes were decoyed into Louisburg's harbor and captured. So great was the booty that every sailor in the British expeditionary fleet was granted a share amounting to 250 guineas.

Among the New Englanders, who were overlooked in the division of spoils, discontent smoldered. They had done the fighting, and got little reward. No garrison was available for their relief and they were forced to remain through dragging months, suffering with fevers and dysentery, which took such heavy toll that before they left in the following May more than 800 had been buried in Cape Breton.

Then, to the utter bewilderment of New England, the Treaty of Aix-la-Chapelle, in 1748, handed the greatly strengthened Louisburg back to the French!

#### "CRADLE OF THE U. S. A."

Some historians have called Louisburg "the cradle of the United States of America." The seed of discontent was sown among the New England volunteers, and at Lexington and Bunker Hill the ranks of the insurgent colonists were stiffened by the presence of Louisburg veterans.

But England, after Aix-la-Chapelle, had learned her error. Another joint naval and military force, under Admiral Boscawen and General Amherst, sailed from Halifax in 159 ships in 1758. Louisburg fell again.

Unable to maintain the fort and fearing the French would retake it, the British

ordered its demolition. A thousand men wrecked and blasted for six months, leaving the once mighty walled city a broken ruin; yet so well had builders done their work that outlines and foundations of the chief buildings are visible today.

We saw clean foundations of the King's Bastion and Officers' Barracks, ragged casemates, crumbled redoubts, the old parade ground. We drove along straight streets of the splendidly-laid-out old town. No trees stood here with rustling leaves. Sea winds whispered in long brown grass. Gulls flapped in and out of the mist over Louisburg Harbour, their mournful cries accentuating the melancholy of shattered hopes and vanished grandeur.

The new federal museum contains interesting relics of the fort's heyday, and a detailed wood-and-paint model of Louisburg at its height. This was fashioned by Miss Katherine McLennan, honorary curator of the museum and daughter of the late Senator J. S. McLennan, of Sydney.

Rhymed Yankee gloating, titled *A New Song wrote on the taken of Louisbourg*, is preserved here under glass:

Prepare, British Boys, your Hearts for new joys,  
For Cape-Breton and Louisbourg's taken;  
Our Cannons dire Thunder,  
Has made France knock under,  
And Louis—and Louis has scarce sav'd his bacon.

From Louisburg I loafed through Framboise, where hundreds of seals gamboled in the waters beyond a superb sand beach.

#### AN AMERICAN YACHT VISITS THE BRAS D'OR

When I reached St. Peter's Canal, short cut to the Bras d'Or Lakes from the Atlantic, its swinging bridge was open. As I waited, a little black schooner, the *Se-gochoet* of Thomaston, Maine, motored through, the American flag waving from her stern.

The sun was setting as I walked in from the road to River Bourgeois; I had been warned not to pass by this little fishing village. Golden light still shone on the tiny white houses standing like spectators in a stadium around the slim, mile-long harbor. A white yacht rode at anchor. Voices on deck returned the greetings of children drifting in dories around the visiting craft.

Above the "chunk" of oars and the occasional tinkling of cowbells, I heard French voices pouring out their old songs on the still evening air. From far down the harbor, a group of neighbors sang *Alouette*



Photograph by F. W. Baldwin

## AFTER LUNCH, ONE OF THREE SALMON WAS ONLY A HEAD

Outdoor appetites spared only the jaws and gills of one victim, which the feminine angler on the right carries on a twig. The smiling party caught the Atlantic salmon in the Margaree River, mecca for anglers from all over the United States and Canada (page 613).

loud and clear. Closer at hand, a boy-and-girl duet answered with *Frère Jacques*.

Baddeck held a fair, and I heard the old Gaelic songs handed down from Hebridean ancestors. Fiddlers played jigs, reels, and pipe marches. I, who had never square-danced, stumbled in and out, forward and back, through harrowing figures of the Lancers and then through a set of Scotch-eights.

There was a sale of hand-knitted socks, mitts, and sweaters, blankets woven on hand looms, hooked rugs, needlework, and patchwork quilts—products of the long winter nights and wet days of spring.

A milling frolic closed the festivities. At a bare wooden table sat the town's best singers, old hands at milling. A long piece of gray homespun, which had been soaking for hours in soapy water, was loosely rolled lengthwise and laid around the table's edge before the "millers." Breaking into Gaelic

song, the boys and girls clutched the cloth in front of them. In time with the hallad, each passed it along to the one on his right, squeezing and twisting it before setting it down with a sharp thump.

Fists beat the table to cadences of the *Tocherless Lass*, the *Road to the Isles*. Up-swing-thump; up-swing-thump. On and on, twenty times a minute, while waves of song rose and fell. A wet-wool smell suffused the room. Behind the millers a woman waited to measure the piece and show when it had been shrunk enough.

At last we had to drive back to the Strait of Canso and leave colorful Cape Breton. Our time was up. Reluctantly we followed a road that led us again to the western border. In the evening Nova Scotia dissolved in shadow to right and left. But soft afterglow silhouetted upthrust spires of spruces and the clustered masts of fishing boats moored in placid river mouths.

## NEW MAP OF EUROPE RECORDS WAR CHANGES

**S**WIFTLY marching events of the last few months have wrought many changes in the map of Europe.

How lasting these changes will be no one can now predict.

But to record these portentous shifts in boundaries and sovereignty, and to give an up-to-date and accurate background for the tremendous drama now being enacted, the National Geographic Society this month issues to its world-wide membership of 1,100,000 a revised and augmented map of Europe and the Near East.\*

This special supplement to the May number of the NATIONAL GEOGRAPHIC MAGAZINE shows, as of April 10, 1940, the embattled continent and its environs all the way from Africa to the Arctic and from Ireland to Iran, and includes the recent territorial changes in Poland and Finland.

### MAP SHOWS VITAL OIL PIPELINES

That strategic zone perhaps best designated as the Middle East—from Suez to India and from the Caspian Sea to the Gulf of Aden—is shown in a timely inset. For the French and the British this area is vital, for upon it depend sea communications with the East and abundant supplies of that all-important sinew of modern mechanized war—oil.

Prime targets in a 1940 war are the pipelines through which the oil flows. On this new map pipelines are shown as red lines across desert and mountains. They lead from Romanian wells to the Black Sea and the Danube, from the rich fields of Iraq across the Syrian desert to Mediterranean ports controlled by the British or French, and from Iran to the Persian Gulf.

Russian pipelines run from the Baku and other oil fields on the Caspian Sea to harbors on the Black Sea. Another snakes across the Kazak Republic to Caspian ports.

To Germany vast supplies of Romanian and Russian oil are even more indispensable than is the oil of the Near East to the British-French war machine on sea and land, since the western powers have other sources.

From the end of the World War of 1914-1918 until March, 1938, the map of Europe went virtually unchanged. The Versailles status quo prevailed for nearly twenty years.

Then suddenly broke the gathering storm. Men marched and map makers have had to

work fast to keep up with the rapid shifting of boundaries.

Big presses at Baltimore were whirling out copies of a new National Geographic Society Map of Europe in March, 1938, when Hitler's armies rolled into Austria and transformed it from an independent country into a province of the Reich. The presses were stopped and the green of Germany flowed over the place where independent Austria had appeared before.

At the end of September, 1938, the Munich treaty gave Hitler the Sudetenland, and in March, 1939, Czechoslovakia vanished as an independent nation. Memelland, long held by Lithuania, was returned to Germany less than a week later.

Even in the seven months since The Society's map of Central Europe and the Mediterranean, sweeping changes have been made.

Not only the Polish Corridor but Poland itself disappeared as a national entity in the German *blitzkrieg* of September, 1939. The new map shows how Poland has been partitioned between Germany and Russia, with Lithuania getting a share, and it indicates the German-dominated State, called the Government General of Poland, which has been set up around Warsaw.

Farther north, the map shows the Finnish territories acquired by the Russians at tremendous cost in human life in the David-Goliath war which ended in March, 1940. They include the Karelian Isthmus where the Finns long held the Mannerheim Line.

### LAKE LADOGA'S NAME IS CHANGED

The new frontier gives to the Soviet all of Lake Ladoga and adds a new name to geographic vocabularies, for the Russians call it Ozero Ladozhskoe. By contrast, Viipuri assumes a simpler form, Vipuri.

Just north of Finland's wasp waist, Russia gains territory that includes another headline name, Salla. Vaitolahti, northernmost and newest Finnish town, also goes to Russia, along with Finland's part of the Rybachi Peninsula.

\* Members wishing additional copies of the map "Europe and the Near East" may obtain them by writing to the National Geographic Society, Washington, D. C. Prices, in the United States and Possessions, 50¢ on paper (unfolded); 75¢ mounted on linen; index, 25¢. Outside of U. S. and Possessions, 75¢ on paper; \$1 on linen; index, 50¢. Postage prepaid.



FURY STAMPS THE FORBIDDING FEATURES OF A DISTURBED PRIEST-GOD

His worshipers have vanished and with them have gone the bloodstained altars where gruesome sacrifices were offered to appease his wrath. A workman stands beside the giant figure, which was one of 142 statues excavated by the author in the San Agustín region of Colombia. The priest-god carries a knife or chisel in one hand, and in the other a small-shell trumpet with which the people were called to worship. "He wants to be left alone," said a native woman in awed tones when the deity at first defied all efforts to stand him on his feet (pages 639 and 641).

# STONE IDOLS OF THE ANDES REVEAL A VANISHED PEOPLE

Remarkable Relics of One of the Oldest Aboriginal  
Cultures of America are Unearthed in  
Colombia's San Agustín Region

BY HERMANN VON WALDE-WALDEGG

*With Illustrations from Photographs by the Author*

HIGH in the Andes of Colombia the archeologist's spade is bringing to light strange long-toothed statues and other relics of one of the oldest and most mysterious of early American cultures.

Of these vanished people almost nothing has been known. Hidden away on a lofty plateau guarded by the rugged ridges of the Andes, their relics have escaped the attention given such cultures as those of the Mayas, Aztecs, and Incas (map, page 629).

On two expeditions in recent years I have found the hills around the town of San Agustín to be rich in buried temples, tombs, and ferocious-appearing figures carved in stone. Carefully studied, they shed valuable light on the life of these aboriginal Americans who probably lived and carved their gods from about 250 B. C. to A. D. 1000 and whose culture had risen, flourished, and faded before the rise of the Inca civilization on the Pacific side of the Andes.

The region is such a mine of archeological treasures that in two short seasons I was able to excavate 142 statues, several temples in the form of dolmens, many tombs—in one of which some of the bones had fortunately been preserved—and quantities of pottery and other objects, some apparently used in human sacrifice (page 643).

## GODS HAVE HUGE EYETEETH

One of the most striking characteristics of this San Agustín culture is the enormous set of teeth, and especially the gigantic eyeteeth, of the majority of the monuments. They give the figures the malevolent aspect of beings from another world.

These remarkable teeth appear to be primarily a badge of deity, and statues representing warriors or other human figures are generally toothless. Some of the monuments seem strangely ultramodern and one

statue of a war-god or a tribal chief is strongly suggestive of modern cubist art (page 647). Many figures are of extraordinary size. Some weigh more than 15 tons and one has a height of nearly 21½ feet.

Present-day inhabitants of the region look upon the massive stone idols with awe and believe that catastrophe would befall them if the gods were ever borne away to the outside world.

The first scientifically conducted excavations in the area were begun just before the World War of 1914 by the German archeologist Konrad Theodor Preuss. His work in two volumes, published in 1929 and translated into Spanish by the writer in 1931, became the steppingstone for succeeding investigations.

While serving as an archeologist for the Colombian Government and as a teacher of archeology at the University of Bogotá, I made a trip of reconnaissance to the region in 1932 and was immediately struck by the possibilities of this virtually untouched field. Two successful expeditions have followed.

## GOD AND GODDESS IN A PASTURE

On my first visit to San Agustín, my eager interest was aroused even before we reached the town. With a native guide I was riding a rough trail through the dense vegetation of the Colombian highlands on the last lap of the long journey by rail and horseback from Bogotá, when suddenly my eyes lighted upon something that almost made me fall off my horse.

Flat on their backs in the dirt and grass of a meadow lay two heavy figures of carved stone representing a god and goddess. Each was about as tall as a man. With their long jaguar eyeteeth and broad noses, they looked like something out of a nightmare, but to me as an archeologist they were infinitely beautiful.



"DEATH TO THE INTRUDER!" THIS WARRIOR SEEMS TO WARN

In one hand the temple guard holds a mace, in the other a stone. The carving above his head represents a bat, symbol of death, with human features. This is one of the statues now standing in the plaza of San Agustín (p. 632).

"Where have these come from?" I asked my companion.

He shrugged.

"Who knows? They have been here always."

The find had utterly failed to impress him.

"Oof, that is nothing," he declared. "Up there you will find so many you won't know what to do with them."

He waved his arm toward the plateau on which stands the village of San Agustín.

After a hard climb of several miles, we reached the plateau and almost immediately I saw three more statues beside the road near the house of an old native woman. One was so badly broken up as to be barely recognizable. These likewise had long feline teeth and broad flat noses.

I undertook to question the old woman concerning their origin.

"How should I know about it?" she replied. "I am now seventy years old and for as long as I can remember I have seen those stones right there in that same place. How should I know where they came from?"

#### HUGE STONE TROUGHS AS PUNCH BOWLS

Behind her house I saw a massive stone trough, about six feet long, which she used for pounding maize in making the fermented drink known as *chicha*. It, too, she said, had "been here always." She knew nothing of its origin and cared less.

My investigations indicate that these vessels served not as coffins, as Preuss believed, but as enormous punch bowls (page 634).

If indeed these stone vessels were used for the ceremonial mixing of drinks, the size and number of those already found would seem to indicate a rather extensive aboriginal population—and also, perhaps, a rather extensive capacity!

San Agustín proved to be a town of about 600 inhabitants (p. 630).

Remembering the stiff climb behind us, I thought how favorable

had been conditions for the development of an aboriginal culture here. The plateau on which San Agustín stands is protected on all sides by high mountains and deep valleys. It forms a natural fortress difficult of access from almost any direction.

As I scanned the rugged landscape, I thought how fortunate it was that here there were found inexhaustible quantities of exposed rock. Every archeologist finds himself pitted against the merciless ravages of time and is always thankful for any non-perishable substance on which long-vanished artists have unknowingly recorded their way of life.

#### STONE WARRIORS TALLER THAN A MAN

Standing regularly spaced about the plaza of the town were 14 of these stone monuments. There were gods, goddesses, and fierce-looking warriors, some of them taller than a man (page 632).

In the next two weeks I ranged far through the hills, finding many statues half covered by jungle growth, others half buried, and still others revealed only by the presence of mounds which fairly shouted an invitation to the archeologist's spade.

Four years later, as Curator of the Museum of Anthropology at Boston College, I was privileged to return to the San Agustín region and undertake extensive excavations with the support of the Reverend Louis J. Gallagher, then President of Boston College, and with the aid of the Museum of the University of Pennsylvania.

Characteristic of the attitude of some of the natives was the reply of the owner of a plot of ground when I asked him to sell me one of the statues unearthed there.

"No," he said, frowning. "If I were to part with one of these images, some great misfortune would surely befall me.

"You know," he continued, "these are the guardians of the locality. For years they have been buried under the soil and it is only since you people have been coming to this region that all sorts of things have been happening to me. Just yesterday a sow with seven pigs died—the first time such a thing has happened to me in the sixty years I've been living in this house."

It took me a long time to convince the man that the death of the hog had nothing to do with my excavations. To satisfy him I finally wound up by paying for the sow and the seven sucklings.

Bolder than the rest was a small farmer



Drawn by Ralph E. McAleer

#### A CULTURAL STOREHOUSE IN THE ANDES

Near the headwaters of the Magdalena River, in southwestern Colombia, the author found 142 buried stone images and numerous other relics of a vanished culture. The Colombian Government is converting the area, near San Agustín, into a national park.

who lived about two miles from San Agustín. When I visited his modest home, I found that some of the wooden columns of the dwelling rested upon mutilated statues.

#### A FARMER DEFILES THE GODS

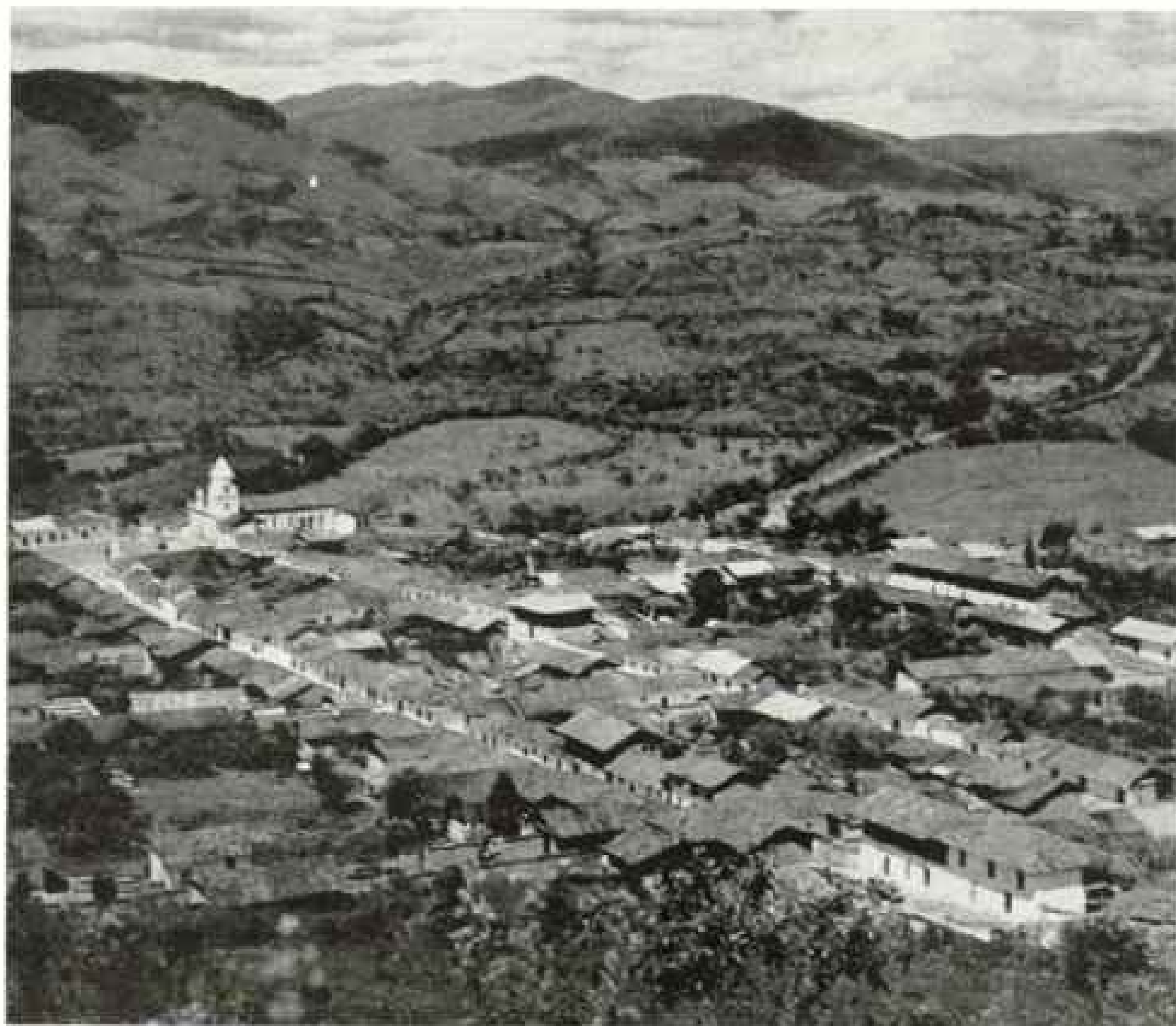
"Those stones are no good anyhow," scoffed this rural iconoclast, refusing to place any credence in tales of gods and vengeance. The man was ill with dropsy, however, and as he began to suffer more and more pain his confidence weakened. Eventually he became convinced that the carved stones in the foundation were at fault and his family went to considerable effort to replace them with other stones—but by that time he was dead.

Although I knew that this area was one of the richest archeological regions in South America, I had never expected to find the fantastic number of specimens that we actually discovered nor to find being revealed before our eyes a culture of such extraordinary nature.

#### CARVINGS OF THE MOON INDICATE A METHOD OF CALCULATING TIME

About two and a half miles from San Agustín I excavated a temple or shrine containing two statues of exceptional interest,





FORGOTTEN STONE GODS SLUMBER IN THE HILLS ENCIRCLING SAN AGUSTÍN

The town's 600 present-day inhabitants regard the idols with awe and know nothing of the vanished people who wrought them. Fourteen of the images have been brought down, with tremendous effort, to grace the plaza (page 632). The earliest known written allusion to the town is in a will dated 1609. San Agustín was invaded by the Spanish Conquistadores and later suffered two devastating fires. During the quinine "rush" in South America in the 19th century, the village bustled with activity. Some of the best plants from which the medicinal bark is obtained were found in near-by jungles. Today the settlement is the center of a quiet farming area.

together with numerous carved designs on flagstones and plates which appeared to have had some astronomical meaning. For instance, one big flagstone bore horizontal and vertical lines with representations of the moon, which may point to the existence of a method of time calculation. Other stones bore carvings of constellations, including the Southern Cross.

#### GODDESSES OF LIFE AND DEATH

Most dramatic, however, were the two statues. One was a stylization of a bat, with a long line of teeth. The bat was a symbol of death in many South American cultures, and the available evidence points to a probability that this monument repre-

sents a Goddess of Death. A second was found about 1½ miles away (page 636).

Diametrically different is the other figure, which may represent a Goddess of Life. The deity portrayed has big round eyes, a sharply cut line of teeth with large, protruding canines, and it holds a baby with a moon-shaped headdress (page 637).

When the dirt was scraped away and the small figure in the hands of the larger one came to light, the workmen grew excited. "There's a baby!" they exclaimed.

#### CHILDLESS WOMEN TOUCH THE IMAGE

Soon, especially for some of the childless women, the statue assumed an aura of supernatural power. I remember one woman in



A "FINE FELLOW," ONE NATIVE CALLED THIS IMMENSE BLOCK OF STONE FURY

More than five feet wide, the huge carved image is a magnificent example of the art of the second period, perhaps about A. D. 600 (pages 636 and 646). Only the upper part of the figure is shown here. Some of the giant statues unearthed by the author weighed more than 15 tons.



MONKEY HEADS EMBELLISH A HOUSE-SHAPED THRONE

The carved stone block, found near Plata Vieja, is a model of a tribal day house. In the center of each side is an entrance, with a skull hanging above it. The monkeys may have been the tribal totem (page 641).



ANCIENT CARVED DEITIES BROOD BESIDE A MODERN MEMORIAL IN SAN AGUSTÍN'S PLAZA

To all, fourteen of the stone figures have been brought down from the hills by the town's present-day inhabitants (page 630). Gods stand on either side of the central monument. The one at right, holding two maize, represents a war-god. In the right foreground is the statue of a human warrior with the tribal totem.



A COLOMBIAN MISS LOOKS BEFORE SHE LEAPS

Caught unawares by the sudden appearance of the author's camera while she was filling the pan with water, the little girl rose suddenly. As she stood poised for flight, the shutter clicked.



WHO NEEDS A PERAMBULATOR

Brother's back takes care of the transportation problem for this Colombian mountain baby. "Nature gives the trio food and shelter," writes the author, "and that is all they want. Cloth is not an indispensable thing in life."



EARLY AMERICAN PUNCH BOWL?

Big stone basins like this one, now used by inhabitants of San Agustín as watering troughs for horses, or for pounding maize in the making of *chicha*, were at first believed to have been coffins. The author, after excavating many and finding no traces of human bones, concludes that they were used in preparing libations for tribal rites (page 628).

particular who wanted very much to have a baby. It was pathetic to see her, constantly touching the statue and whispering something which no one could understand.

Since many carvings representing astronomical calculations were found in this temple and since the infant's headdress is crescent-shaped, the figure may possibly represent the day holding in her arms the new moon.

Although we had seen many examples of the handiwork of these ancient inhabitants, we had yet to meet one face to face.

After the discovery of the Temple of Life

and Death, however, I made a detailed examination of the vicinity and eventually, at a depth of about sixteen feet, we excavated a box-shaped tomb.

On the bottom were the remains of a man!

#### UNEARTHING AN ANCIENT COLOMBIAN

Most of the bones were badly damaged and some completely disintegrated through action of water. Nevertheless, I was fortunate enough to find fragments of a skull, the right forearm, and the left tibia, or shin-bone. Close at hand was a small, unbroken reddish-yellow pot with a narrow ring-shaped neck and a wide mouth.

The nature of the pottery and the stratification of the tomb show that this burial belongs to the

first period of the San Agustín culture; hence this ancient Colombian may have lived at about the time of Christ. The fragments of the skull and other bones showed no extraordinary characteristics which would indicate any marked physical differences from the Indians of the present day.

Other finds, even more interesting, awaited us.

We had set out by horseback for the headwaters of the Bordonos River where, the natives told me, there was a very high waterfall. Knowing that such dramatic manifes-

tations of nature often arouse religious feelings in primitive peoples. I thought that possibly the fall might have been the center of some previous settlement.

#### OVER ROUGH JUNGLE TRAILS

The trail turned out to be terribly rough. At last we met a man who was on his way down and I asked him whether he had ever heard of any statues being found in his region.

"Of course," he said. "There's one right on my ground, and a fine fellow he is!"

"Could you go back?" I asked, promising to pay him well.

He looked doubtfully at our horses and shook his head.

"They'll never do it," he said. "It's a terrible trail."

I assured him, however, that the horses were fit and he finally agreed to go.

What he had told us about the trail was nothing. The hoofs of our horses were continually catching in the tangled roots and deep mud. Every moment we were afraid one of them would break a leg or fall over a hidden cliff. We were somewhat shaken in spirit when, in spite of our caution, one of our pack horses finally slipped, fell over a precipice, and was killed.

Riding, of course, was impossible. We had almost to drag our horses along, wading at times nearly breast-deep in mud and matted roots.



TOTEM OF AN ANCIENT CLAN—A SERPENT-EATING EAGLE

A tribe endowing a bird or animal with divine powers carved its image in stone. The creature thus selected as a totem was never killed. Eagles with snakes in their beaks are seen frequently in San Agustín. To this day, the inhabitants have a high respect for the birds and forbid shooting them.

At last, late in the evening, when we were nearly worn out and our horses were hardly able to go a step farther, we arrived at the home of Bernabé, our friend of the trail. That night we all slept in the pioneer's tiny cabin, 15 of us in a one-room log house. A six-month-old baby hung in its cradle right above me.

#### TELLING TIME BY CHEWING COCA

Living on such intimate terms with the natives, here and elsewhere, we had ample opportunity to observe their customs. They arose about five, made a fire, and had breakfast, which consisted of chicha and



ONCE MORE A BAT GOD, SYMBOL OF DEATH, BLINKS IN THE SUNLIGHT

Workmen have unearthed the carved figure from its centuries-old resting place in the jungle. Throughout Central America, the bat represented death among many tribes (page 630).

bread. About six o'clock they were ready for their first chew of coca leaves, from which cocaine is made.

A chew lasts about four hours. In fact, the natives literally tell the time of day by their chews. A chewing is called a *mambeo*, from *mambe* (lime cooked in raw sugar water), which is chewed with the coca.

A native of this region does not say that he will report for work at such and such an hour. He says he will be on hand in the first or second quarter of the first, second, or third *mambeo*—the 12-hour day being divided into three four-hour *mambeos*—and these people are more punctual than many of us who have watches.

To their experienced palates there is a readily discernible difference between the sharp, acrid taste of the coca and lime during the first quarter and the milder stages of taste during subsequent mastication.

Bernabé's "fine fellow," of which only

the head was visible, turned out to be a notable statue (page 631), but even more important was another find.

ALLIGATOR GOD OF SACRIFICE

A piece of rock was seen projecting from a mound and when we excavated we found a large, flattened stone on top of which was a square depression opening toward the front.

For its religious significance, I believe that this piece is one of the most interesting archeological specimens yet found in South America. The hollow on top is the place where victims were sacrificed. Along the open side the blood of the victim drained into the mouth of a vengeful deity, the Alligator God, represented in its natural shape on three sides of the stone block and in its divine form on the bottom (page 643).

We can only imagine the religious fervor accompanying the scenes of sacrifice which



THE GODDESS OF LIFE HOLDS A BABY

The author makes notes on his find before villagers swarm to the spot. Their interest was fanned by news that a "statue with a baby" had been found. San Agustín women wanted to touch the figure and for those who were childless, Dr. von Waldegg writes, "the statue assumed an aura of supernatural power" (page 630).

probably centered around this stone. The civilized mind needs no graphic portrayal to sense the horror of the custom; yet these ancient people of San Agustín probably kept this grim figure in evidence as a reminder through their daily life of the ultimate demand their deity might make and as a gruesome stimulant to mob hysteria when the ceremonies were under way.

#### WORKMEN FEARFUL OF THE SINISTER SACRIFICE STONE

When my workmen learned that this stone had apparently once been used in human sacrifice, they seemed very much astonished and upset.

"I don't want to go on working here," said one, shaking with fear.

"Did you hear," he asked his fellow workmen, "about what happened to Don Sim-

foroso who dug out a *guaca* (Indian burial)? Two days later he became a leper!"

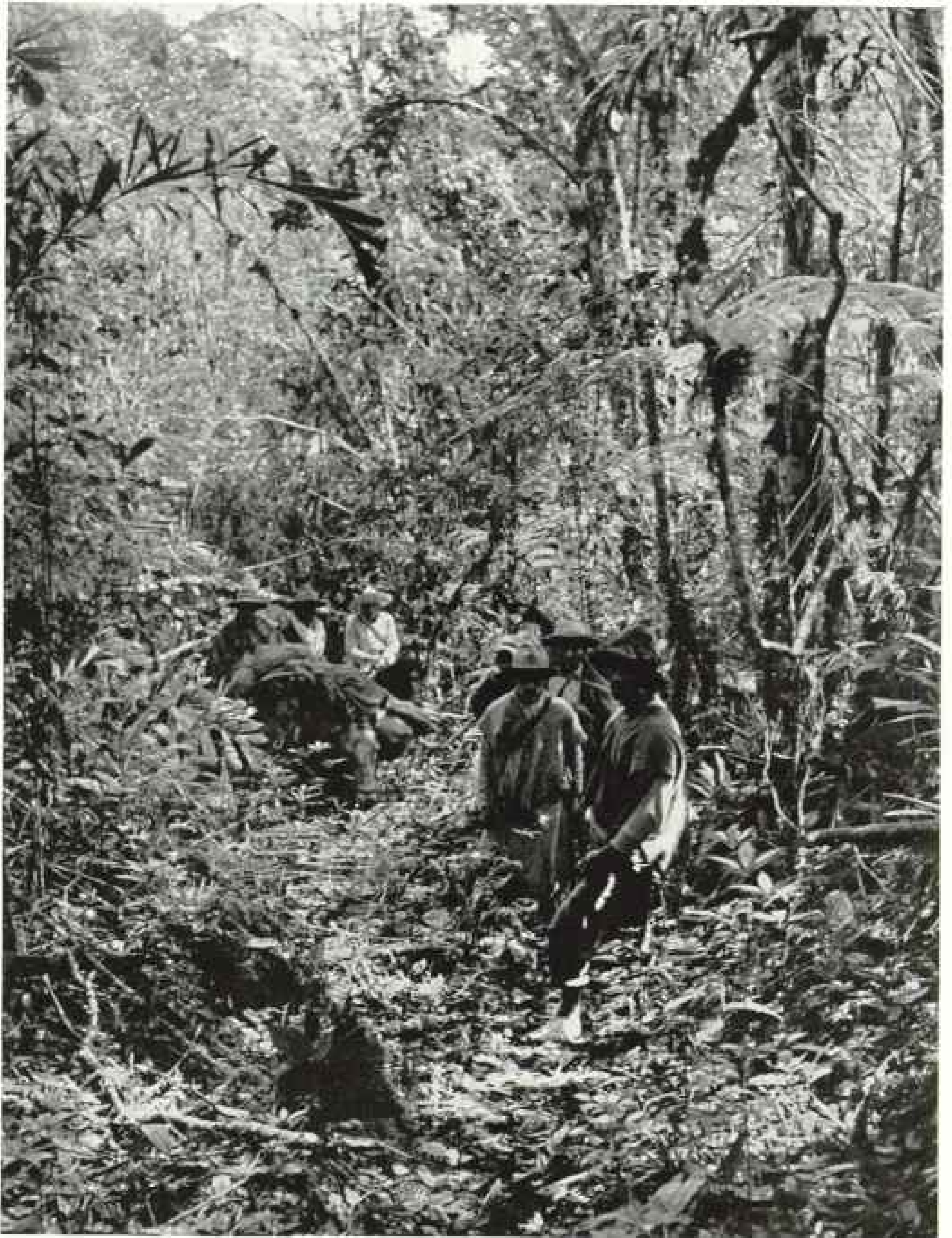
Earnestly he addressed himself to me.

"Don't forget," he said, "that these were gods. Today we don't worship them any more, but I am sure that their power is still upon us and upon this region."

Among the relics of this culture we also found evidence of a practice of self-torture for ritual purposes. One statue found a few miles from San Agustín portrays a god with a broken cross (a symbol of fire) on his forehead, apparently extracting blood from his tongue, a religious practice which also existed among the Mayas and Aztecs of Central America (page 646).

Skulls evidently were used as fetishes or talismans in some regions of the San Agustín culture. A colossal figure with catlike teeth and large puma ears has a carved





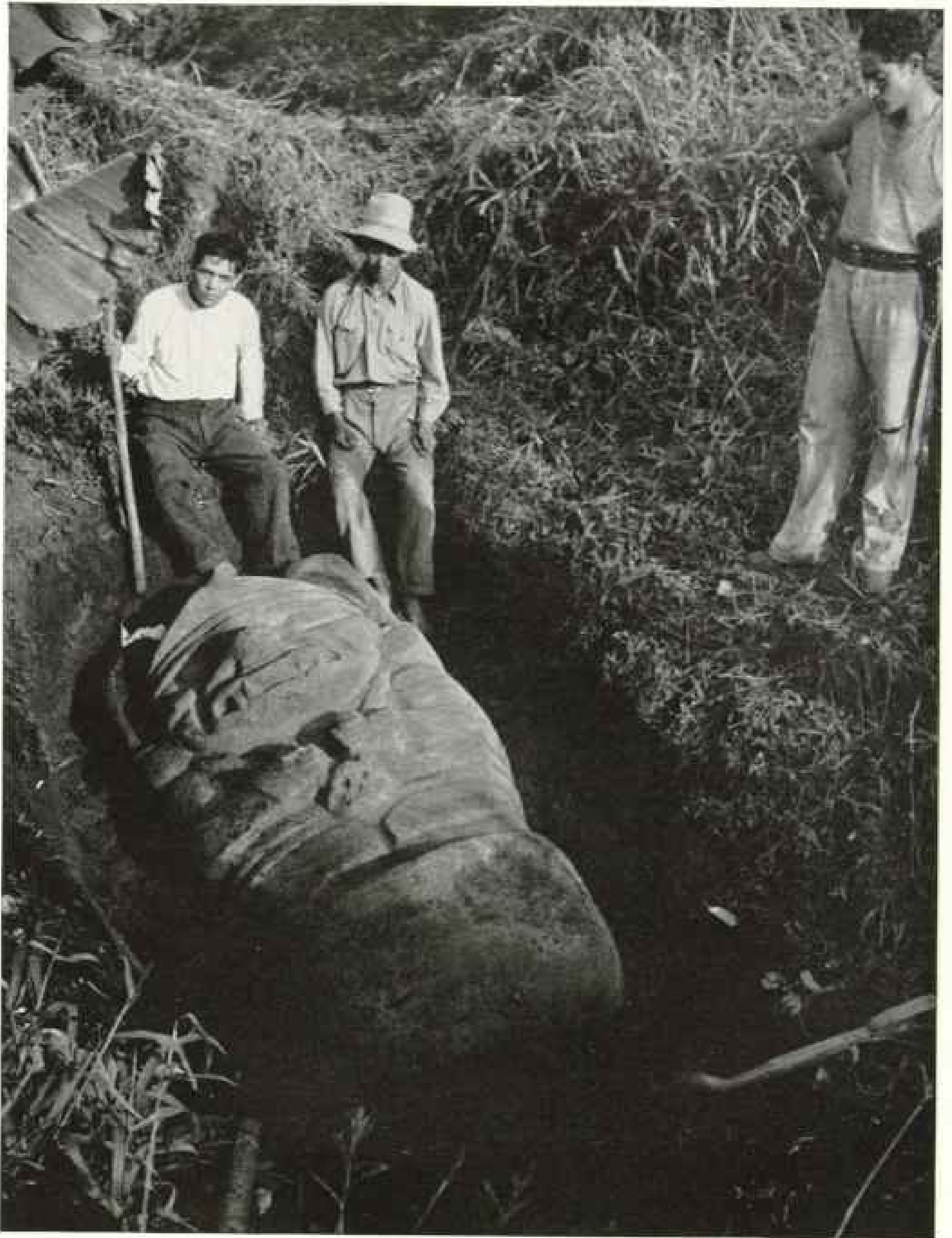
THE AUTHOR'S GUIDES CUT THEIR WAY THROUGH TRAILLESS JUNGLE.

The worst stretch traversed was to the headwaters of the Bordonos River, where horseback riding was impossible. "We had almost to drag our horses, wading at times nearly breast-deep in mud and matted roots," Dr. von Waldegg writes. "Slopes were terribly steep and there was virtually no trail at all" (page 655).



FOUR PULLEYS FAILED TO PUT THIS PRIEST-GOD BACK ON HIS FEET

So heavy was the statue that the derrick could not restore it to its original upright position. The author estimated its weight at 10 tons. Finally, with the aid of many workmen, a pit was dug at the base, the giant slipped into it, and the front of the hole cut away to reveal the grim image (pages 626, 641).



VANISHED CARVERS GAVE CATLIKE TEETH AND PUMA EARS TO THIS GIANT

Large, protruding eyeteeth are a sign of deity, for statues representing warriors and other human figures are generally toothless (page 647). In the center of this figure, suspended from the neck by a stone "string," is a carving of a trepanned skull. Villagers, questioned about the origin of the statues, merely replied that they had lain about San Agustin "always."

representation of a trepanned skull hanging on a string from the neck (page 640).

#### MASSIVE PRIEST-GOD REFUSES TO BUDGE

Many of the statues and other objects excavated in our two seasons of work were of such massive proportions that we were able to raise them only with the greatest difficulty. Particularly reluctant was a grim priest-god (page 626).

This bulky stone individual weighed at least ten tons and we found ourselves unable to raise him, even with a tripod and four pulleys (page 639).

A murmur went through the group of watchers.

"He doesn't want to get up," I heard one woman say. "He wants to be left alone. You will never be able to do it, not if you use all the people of the village. He is making weight for himself."

Indeed, after trying all afternoon without any results, I was half inclined to agree with her. It really seemed as if this god were still maintaining his power.

We finally compromised by digging a hole about six feet deep in front of the lower half of the prostrate figure, sliding the god upright into this pit, and then excavating the whole foreground.

Of exceptional importance was a piece found in the region of Plata Vieja, more than fifty miles north of San Agustín. It was evidently intended to serve as a throne. Its particular interest lies in the fact that it helps to show how the people of this culture lived: it is modeled on the lines of a house, probably a day house in which a tribal group lived during the day. The model, of course, is of solid stone, whereas the houses themselves were doubtless of wood, leaves, and straw (page 631).

On a horseback trip to the southeast of San Agustín, I failed to find archeological relics, but instead I found another thing of great interest—a series of caves of amazing extent in which that strange blue-eyed bird of the night, the *Steatornis caripensis*, or guácharo, nests by the thousands (page 644).

#### CAMPED IN A JAGUAR'S DEN

These caves, formed by the river itself, happened to be known to my half-breed guide, Eleuterio, called El Cacique (the Chief). At the beginning of the century, while civil war was raging in Colombia, he

had had occasion to hide out alone in the caves for about a year.

One night we camped in one for shelter and warmth. The entire floor of these caves is covered with well over two feet of guano.

"We'd better build a big campfire," said Eleuterio, "because there are *tigres* in here."

In the morning we found fresh jaguar tracks around the entrance. It was *his* cave. He had paced the ground and in the end had quietly gone away.

#### BIRD OF DARKNESS, WITH BLUE EYES AND LONG MUSTACHIOS

As soon as we had stepped inside the first cave, we had made the acquaintance of the guácharos, also known as oilbirds. There were thousands of them, flying wildly about and shrieking so loudly as to drown out even the terrific roar of the river. Their nearest relatives are the goatsuckers.

Next morning I shot one for my collection and was amazed at the long mustachios, blue eyes, and striking white spots on the beautiful chestnut-colored feathers.

"These white spots on each feather look like tears," I remarked.

"Yes," said Eleuterio, who had been watching while I studied and skinned the bird. "The people say that these are the tears shed by the Indians after their defeat and all the trouble they have undergone at the hands of the white man."

He had a firmly fixed belief that the birds themselves were the spirits of Indians who had lived here long ago.

"You know," he reminded me, "a big tiger (jaguar) lives in these caves, and I tell you I have seen this tiger sitting up on a rock with all those birds flying around him just as if they were waiting to receive his orders. That tiger may have been one of the great chiefs to whom the spirits of the Indians are giving homage today."

#### FACES ON THE CLIFFS

One day as I was crossing the swift Magdalena River I happened to see something that vaguely suggested a carved image on the cliffs on the other side of the river. With field glasses I was able to distinguish clearly a carving of a woman with extended arms, possibly in an attitude of prayer (page 642). She is about fourteen feet high and has pronounced superciliary ridges, the bony ridges over the eyes, which are particularly prominent in the apes and primitive man. Another figure has the head of an Indian



FROM HER HILLSIDE PERCH, A 14-FOOT FIGURE OF A WOMAN PEERS INTO THE VALLEY OF THE MAGDALENA

Ancient sculptors risked death to carve many of these statues on nearly inaccessible cliffs. Such a feat, the author writes, "proves once more the deep-rooted religious feelings of the people, who endangered their lives to portray the images of their gods."

with a huge feather crown and big earrings.

I was eager to follow this culture on to the other side of the Andes to see whether any evidences of its existence could be found there as well. So, early one morning, I set out from San Agustín on horseback, with two native companions, bound for the Valle de las Papas on the other side of the range (map, page 629).

In this region the central and eastern cordilleras of the Andes come together, forming one of the most important watersheds of the Andean system. The vegetation up to about 9,300 feet is dense and muddy

jungle. A constant fog makes the region one of the dampest in the Andes. There are giant ferns two and three times as tall as a man, and a shrub with handsome flowers of red, blue, and wine.

#### WOOLLY LEAVES MAKE A WARM BED

At about 9,300 feet this subtropical vegetation gives way to low shrubs, mountain grass, and *trailejón*, one of the most important plants of the Andean highlands, since it has actually saved the lives of hundreds of persons who have ventured into these inhospitable regions.

Leaves of this plant are about a foot long and have a woolly coating. A wayfarer crossing a high mountain pass and in danger of freezing can save his life

by making a bed of these leaves, which give as much warmth as several woolen blankets.

Late at night we went over the pass, which is called *Páramo del Letrero* (High Mountain Pass of the Inscription). At the summit are two stones bearing inscriptions which probably date from the time of the Spanish Conquest. They contain an invocation to the Virgin Mary for those who are crossing the pass.

It was freezing cold, with constant fog, and we were glad indeed to descend at last to the Valle de las Papas. There, in the

very first house, hospitable natives helped us to hot coffee and dry clothes.

RELICS HERE  
MORE PRIMITIVE

In this valley, sure enough, I found unmistakable relics of the San Agustín culture. They were more primitive, however, for they belong to the first cultural period, which may have extended approximately from 250 B. C. to 200 A. D. Statuary of this period is usually cruder, smaller, and lacking in deeper religious and social significance. The pottery is coarse-grained and generally large-sized.

From one of our excavations we obtained several clay spindle weights. I showed one to a native woman.

"You could give me that," she remarked. "I need it for my spinning."

The object was about 2,000 years old, yet she knew exactly how to use it. She showed me, spinning yarn from a hank of black wool tied to a chair (page 645).

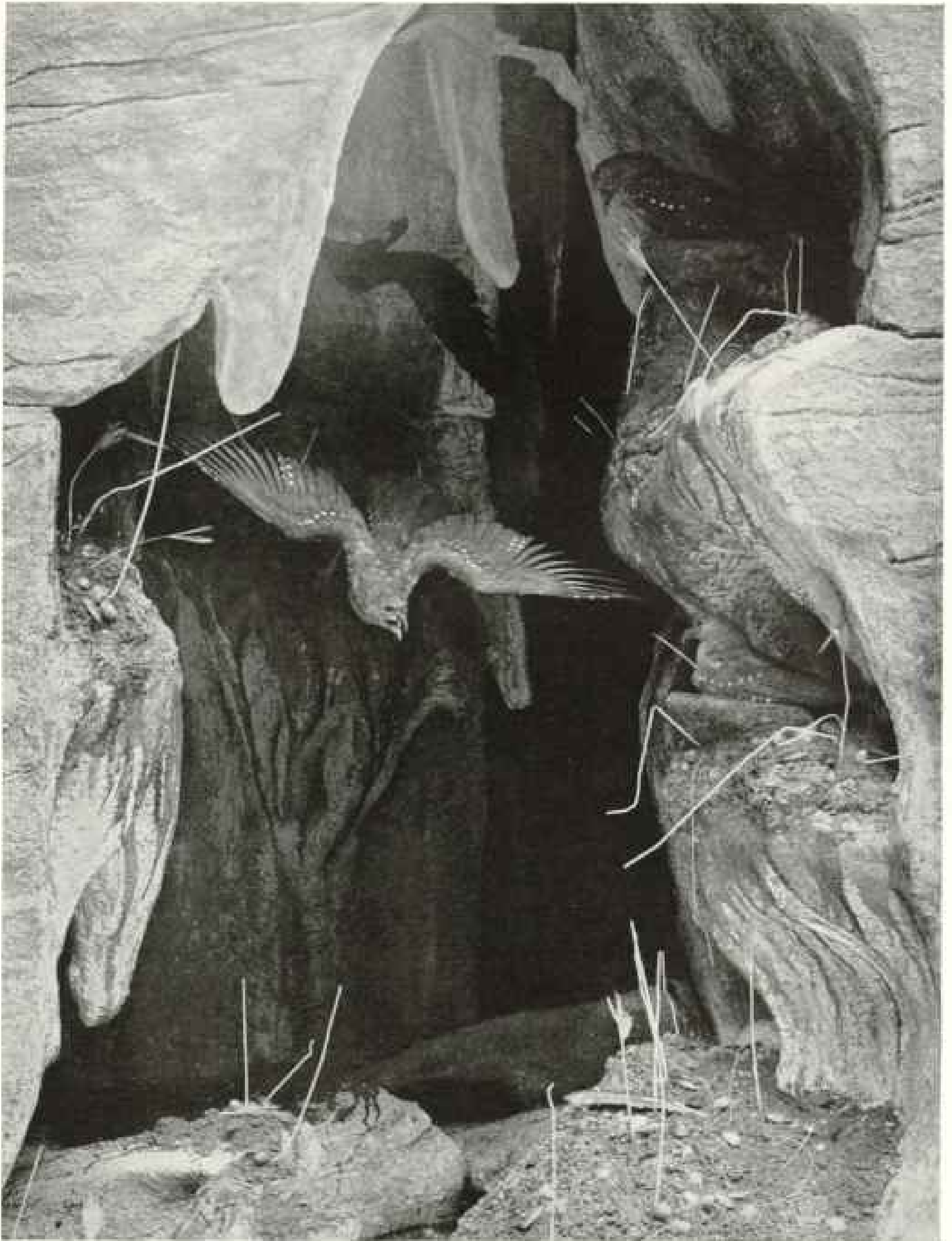
In northern Ecuador I found more relics of the San Agustín culture, but they had grown cruder and cruder. I had been backtracking on the route of these mysterious people. Apparently originating farther to the south, they had entered this region and slowly spread to the other side of the range. There in the vicinity of San Agustín, amid protected and ideal conditions, they reached their highest development.



SACRIFICIAL BLOOD APPEASED THE ALLIGATOR GOD

Across the flat stone sprawls the ugly figure of the deity, shown in the drawing below. This carved side formed the ceiling of a temple or shrine. On the other side, the roof, victims were slaughtered and the blood ran through grooves between the teeth (front edge) into the god's gaping mouth (page 636).





Photograph courtesy Field Museum of Natural History

#### SCREAMING OF WEIRD STEATORNIS BIRDS RINGS THROUGH COLOMBIAN CAVES

The author camped in one cavern inhabited by thousands of these nocturnal birds. The photograph shows the exhibit of this species in the Field Museum of Natural History, Chicago. Indians believe the white spots on the chestnut-colored feathers are tears shed by their ancestors for deprivations suffered at the hands of the white man. Others think the birds themselves are the spirits of ancient Indians (page 641).



A COLOMBIAN MOUNTAIN WOMAN SHOWS THE AUTHOR HOW TO USE A SPINDLE WEIGHT 2,000 YEARS OLD

When Dr. von Waldegg came into the Valle de las Papas after excavating on the heights near by, he showed this discovery to the villager. Despite the object's age, she recognized it immediately. "I need it for my spinning," she said. Dextrously she whirled the weight as she spun from the hank of wool tied to the back of a chair (page 643).

It must not be imagined that these people during this period or at any future times attained anything approaching the richness of the literate cultures of the Old World. Many aspects of their way of life seem macabre, savage, and crude. At the same time, it should be remembered that the story of their existence is told only in their surviving handiwork, unsupported by any literature or evidence other than time-defying stone or clay.

#### STONE CONDUITS FOR WATER

Like the Mayas, Aztecs, and Incas, the people of San Agustin were American Indians who under favorable circumstances reached a comparatively high level of social and artistic attainment. They had stone conduits for conveying water either for

drinking or for irrigation. Stone tools for grinding indicate they grew maize, and there are evidences that they had domestic animals. Clay spindle weights show they knew how to spin, and though no remnants of fabrics have survived in the damp soil, representations of skirts and breechcloths are found in their statuary.

The enormous pieces of stone, especially the slabs forming the roofs of dolmens, were doubtless cracked from solid rock by fire, pulled or rolled along a slope on poles, and pushed into place with levers.

Unfortunately lacking in these stone monuments is any indication of a system of dating,\* such as that which has revealed

\* See "Discovering the New World's Oldest Dated Work of Man," by Matthew W. Stirling, NATIONAL GEOGRAPHIC MAGAZINE, August, 1939.





A PRIEST-GOD DEMONSTRATES THE WAY TO PIERCE THE TONGUE

The instrument of self-torture probably is a chain of human vertebrae, to which is slung a skull at the bottom. Such rites also existed among the Mayas and Aztecs. Across the forehead runs a broken cross, symbol of fire (page 657).

to us the age of Maya relics. Certain it is, however, that this is one of the oldest American cultures of which we have knowledge.

The nature and large number of these monuments—hundreds have already been found—lead to the conclusion that it must have taken many centuries for this culture to develop from its most primitive stage and for the statues to be carved by the slow and crude methods available. The art itself gives valuable clues through comparison with that of other cultures such as the Proto-Chimú of the Peruvian northwest coast, and the ancient Chavin of the northern mountains of Peru. The upper level of

the San Agustín culture merges with later cultures, the approximate dates of which are known.

Of course there are many pitfalls which the archeologist must be careful to avoid. For instance, it would be hard to say on the basis of stratigraphy alone to what cultural period a monument weighing several tons belongs. Water infiltration or landslides, or even the constant changes of the vegetal life of the jungle, the growing of roots and the falling of trees, may cause such a monument to reach a deeper level, or it may lose its original position in a number of other ways.

It is at this point that one must abandon the stratigraphic method and

take into consideration, after the manner of the art critic, the skill of workmanship and the presence of social and religious symbolism in the object under consideration.

On the other hand, where stone axes and adornments are found together with numerous pottery fragments, the order of the various levels has a definite importance. The stage of development of the pottery forms one of our most valuable clues.

By all these methods the culture has been divided into three periods, set off by dates which of course can be only the roughest of approximations. The first period may have lasted from about 250 B. C. to 200 A. D., the second from 200 to 700 A. D., and

the third from 700 to 1000 A. D.

#### DECLINE OF THE SAN AGUSTÍN NATION

The cause of the artistic decline of San Agustín may have been invasion by a more powerful nation or a gradual disintegration of the people from other causes. Relics of the final period are not nearly so plentiful as those of the second, a fact which seems to prove that the nation, ravaged by wars or famine or undermined by dissolution of the social order, had greatly diminished in size.

Religious sentiments that reached such deep expression during the second period are gradually vanishing. A typical example is the large statue of Quebradillas, portraying a war chief with rectangular eyes and mouth, large ear blocks, cuffs, and war club. Although this is a first-rate piece of sculpture by a modernistically inclined artist, we do not find in it the former sublimity, nor does the monument inspire sentiments of fear, which was one of the most powerful motives in the preceding period.

Religion seems to have undergone a rapid change. Its complete and absolute decay, caused, perhaps, by an internal revolution or a war which decimated the population, is reflected in the art of this epoch. The monuments of the period point rather to a cult of the dead, into which the previous religious conceptions may have been absorbed.



HE WOULD FEEL AT HOME IN A CUBIST ART DISPLAY

The carved war-god, or perhaps tribal chieftain, with a mace in his hands belongs to the final period of early San Agustín culture, when the religious sentiment of the people probably declined. Such divine features as cat teeth and puma ears, which marked earlier statues, are lacking.

Thus explorations in this mountainous area in southwestern Colombia lead us in the end to the fall of a noble culture. Somehow, our San Agustínians, after developing the cultural personality that is achieved only by a people of maturity, unknowingly violated a law of nature, calling down upon their heads the merciless penalty so often inflicted along the course of social progress.

What are these laws? Will it ever be possible for any people to continue in harmony with them? The answer lies in no small part in the comparative findings of the scientific archeologist, who searches for the causes that lie behind the fortunes and misfortunes of bygone nations.



"IT'S A LONG, LONG WAY TO TIPPERARY," BUT THIS CART'S NEAR THERE

Above the rooftops looms Cashel Rock, the "Acropolis of Ireland." Before the construction of its church buildings centuries ago it was the home of Irish kings. Remnants of its former glory still attract scholars, writers, and antiquarians from every corner of the earth (Plate X and page 691). With Eire's return to old Irish ways, road signs in Gaelic as well as English direct travelers.

## OLD IRELAND, MOTHER OF NEW EIRE

By Whatever Name, 'Tis the Same Fair Land With the  
Grass Growing Green on the Hills of Her and  
the Peat Smoke Hanging Low

By HARRISON HOWELL WALKER

*With Illustrations from Photographs by the Author*

**B**LUE turf smoke hung like a thin mist over white cottages against the green hill as I walked up an Irish lane. I breathed deeply; I breathed Ireland.

From an open door of a snug thatched home came accordion music, and the tapping accompaniment of feet on the stone floor vibrated in me. A girl laughed. A man began a Gaelic song. At the little square window a woman was smiling and singing, too.

On the hill a crisp wind from the sea whipped my coat, cooled my cheek, and left the taste of salt on my lips. Below spread the harbor of C6bh where I landed only yesterday. Yet, caught in a spell like that which made early English settlers more Irish than the Irish themselves, I felt already old in Ireland.

### OLD ERIN'S WAYS IN NEW EIRE

Although England controlled this island outpost for hundreds of years, Gaelic culture never died completely. Even the conquering British could not resist Irish music and poetry, the language, and the smiles of the colleens. In the 14th century English warriors put down their swords and picked up harps.\*

And now, some six hundred years later, the people of old Erin are turning back to ways of their Gaelic ancestors to strengthen the free Irish State as a separate nation (map, page 653). The original Irish language, homespun customs, and age-old industry I found almost everywhere in a random journey through this country that retakes the ancient name of Eire.†

As if he had known me all his life, a friendly farmer paused on the road to speak.

"Is it as green as you thought it would be?" and he looked out over the rolling fields.

"Yes, and even fresher."

"You should see my wheat in the wind; it moves like a sea in fine weather."

The lilting rhythm of his expressive phrases sounded like well-scanned verse. Together we walked down the steep road to C6bh.

"Goodbye, now," he said. "Mine is the farm just across from the graveyard where *Lucitania* victims are buried. If you're free on Sunday afternoon, come over. I have a family—and daughters, too."

I told him I'd call on Sunday.

Byrne's flower garden almost concealed his low house. Fuchsia and lupine grew as high as the roof. Roses rambled everywhere.

"That's all Eileen's work," Mr. Byrne told me.

Eileen was a bright-eyed daughter.

With another daughter, lithe Pauline, and a neighbor girl, I walked to a Norman castle at Belvelly. It was several miles north of C6bh as a crow might fly, but not as Irish lanes go.

When our walk ended at eleven, scarcely an hour after summer darkness, my legs felt like anchors. I think we followed ten of the fourteen miles of shore road that circumscribes the island on which lies C6bh.

### CORK AT WRONG END OF BOTTLE

A big liner at anchor in C6bh's harbor reminded me of a model boat in a bottle. I wondered how the vessel had slipped through the neck; actually the entrance is a mile wide.

At the wrong end of the bottle is Cork, on an island near the mouth of the River Lee. Its name comes from *Corcaigh*, Gaelic for marsh. On Monday I wandered through Cork, second only to Dublin in size among the cities of Eire (page 654).

Amidst all the bustle of Patrick Street gleamed a tiny corner of Celtic Ireland. On a rustic workbench lay scraps of sil-

\* See "Ireland: The Rock Whence I Was Hewn," by Donn Byrne, NATIONAL GEOGRAPHIC MAGAZINE, March, 1927.

† Pronounced "Aib-6."



HATS OFF TO THE FIRST PRESIDENT OF EIRE!

Dr. Douglas Hyde takes his own off, too, in acknowledging the cheers of thousands of spectators at the Dublin Horse Show (Plate IV and page 652). Elected in 1938, President Hyde will hold office for seven years.

ver, dull in its unfinished state—duller still in the gray Irish light that filtered through a northern window. A man with a cow-horn hammer tapped at a piece he would turn into a graceful chalice. He went to a forge to anneal the silver, returned to his bench, resumed hammering—much the same process, and much the same tools, used by men before Christ was born.

Crowds going home after work poured over St. Patrick's Bridge. Interested to see where many lived, I moved with the mass toward the hilly northern district. Like gophers dropping into their honeycomb holes, people dispersed and disappeared. I found myself almost alone on a winding

lane almost two centuries ago. Manager Murphy showed me about.

A little stream turns big wooden mill wheels to furnish the foundry with power. Two-ton iron hammers on ten-foot elm shafts as thick and strong as battering rams pound red-hot metal into shovels, spades, and wagon axles.

I watched a man shape a neat, symmetrical axle out of a plain iron bar. No measuring rod was necessary; his eye reckoned accurately as any yardstick. Deftly, rapidly, he moved the piece under the great hammer head which rose and fell like the fist of an angry giant.

In another shop a man with a hand ham-

lane above the town. Brick houses gave way to little stone cottages.

By a wall I paused to trace the course of the River Lee through the city below. A gull cruising high and out of place seemed startling in its whiteness against the dull light that lay like a gray mantle over Cork. Still more startling were the sudden notes of the sweet-toned bells of Shandon. The gull swerved abruptly and its wings for a moment beat in time to "The Bells of St. Mary's." Gone was the bird when the gay tune of "John Peel" rang out its "view hallo-o-o."

#### TOOLS TO TILL THE IRISH FIELDS

Four miles from Cork a primitive steel factory continues to shape farm tools as it



Photograph by Meri La Voy

AMERICAN SAILORS MANEUVER TO KISS THE BLARNEY STONE

"With fair words and soft speech" the Lord of Blarney kept putting off fulfillment of a promise to Queen Elizabeth. Exasperated, she finally declared: "This is all Blarney; what he says he never means." Thus the English language acquired a word. A stone in Lord Blarney's Castle near Cork traditionally confers on those who kiss it the gift of "sweetly eloquent persuasiveness."



WOMEN'S CLOAKS IN KINSALE ARE CONVERTIBLE

When the sun shines, Mrs. Soderlund puts her top down. Mrs. Carroll, however, plays safe (page 658).

mer fashioned spades from flat steel as red as a tropical sunset.

Various regions of Ireland have particular shapes for spades. The forger picked up one model, and said, "This is for Wexford." Another was for Kerry; another for Cork; one for Clare; and still another for Limerick. He told me there are more than a hundred different spade patterns. Turf cutters, called slanes, are made in thirty or forty styles.

"My great-grandfather worked at this very same forge," said the spade man.

Innovations sweep like fresh winds through many factories today. But the only change in this shop since it began is a wheel-driven draft instead of old-fashioned bellows. Business as usual goes on by hand.

#### NO "ROCKY ROAD TO DUBLIN" NOW

I had to tear myself away from Cork. In a rented Ford, manufactured at that city's plant, I drove along winding roads in the direction of Dublin. Signs in Gaelic as well as English marked the way.

Passing through Youghal (called Yawl), I wondered what Edmund Spenser, who probably talked of his *Faerie Queene* while visiting Sir Walter Raleigh here, would think of modern mermaids on the resortish beach. Sir Walter I pictured sitting under a yew tree before his house, peacefully smoking Virginia tobacco.

Busy Waterford has probably bustled ever since Henry II paid his first British call in war galleys almost eight hundred years ago. Where his wooden ships landed, grimy steel freighters now unload English coal at Ireland's premier southeastern port.

Near the quay stands the circular Reginald's Tower, which takes town history back to 1003. Danes built it and named it for Rognald, a son of King Sigtryg Silkebeard.

#### DANISH BLOOD IN IRISH VEINS

Wexford seemed more Danish than Waterford. Squeezing through the narrow streets, I bumped into men, women, and children bent on butter-and-eggs-and-bacon business. Danish blood flows in their veins.

County Wexford, a gently rolling green, broken by fuchsia-hedged lanes, stone walls, and thatched cottages, swells to a climax near Enniscorthy. The famous stand on Vinegar Hill in 1798's Rebellion makes it a Bunker Hill of Ireland.

Crossing into Wicklow County, I came to Arklow.

On a horse-drawn cart with two red wheels a man dipped milk from a big blue barrel. He did not shout, ring a bell, or blow a horn, but paused at irregular intervals. Customers came, swinging jugs or pails, on a cash and carry basis (Plate XVI).

Up the Vale of Avoca I wound with a river to Glendalough—valley of the two lakes. In the sixth century St. Kevin founded the little "city of Seven Churches." It is now in ruins, yet it remains one of Ireland's most sacred places.

#### "ST. KEVIN'S BED" ON A MOUNTAINSIDE

Well-preserved St. Kevin's Kitchen is an excellent example of the early Irish oratory. It is built entirely of stone with a steeply pitched slab roof and a round bell tower. Not far away, St. Kevin's Cross leans at a rakish angle (Color Plates IX and XII).

Even on a brilliant day Glendalough casts a weird spell. In the glen, two bleak lakes mirror the walls of grim, steep mountains. Their rocky sides sweat and gleam with sun or frown and glower under clouds.

Stories make St. Kevin's Bed a cave high up on a sheer mountain wall, for he would escape an enamored young woman. Wrote Thomas Moore:

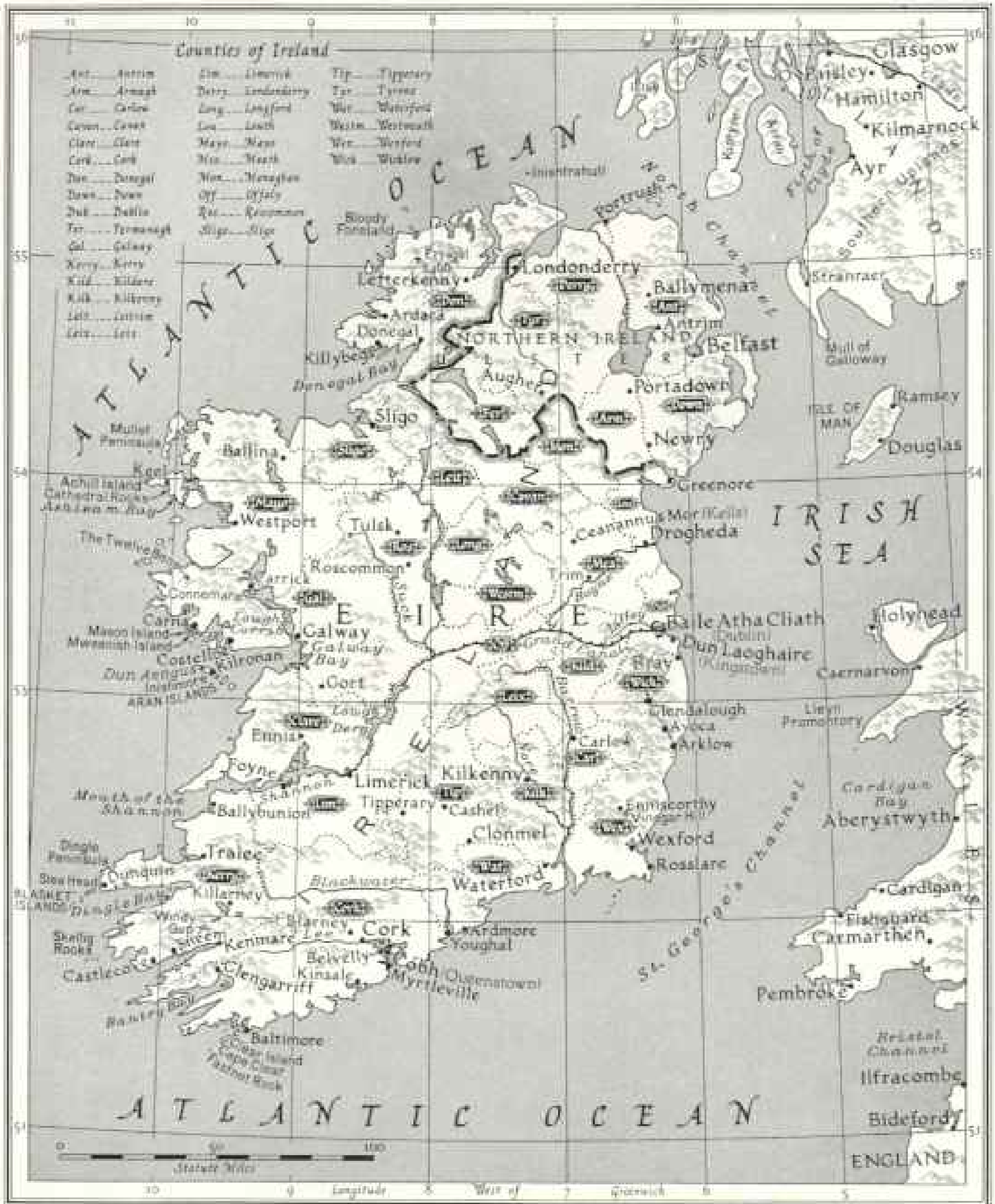
By that lake whose gloomy shore  
Skylark never warbles o'er,  
Where the cliff hangs high and steep,  
Young St. Kevin stole to sleep,  
"Here at least," he calmly said,  
"Woman ne'er shall find my bed."  
Ah! the good Saint little knew  
What that wily sex can do.

#### HORSE SHOW MAKES DUBLIN PRANCE

Dublin pranced with equine excitement. Annually the five-day horse show under the auspices of the 200-year-old Royal Dublin Society fills the city with horse lovers from all over the world (Plate IV).

Arriving late on the eve of the show's opening day, I slept in the bathroom of an old-fashioned hotel, glad to have a place at all.

The show spreads over the vast garden-like grounds at Ball's Bridge, a ten-minute drive from Dublin. From nine in the morning till seven at night, spectators, grooms, and contestants, breeders, sellers, and buyers throng judging rings, auction blocks, and the great jumping enclosure. Horse is

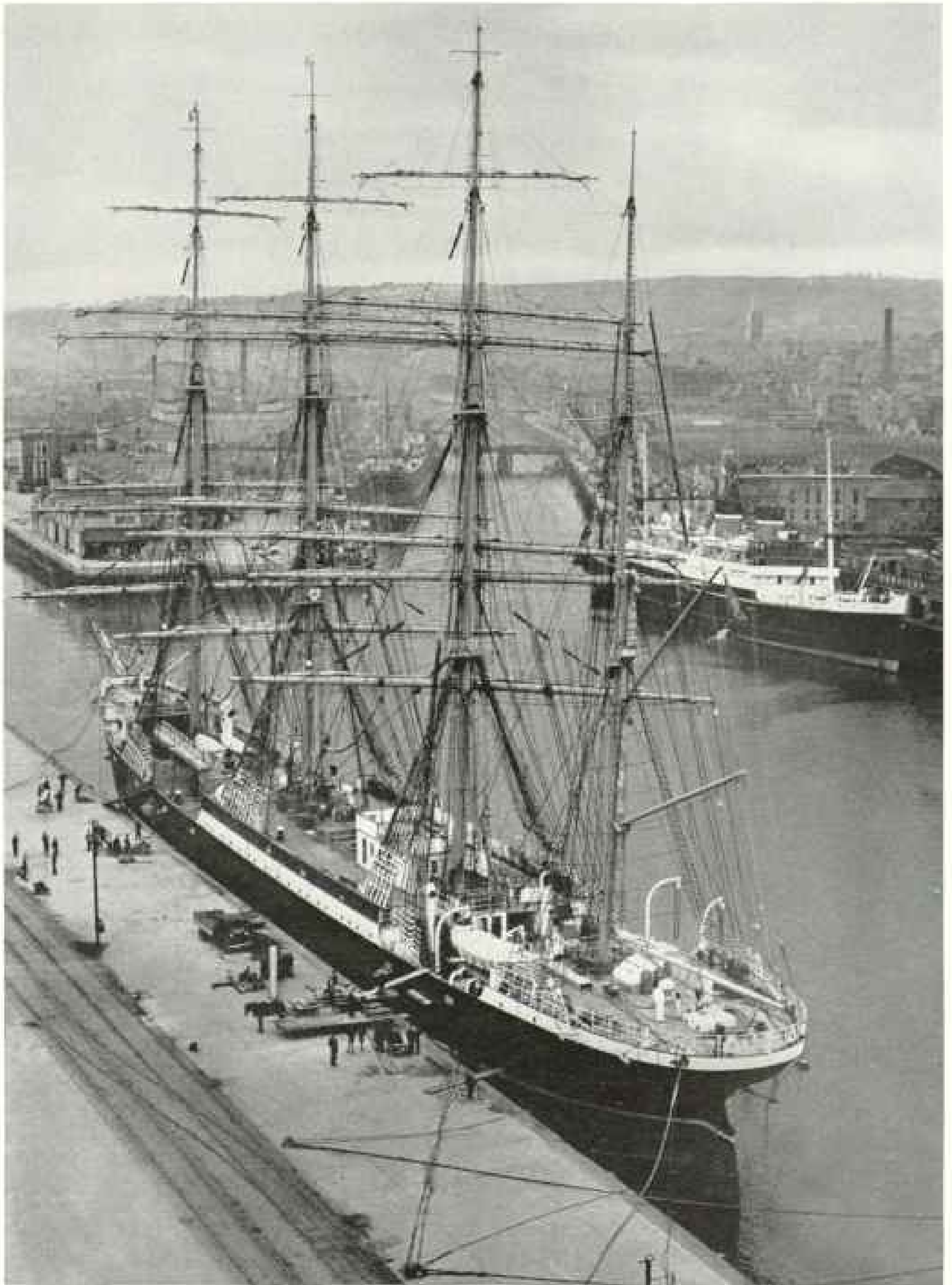


Drawn by Newman Dumstead and Ralph E. McAtee

FRIENDLY IRISH FOLK WELCOMED AN AMERICAN ON A RANDOM JOURNEY AROUND ROCKY SHORES AND OVER LONELY MOORLANDS

With trips to small outlying islands—Clear in the south, the Blaskets off the coast of Kerry; Aran and Achill in the west—the author visited villagers, farmers, and fishermen in almost every section of the Irish Republic now known by the old Gaelic name of Eire. The island as a whole still goes by the magic name of Ireland. To bind 26 counties in a separate nation, Eire, a neutral in the present European conflict, reverts to ways of ancient Gaelic ancestors. It is a sovereign country, independent and democratic. Northern Ireland, comprising six counties largely inhabited by people of Scottish descent, continues its allegiance to Great Britain.





A GERMAN SQUARE-RIGGER WITH WHEAT FROM AUSTRALIA MAKES HER LAST CALL AT CORK.

Sailing halfway around the world, the "wheater" *Kommodore Jahnson* brought her cargo to Europe once a year. After she sailed in August, 1959, from Ireland's principal southern port, on the River Lee, the vessel was detained in Brömerhaven, Germany, by war. When St. Finbarr founded a monastery near here in the 6th century, the land was so swampy that the site was called *Corcaigh*, Gaelic for marsh; hence Cork (p. 649).

god, mayor, emancipator, joy of Dublin. He's an excuse for romance, new clothes, vacation, business, sudden wealth, and a congeniality as thoroughbred as himself.

And around him develops a sort of Irish fair. An industrial exhibit displays everything from cigarette manufacture to lavender bathtubs, dainty cakes to anti-aircraft guns, coarse woolen tweeds to delicate lace. In three-hour shifts during the afternoon, two prize army bands play classical, military, or favorite Irish music.

On Friday the major event took place. Belgium, England, France, Germany, Ireland, Netherlands, and Switzerland entered three-horse teams in the international military jumping contest. Irish bagpipe and drum corps in kilts escorted each team to the field. Almost 29,000 persons watched Eire's President Douglas Hyde present the show's most coveted prize, the Aga Khan trophy, to France (page 650).

Horses in the flesh make the show what it is, but a holiday spirit comes as a corollary and pulses throughout Dublin. O'Connell Street, the main thoroughfare, seethes with aristocrats in racy tweeds and flashing silks, handsome boots and riding breeches. Stout business flows through corner pubs and down small side streets. Theaters grow queues that line broad sidewalks. And a little old woman in a black shawl shuffles up and says, "Only fo' pennies, this lovely rose."

Gay balls in big hotels and smaller dances in public halls make equestrians by day fly by night. On toward dawn such familiar tunes as "Daisy" jingled through my window as American foxtrots mingled with Viennese waltzes and Irish jig-time airs.

Running for my life across College Green with the change of a traffic cop's signal, I took refuge in the doorway of the American Express Company (page 656). Other Americans huddled there, too, like citizens in an air raid. I heard scraps of talk in familiar accents:

"I suppose this is the Times Square of Dublin." "It says here Trinity College, the Oxford or Cambridge of Ireland, was founded in 1591—oh! and the Book of Kells is in the college library. We must . . .". "Grafton Street—the one right here—is *the* shopping street. Wonder if I can get a . . .". "By the way, did you get seats for the play in the Abbey Theater?"

The house of Guinness brews stout and monopolizes Dublin's quays. All along

the busy Liffey's docks, trucks, wagons and barrels, tugs and barges remind one that "Guinness is good for you." I even saw a steamer named *Guinness*.

Past residential squares with fine old Georgian mansions I drove to Phoenix Park, on the city's northern outskirts. Within its area of 1,750 acres, woods and well-kept gardens fringe lakes, set off playing fields, and leave enough room for a racecourse.

#### DUBLIN LIONS SHIPPED TO AFRICA

Phoenix Park to me means zoo. And the true significance of Dublin's Zoo lies in its lions. So successfully are they bred that even West Africa places orders with Dublin.

"To what do you attribute your success in lion breeding?" I asked the zoo superintendent, who kindly showed me around.

"Feeding," he replied. "We give our lions plenty of donkey and goat meat. Such a diet is not difficult to supply in Ireland. And this meat is nearest to what the animals would select in their native habitat."

We paused to chat with Lion-keeper Flood, a man in his sixties, perhaps. Leaning his broom against a cage, he lit a cigarette and said:

"Well, I should be able to get along with these roarers. My father managed 'em pretty smoothlike for fifty years."

"Every lion knew and loved his father," added the superintendent. "He could whisper to them and they'd obey promptly."

#### SOUTH AGAIN TO COUNTY CORK

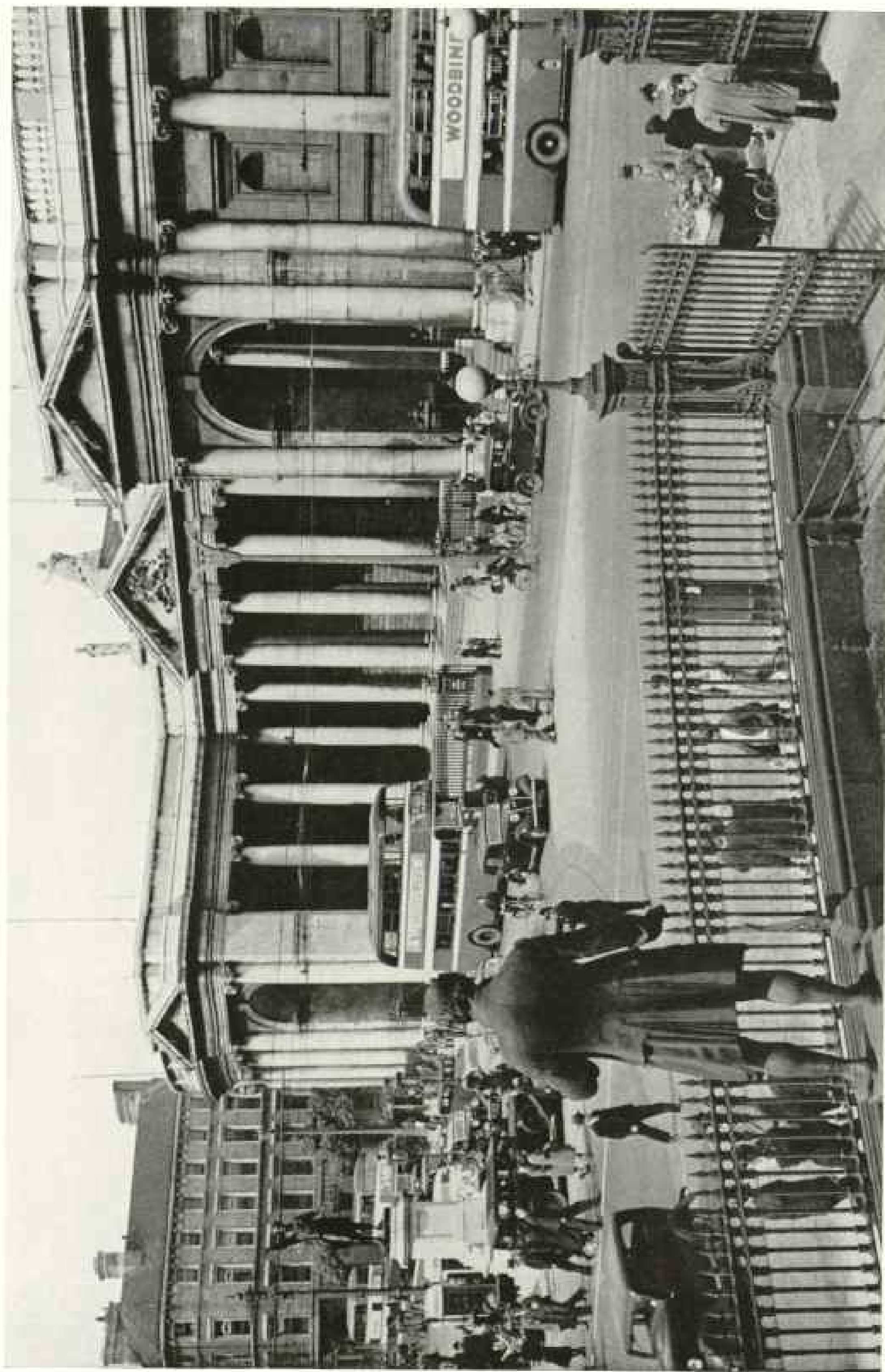
I left Dublin and returned to Cork, for I still had the taste of the south in my mouth.

One smutty collier, high-strung tugs, and lazy freighters drifted down the Lee. Impatient gulls, screaming for dinner, followed in circling flight; and an abridged Irish version of a Ford motored south on the road that margins the river's right bank.

Children running and laughing near the waves, and flowers defying the flying spray, detained me in Myrtleville.

I was not barefoot and I wore a coat. There was a cityness about me. A stranger to this little corner where winds blow fresh and naturally through ruffled hair and against bare chests, I attracted a group of free-spirited boys. They peered into my car, then turned to look at me some more.

From a yellow cottage hedged with scarlet fuchsia a mother called that tea was ready. Maurice said goodbye; then John,



GRASS IS SCARCE AT COLLEGE GREEN, THE BUS-HUMMING HUB OF DUBLIN

The statue of Oliver Goldsmith "watches" double-decked vehicles pass, advertising among other products an American cereal. From a pedestal Henry Grattan seems to be hailing a taxi (left background). He was a leader of the Irish Parliament which once occupied the large building, now the Bank of Ireland.



POTATOES AND BABIES—IRELAND'S HAPPY HERITAGE

Almost every farm grows the tubers which are the country's staple crop. In 1846 and 1847 the potato blight caused one of the greatest calamities ever to overwhelm a nation. Over 21,000 persons starved to death when the principal source of food was destroyed. Now farmers spray their plants to prevent blight.



PEG SAYRES, GAELIC WRITER, SURVEYS HER CUPBOARD CURIOS

Because there is no electricity on Great Basket, natives collect as curiosities discarded bulbs that wash ashore. The "Queen" of the island displays three of the treasures on a shelf at the right (page 675).

then Edward. As Thomas, youngest and most freckled, started off, too, I asked how far it was to Kinsale.

"Hold me up!" he gasped, closing his eyes to think all the harder. "It must be twenty-five miles."

But Thomas had a right to be wrong in Myrtleville, especially on his summer holiday. Actually it was about thirteen.

#### WAYFARERS IN DARK WITCHES' GARB

Women in black hooded cloaks flapped like dark witches along a road into Kinsale. As I passed, they closed the wraps about their faces, leaving only eyes and a bit of nose exposed. It reminded me of the Near East where ladies of the inevitable veil make similar self-conscious gestures (Plate XVI and page 651).

Traces of Spanish influence cling to Kinsale. The women's black hooded cloaks show a more northerly version of the man-

tilla. With narrow, twisting streets and squarish houses whose charm is reflected in windows and doorways, the town resembles many in Spain.

Around its landlocked harbor Kinsale grew into a thriving little city. Although fishing has been the principal industry, it is now only a half-forgotten tale.

Fifty years ago English, Manx, Scottish, French, and Irish fleets fishing the excellent mackerel grounds off southern Ireland made the harbor their headquarters. Here more than 600 craft came to dry their nets, moisten the salty palates of their crews and enjoy safe mooring till the next haul.

"At that time you could walk the length and breadth of the harbor by stepping from one fishing boat to another," said a white-bearded fisherman who still watched the tide for no reason at all.

Another glanced up from a rope he was knotting for a door handle and said: "Tis



BLASKET BOATS MOOR HIGH, DRY, AND BOTTOM UP

To launch a curragh, islanders crawl underneath, and it walks like a big black beetle down to the sea (Plate II). Against a cliff lean the ours which whip the craft along as lively as a water spider (p. 671).

the steam trawlers that have run our little boats off the fishing grounds. We used to do a fine business in mackerel and herring. Kinsale cured an enormous amount of mackerel for England and America. We fished; other countries ate; now we rot."

Mrs. Murphy of Murphy's Hotel stood outside the street door and told me how to reach the house of Father MacSweeney, "the most knowledgeable man in Kinsale."

He and I walked up the hill to Desmond Castle. This stronghold has served as customhouse, prison, and funeral parlor. Until boarded up recently, it even stabled cattle.

Once an undertaker hung a big sign above its Gothic doorway. It read, "Why lead a miserable life when you can be decently buried for seven pounds?"

From the castle roof Kinsale in the rare sun seemed a diorama. Father MacSweeney pointed out the "modern town" in the bosom of the bay; on the east, in a suburb

called Scilly, fisherfolk occupied cameo cottages in a brooch of close companionship.

"On that tongue of land that appears to be an island," he said, "James II built a castle and a fort: see the ruins? And young William Penn lived there a while, long before he sailed to bargain with the Indians for Pennsylvania."

At Baltimore, farther west along the south coast, I visited an industrial school. Here boys six to fifteen years old learn to make fish nets and to sail. Even boatbuilding has its place on the salty schedule. In a yacht constructed by young hands of this school, Connor O'Brien sailed around the world.

Students knit sweaters and socks that would bring high prices in the United States. Their shirts and trousers, jackets and boots show patient work of their very own hands. Football shoes they fashion from thick sheets of leather. They also stuff mat-



Photograph by Bronson De Coo from Galway

#### FARMERS CAUSE A SQUEAL AS THEY CHANGE PIGS IN MIDSTREET

Limerick, a center of hog raising, does a busy bacon-curing business. Each week one of the several establishments prepares about 2,000 pigs for bacon, ham, sausage, or pork chops (page 675).

tresses to fit the springy wires they coil for their beds.

Cecilius, son of the first Lord Baltimore, received a grant of New World land from Charles I. On that territory rose the city of Baltimore, Maryland, named not for this Irish town but for the founding family.

Buckets of soapy water wash the countless front steps of the American city, while the hectic Atlantic splits wide open on the ragged shore that is Irish Baltimore's front door. Like a lizard's tongue-stretching for flies, rugged headlands stab at rocky islets.

How a clumsy collier misses these watery gravestones in finding its way to the pier, no landlubber can guess. But twelve stevedores know why it takes six days to discharge six hundred tons. Basket by basket they bring coal ashore, for modern machinery would decrease employment.

I found Michael in Goggins' public house. When in Baltimore, he's usually there. Michael is skipper of the little craft that plies between the mainland and near-by Clear Island, curiously called "Cape Clear."

We strolled down to the harbor.

"Sure, there's room for you aboard. But we can't sail till we get the mail. It hasn't

come yet; should be in close to four o'clock," said Michael, shifting a tea chest to make room for me.

Out of the mist loomed Clear Island like a mountain top floating on clouds. Three miles long and a third as wide, the island has no village proper. Scattered stone cottages spot green slopes like boulders in a New England meadow.

Islanders came down to watch the boat dock, there being no more exciting pastime. White-bearded men wearing peaked black hats, and women wrapped in heavy woden shawls showed as much curiosity as the barefoot children.

John Burke and I followed island traffic—people, asses, and a single horse cart—up a steep, stony road. Outside a little red inn Mrs. Burke met us. I entered my Clear Island home.

#### DANCERS WHIRL TO LIVELY TUNES

With darkness young folk and old gathered at the inn for dancing. Mrs. Burke sat on a bench by the stove and squeezed lively Irish tunes from an accordion. Dancers whirled on the kitchen floor (p. 673). White beards and gray heads leaned against



Photograph by Bernd Lohse from *Three Lions*

#### IRISH CAN LISTEN AS WELL AS THEY SPEAK

At frequent intervals the Gaelic League of Eire holds meetings to further national interest. Patriotic speeches in the original Irish tongue continually stress the importance of building up the nation on a basis of its Gaelic language, homespun customs, revival of age-old industry, and a united Ireland.

whitewashed walls under crucifixes and kerosene lamps. Children closed their school-books; excited by music and dancing, they pattered about in bare feet like nervous puppies.

I watched high-speed sets or quadrilles, jigs, a hornpipe, and the *stepacipeen*. In the last, dancers held hands to form a circle, closed in and out, then intermingled with a rapidity that made me dizzy to watch.

My second night there, the islanders invited me to take part in a set. Kathleen, the innkeeper's daughter, was my partner. If my feet spun like my head, I wouldn't have known them as my own. Even then the tempo was retarded one-fourth—a merciful gesture to the uninitiated.

In welcome rest periods between dances, everyone sings. Winded as a runner after a race, I tried to join in. My breath came back, but a lump stuck in my throat. For me Irish songs have a strange sweet sadness.

Along a rocky lane bordered by stone walls called "ditches" a young fellow named Thomas and I walked toward the island's east end next morning. Sitting on a "ditch" we smoked our pipes and watched a lobster

boat near shore. Its sail gave the craft an oriental touch on a sea as blue as the Mediterranean.

Thomas and I sprawled on the heathery scalp of the rock-browed headland. Gulls wheeled near by and floated out over the frothy flecked vastness of blue. Whiter than white in the morning sun, gannets folded their widespread wings and dropped in for a seafood breakfast. A few swallows arabesqued about the cliffs. Close to the waves black cormorants shot like dots and dashes in telegraphic flight.

Cool, salty breezes tempered the sun's heat and kept the heather trembling. I faced the sea-swept east and felt the wind rushing in my ears.

Generally, island construction rises in stone. Since trees cannot stand the briny blow, timber must come from the mainland. Cottages show mortarless stone sides. Flat rocks in roadside walls are laid on their thin edges, not slab upon slab. The effect reminds me of a bunch of letters carelessly stuffed into a pigeonhole.

A September sun beats down on split ling salted and spread on roofs or stone walls.



When cured, the fish makes food for Fridays throughout the coming fall and winter. A September sun gladdens the man anxious to gather hay, or reap and store his wheat and oats. And a September sun sends womenfolk along the winding road to Lough Errul; they take family washing to the lake that is the public laundry.

#### NATURE'S OWN WASHING MACHINE

Lough Errul has a remarkable capacity for cleansing. The water is unusually soft. Swimming about in it, ant-sized organisms fatten on the dirt of soiled clothes. So easy-going housewives dump their bundles in the lake and lie down on the grassy bank while submarine laundresses do their work.

About Clear Island folk there's a wistful strangeness. They climb to horizons where they stand like statues or crouch like fakirs seemingly staring at nothing. Cows and horses, sheep and asses follow the example. No matter what time of day, nor where I am, if I look up toward the land horizon, I see a man or woman or child or animal against the sky.

Dinny Burke disappeared at tea. It was midnight when he returned.

"Where have you been, Dinny?"

"Out wabkin'," (walking) was all he said.

I would have bet my pipe he'd been standing on the horizon, too.

Skyline soliloquies belie the island's industry. Virtually clawing at the stingy soil, farmers struggle to maintain their holdings. Fishermen battle high seas near rocky shores to tend lobster pots. In the path of wild Atlantic gales, thatched roofs require constant attention. To insure precious pasturage, miles of stone walls must stay intact. Girls, in addition to home chores, keep needles flashing at the government knitting house. Some forty children under a professor and instructress carry on the tradition of Clear's reputable school; graduates teach Gaelic on the mainland.

Seen from Clear Island on a fine day, Fastnet Rock with its lighthouse, four miles away, resembles an approaching square-rigger. Sea voyagers from America usually have a first peek at Europe when liners pass this precipitous preface to Ireland.

As a craft like an autumn leaf in a fitful wind bolted me back to Baltimore, I watched Fastnet Rock, which seemed to be sinking. I looked once more toward Cape Clear; a black figure broke the island's horizon.

Crossing bleak hills all wet and wind-swept, I glided down to green Glengarriff. Pines growing on rock-strewn shores painted Japanese pictures on Bantry Bay. And heavy foliage, almost tropical, dripped musically after the rain. Shiny leaves glimmered like silver in the softening sunlight.

High in the hills north of Glengarriff a road tunnel in a constant cold sweat links County Cork with Kerry—Kerry of the cattle, Kerry of the heather, Kerry of the bogs all silent and lonely.

The road careens through low-lying Kenmare and climbs again into even more barren highlands. An unexpected sign by a solitary tarn tells travelers of a bar and refreshments. I stopped to ask for lunch.

"We don't cater quite that way," said a woman with an expression cold as the tarn.

But I got plenty of raw tomatoes and brown bread; and the woman warmed along with my tea. This is the way of Kerry folk; cool at first, they glow at last.

#### WHERE KILLARNEY CASTS ITS SPELL

From the harsh heights of Windy Gap I looked down on the soft pleasantness of isle-starred lakes, wherein lies Killarney's loveliness (page 674).

Killarney, an old story, rates as Mecca for visitors to Ireland. Muckross Estate and the old Abbey, Ross Castle and islands of the three lakes whisper history and legend as gently as a soft summer breeze.

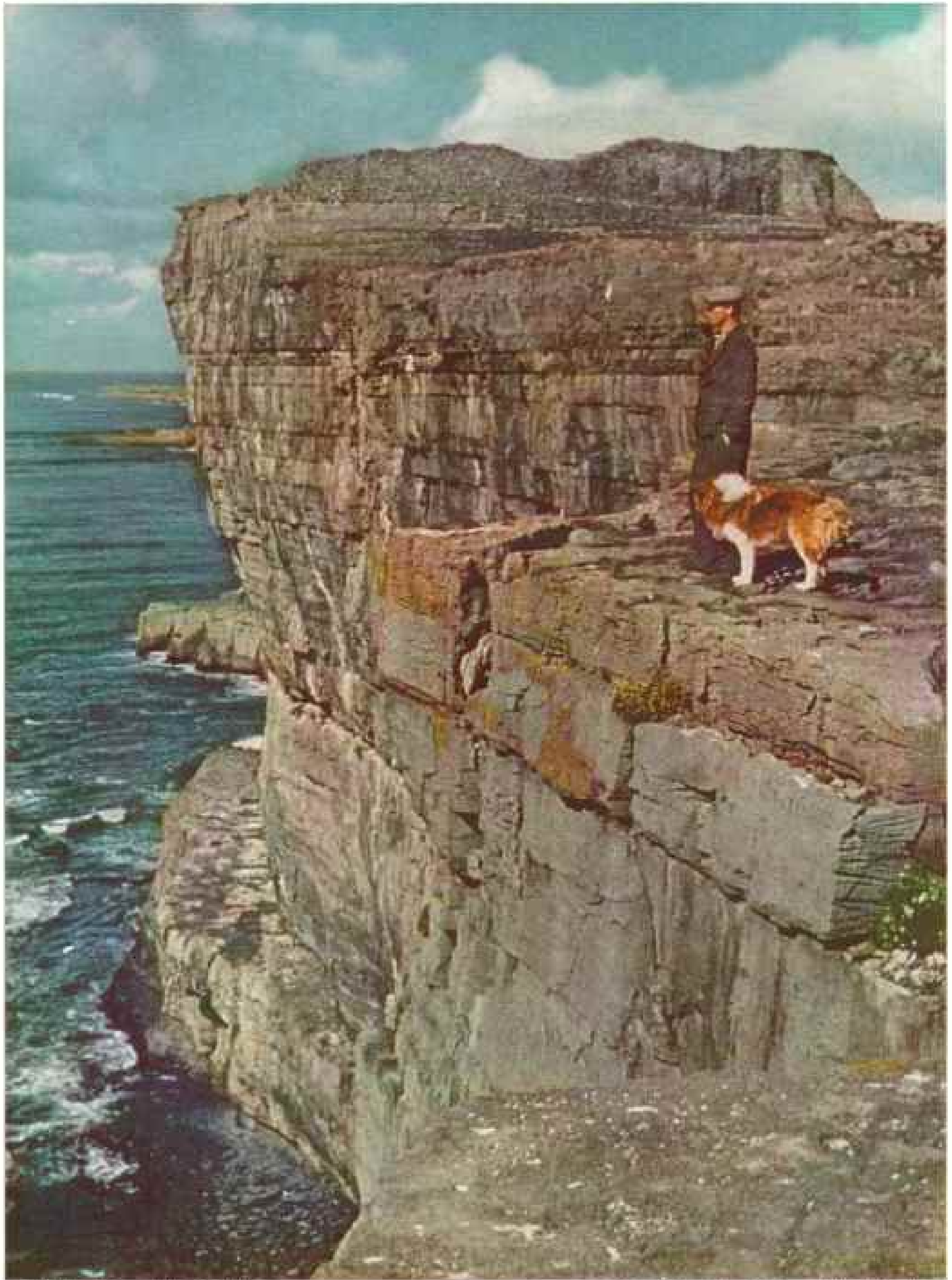
Continuing west to Castlecove, the road wound through amazingly wide valleys. They seemed all the vaster as tiny white cottages like the first few scattered flakes of snow clung to sweeping hillsides. No hamlets or villages I saw—only lonely homesteads making minute specks in the dark, distant hills of Kerry. Some houses squatted in bog bottoms where golden gorse and purple heather bloomed together in lovely confusion. Black turf ricks played hide-and-seek in the mist that came and went with the wind.

#### A FORT 2,000 YEARS OLD

Bright yellow gorse rang out the loudest living note in Castlecove's symphony of sea and rocks. Deep-red fuchsia struck low warm chords, and two or three trees broke the regular rhythm. With the rushing waves ran an unfinished melody.

Three miles from the cove and back in the hills I found Staigue Fort. A pre-Celtic tribe built it some 2,000 years ago.

WHEN IRISH SKIES ARE SMILING

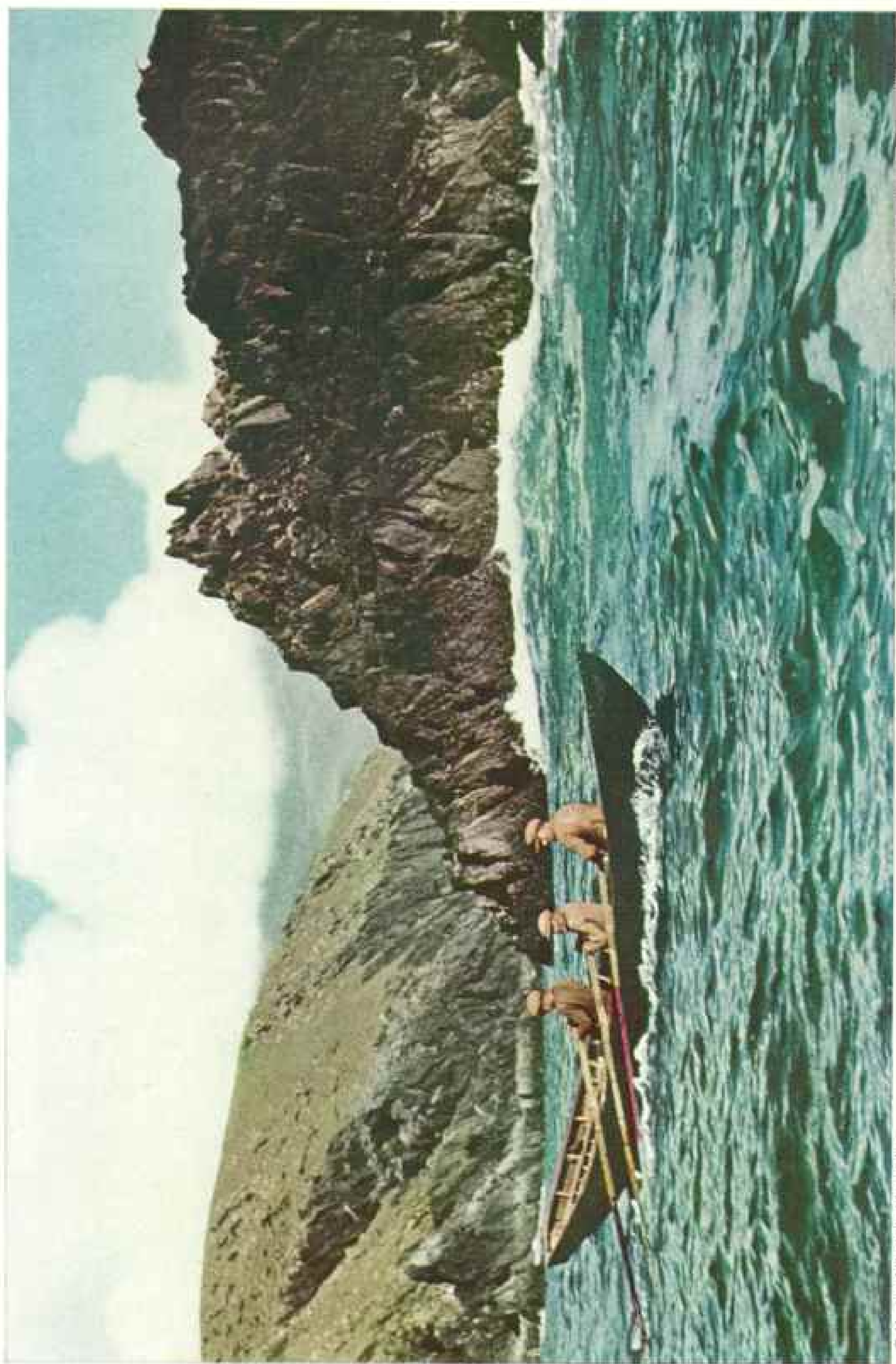


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Kodachrome by Harrison Howell Walker

BUILT ON THE BRINK OF ARAN'S CLIFFS; A FORT WITHSTANDS TIME BUT NOT THE TIDE

Two thousand years ago a pre-Celtic race constructed this citadel on the largest of the Aran Isles off the Irish west coast. Although the Atlantic has blasted away half the fort, Dun Aengus remains one of the most magnificent barbaric monuments in Europe. Using stone and no mortar, early defenders raised walls yards thick and three times as high as a man. Against what foe they guarded barren Inishmore Island, Ireland's western outpost, no history tells.



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PAST JAGGED SHORES, FISHERMEN BREAST ATLANTIC SWELLS ON THEIR RETURN TO THE ILASKETS

Great Blasket Island harbors a healthy, hard-working, seafaring colony. The men spend much of their lives in fragile curraghs. From such wood-ribbed, keel-less boats covered with tarred canvas, they fish mainly for lobsters. Before the present war in Europe, the catch was sent to France (Photos XI and XIII).



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STONES FROM THE ROCK-STREWN FIELDS OF CONNEMARA LACE THE LANDSCAPE WITH SNAKE-LIKE FENCES

Many landowners of fertile eastern Ireland were forced as refugees to these rocky regions of the west when Cromwell, and then William of Orange, stormed the country. With stones they built homes and piled up walls around their little holdings. Only by backbreaking work have farmers succeeded in raising enough grain to make bread, thatch roofs, and feed their livestock (Plate VII).

Kodachrome by Harrison Howitt Walker



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PRANCING THOROUGHBREDS AND JAUNTY CROWDS MAKE DUBLIN'S ANNUAL HORSE SHOW IRELAND'S LIVELIEST EVENT

For five days horse lovers from all Ireland and many foreign countries throng vast gardenlike grounds at Ball's Bridge near the city. In addition to the judging and jumping, trading and auctioning of fine breeds, there are concerts, an industrial exhibit, and flower show. Outdoor restaurants and tea gardens attract hundreds who stay all day.

Kodochrome by Harrison Howell Walker

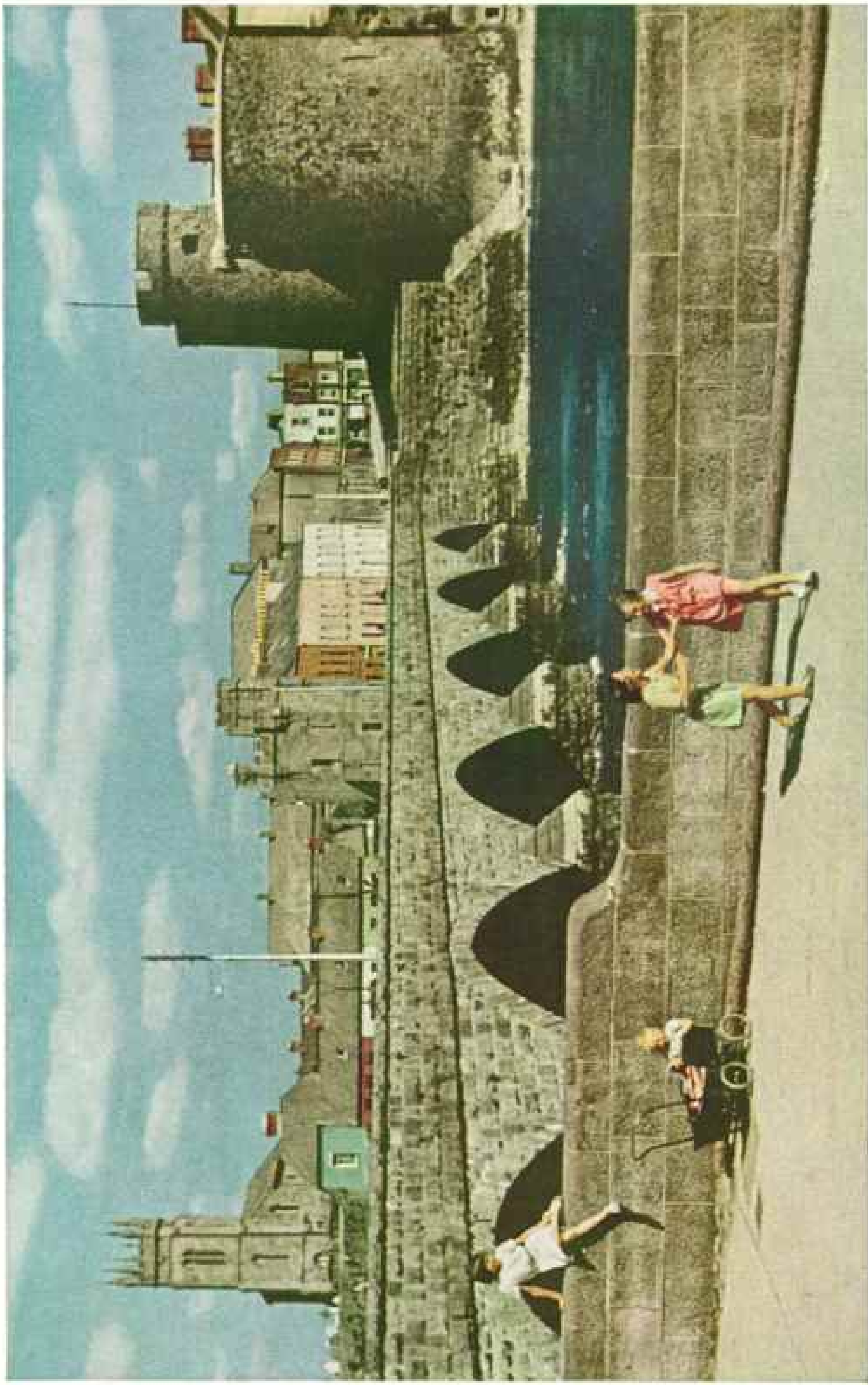


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Kodachrome by Harrison Howell Walker

M-M-M—BUNS AND MILK AND THE FREEDOM OF RECESS: THAT'S THE LIFE FOR A LIMBICK LAD!

Each school day at 11 o'clock, boys rush to a dairy for refreshment at the city's expense. For every house with children under school age, the town's endowment fund allows a pint of milk daily. Here redheads are numerous. In Chinese style some young heads are clean-shaven except for a bush of forehead.



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Kodachrome by Harrison Howell Walker

CAREFREE CHILDREN OF LIMERICK PLAY NEAR THE SPOT WHERE WAR LORDS SIGNED A WORTHLESS TREATY

At this end of Thomond Bridge stands a stone to mark the signing place of a late 17th-century truce between England and Ireland. Peace lasted such a short time that old records say the treaty failed "before the ink wherewith 'twas writ was dry." Across the River Shannon bulge the ten-foot-thick walls of King John's Castle, built in 1210.



Kontachromes by Harrison Howell Walker

LEADING WITH A SPADE, THE QUEEN OF "SPUDS" PACKS  
TRENDS IN A BASKET ON HER BACK

Well may she smile; 1939 was a good year for potatoes. Carrying a heavy creel is no hardship when filled with food for the coming winter. Like many women of Connemara, she wears a red petticoat and goes barefoot.



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"TELL US A STORY," THE CHILDREN WOULD BEG IF  
PADRAIC O'CONNORRE COULD COME TO LIFE

In Galway's Eyre Square, where boys and girls play among rocks and flowers, the Irish author's statue seems to take notes for a poem of story in mind. This popular writer of Gaelic tales died in 1928.





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Kodachrome by Harrison Howell Walker

FACING THE LENS: THEY BREAK TRADITION—NOT THE CAMERA

Long ago a poster considered unfair to Achill Island displeased natives. Since then they have rarely yielded to photographers. Proud of her pipe and healthy grandchildren, this woman did not object to standing before a hard-earned haystack. Bog covers most of her land, leaving little ground for farming. In past years many islanders have gone to England to help with the harvest there. From foreign earnings they saved enough to tide them through Achill's bleak, windy winters (Plates XIV and XV).

A stone circle open to the sky, it has an inside diameter of 88 feet. Walls, 18 feet high and about half as thick, show ingenious mortarless masonry. Although hardly visible from the sea, the fort commands a broad coastal view.

A couple of sheep were climbing on the inner ramparts. Outside the walls black Kerry cattle grazed lazily. Such pastoral peace had not stimulated the building of this garrison. Other strongholds, too, in the region tell of prehistoric invasions on Ireland's west coast a thousand years before Norse attacked the east.

On the hilly way to Dingle Bay I picked up a man wrapped in the aroma of any Kerry cottage. It was that comforting domestic scent of butter and turf smoke.

He pointed out the Skellig Rocks, nature-made towers arising all rocky from the sea. Deserted monasteries perch on the dizzy heights like those at *Metéora* in Greece. Today its isolation appeals only to a breeding colony of gannets.

My passenger got down at a chapel, for it was Sunday and he Irish. He put his thanks and farewell into a God-bless-you couplet,

#### TO THE LONELY BLASKET ISLES

Dingle Bay was dazzling in the next day's sun. Skirting the south shore of Dingle Peninsula, I rounded precipitous Sleah Head. Out in the Atlantic lay the Blasket Islands like emeralds on rumpled deep-blue velvet (Plates XI and XIII).

Waves and weather willing, mail to and from the Great Blasket goes by a 16-foot curragh three times a week. A peculiar type of rowboat, the keelless curragh is ribbed in wood and covered with tarred canvas. It weighs about 250 pounds and can carry a ton. Two or three pairs of virtually bladeless oars whip it along as lively as a water spider (Plate II and page 659).

From Dunquin, mainland port for the Blaskets, I left with the mail. The curragh also took a cargo of food and miscellaneous merchandise.

As we approached, islanders gathered on the bluff above the nutshell harbor.

"Welcome to the Blaskets!" greeted a young woman as soon as I had stepped from the curragh. "I'm Moira Guibéen," and she showed me up the tilted path to her house.

Mother Guibéen put more turf under the

kettle on the open hearth. When sons Sean and Maurice came over the windy hill, we all had tea.

Great Blasket's single settlement numbers 99 persons, almost all related. The community can hardly be called a village, for it has neither shops nor chapel. Marriages and funerals take place on the mainland. A couple in love and wishing to wed must wait sometimes six weeks or more in winter for a safe crossing to the nearest church. The dead must wait, too. There is, however, a graveyard for infants on the island's rocky shore.

Six years had passed since the last wedding, and eight since a child was born. To the mainland or England emigrate many of the younger generation.

Seven pupils attend the school that differs from other cottages by having three instead of two windows on the sunny side.

When the present European war was ten days old, an official came out to Great Blasket looking for a German spy. He had been informed that a foreigner was seen recently heading for the islands.

As the official asked for my passport, he said:

"Perhaps you haven't heard, but there's a war on in Europe now."

Great Blasket has no radios, wireless, or telephones; newspapers arrive irregularly.

Everywhere in Ireland the war was the overshadowing topic. I remember particularly the reaction of one old woman in a black shawl.

"I wonder what Christ is thinking these shocking days." Not sacrilegiously, but out of shame for men on a warring earth, she spoke.

#### NO RENTS OR TAXES HERE

Fishing has always engaged Blasket Island men; and lobsters have made it their most lucrative industry. Strangely, no lobsters find a market on the Irish mainland, and the island itself consumes very few. Native fishermen generally turn over the catch to a French agency. Each lobster brings a shilling (about 20 cents).

With the war, however, the French boat ceased to call. Blasket lobster pots now lie dry and idle on stony ledges near the upturned curraghs. And fishermen just sit on the cliff with expressions as blank as the black bottoms of their boats.

No rents, rates, or taxes burden Blasketers. Only once did I hear the term rent



THIS POLICE BARRACKS SHOULD BE STANDING ON INDIA'S NORTHWEST FRONTIER!

By mistake the architect's plans came to Carna, Connemara, and the building materialized before the error was discovered (page 678).

used, and even then not involving money. About ten cows graze on the island, but they supply enough milk for everyone. He who owns no cow rents out pasturage, receiving milk in payment.

Moira knocks on my door. I open my eyes from a heavy, healthful sleep. Sunlight bursts through the window fringed with climbing nasturtiums. I dress hurriedly, for the day is young and cool. Once at the hearth, I warm by a turf blaze in anticipation of a steaming cup of tea.

From the fire Moira rakes red-hot coals and on them sets a teapot. She drops two eggs into a tin cup of boiling water,

slices bread baked last night, and then I am having my Basket breakfast.

Before I finish, Mrs. Guheen hangs the "oven," a big black pot, over glowing embers. On its lid she stacks more fuel. Half an hour later when I am smoking my pipe, she lifts the oven from a wooden crane. The black pot turns to Pandora's box as she removes a round brown loaf to the window sill for crisping. After evening tea she will bake again.

Now that lobster pots lie idle, Sean goes often to the hill for turf. Fires must burn even more brightly to dispel the bleak gloomy days of cold months to come.

Behind two asses saddled with panniers, I went with Sean to the hill one

day. We followed a road that ended abruptly two miles from the community. Zigzagging up, our Basket caravan climbed to a stone bin where turf was stacked to dry (Plate XI and page 677).

"It's very neatly piled in the bin," I remarked.

Sean just grunted and went on loading the panniers. He packed the baskets with care, for turf dropped meant turf drowned in the frothy sea breaking against rocks far below.

Down from the hill we came back to the cottage with a good load of good turf. Sean released the bottoms of the baskets

and the turf fell to earth. Removing the panniers, he freed the asses for the night. They could ramble almost anywhere, for stone walls guard precious pastures and fish nets fence off vegetable plots.

At the island's north end a sheer cliff rises like a great castle wall. There I would be alone with the thundering sea, the flight of a gull, the light on a cloud, or the breeze that brings the coolness of evening.

One late afternoon a boy and his dog surprised me at my favorite spot.

With the loneliness of the place in common we fell into uncommon talk. He had little knowledge of English; I knew no Gaelic. To everything I said he replied "Oh, yes." Realizing the monotonous repetition, he finally varied with an "Oh, aye."

Moira Guibeen was the only one in her family who spoke English. Once at twilight when chores and evening baking were done, she said:

"Come with me, and I'll show you where Maurice O'Sullivan lived as a boy."

He wrote *Twenty Years A-growing* in Gaelic. When the story was translated into English, it proved a best seller. It tells of Blasket life.

Past cottages and over lanes that terraced the hillside like a small piece of Philippine rice fields, we walked to a dry-stone dwell-

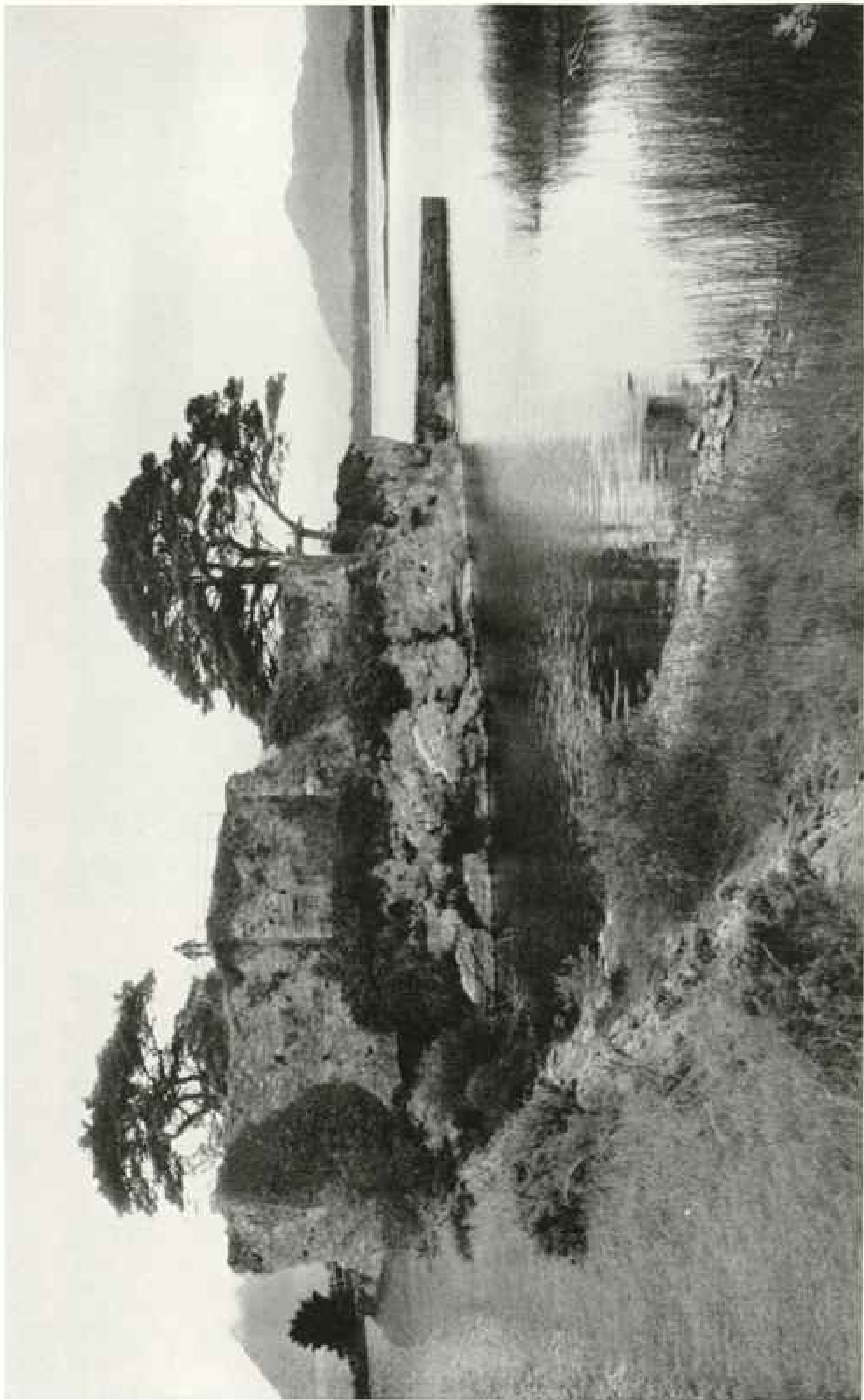


SMILES BELIEVE THE EXERTION OF AN IRISH JIG

Dancing calls for stamina, breath, and speedy footwork. Almost every evening natives of Clear Island gather in Jack Burke's inn for a night of whirling to music from his wife's accordion. In rest periods everyone joins in singing old favorites—if he has any breath left (page 660).

ing. From our position we could look almost directly down its chimney. For protection from heartless winds, the O'Sullivan cottage and many others on the island are built into the hill. They seem more like dugouts than houses.

Moira took me to another cottage to call on the late Tomás O'Crohan's son. We found him lounging, all legs and arms, in a baby's cradle near the hearth. Evening callers occupied the chairs. He labored and rose to welcome us. Since I was a stranger, he thought I would be interested to see a book called *The Islandman*, written by his father.



Photograph by Blamson De Crot from Galbreath

"BY KILLARNEY'S LAKES AND FIELDS . . . VIRGIN THERE THE GREEN GRASS GROWS!"

From Edmund O'Rourke's poem, *Killarney*, come these lines. Mr. and Mrs. William Bowers Bourn of California and their son-in-law, Arthur Vincent, an Irish Senator, presented the 10,000-acre Muckross Estate to the Irish Government. With this gesture of goodwill Killarney's three lakes and the country immediately surrounding them became a national park of Eire.

"Now you must meet the 'Queen' of the Blaskets," said Moira as we moved up the hill toward another home.

Peg Sayres, born on the mainland, has lived most of her long life on Great Blasket. In Gaelic her book unfolds this life (page 658).

Before the smoldering turf, I watched shadows flicker over the woman's fine face. And I heard her speak softly of a boy who used to patter about her cottage floor in his tiny bare feet. Maurice never forgot his respect for her in his *Twenty Years A-growing*.

In every home I entered I noticed the inevitable "dresser," a sort of Dutch cupboard. Besides the usual colorful china, electric light bulbs decorate the shelves. Now, there is no electricity on the island, so dead bulbs tossed from passing ships are picked up on Blasket beaches as curiosities.

Moira Guiheen found photographic flash bulbs particularly fascinating. The first I gave her she fondled almost lovingly. Rubbing her hand over its surface, she said:

"I like it because it's round and smooth as a gull's egg."

Moira and Sean helped me to the harbor with my luggage. The postman and his son crawled under their upturned curragh and carried it down to the water (page 659).

"Will you row?" asked the postman, his tongue in his cheek.

"Sure," I replied, for I was familiar with oars that overlapped to leave little skin on novices' knuckles.

I forgot to get tired rowing back to the mainland; I was watching Great Blasket's white cottages dwindle to gray specks like distant gulls flying away.

#### WHERE THE RIVER SHANNON FLOWS

To him who lingers on Thomond Bridge, the city of Limerick whispers at twilight. The Shannon sighs as it flows by stones that stand for the war-riven past. Through crenelated turrets of a hoary castle, breezes wheeze their bloody secrets. In hushed, dusky tones old church spires and ragged battlements tell gently but proudly of Limerick's heroes (Plate VI).

Twice in the late 17th century William III's English forces tried to capture Limerick. Patrick Sarsfield and his stalwart Irish stood firm as the walls that defended the town.

Eventually a truce was declared but not honored by the invading armies.

On a street corner I found a large group of small boys. Each held a bottle of milk in one hand, a bun in the other (Plate V). Each school day the city provides this refreshment at morning recess.

I liked Limerick children. They liked my camera. When attempting to photograph Sarsfield's statue, I became more popular than that hero. So many swarmed in the way I couldn't even focus.

"I'll take a number between one and a thousand; the three guessing nearest can be in the picture," I stipulated.

"Twenty hundred!" shouted an excited girl.

The unlucky ones clamored to be photographed anyway.

"Aw, take our phawtuh," they begged again and again.

I began to edge away as the confusion increased.

"Take us fighting, then," suggested a true son of Limerick.

#### IN LIMERICK THE PIG IS IMPORTANT

Ireland's importance as a stock-raising land has immortalized horses, cattle, and sheep. In Limerick the pig comes into its own, supplying the Nation's finest bacon, ham, pork, and sausage (page 660). Each week approximately 2,000 hogs are prepared for curing by a single establishment. And enormous signs plastered on buses and trams that serve the other side of the country advise the public to eat O'Mara's Limerick-cured bacon.

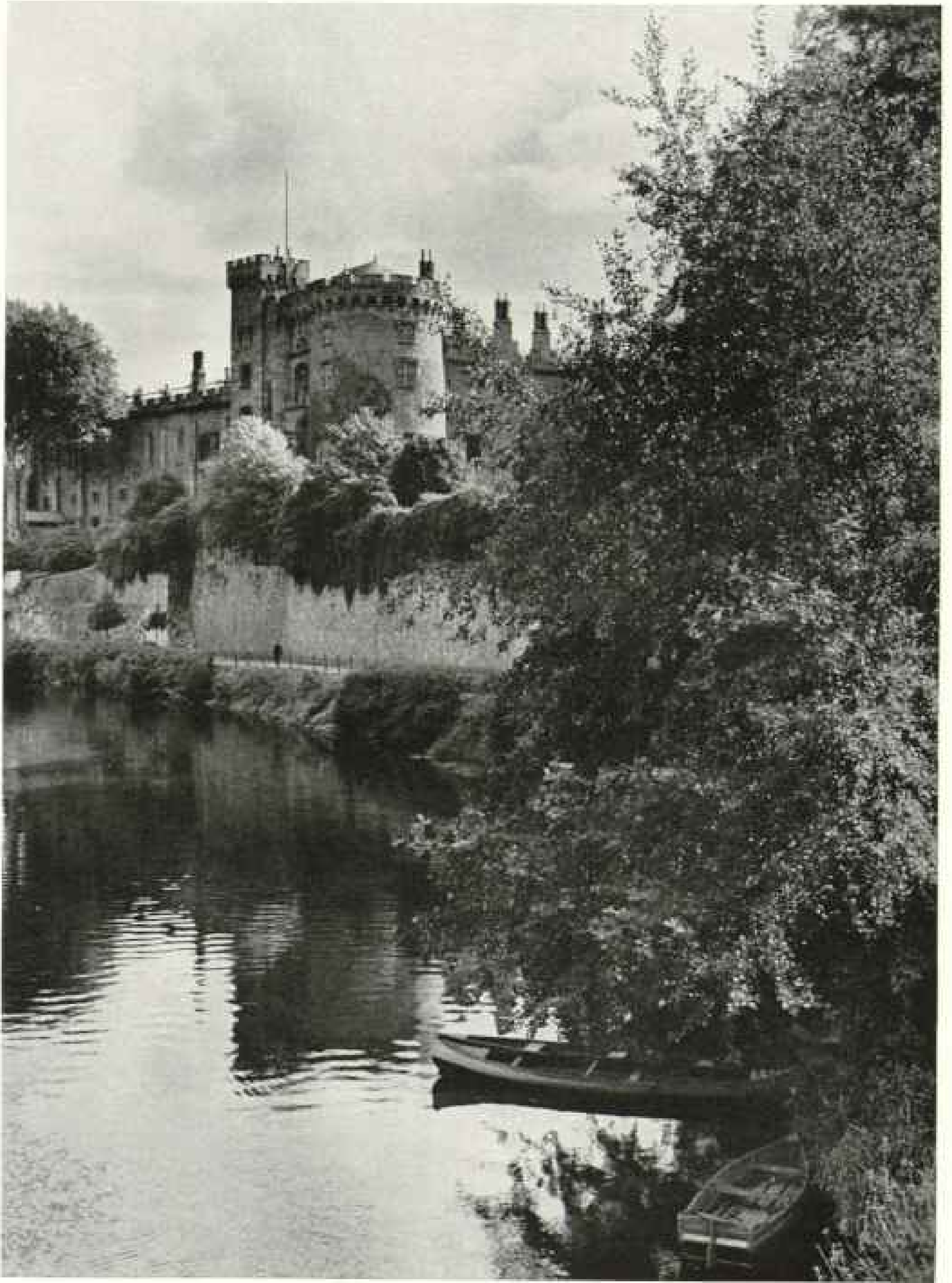
Once a farmer brought a black pig to the plant and was watching it through the various processes. With several white pigs it went into the dehairing machine, then passed on to the other stages.

"Mister," asked an attendant, "why do you stay here? Your pig has gone on long ago."

"Ah, no he has not," replied the farmer. "The white ones that went in came out all right, but not my blackie."

Reddish cows in fresh green pastures, gleaming white cottages, and co-operative creameries make one big dairy farm of southern Clare.

In black or brown shawls above red flannel skirts, women of the west move through Galway. Their Old World reflections in modern shop windows make time's hour-glass turn turtle. Men wearing baggy homespun tweed tilt back broad-brimmed black hats to ring out a laugh that echoes



ONCE A MEDIEVAL FORTRESS, KILKENNY TODAY BARRACKS SOLDIERS OF EIRE'S ARMY

When the Normans arrived in the 12th century, the castle became a storm center. Although renovated since its construction in 1192, it retains its military character. Under the grim walls and along the dark River Nore winds a tree-shaded path known as Canal Walk. Here Thomas Moore, the poet, liked to stroll.



A GALWAY LAD AND HIS DONKEY WORK TO KEEP THE HOME TURF BURNING.

Panniers are loaded with fresh-cut peat from the bogs. In cottages all over Ireland turf serves generally as fuel (Plate XI and page 677).

down the narrow streets. On a bridge or a corner they stand indefinitely, swapping stories often in Gaelic.

Donkey carts delay auto traffic. Horses and wagons impede cyclists balancing baskets and buckets. It must be a special market day, I think, for the streets are so crowded with wheels and feet and boxes and barrows. No, I am told, it's usually this way. This is Galway, God bless it.

Down by the harbor it's quieter. A transatlantic liner has called and sailed away. Gentle winds make gentle gestures to rock a few fishing boats. Masts pencil black streaks against a sky all lonely and cold after the sun has gone with its glow.

Dark night comes; the family hearth glows; the streets are almost empty. A Galway mother who seems all shawl shuffles home along an alley, and she pauses by a lamplit window to speak in hushed Gaelic with a woman just like herself.

#### ROCK-BOUND CONNEMARA CALLS

I stood under a window of Lynch's Castle, now a banking house. Of Lynch himself and his knot-tight principles I thought. When James Lynch Fitzstephen was Mayor of Galway, he condemned his own son to

death on a charge of murder. Not finding an executioner, the father hanged his son from a window as a civic object lesson.

Along the north shore of Galway Bay I drove into Connemara, a land of bog and rock chinked with mock heroic pasture plots. I came to Costelloe and stopped at a cottage for the night.

With the Naughton family I talked long while turf burned low on the open hearth. In an adjoining room two students of Gaelic studied out loud.

Those who would learn true Gaelic come to Connemara. Hundreds of Irish students pass summer months among these folk.

From Costelloe I glided away on a 30-foot sailing craft loaded with turf for the barren Aran Islands.\* Skipper Peter, called "Pater," made his living by shipping fuel from the mainland to the turfless islands.

A good breeze filled the black mainsail and jib; we headed for Inishmore, largest of the three Aran Islands.

At the window of my little hotel in Kílonan, foremost village of Aran, I sat sipping a cup of tea. I watched men herd

\* See "Timeless Arans," by Robert Cushman Murphy, NATIONAL GEOGRAPHIC MAGAZINE, June, 1931.



sheep and cattle—among the finest in Ireland—down to the biweekly steamer from Galway. Caravans of empty donkey carts rattled along the road to the pier; they returned laden with flour, timber, and miscellaneous supplies from the mainland.

On the island's rocky nine-mile-long spine I looked north to Connemara's grape-blue mountains. To westward and into infinity rolled and unrolled the vague Atlantic. All around me—stones—stones—stones.

#### SEA IS CONQUERING AN ANCIENT FORT

Two thousand years ago defenders of Aran raked up rocks to build circular strongholds and beehive homes. Although half of a fort called Dun Aengus fell 300 vertical feet into the undermining Atlantic, it ranks today as one of Europe's most magnificent barbaric monuments (Plate I).

Climbing over endless stone walls at 50-yard intervals, I hurdled the island's mile-and-a-half breadth to reach the southern shore. I found another prehistoric fort like Dun Aengus. Remarkable as it may have been, I preferred to sit on the brink of a cliff watching the sea and the sky and birds at their flighty business of feeding. I never tired of gannets dropping like white bombs in air raids on fish.

Days on Aran are quiet and mostly gray. Everything is gray—the houses, the fields, the fences, the roads.

I seem to be the only one moving over the lanes of Kilronan; yet no one idles. Men fish when not scraping scant soil for precious potatoes. Women work about their hearths and yards. Children study at school. Everyone shares in tending the livestock that is the family's capital.

Old-timers, often bearded, wear homespun jackets and trousers, sweaters knitted by their wives, and raw calfskin slippers (hair outside) called pampooties. Women flow in full flannel petticoats of red, blue, or black. Over their heads they drape dark woolen shawls that fall almost to the knees.

The sun throws its last mellow rays on bronzed fishermen spreading nets on rocks to dry. Several hundred yards from shore, shiny black curraghs dance on the incoming tide while their crews set lobster pots.

I snuff my candle and look out on the night. A sickle moon too new to reflect in the bay hangs over the ghostly Aran Islands. One little hole of yellow light in the cabin of Pater's boat shows me he's back from Killeany across the bay—tells me I'll be

sailing away in the morning. I fall asleep wondering if anyone else hears the dwindling waves rattling loose pebbles on the stony shore.

Along Connemara's remotest coast, ragged and inspiring as Manhattan's skyline, I drove away from Costelloe. The country made me think of Milton's "lakes, fens, bogs, dens"—a paradise wild, not lost. And the true pulse of the isolated Connemara I sought beat at simple Carna.

Like an unnecessary exclamation point, the towering police barracks stand at the end of the peaceful village. The building designed for India's northwest frontier reached completion in Carna by mistake (p. 672).

An inn for city sportsmen prompted me to ask a man on the dusty road, "Is there any place to stay besides the hotel?"

"Mrs. O'Malley's—on the hill ahead of you."

Birds rustling to roost in one of the few trees of the region made the only sound till I knocked at the door.

#### HOSPITALITY AMONG THE O'MALLEYS

"Sure, we have a room for you—if you're not particular," smiled a daughter of the house. "How about a cup of tea now? We're going to have ours as soon as mother comes in. She's gone after the cows."

Mrs. O'Malley came in.

"You are welcome here," she greeted me, kicking off a shoe to relieve her gouty toe.

Mr. O'Malley soon appeared. His chair and slippers waited by the fire. Settling down in his favorite place, he and his soft homespun tweeds spelled comfort with capital Gaelic letters.

"It's an odd way that you'd be coming to such wicked people as us," and his twinkling eyes were bluer than the smoke from his old black pipe.

Such wicked people, the O'Malleys, that every summer their farmhouse is overcrowded with visitors genuinely bent on the revival of Gaelic culture. Mairead, a daughter, teaches at a national school.

"Are classes conducted in Irish?" I asked.

"Yes. We teach all subjects, hold all conversations, and give all orders in Gaelic," she explained. "Official regulations allow half an hour of reading and half an hour of writing in English a day."

"I saw children going to school in summer," I said. "Vacation must be short."

"Five weeks, usually—from July first till about the seventh of August."

WHEN IRISH SKIES ARE SMILING

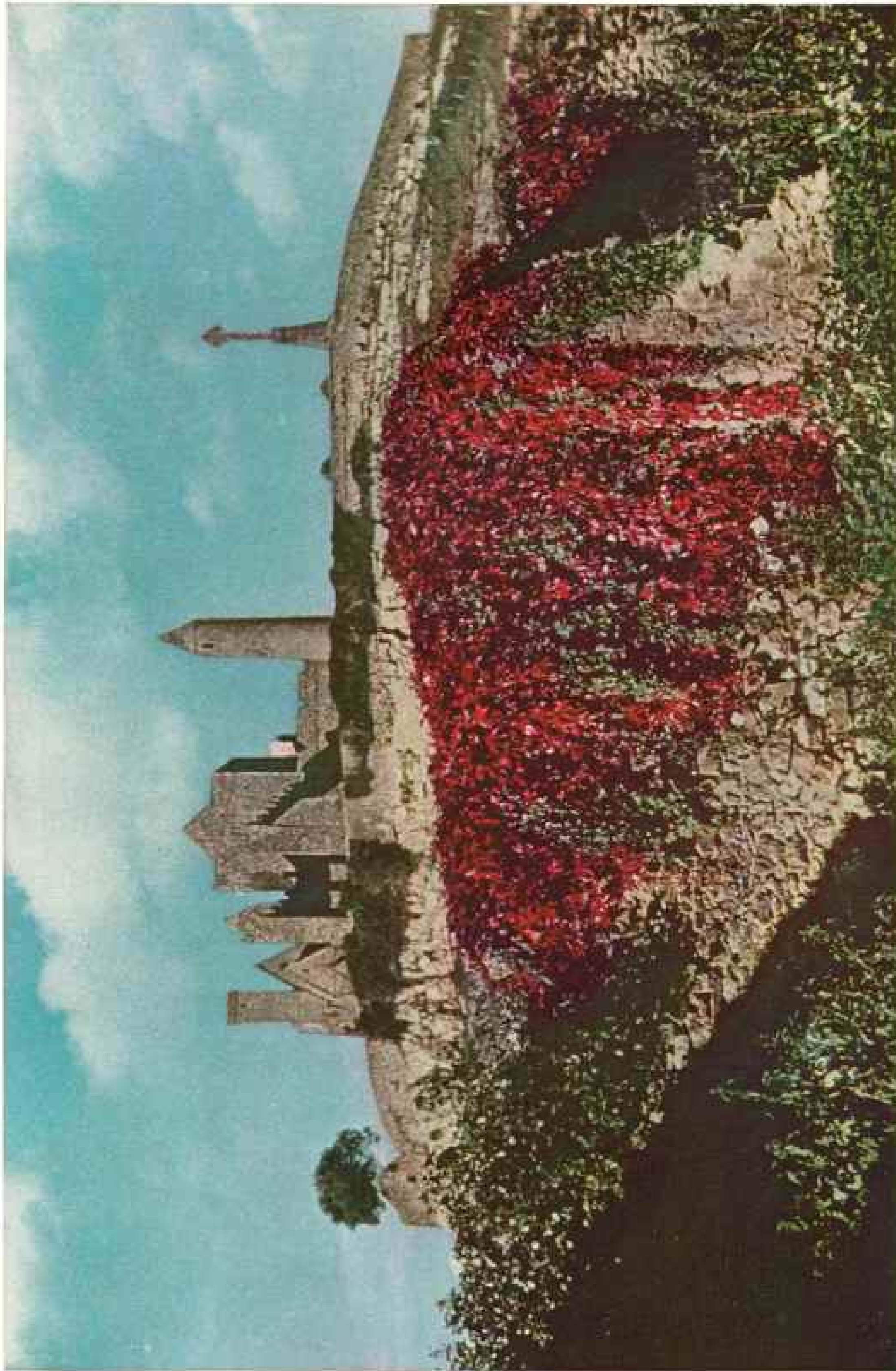


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Kodachrome by Harrison Howell Walker

HUG ST. KEVIN'S CROSS AND YOUR WISH COMES TRUE!

Tradition makes a "wishbone" of the granite monolith near ruins of a sixth-century monastery founded by St. Kevin at Glendalough. The "wheel" in the cross is an ancient symbol signifying the sun's circuit. Kevin, like St. Francis, was a lover of birds and beasts. Legend says that once while he prayed, a blackbird laid her eggs on his outstretched hand; he patiently waited till they hatched.

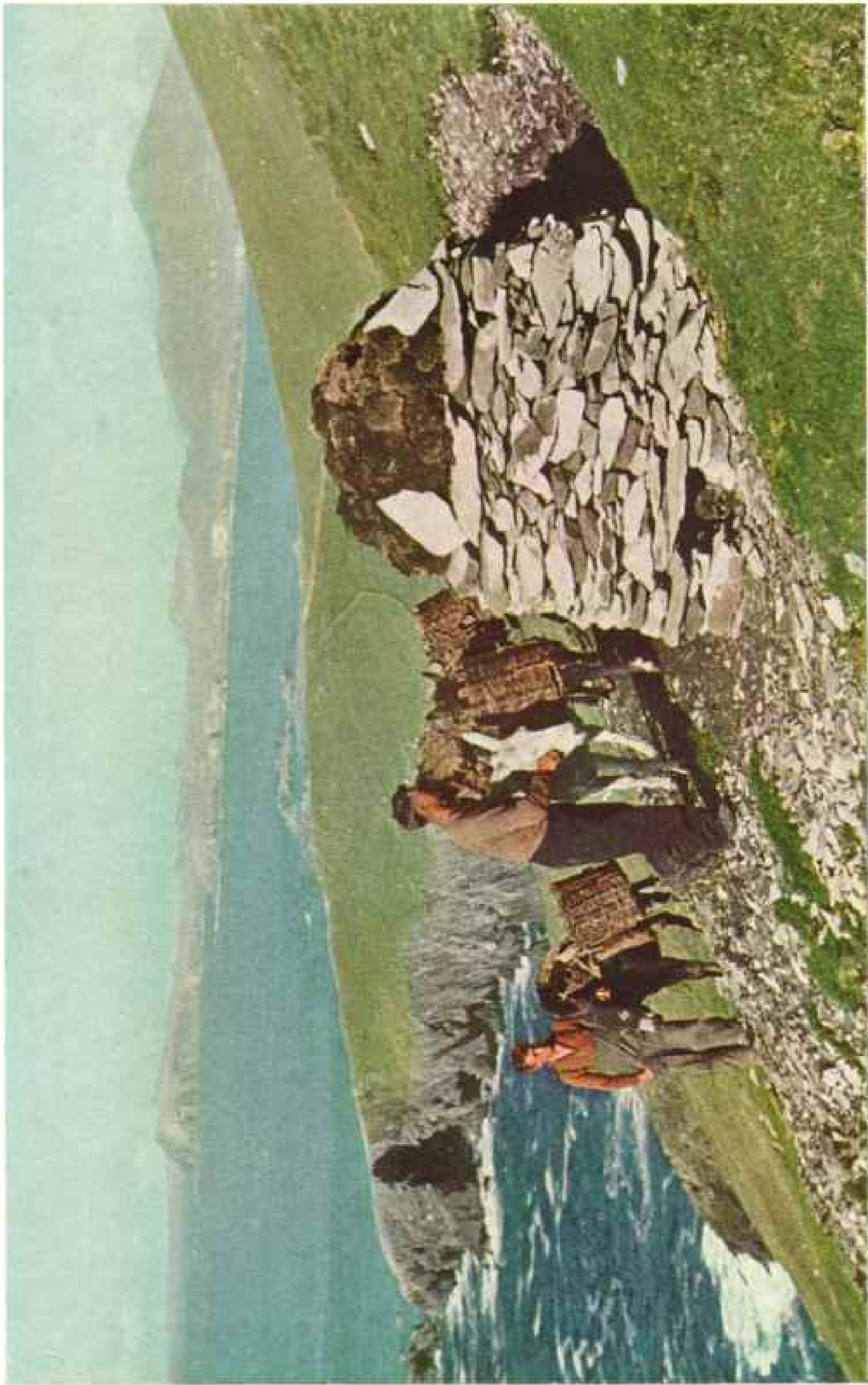


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Redrawn by Harrison Howell Walker

SEAT OF ANCIENT KINGS AND LATER OF ARCHBISHOPS, CASHEL ROCK IS THE ACROPOLIS OF IRELAND.

In the twelfth century the royal residence became a church possession. Cormac's Chapel with its slender square tower ranks as one of the country's Romanesque gems. For more than a thousand years the round tower has surmounted the Rock.



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CUT AND DRIED TURF IN PANNIERS GOES DOWN FROM THE HILLS TO BASKET HEARTHS

Kodachrome by Harrison Howell-Walker

So that wild Atlantic gales cannot blow it away, islanders stack drying peat, or turf, in stone cribs. Treeless Great Blasket, largest of the island group, lies two miles off Dingle Peninsula (background). All cooking and breadmaking is done over blaring turf, the only source of heat during long chill winters (Plates II and XIII).

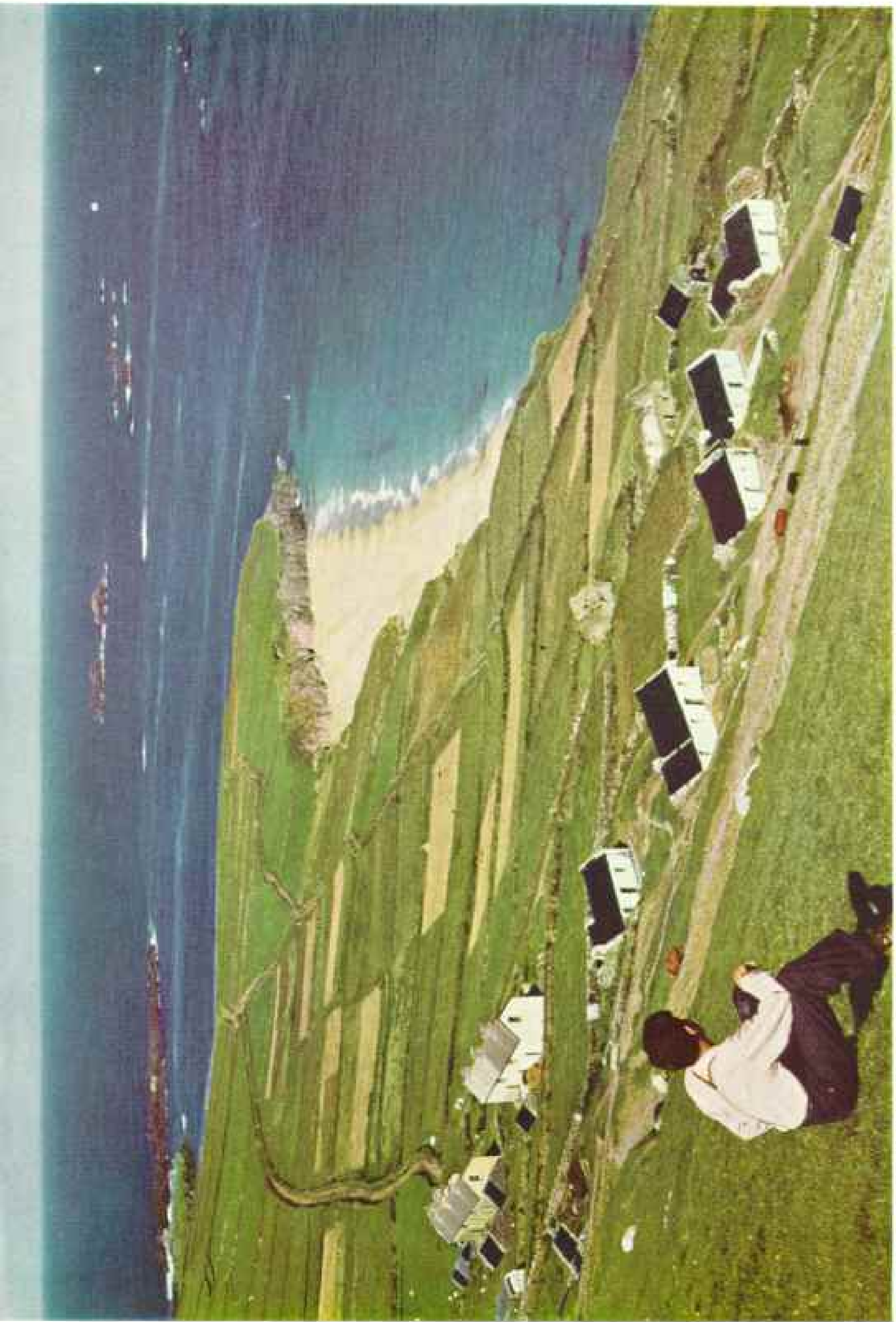


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Kolachrome by Harrison Howard Walker

SIXTH-CENTURY STONES OF ST. KEVIN'S KITCHEN ARE FOOD FOR HISTORY-HUNGRY VISITORS TO GLENWATKUGH

In the grimy "glen of the two lakes," the Irish saint established an important center of learning nearly 1,500 years ago. Scant vestiges of his monastery and holy city remain, but this well-preserved "kitchen" affords an excellent example of the early Christian cratery in Ireland (Plate IX).



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Photographs by Harrison Dowell Walker

UP A HILLSIDE OF GREAT BASKET SHEEP COFFERS TO FORM THE ISLAND'S ONLY COMMUNITY

Fewer than a hundred people living in 22 houses fish, farm, and gather turf on the most habitable of the several Basket Islands (Plates II and XI).

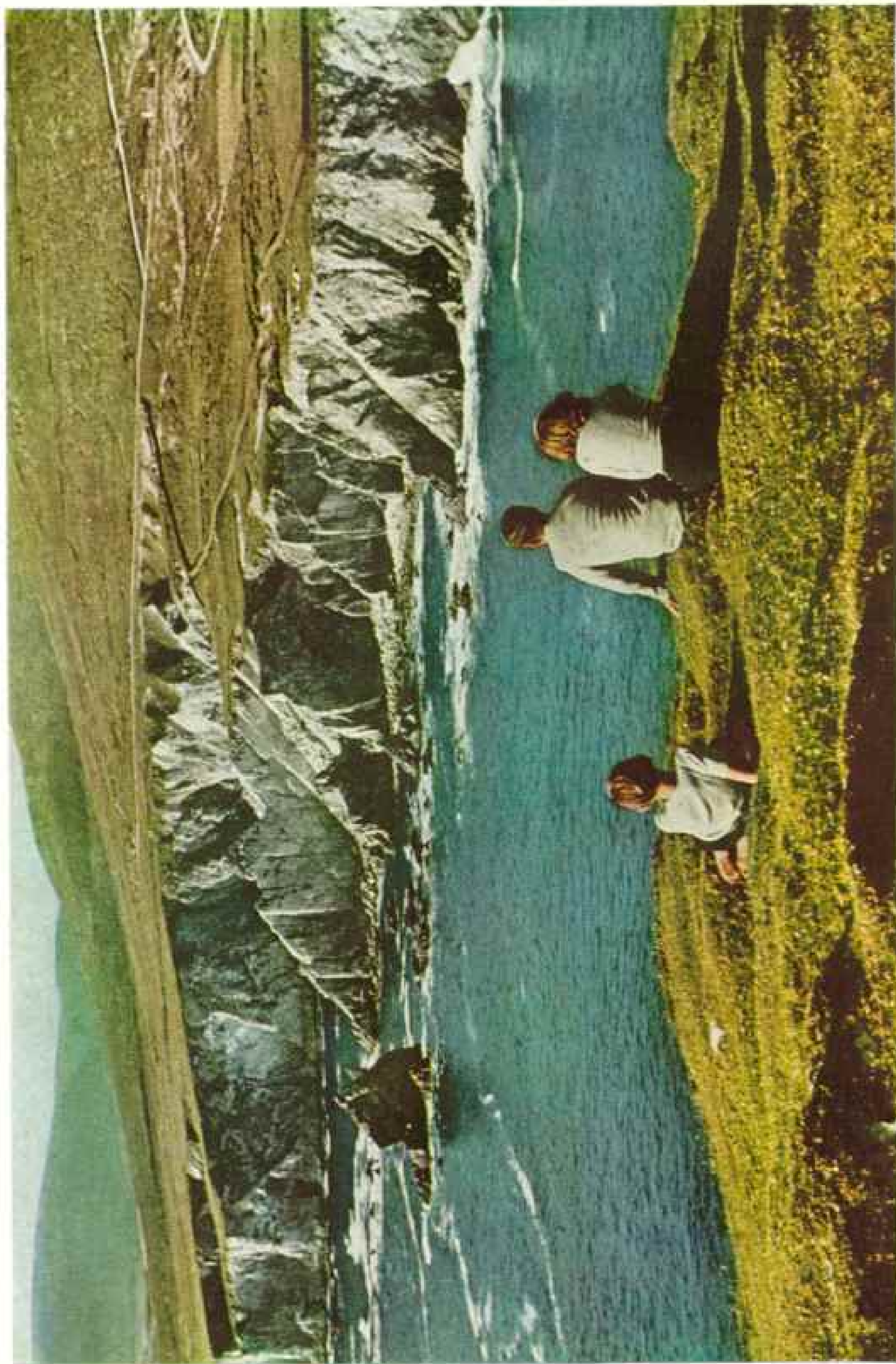


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ROPE SECURES HAYSTACKS AND STRAW-THATCHED ROOFS WHEN WINTER WINDS SWEEP ACROSS ISLAND

Koofuama by Harrison Howell Walker.

Before the nearest cottage, a high-heaped rick of black turf insures a constant blaze on the open hearth during cold, gloomy months ahead. Left on shore by the ebbing tide, a fisherman's curragh "parks" in the front yard. Formerly cattle shared cottages with Islanders, but the Government has now built many new homes (Plates VIII and XV).



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Kodachrome by Harrison Howell Walker

ATLANTIC BREAKERS MEET RUGGED RESISTANCE ON ACHILL ISLAND'S DUTTBESSED COAST

Distance dwarfs mighty cliffs across Achillan Bay. Near the brink runs a breast-high wall to keep cattle and sheep from falling off. Farther around the precipitous shore the sea has sculptured Gothiclike arches in the Cathedral Rocks, rising sheer and rugged beside sandy beaches.





BLACK HOODED CLOAKS REMAIN TO RECALL SPAIN'S INFLUENCE ON KINSALE.

This Irish version of the mantilla, often richly embroidered, is handed down as an heirloom. Formerly an important port with a safe natural harbor, Kinsale established trade with Spain, some of whose merchant families settled here.



© National Geographic Society

Kodachromes by Harrison Howell Walker

NO SLAVE TO BOTTLES IS THE AUKLOW MILKMAN—HE DELIVERS FROM A BARREL. On a cash and carry basis, he dips milk from the big blue cask to fill housewives' pails or earthen jugs.

One Sunday morning I sat on a stone wall near Carna's chapel. Sunshine blazed on the red of the women's long full skirts and the brown of their shawls as they spread like flames along a white sandy road. They walked together apart from the men, who sauntered more leisurely behind. Men who wear such comfortable baggy tweeds could never be the hurrying kind.

After church and a big Sunday dinner, Mairead offered to show me Mason Island.

At Mweenish, taking-off place for the half-mile-distant islet, we found a man talking to an old woman, her back bent under a creel of potatoes she had just dug.

"Would there be anyone here to row us in to Mason?" Mairead asked in Gaelic.

"And what's the matter with me?" bantered the good-natured fellow.

So he rowed us *in*, as the Irish say when speaking of going to an island.

#### RADIO COMES TO MASON ISLAND

Less than a mile long and half as wide, Mason Island presents a treeless patchwork of stone-walled pastures. I saw no tilled ground. About forty persons live in eleven cottages. One home recently installed a radio, the island's first, which immediately made it the most popular.

We entered a cottage. Two men in tweeds sat at a table drinking tea. Beside the enormous hearth, on a low stool, squatted an aging woman. I could not take my eyes off her face.

This face had weathered a life common to these remote western islands; long gloomy winters with wild chill winds and seas raging and roaring and hurling boulders upon the shore; not much to eat; little fuel for the great fireplace when a biting gale gnawed and gnashed the cracking door, rattled the windows in its chattering teeth, and howled around the straw-thatched eaves.

"They are happy people," Mairead told me as we walked over the beach of sand finer than sugar and almost flour-white. "They are materially well off now. Their fine cattle bring high prices. And they catch a lot of lobster, too."

Against a dune we sat watching colors from which Jan Vermeer himself could have learned. Delicate blue waves were too gently washing over a talcous beach to break into froth or foam.

It was pleasant to run your hands through the velvety sand. I tried to hold it in a tightly closed fist, but so fine were the

grains that they trickled away like gold dust in a prospector's dream.

"It's like time," Mairead spoke more to herself than to me. "It just slips through your fingers, and there's nothing you can do to hold it back."

When our boatman landed us at Mweenish again, he refused to accept anything for his trouble.

"It's proud I am that you visited our island," he said.

#### A NATIVE RETURNS FROM AMERICA

Before returning to Carna, Mairead took me to Mrs. Geary's cottage. Mrs. Geary once went to America. After nine years in Boston, she could stay away from Connemara no longer. She returned. She returned to the stony land by the sea, to her flowing red skirt, her great black shawl, and the spinning wheel by the hearth (p. 689).

And now her heart beats warm again as her bare feet tread softly on the cool stone floor. Her husband is dead, but several children help keep the home turf burning.

Connemara hills became vague and violet as we moved quietly home through the dusk.

Northward I passed under the shadow of the almighty Twelve Bens, Connemara's most majestic mountains.

Near Carrick on Lough Corrib's north shore I stopped at a house for tea. The girl in the red dress would have to see mother, but her smile really put all doubt aside. I waited in the garden. Geraniums and blue hydrangeas, wine-colored dahlias, multihued pansies, and white sweet william told me much of the people who lived here.

Across a golden field of oats, I looked toward Lough Corrib and beyond to the low-lying hills. Hanks of woolly clouds stretched strands of white yarn in sky that paled above the lake's deeper blue.

From a dark pine tree a little brown wren chattered at me, a stranger. The muffled tones of churning moaned through a window of the small red dairy house. And in the cottage I heard the comforting clatter of teacups.

In this peaceful corner of a land that turned back the hands of a centuries-old clock, it was hard to believe that modern warfare ripped up a continent not so far away.

A short swivel bridge links the mainland with Achill Island, largest off the Irish coast. Like a rainbow the road ends at a



Photograph by Leo J. Hufferman from Gondran

GASOLINE RATIONING MAY THREATEN AUTOISTS, BUT THIS TIPPERARY COLLEEN DRIVES HOME WITH FLOUR AS USUAL.

Shortly after the outbreak of the war, even neutral Eire planned to ration "petrol." An eight-horse-power car was allowed only eight gallons in six weeks. The country girl's well-fed donkey has few fears of fuel curtailment in the rich grazing grounds of Tipperary's Golden Vale.

treasure—a treasure of golden sand spread over miles of broad strand and rocks with amethyst in them.

#### ON CLIFF-WALLED ACHILL ISLAND

In Keel I walked into the Amethyst Hotel's dining room and sat down to lunch by myself. A waitress rushed up.

"If you please, sir," said she, "at the long table over here."

She reseated me with a group of young people on holiday from Dublin. As friendly as any Irish, they immediately began telling me what they liked about the island.

"In fact," said one, "we could take you to some of the places ourselves."

We followed rough and dangerous roads to reach the southwest shore. From a bluff we watched the aggressive Atlantic hurl

itself against jagged, cliff-walled resistance (Plates VIII, XIV, and XV). Retracing the same hazardous roads seemed soft as a plush parlor carpet after the pounding and crashing and thundering of the sea.

Inland we found natives busy in the fields. The women's red skirts flamed like poppies amid ripe wheat.

As we passed through the fishing community of Dooagh, near Keel, I almost expected the white cluster of black-capped cottages to waddle away like a frightened flock of penguins.

#### CAPTAIN BOYCOTT GAVE US A WORD

Our road struggled up into wind-swept hills and disappeared as if blown away. Near by stood a gate to an estate once owned by Captain Boycott.



FONDNESS FOR HER CONNEMARA HOME BROUGHT MRS. GEARY BACK FROM BOSTON

After nine years in the United States, this Irish woman became so homesick for her little stone cottage that she returned. Now tea simmers over the turf again; she spins on a wheel her mother used; and her heart beats as merrily as the clock on the dresser behind her (page 687).

He, a prominent figure in the Irish land wars, displeased his tenants. They retaliated with treatment that brought a new word to the English language.

Little boys, not boycotting tenants, now hung about the gate.

"Want to buy a lovely piece of amethyst, mister?"

ROOFS TIED LEST THEY BLOW AWAY

Back on the mainland, I blew along to Ireland's draftiest corner. Off the north-west coast of County Mayo the Mullet Peninsula flies like a kite. Only the kite string keeps it from being an island.

Virtually treeless and flat as a flounder, the Mullet exposes a 16-mile broadside to Atlantic gales. Wintry winds cut the two-mile-wide peninsula like cold steel blades in ripe grainfields. And so in late Septem-

ber cottagers rope down straw-thatched roofs securely as precious parcels.

I stopped at a cottage where a man on a ladder and his son on the roof were fastening the thatch with rope made from bent grass. Seeing my interest in the crude cord, grandfather came out to explain with a demonstration (page 690).

He raked together a pile of bent, a coarse type of grass that grows about 18 inches high in sandy places near the sea. Twisting a few strands together, he made a short piece of rope. One end he retained; the other he gave to a boy who turned it on the dull blade of a sickle. The old man paid out and the boy kept on revolving the sickle, walking away backwards as he did so. In a few minutes they had twisted about a twenty-yard strand.

Bundled into a ball, it is ready for thatch



MEN OF THE MULLET TOSS BALLS OF ROPE TO TIE DOWN THEIR ROOFS

Atlantic gales sweep across the peninsula with such force in winter that cottages not given this precaution are often completely "scalped." The cord is made from a tough grass called bent. Both ends of each securing strand are fastened to pegs under the eaves (page 689).

fastening. On one side of the cottage a man holding a loose end slings the ball over the ridgepole; it rolls or unrolls down the other side to another worker. They tighten up on the rope, tying the ends to pegs under the eaves. It takes many such strands to secure the thatch.

"When this work is done, winter rains won't come down on us," said the grandfather. "And man, it's wild around here in winter. Sometimes it blows so hard whole roofs go quick as a wig in a high wind.

"But this bent grass rope lasts only a year. Next September we'll have to do the job all over again."

#### KILLYBEGS FISHES FOR A LIVING

With glimpses of Mayo's rugged north coast, I continued through Sligo to County Donegal. Although a part of Eire, which is considered southern Ireland, it lies farther north than half of Northern Ireland.

A truck passed my little Ford. Across the rear large letters advertised "McGet-

tigan of Killybegs." That was enough to invite me to Killybegs.

Fishing boats were returning with the day's catch as I walked down to the quay. A fresh-fish smell filled the air, and so did hungry gulls. From boxes that littered the pier, plaice and sea trout overflowed almost like something liquid. Buyers were busy, shippers shuffled about in a hurry, and bronzed men looked forward to cottage comforts after a blustery spell at sea.

In the darkening evening I wandered about Killybegs' random lanes.

An open cottage door showed a low-burning fire flicking fanciful shadows on an old-fashioned cupboard; a small square window—a mere patch of warm candlelight—framed a gray head bent over knitting and a girl with a dark teacup before her bright face; black figures leaned against white walls; in a fading sky vague wisps of turf smoke curled from chimneys and lost themselves but not their aroma in the cool thin air of night.

Much of western Ireland is rock. Men remove stones to uncover enough soil to plant a few potatoes.

In marked contrast, the region around Killybegs is virtually stoneless. Rock, in fact, is quarried. Wire bounds vast green fields and fences cattle.

#### A YARD OF TWEED IN TEN MINUTES

Ardara is an important center for Donegal tweed. I visited a factory where all work is done by hand. In one room five men at five looms weave yard after yard of handsome tweed.

"How long does it take you to weave one yard?" I interrupted a busy worker.

"Ten minutes."

"How many yards go into the piece you are working on?"

"Seventy-five to eighty—enough for about ten men's suits."

In the stock room I saw fancy woolen golf hose, sweaters, scarfs, and mittens, all knitted by women's hands in spare time. But of spare time there's plenty in this land of long winter evenings and dreary days when little can be done outside.

"We have no organized knitting in the factory," the owner told me. "It's too slow. Women work on their own and bring finished articles to us. We sell to well-known houses in America, England, and all over the world."

As he swept his arm in a wide circle, he knocked over a pile of sweaters bound for Peck and Peck, Fifth Avenue.

#### FROM SHEEP'S BACK TO YOUR OWN

Near Ardara I talked with a farmer.

"If you wanted any tweed, you could tell my wife what mixture and how many yards." He relit his pipe and settled down on the stone wall. "She'd do everything herself—even to dyeing the wool from the backs of my sheep. And if you'd stay for tea, you could watch her at the loom."

"What sort of dyes do you use?"

"There's crotle—that's a lichen; we use heather for yellow; we get black from the alder tree; and blue comes from briar roots. But you'll have to ask my wife; she does the dyeing, and she can tell you more about the other colors."

Donegal fell away behind. I glanced back at the hills where white cottages snuggled like children under blue downy quilts.

At a scissorslike crossroads I took a short cut to Trim. Roses softened crumbling castle walls; swans rippled the Boyne like a gentle breeze; cows grazed under Gothic arches of a roofless medieval abbey.

Continuing south, I found Kilkenny busy as a bank on payday. People moved like conscientious ants through the streets and disappeared into shops. They popped out to vanish again around a corner or over the bridge that spans the River Nore.

Wild ducks winging over the river flew higher to clear St. Canice's Cathedral. I followed their swift westward flight and came to Cashel at sundown.

#### WHERE ONCE DWELT IRISH KINGS

Once the seat of early Irish kings, Cashel became a holy city. On the two-acre area of this mass of limestone, rising 300 feet above fertile plains, a disciple of St. Patrick built the first church. Centuries later, in the Middle Ages, a cathedral dominated the Rock (Plate X and page 648).

In 1495 the Earl of Kildare purposely burned the cathedral. He excused himself to Henry VII by saying he thought the Archbishop was in it.

Approaching the south coast, I smelled the sea again. At Ardmore men on the beach were gathering seaweed. In late September and early October it washes ashore.

Two barefoot workers in rolled-up trousers walked out to meet the surf. Using wooden rakes with ten-inch teeth, they dragged the weed to piles on the sand. Horse carts took the seaweed to farms where it would be dried to make fertilizer for beetroot and potatoes.

To pick up mail before sailing from C  bh, I called at Cork's post office.

"Will you be leaving our country for America now?" asked the clerk.

"Yes, and I'm sorry," I said.

"But America's a grand country," he countered. "A native of Cork once said: 'Returning to Ireland from America is like stepping from the 20th century back into the 18th.' In one way, at least," he smiled, "we're ahead of America; our sun rises several hours before yours."

I wanted to remind him that the sun rose on an Irish civilization centuries before white men settled in America. And I thought of the Irish sun rising tomorrow on a new Gaelic land as green and fresh as ever bloomed the old.



## ON INTIMATE TERMS WITH GOLDEN EAGLES

After traveling to Wyoming from their home in Washington, D. C., the authors at last discovered a family of golden eagles not far from Laramie (page 704). John Craighead says it is not dangerous to hold the eaglet in this manner, for it is kept so busy balancing itself that it cannot wield its formidable talons. A bird of prey seldom uses the beak for defense, yet it could be a destructive weapon.

## IN QUEST OF THE GOLDEN EAGLE

Over Lonely Mountain and Prairie Soars This Rare  
and Lordly Bird, But Three Youths from the  
East Catch Up With Him at Last

BY JOHN AND FRANK CRAIGHEAD

*With Illustrations from Photographs by the Authors*

WHAT bird lover and nature photographer has not dreamed of finding the nest of some rare, unusual bird and observing its home life? Our dreams were of golden eagles.

Bald eagles and most of the species of hawks we counted among our intimate friends, thanks to years of studying birds of prey and training them for falconry.\* But with the golden eagle we had not even a bowing acquaintance.

Wild and rare, living in lonely places, this lordly bird can stir the imagination of any man. Although the bald eagle is the national bird of the United States, most persons envisage the fierce golden eagle when they think of the country's emblem.† The two eagles are about equal in size, but the golden feeds on large swift prey that taxes its strength and courage, whereas "Baldy" is chiefly a fish eater.

To us the golden eagle was even more than a symbol; it was one of the largest of our birds, with a 7-foot wingspread and talons as big as a man's hand. Its huge stick nests often contained whole truckloads of material. There were accounts of its attacking lambs and fawns; even stubborn if unsupported tales of its kidnapping little children. We wanted to see this king of birds and find out how much of him was myth and how much was truly eagle.

### TO THE GOLDEN EAGLE COUNTRY

Scraping together the necessary funds, we arranged to get some wild life photographs for the United States Forest Service and the Biological Survey, and headed west with our friend Morgan in an automobile loaded with camping equipment and cameras.

We had only one real clue. An ornithologist in our home city of Washington, D. C., had told us there were golden eagles in Wyoming's Goshen Hole country. Accordingly, we spent several days searching Goshen County, but we soon discovered that even a county was a mighty big area.

We had about decided to move farther west when an old native of Goshen informed us he knew where "a big brown eagle" nested. We were doubtful and plied him with questions.

No, he said, it didn't have a white head. Yes, it nested on a steep cliff overlooking the river. No, it wasn't a hawk, it was a big bird. Yes, he had watched it feed its young every morning and evening while he had been working on the road. Yes, it could fly fast.

We seemed to be on the right trail!

"Is it a golden eagle?" we asked point-blank.

"Well," he said, a little peeved, "I don't know the names of nothin'; I just know 'em when I see 'em. I call it a brown eagle because it's brown."

### WHEN AN "EAGLE" IS NOT AN EAGLE

After half an hour we had weeded out precise directions for reaching the golden eagle cliff. The site appeared ideal for an eyrie. But a long and careful search finally proved that our "golden eagles" were nothing but turkey buzzards!

All three of us were greatly discouraged; in this area golden eagles are hatched early in the spring and we knew that the young birds would soon be leaving their nest. Our only clue was gone. To find a golden eagle now would be very much a matter of luck. We headed for southeastern Wyoming where we could photograph some hawks and just possibly find an eagle.

At Laramie our hopes were revived. A professor at the University of Wyoming told us where a golden eagle used to nest.

We were in such a hurry to get to this spot that when we saw a big nest in a fir tree high on a mountainside we passed it by

\* See "Adventures with Birds of Prey," by Frank and John Craighead, NATIONAL GEOGRAPHIC MAGAZINE, July, 1937.

† See "The Eagle, King of Birds, and His Kin," by Alexander Wetmore, NATIONAL GEOGRAPHIC MAGAZINE, July, 1933.





"OH, HOW WE HATE TO GET UP!"—AFTER A NIGHT LOADING CAMERAS

Because the moon flooded the camp with its radiance, film holders had to be filled inside the sleeping bags, which made a rather stuffy "darkroom" (page 699).

without climbing to it. Through our glasses we could see that the nest contained young birds. Probably they were rough-legged hawks, we decided. Well, we could always come back if we found no eagles. We hurried on, excited by the hope that we would find our long-dreamed-of bird.

#### A NEST, BUT NOBODY HOME

The nesting site was a high bluff that rose abruptly from the sagebrush plain and extended for miles. Surely, we thought, we will find a golden eagle here. But when the long, soft shadows of evening appeared on the cliff, we had found no eagles—only the remnants of a previous year's nest high on the side of the bluff. The golden eagle had sought a new and distant nesting place.

The cliff had other tenants, though. A prairie falcon, sparrow hawks, a western red-tailed hawk, a Swainson's hawk, and a great horned owl had not deemed this too lowly a place in which to raise their young.

Swallowing our disappointment, we decided to try to get pictures of the mother prairie falcon landing at the nest and feeding her hungry family of five.\*

On a ledge of the cliff we built a blind of tripods covered with canvas, and early the next morning John and Morgan helped me (Frank) into it.

When the sound of their footsteps had died away, I focused the still camera and

\* See "Week Ends with the Prairie Falcon," by Frederick Hall Fowler, NATIONAL GEOGRAPHIC MAGAZINE, May, 1935.



NOT AIR RAID PRECAUTIONS; JUST A BLIND THAT BLENDS

So well was this hide-out camouflaged with cattails that a marsh hawk family, whose nest was a few feet away, never became aware of it. Frank is emerging from the back of the blind after taking movies (pages 698 and 700).

sighted and wound the movie camera. Both were on a level with my face, for I had to lie down to keep from bumping my head on the ledge above.

#### FALCON'S-EYE VIEW OF CAMP

From a hole in the blind I watched Morgan and John getting breakfast at camp far below me. They looked so small that it was difficult to see all of their actions, but I could interpret their movements according to the routine I knew they would follow. I saw a tiny flame blaze up as Morgan lit a fire while John helped get breakfast by punching holes in a can of milk.

Two of the prairie falcons started to scream. Tensely I raised myself on one

elbow, put my finger on the trigger of the movie camera, and waited. Nothing happened. The young birds quieted down. The mother was not returning as I had hoped. I relaxed and again gazed down on our camp (page 702).

#### BABY OWLS AS BEDFELLOWS

John was sitting on his sleeping bag, feeding meat to Cactus and Sagebrush, two young burrowing owls that we had taken for pets. I couldn't distinguish the owls, but I knew what they looked like. They were tiny, shapeless balls of thin down, with large, heavy heads and long, ungainly legs. Their eyes had not yet opened upon the world and the only signs that they had



NOT ALL BARN OWLS LIVE IN BARN'S

This sleepy mother was captured in Nebraska by Frank, who slid down a rope and grabbed her while she was sitting on a nest. After the picture was taken, he returned her to her home in the bank of a dry stream.

any eyes at all were two tiny sealed slits on either side of their beaks. They reminded me of tired, sleepy old men who could not hold their heads up.

They were not a week old yet, and they couldn't have been over two days old when we found them in their nest in a prairie-dog hole in Nebraska. At that time they were not as large as the pocket mice that their mother had brought home to feed them. All eight of the young owls in the brood could have made a meal out of the one large Mormon cricket that lay beside them in the nest.

Cactus and Sagebrush were quite a care.

travels through Wyoming. Externally she was black and white, but internally she was mostly black. She was always up to some mischief.

#### PET MAGPIE GOES NATIVE

One time Maggie disappeared completely and three days later we found her in a magpie nest almost a quarter of a mile from camp. She was making herself at home scolding four foster brothers and sisters.

When we took Maggie back to camp, she seemed tamer than before, strangely enough, and was content to stay with us, even though her foster mother came down

When we went to bed at night, we closed them up in a box lined with cotton. Yet by about four o'clock they got so cold that one of us had to get up and put the owls, box and all, in his sleeping bag to warm them. From this time on the owls' bedfellow could only doze, for if he went to sleep and rolled over on them they would surely be killed. It was a great relief when they finally grew enough feathers to keep themselves warm.

#### MAGGIE, THE CAMP COMEDIAN

While John fed our pet owls, Morgan was chasing Maggie, a pet magpie, in and out of the tent and through the pans and food supplies. A comic and stubborn bird was Maggie, whom we had adopted in our

early one morning and tried to coax her away.

Below at camp, Maggie and the owls had been fed, breakfast dishes cleaned, and sleeping bags spread out in the sun when again I heard the young falcons yelling. This time I could also hear the old bird and knew she was bringing food. Tense and excited, I held my hand out, ready to snap a still picture the instant the mother landed.

But the old falcon was highly suspicious. Back and forth she flew in front of the cliff, screaming at the blind as she went past. The hungry youngsters were tortured by the sight of food, so near and yet so far away. My arm became as heavy as lead.

Just as I thought I would have to relax for a moment, the

old falcon zoomed up to the nesting cavity and glanced backward at the blind for a split second while the youngsters snatched the ground squirrel from her talons. The next instant she was gone, but I had taken a picture.

Now I was able to take my time and get movies of the young hawks tearing up and eating the ground squirrel. When their meal was over, they stood at the very edge of their nesting cavity and vigorously flapped their wings to strengthen them.

In the afternoon the heat inside the canvas blind became almost intolerable. To



MORGAN PLAYS NURSE TO A YOUNG BURROWING OWL

Cactus and Sagebrush, a pair of chicks taken from a prairie-dog hole in Nebraska, at first had to be fed by hand five to six times a day. Until they could grow a thick coat of down, the tiny owls were taken into a sleeping bag each night by one of the party. This meant he could only doze, because if he rolled over the birds would be crushed (page 695).

get relief I turned my head toward a hole in the back of the blind through which a tiny breeze was coming.

After a while I saw John and Morgan walking through a swamp a mile west of camp, looking for the nest of a marsh hawk which we had seen the day before. Later I learned that the mother had flushed right at their feet and that in her nest on the ground they had found two very young hawks and one egg. Now we had two nests that we could work on at the same time.

After supper we had to attend to the worst job of the day—emptying and filling



WITH A WHIRRING AND BEATING OF WINGS A MARSH HAWK TAKES OFF

This remarkable action shot of a flushed bird was taken from the blind pictured below. The mother's hasty departure knocked the young ones out of the nest, one little fellow landing on his back.



IT WAS HOT AND CRAMPED ON THE PHOTOGRAPHER'S "FIRING LINE"

In order to get pictures of the marsh hawk nest, a blind, made of sheets, blankets, and cattails, was built only eight feet away (pages 695, 700, and above).



DOWN A CLIFFSIDE WENT JOHN TO INTERVIEW PRAIRIE FALCONS

With Morgan paying out the rope, it was easy to call on the family of five nearly grown birds. Here John seems to be bouncing one on his knee. On the ledge above, a blind was built, but it was some time before the mother would approach the nest and bring a ground squirrel for her hungry brood. The male never came near, passing his contributions to his mate for delivery.

camera slides. We waited until ten o'clock before it was dark enough. Then, after ten, the moon came up and it was too bright to use the tent as a darkroom. There was only one alternative—use our sleeping bags.

Of all the means of inflicting self-torture, filling slides in a sleeping bag is the worst. First we got films, empty boxes, and slides all together. Then two of us crawled into the sleeping bags, headfirst, and closed the bags up after us.

In total blackness we took each film out of its holder and placed it in a box between

pieces of paper. Next we filled each slide with an unexposed film. After a few minutes it became difficult to breathe; we got hotter and hotter and sweated as if in a steam bath.

In half an hour we would back out of the sleeping bag and take deep draughts of fresh air. It was easy to lose two pounds while emptying and filling a dozen slides.

#### YOUNG HAWKS ARE MOSTLY APPETITE

Each day we waited in the blind beside the prairie falcon's nest, and each day the



JOHN SNAPS A GREAT HORNED OWL, SCION OF AMERICA'S FIERCEST OWL FAMILY

This youngster, whose home is in a cave on the cliffs, was fed almost entirely on rabbits caught by its parents during night raids. Captured early, the young great horned owl makes an interesting pet and shows much affection for its keeper.

hawk became tamer, returned more often, and remained longer at the nest. The male hunted, too, but instead of coming to the nest he passed his contributions to his mate for delivery.

The five young falcons ate prodigiously. On our last visit in the blind the mother had returned ten times by midafternoon, each time with a 13-striped ground squirrel.

Later that same afternoon two of the young birds gathered enough courage to spread their untried wings and glide out into the unexplored emptiness. Our falcon photographing was over.

#### MOTHER MARSH HAWK SHADES HER BABIES

Watching the marsh hawk's nest was even more interesting, for the hawks were very young and the mother stayed with them for hours at a time. Our blind, made of cattails, was only eight feet away, but so well camouflaged that the hawk never suspected our presence (pages 695 and 698).

Her chief concern was to shade her ten-

der babies from the hot sun. Sometimes she spread her wings to do this; but usually, with one foot—holding her talons doubled up and limp, so as not to hurt her youngsters—she pushed them all together into the middle of the nest, then stood directly over them.

When the hawks were only a few days old, the mother would push her beak down into the nest and dig two holes, one on either side of her young, then step in the holes and squat down to brood her babies.

This almost caused the death of the young birds, because the mother would never flush from her nest until we were within a few feet of her, when she would suddenly leave with a beating of wings and rustling of weeds. Her feet were usually in the holes and the young hawks were generally lying over her talons, so in leaving in such a hurry she threw the youngsters clear out of the nest.

On one occasion all three were thrown almost a foot away, one little fellow land-



"SO YOU WON'T SHAKE HANDS AND BE FRIENDS!"

Because some of its brothers steal barnyard fowl, the red-tailed hawk is dubbed "chicken hawk." But it deserves a better reputation. Its usual diet is meadow mice, as well as gophers, rats, moles, and grasshoppers. This nest of a western red-tail was photographed in northern Utah.

ing on his back. He was wedged between two cattail stalks and his head was cut by his mother's talons.

One day the mother became worried and excited because she couldn't be in two places at the same time. Two youngsters were on one side of the nest and another on the far side. The only way she could keep the sun off all of them was to get them together.

When they were younger, she had solved this problem by pushing them with her talons or picking them up in her beak. The young hawk was too big for this now, however, so she did the only other thing she could do. She stood over the two on one side of the nest for a while and then went over to the other hawk. She walked fast, turned her head from side to side, and seemed very disconcerted.

Finally the lone hawk waddled over to his brothers and sisters; whereupon the mother calmed down and stood over them until she heard the male calling for her

to come and get a mouse he had caught.

The marsh hawk was extremely gentle with her young. In feeding them while they were very young she tore off tiny pieces of meat with the tip of her beak. She then turned her head sideways, slightly opened her beak, and let a young hawk take the offered particle. When she tore off a leg of a bird, she started to give it to a young hawk, but thought better of it and swallowed it herself. She always ate the gizzard, feet, and pieces of the skin and feathers. Only the dainty, tender portions were given to the youngsters.

#### GENTLE TO YOUNG, FIERCE TO FOES

After I had seen the gentle side of this bird's character, I (John) had a chance to see her at the height of her anger, to watch her change from a tender, motherly bird into a fierce, bloodthirsty creature determined to protect her young at all costs.

While waiting in the blind, I often heard a rustling noise in the cattails behind me.





BACK IN CAMP, AFTER A HARD DAY PHOTOGRAPHING PRAIRIE FALCONS ON THE ROCKY CLIFFS

Supper time meant feeding Maggie, the pet magpie (center), as well as two burrowing owl chicks and three hungry ornithologists. Here, at the edge of the sage-brush plains of southeastern Wyoming, no golden eagles were found, but the bluffs had other tenants—prairie falcons, sparrow hawks, a western red-tail, a Swainson's hawk, and a great horned owl. In the middle of the day the exposed campsite became so hot that the party had to seek the shade of the canyons, but it was cold at night. Drinking water had to be hauled in each day by car.



FROM A CRUDE MAN-MADE "CROW'S NEST" (RIGHT), HIGH ABOVE THE GROUND, THE GOSHAWK'S NEST WAS FILMED

The blind was put up slowly, piece by piece, usually while the parents were off seeking food. At times the goshawks were belligerent, striking at the blind and camera, and showing anger rather than fear. While examining the young in the nest, John was attacked by one of the irate parent birds (page 707).

The mother hawk also heard these noises and became alert and nervous. I recognized the sound as that caused by a rat and wondered if perhaps it had not earlier stolen one or two of the hawk's eggs.

One day the noise started behind me, circled around the blind, and started coming toward the marsh hawk's nest. The mother became alert; the calm look in her eye changed to one of fear, though not for herself.

The noise came closer and closer. The mother hawk became more restless, moved her head quickly, and acted as if she wanted to do something, but didn't know how.

When the noise was only a few feet from her, she could stand it no longer and charged headfirst into the cattails. She flapped her wings and tried to push her body far back into the tangled mat of dead stalks. When she could get no farther she returned to the nest, her eyes blazing with anger, only to charge headlong into the bushes again.

I doubt if she saw anything. I believe she only heard the noise and knew that it meant danger. Maybe she had an old score to settle with the mysterious stranger. Perhaps she had seen him before, or perhaps she acted only through instinct, and her emotions of anger, fear, and self-preservation were aroused by the sneaking but continually approaching footsteps. Centuries of nesting on the ground may have instilled in this species of hawk a healthy respect for lurking danger.

As we left the marsh hawk and prairie falcon behind, most of our camera ammunition had been fired.

"Suppose now we should find a golden eagle nest," said Morgan, "with all but one reel of our movie film gone!"

But we had long ago given up hope of finding our elusive eagle; the young had probably left the nest by now. Our golden eagle dreams had taken flight.

#### GOLDEN EAGLES AT LAST

Outside of Laramie we stopped our car and through binoculars took another look at the rough-legged hawk nest we had passed by two weeks earlier.

"Why, look! The young birds are black!"

"Yes, and they're big, and look how large the nest is."

We looked at each other, the same thought in our minds. Young rough-legged hawks aren't black.

It didn't take us long to climb the moun-

tainside. From underneath the tree we could see that the nest was very big, not small as it had first appeared to us from the valley far below. All three of us started up the tree at once.

When we pulled ourselves up even with the edge of the nest, we saw two huge birds. Could they really be golden eagles?

John climbed into the nest and saw that their feet covered an area as large as his hand; their beaks were large and powerful; feathers covered their legs; and there on the backs of their heads were hackles of a golden-brown tinge!

They were golden eagles; what else could they be? Still, we couldn't believe it. We had never seen a live golden eagle before and we had least expected to see one here.

#### HUGE NEST WILL HOLD THREE MEN

A more careful survey of the nest assured us that we had found our eagles. It was lined with green fir branches and was strewn with partly eaten jack rabbits, ground squirrels, and weasels. It was big and strong enough to support all three of us; some of the sticks were four feet long and an inch in diameter. When we climbed back down the mountain, we saw the old eagles soaring high above us.

Here was a rush job; we would have to hurry to get our pictures before the young eagles left the nest. Early next morning we built a blind on the mountainside overlooking the cyrie.

Half an hour after I (John) crawled into the blind, the young eagles began to scream and flap their wings.

Looking out, I saw the old eagle coming across the canyon. She looked like a big Douglas airliner as she soared over the opposite mountain and then zoomed down into the valley in front of me. She was coming much faster than I expected, and almost before I knew it she alighted on the nest.

I was so absorbed in working the movie camera that I did not notice that the old bird had brought back a large jack rabbit until the young female made a rush and grabbed it.

The adult eagle stood a moment on the edge of the nest, then dropped into the valley again, leaving as quickly and as silently as she had come. No longer did she bother to feed her young ones. All of her time was devoted to getting food.

I expected to see a tug of war between the two young eagles to decide which should



SCREAMING DEFIANCE, TWO GOLDEN EAGLETS DARE MAN TO APPROACH

Culmination of weeks of search was this big nest and brood of two atop a fir tree near Laramie, Wyoming. The eaglets were mostly black, but on the backs of their heads grew the characteristic hackles of golden-brown tinge. Before the female bird in the foreground are the hindquarters of a jack rabbit she had been eating. The male is perched on the limb.



WINGS SPREAD, THE EAGLETS SEEM ABOUT TO FLY AWAY WITH FRANK.

Although their bodies are massive and their wings fully feathered, they cannot fly yet. Even through a leather jacket their sharp talons could be felt. The golden eagle has been able to exist in the Rocky Mountain region chiefly because of its wariness.

eat first, but no such thing occurred. The male was not only a king but a gentleman; he patiently waited until his sister had completely finished her meal before he started on his share of the rabbit.

I do not know whether it was always customary for them to take turns and then eat in peace, or whether the male was just not so hungry as the female. Perhaps he had learned from experience that it did not pay to argue with his bigger and stronger sister. Whatever the cause, the meal was as peaceful and orderly as any I had ever seen at the nest of a bird of prey.

When it was over, I got out of the blind and climbed the tree. Only half of the jack rabbit was eaten. I counted the hind legs of 21 rabbits, scattered loosely over the top of the nest, and even more ground squirrels. The young eagles were being well fed and growing fast. No longer did they have

down on their feathers. Would they still be in the nest when our new supply of movie film arrived?

#### EAGLETS AT PLAY

It was often many hours between feedings, and the eaglets invented amusements to while away the time. I saw them clutch at imaginary prey with their talons, and the male enacted a fierce struggle with a dead stick, clawing and biting it. He pounced on the stick, sprang back as if in alarm, then pounced on it again and hobbled about with the stick tightly clenched in his feet.

Finally, when he had disposed of it with a few quick snips of his beak, he flapped his wings, raised high his golden head, and screamed victoriously. At least I assumed that it was a scream of victory, but it was very weak and plaintive for such a large, fierce bird.



THE NATIONAL BIRD OF THE UNITED STATES IS NOT VERY IMPRESSIVE WHEN YOUNG

Not until it is more than three years old does the bald eagle assume the white head and tail feathers that make it one of the handsomest of birds. Bald-eagle nests are usually found near water, as the bird feeds largely on fish. This one is in a sycamore overlooking the Potomac River.

As we watched the parent eagles swoop in from high above and noticed the size of their beaks and talons, we thought how dangerous a golden eagle would be if it ever attacked a man.

Several different kinds of hawks will strike a man in defense of their young, but golden eagles in this respect are less bold. Both birds soared high overhead and kept out of sight when we were at the nest. We could observe them closely only by hiding in the blind.

#### HOW IT FEELS TO BE HUNTED BY A HAWK

While we were waiting for movie film to come from Washington, D. C., we started preparations for photographing a goshawk nest in a pine tree not far away (page 703).

The goshawks had absolutely no fear of the blind, which we built in two near-by

trees. Most other hawks sneak quietly into the nest and leave quickly until they have become accustomed to the blind. But the goshawks screamed defiantly, struck the blind and cameras, and showed only anger instead of fear. No wonder the goshawk has the reputation of being one of the fiercest of American birds!

We once had a goshawk of our own and trained it to hunt rabbits, but we had never expected to be hunted by one.

Early one morning before entering the blind, I (John) climbed up to the nest to see if the young birds had been fed.

I picked up one of the young goshawks and was feeling his crop when something struck me squarely in the chest.

I was so startled I almost dropped the young bird. The mother goshawk had opened an undeclared war.

I put the young hawk back in the nest



VICTIM OF AN EAGLE "BLITZKRIEG"

While a golden eaglet was being banded, Morgan relaxed his hold on the bird a moment to slap a mosquito. Instantly a huge talon shot up and closed on his face. Although he quickly jerked back, Morgan was badly clawed (opposite and page 710).

and was struck again before I could move. There were no limbs large enough to hide behind and all I could do was to stick my head behind the trunk of the tree when I saw the hawk start to dive.

She swooped at me with more savagery and fury than I had ever seen our trained hawk display. I could well appreciate the terror a rabbit or ground squirrel must feel when it hears a rush of wings and looks into the cruel, blood-red eyes of the speeding goshawk just before its steely talons strike. A shiver went up my back as the hawk left a pine tree above me.

She came with terrific speed, and as I

crawled down the tree she hit me twice on the hand and once on the shoulder. Every blow except the first was glancing, so I got to the ground with only a few scratches on my hand and a torn lumberjacket.

From then on we were struck every time we approached the nest. She always struck from behind and so fast did she come that on several occasions she hit us on the head before we even realized she was near.

From inside the blind we could see everything that went on at the goshawk nest. The hawks preyed almost entirely upon ground squirrels, though occasionally they caught red squirrels and rabbits. About every two hours they came back with food.

If the little goshawks were not hungry, the parents cached the prey on the limbs of a near-by pine. When the youngsters were hungry again, one of the parents would fly over to the storehouse, pick up a ground squirrel hanging over a limb, and bear it to the nest.

#### A HAWK AT HER HOUSEWORK

After alighting on the nest, the old goshawk would glare intently at the blind with her red eyes. When assured that all was well, she would begin to feed her young ones, and then no amount of movement on our part could scare her, so absorbed was she in her duty.



AN EAGLET LETS ITSELF BE Banded AFTER LEAVING ITS MARKS ON MORGAN'S FACE. If some day the leg bands are forwarded to the U. S. Biological Survey in Washington, D. C., they will record how long these golden eagles lived and perhaps how far from their parents' home they flew.

When the young hawks were gorged and sleepy, the mother seemed to think she ought to do something more than just watch her children. So she flew to a near-by limb and with her beak broke off a small green pine twig. This she carried back and placed along the edge of the nest. Then she returned for another, breaking off one as thick as a lead pencil.

She broke the limb in the same manner in which she snapped the leg bones of ground squirrels. She gave a sharp twist with her beak while pulling up with her neck, keeping her legs straight and braced.

This procedure continued until the entire edge of the nest was lined with fresh green pine. A few days later she relined the nest with aspen twigs and leaves. This ceased as the hawks got older, although an occasional twig was brought back.

The goshawk and golden eagle nested only about two miles apart; both hunted over a wide territory and both were fierce birds that brooked no rivals. How could two such predaceous birds live in harmony

when evidently they often hunted in the same areas? Would they not fight to the death over a wounded rabbit or meet in midair in a fatal feud over their hunting and nesting territories?

One would think that there would surely be such encounters, but never except under unusual conditions would such a thing happen. The goshawk is a bird of the woods and forest. It hunts in the thickly wooded valleys and ravines, dashing swiftly after its prey. Often we saw it snap off dead pine limbs as it swerved through the woods like a moving shadow after red squirrels. Its short wings and long tail are made to order for hunting in cover.

The eagle, on the other hand, hunts in the open—usually brush-covered—plains. Its long wings are for soaring. High in the sky, the eagle surveys the open country below and when an unfortunate rabbit or marmot moves, the bird drops like a rocket.

Because the hunting habits of these two birds are so different, it is possible that they never meet; it is even more probable that



if they met they would pass each other with only a casual glance, the one content to be supreme in the woods, the other the lord of the upper air and open spaces.

The movie film we ordered was more than a week late. When only two more days remained for us to spend with the golden eagles, there was still no sign of it.

Finally, the evening before we had to leave, we went to the post office with no hope of getting our film—and it was there!

We were overjoyed; but how could we ever take 2,000 feet of film of the golden eagles and the adult goshawks in one day? But it had to be done; we couldn't miss a chance to get movies of these birds.

When the white rolling clouds of late afternoon were drifting across the sky back of the eagle nest, we were taking our last pictures of the golden eagles.

For the second time that day, we stuffed the defiant young monarchs into half of a pup tent, tied the loose ends together, and lowered the eaglets through a ladderlike maze of limbs to the mountainside below.

As soon as their dark prison was spread open, they spasmodically clutched the loose canvas with their talons, ruffed up the feathers on their backs and heads, and with blazing eyes and open beaks dared us to try any more funny stuff.

One daily experience like this for almost a week was bad enough, but to be kidnapped and carried around like a sack, posed, and photographed twice in the same day was as much as any wild, proud creature could stand, and more than our golden-crowned prince and princess would endure. Physically they were not hurt, for we were very careful with them, but their dignity had greatly suffered.

Only one more operation remained. We wanted to band the young birds and then perhaps some day we should learn how long they lived, where they built their nests and raised young, or how far they roamed from the old fir tree.

Morgan was holding a seemingly calm, resigned young eagle while Frank clamped a band on the bird's leg with pliers. The eaglet lay snugly in Morgan's arms.

#### AN EAGLET GETS EVEN

Then a mosquito settled on Morgan's ear and unthinkingly he slapped at it. Instantly a huge rough talon shot up and clenched with all the suppressed fury of an outraged monarch. This time the claws did not clutch empty space, as they had done

so many times before, but closed on Morgan's unprotected face.

Instinctively Morgan jerked back his head, tearing the talons free, but he was blinded with blood and unable to tell whether the eagle had gouged his eyes.

Quickly Frank lifted Morgan's hands from his face and relieved us by announcing that the claws had missed the eyes—and would Morgan please raise his head so I could take a picture?

Justly indignant over such a request, Morgan wiped the blood from his face and eyes, then resentfully looked up while I finished the last of our movie film.

Through bloodshot eyes he squinted at the cocky young eagle, which seemed to say, "Now we are even."

Closer examination showed that two claws had missed the eyes by only a fraction of an inch, and the other two had sunk into the forehead and chin (page 708).

#### SKY KINGS, NEST-BOUND NO MORE

Returning the eaglets to their smelly, fur-lined nest, we hurried down the mountains into the darkening valley. But though eager to get back to camp and dress Morgan's face before dark, we stopped to bid our royal friends goodbye from below.

The nest and eagles were black against the bright twilight of a western sky. The valley was cool and still. Even the noisy Clark's crows and magpies had gone to roost or were silently flying from treetop to treetop, waiting for the sun to set. A sparrow hawk gave its exciting "killi killi" scream as it took off from a dead stub far down the valley, circled over the treetops, then sped back to its perch and bobbed its tail in farewell to the fading day.

This was a moment for reflection and our thoughts flew upward to the golden eagle nest. Soon those fierce, beautiful birds would be easily soaring over the valleys and mountains that we trudged with so much effort. Once they were out of the nest, never again would man be able to pick up, bundle into a tent, and roughly shove around those free-spirited birds. If their pictures were ever to be taken again, it would be through patience and cunning, not by force and superior strength.

We had taken advantage of the young eagles, but when they should come into their prime they would suffer no indignities. They would be the hunters, not the hunted, and like kings they would rule a mountain and prairie domain where might is law.

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## ORGANIZED FOR "THE INCREASE AND DIFFUSION OF GEOGRAPHIC KNOWLEDGE"

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

Articles and photographs are desired. For material which The Magazine can use, generous remuneration is made.

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

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

In Mexico, The Society and the Smithsonian Institution, January 16, 1939, discovered the oldest work of man in the Americas for which we have a date. This slab of stone is engraved in Mayan characters with a date which means November 4, 291 B. C. It antedates by 300 years anything heretofore dated in America, and reveals a great center of early American culture, previously unknown.

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

The National Geographic Society-U. S. Navy Expedition camped on desert Canton Island in mid-Pacific and successfully photographed and observed the solar eclipse of 1937. The Society has taken part in many projects to increase knowledge of the sun.

The Society cooperated with Dr. William Beebe in deep-sea explorations off Bermuda, during which a world record depth of 3,028 feet was attained.

The Society granted \$25,000, and in addition \$75,000 was given by individual members, to the Government when the congressional appropriation for the purpose was insufficient, and the finest of the giant sequoia trees in the Giant Forest of Sequoia National Park of California were thereby saved for the American people.

The world's largest ice field and glacial system outside the Polar regions was discovered in Alaska by Bradford Washburn while making explorations for The Society and the Harvard Institute of Exploration, 1937-8.

# The More Fine Features the Better Car You Get!

Here's how "All Three" low-priced cars compare on 22 important features found in the 1940 high-priced cars:

*Plymouth has 21... Car "2" has 11... Car "3" has 8*

**YOU CAN QUICKLY SINGLE OUT  
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JUDGE THIS "ONE-TWO" WAY**

**ONE:** The 1940 Quality Chart reveals what each of "All Three" low-priced cars gives you in size and comfort...in long life, economy, and fine-car engineering.

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CHART FOR FACTS**

**2. TAKE THE LUXURY  
RIDE FOR PROOF**



IT'S EASY to see why thousands are switching to Plymouth this year! The new "One-Two" comparison makes this big demand for Plymouth perfectly clear!

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*The Case of*  
**BURNS LEE**

*who now can give his wife  
the things he's always  
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When Burns's company made him a Branch Manager a month ago, it meant a secure position for the future . . . meant he could give Pauline the little house on Pine Street . . . and the small luxuries so important to a woman. And Burns wants her to have these things always . . . no matter what may happen to him . . .

## What Life Insurance Plan for the man who wants to assure his wife the comforts she has today?

To men like Burns Lee, the important thing in considering life insurance is to obtain the maximum *permanent* protection, at *low cost*. For such men, The Prudential has developed an improved form of "whole-life" policy called the Modified 3.

**Q:** What is a Modified 3 Policy?

**A:** It is a Prudential policy offering permanent protection in amounts of \$5,000 or more, and with a "modified" premium arrangement.

**Q:** How are the premiums "Modified"?

**A:** The premium for the first three years is set 15% lower than the premium for later years.

**Q:** What is the advantage of lowering the premiums for the first three years?

**A:** *Low-cost protection right from the start.* After three years, when the premium increases, whatever dividends are credited to the policy may be used to offset the increase. Thus the net cost remains at all times as low as possible consistent with safety.

**Q:** What makes the Prudential Modified 3 a "whole-life" policy?

**A:** Premiums are payable during the entire lifetime of the insured, and the insurance is payable to the beneficiary whenever death occurs.

**Q:** If at any time it is impossible to pay premiums, does the insurance cease?

**A:** Not necessarily. When premiums are discontinued, any value in the policy is used to provide extended insurance, but only for a limited period. Furthermore, at any time after three years' premiums have been paid, the insured can exchange his policy for a fully paid-up policy of a reduced amount.

**Q:** Does the Modified 3 Policy have a cash value?

**A:** Yes, after three years' premiums have been paid, as shown in the policy.

The Modified 3 Policy is one of many Prudential policies. There's a Prudential policy to fit every life insurance need and a premium-payment plan to fit every purse. For further information on how The Prudential can help you solve your individual life insurance problem, see your local Prudential representative, or write the Home Office.

# The Prudential

HOME OFFICE: NEWARK, N. J.



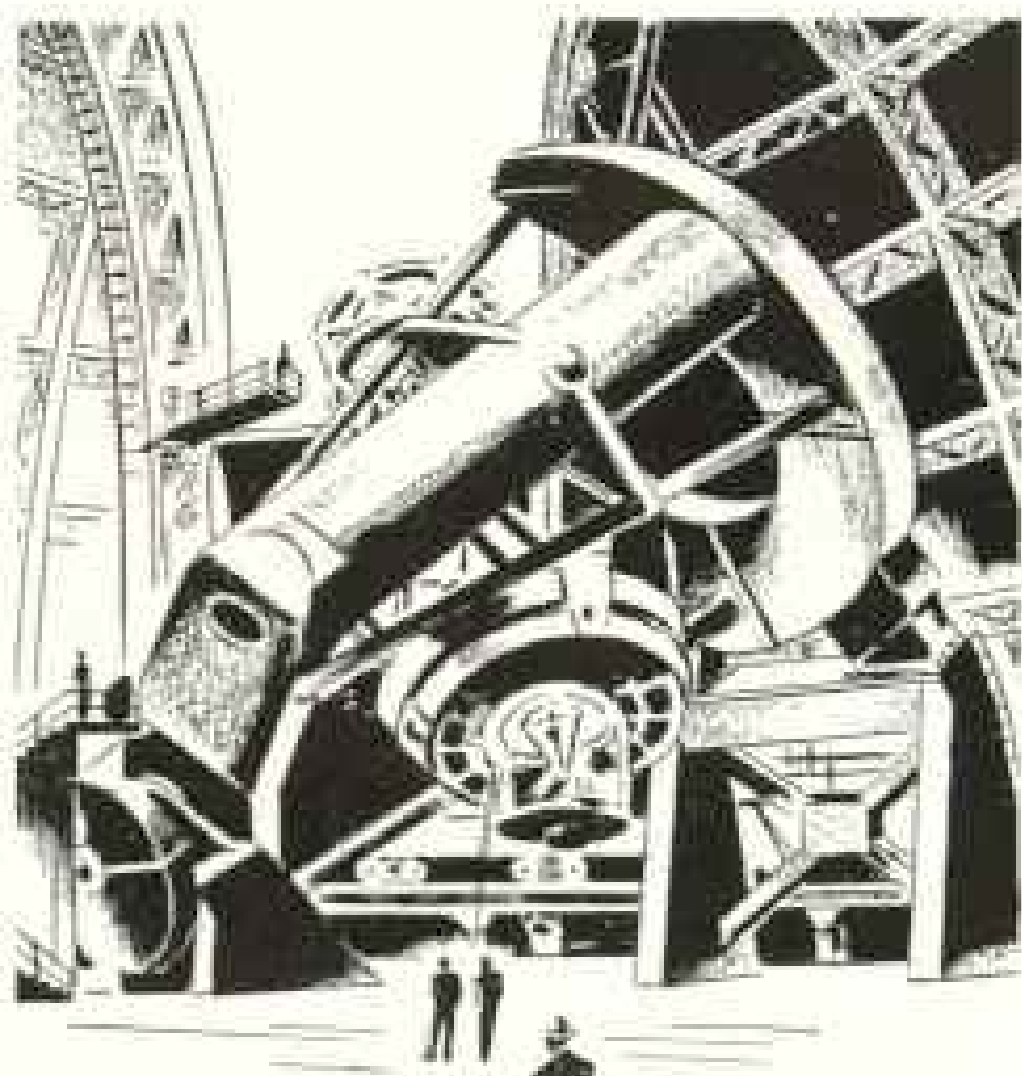
INSURANCE COMPANY  
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"Mention the Geographic—It identifies you."

# CHAMPION

## *of Star-Gazers*

*by Westinghouse*



- *They're building* an eight-story telescope out at Mt. Palomar in California. Its mirror, as you probably know, is 200 inches across . . . weighs 20 tons.

This gigantic optical device has a seeing distance, in miles, of — — well, put down a 6 followed by 21 cyphers. Astronomers call that distance one billion light years.

- *But a telescope* is a great deal more than a huge mirror. Twice the size of any existing telescope this one required a mounting of entirely new design.

- *Consider* the fantastic requirements: 500 tons of steel put together to tolerances as close as two one-millionths of an inch—so rigid its 75 feet of length will not deflect more than seven hundredths of an inch—so flexible it can throw off an earthquake shock—so mobile it can be moved by the force of your breath. That is what it takes for the mounting of this telescope.

- *And of the few concerns* having resources of men, plant and equipment even to think of such an undertaking, the Westinghouse Plant at South Philadelphia was given the nod—and went to work.

- *It was pioneering* of the highest order—practical science guiding meticulous skill in a six million dollar project. Many of the problems were unique. For instance, the midday sun, beaming through skylights, could expand a 154-ton bearing enough to upset fine calculations, so a giant "sunbonnet" had to be devised to shade the mounting during construction.

- *When ready for use* this mounting will have three observation points—one will have an automatically self-leveling floor and spectrograph table. A fourth observation point beneath the floor will be air-conditioned and temperature-regulated.

- *And this entire 500 tons* of mobile structure will actually be floated on oil, requiring only 1/650,000 of a horsepower to sweep it across the skies—one flea-power. We make small motors, but not that small, so a one-half horsepower motor will furnish the power.

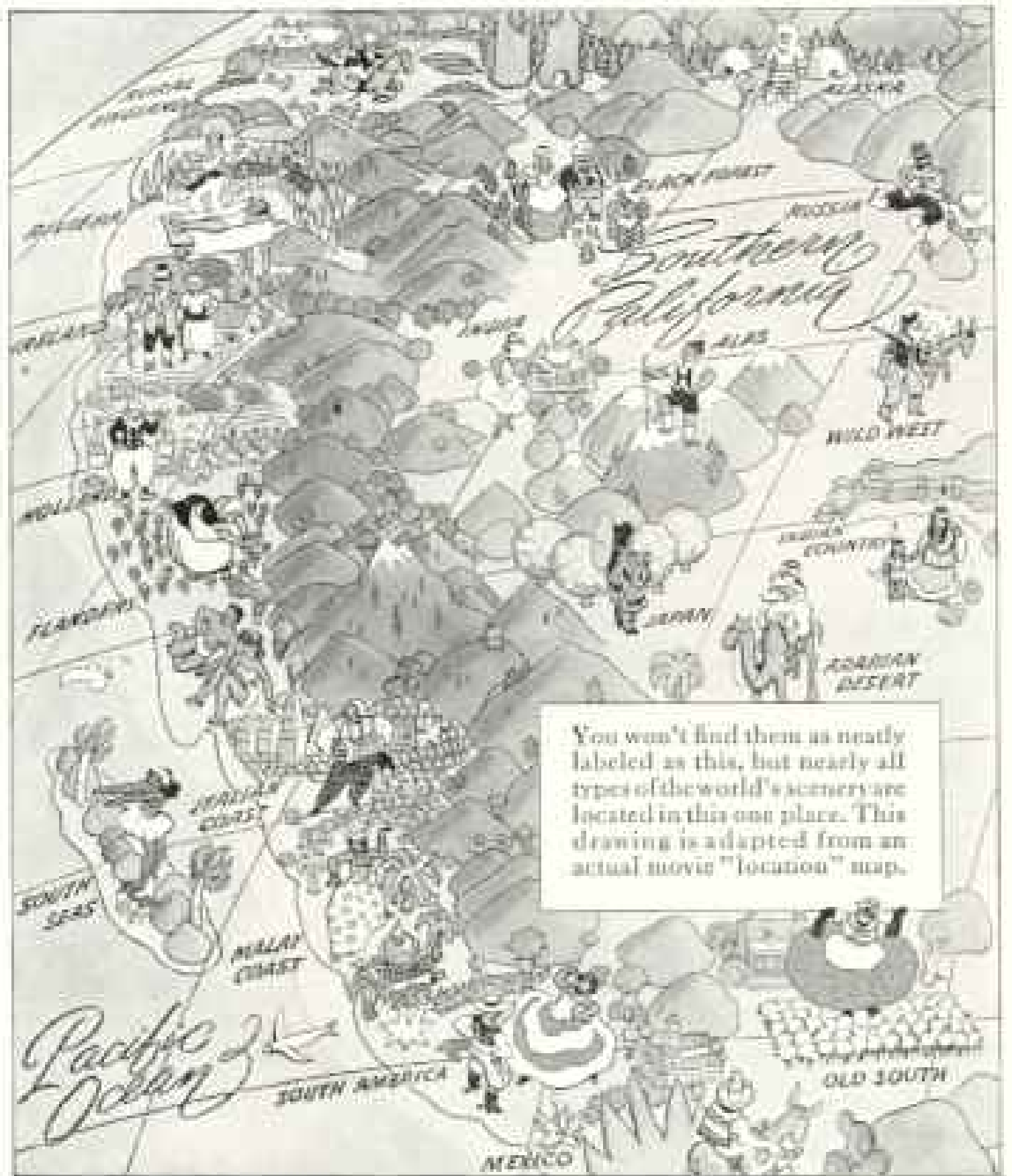
- *This has been* a thrilling task, even for a plant capable of turning out annually a million horsepower in turbines. The inconceivable exactions of the job, the mad combination of gigantic mass with split-hair precision, imposed no unusual demands, for our own products regularly called for just such extremes of size and accuracy. We feel an inward satisfaction in the knowledge that our standards generously encompass the decimal accuracy required by this champion of star-gazers.

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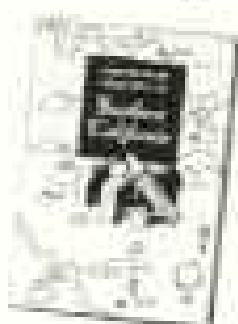


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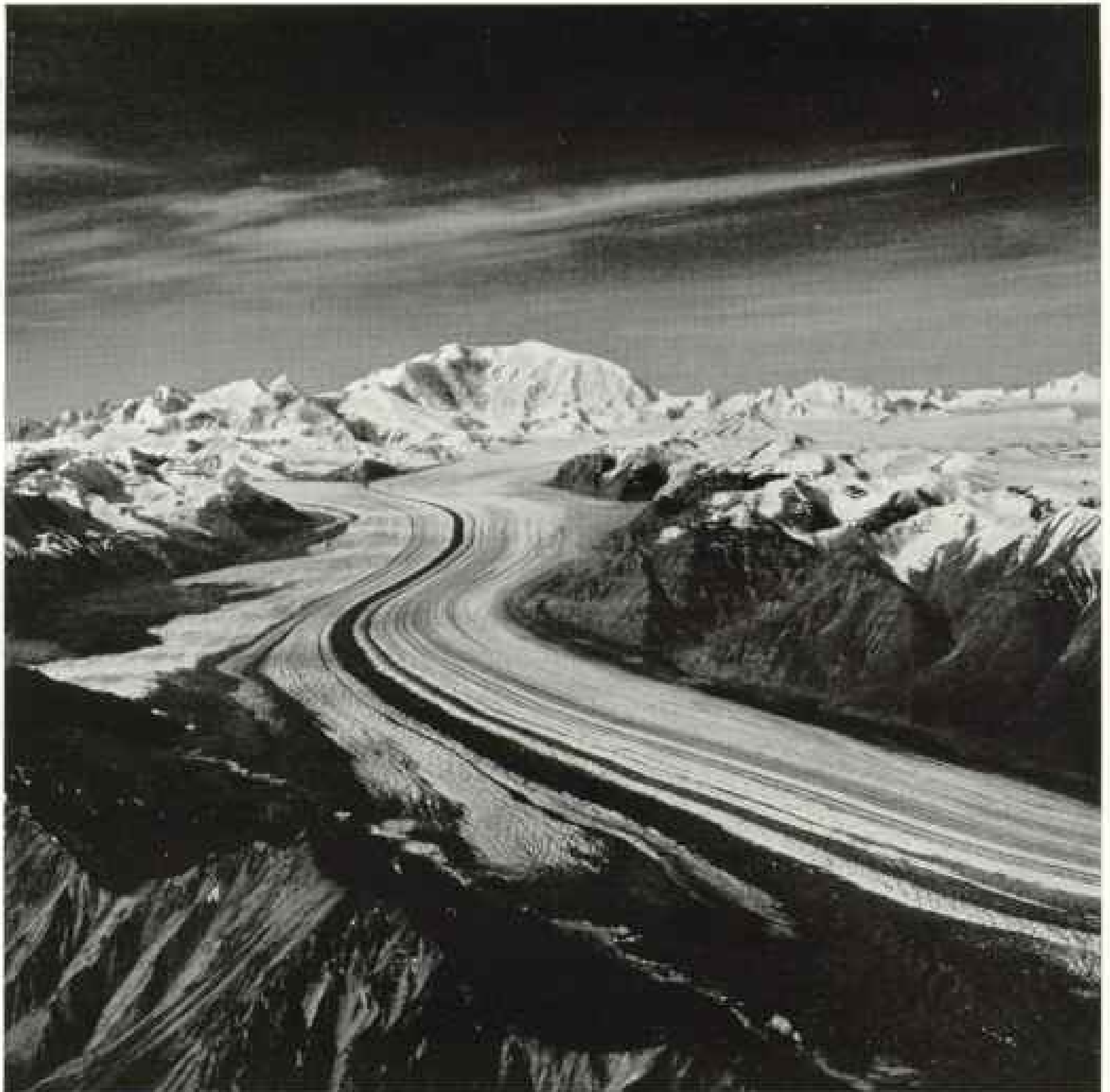
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"NABESNA GLACIER AND MOUNT BLACKBURN, ALASKA"

## A hard picture to get—but Agfa Film got it!

THIS BEAUTIFUL PICTURE was made on Agfa Film by Bradford Washburn, leader of the National Geographic Society's Alaskan Flight Expedition, in 1938.

Notice the feeling of distance . . . the depth of focus, and the detail throughout, from the dark foreground to the distant horizon.

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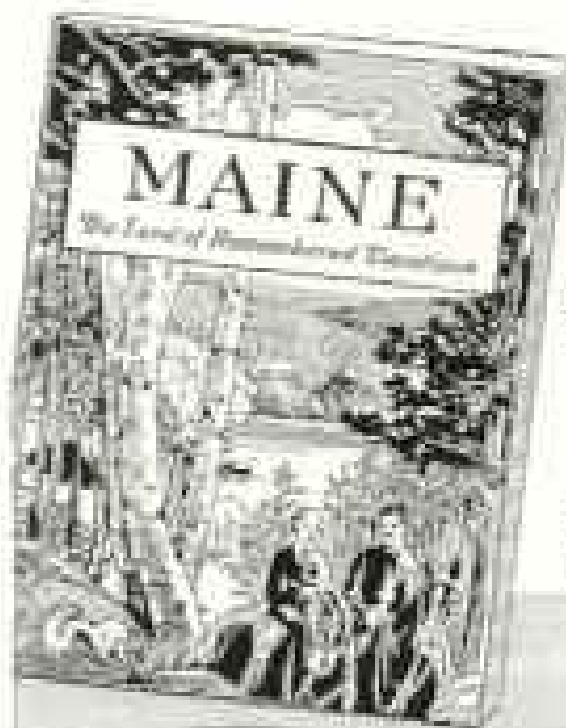


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*Illustrated: Studebaker Commander Cruising Serenely at Navajo Tower, Grand Canyon National Park, Arizona—priced \$962—delivered at factory.*



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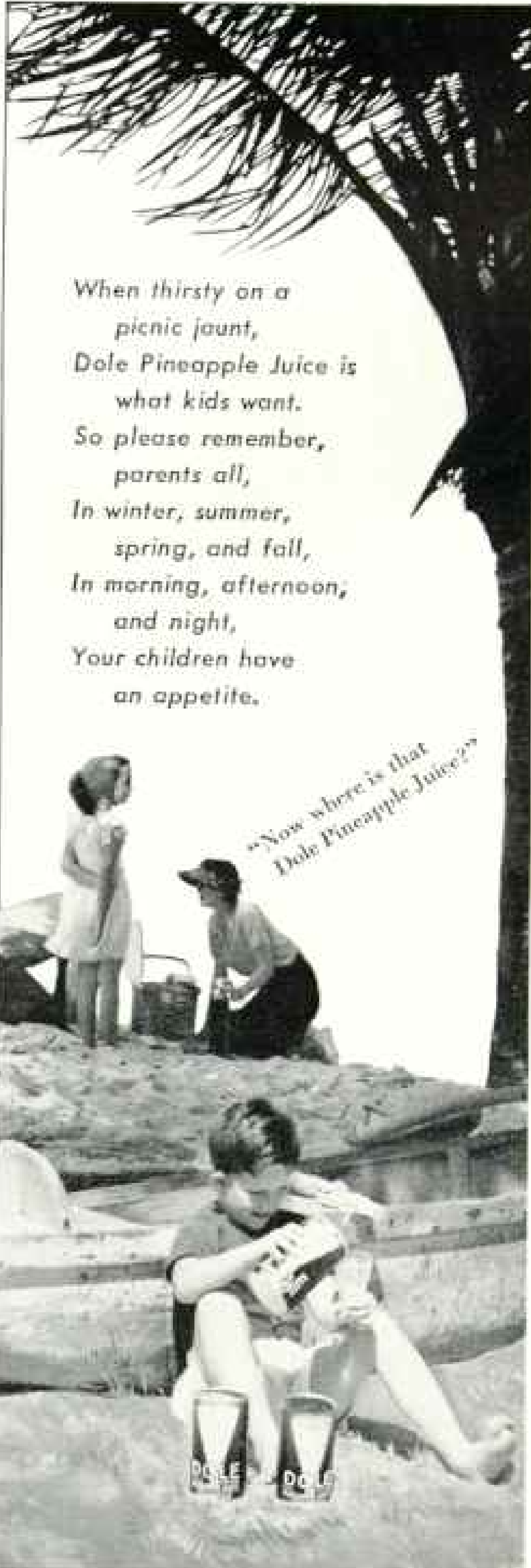
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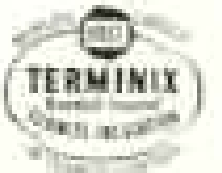
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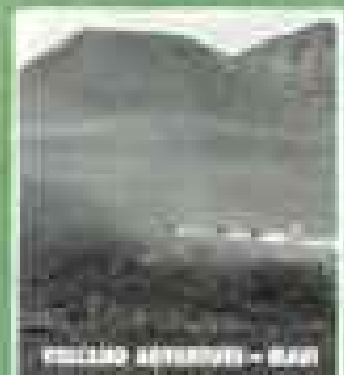
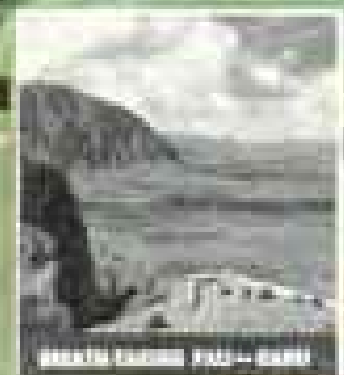
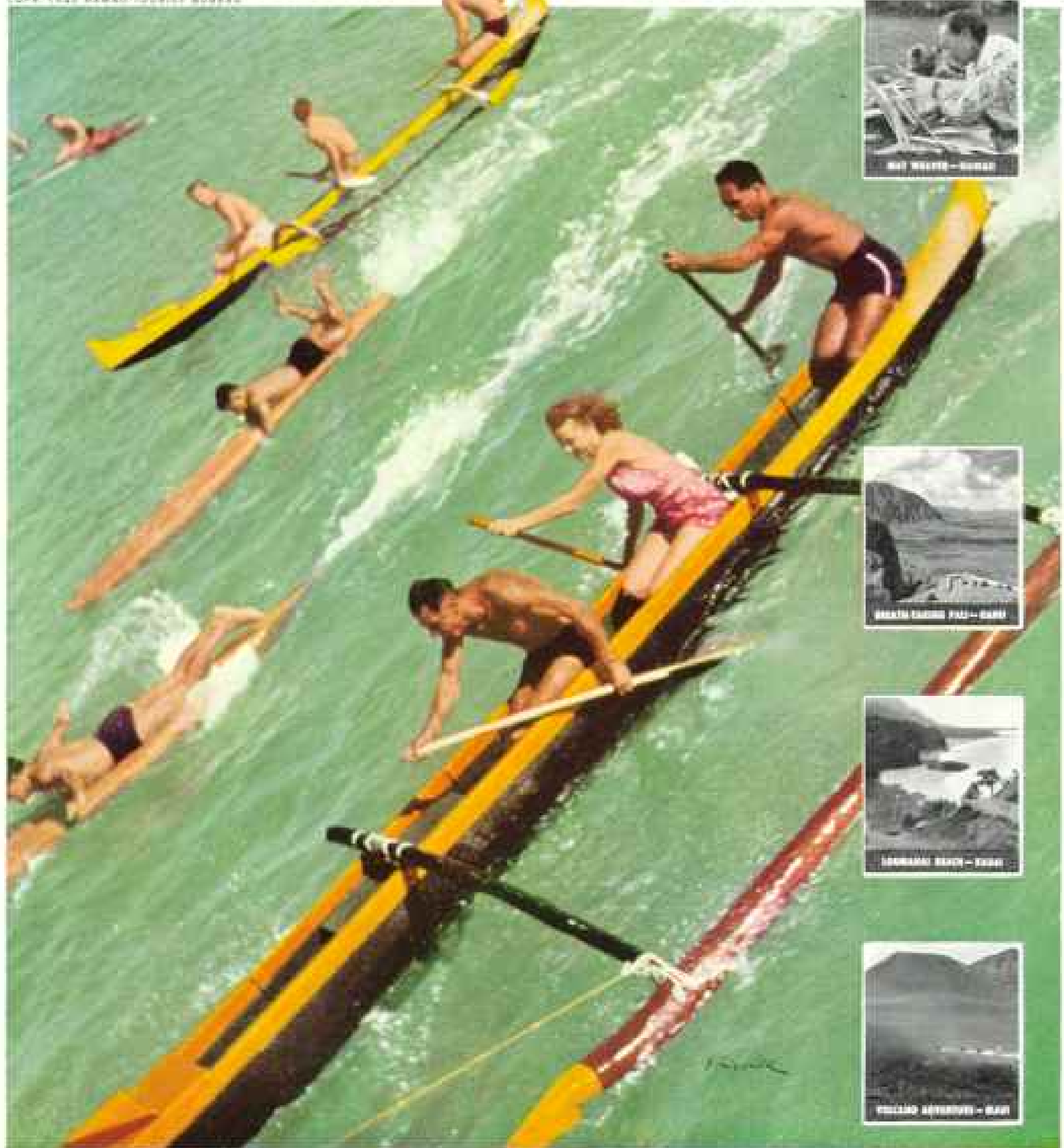
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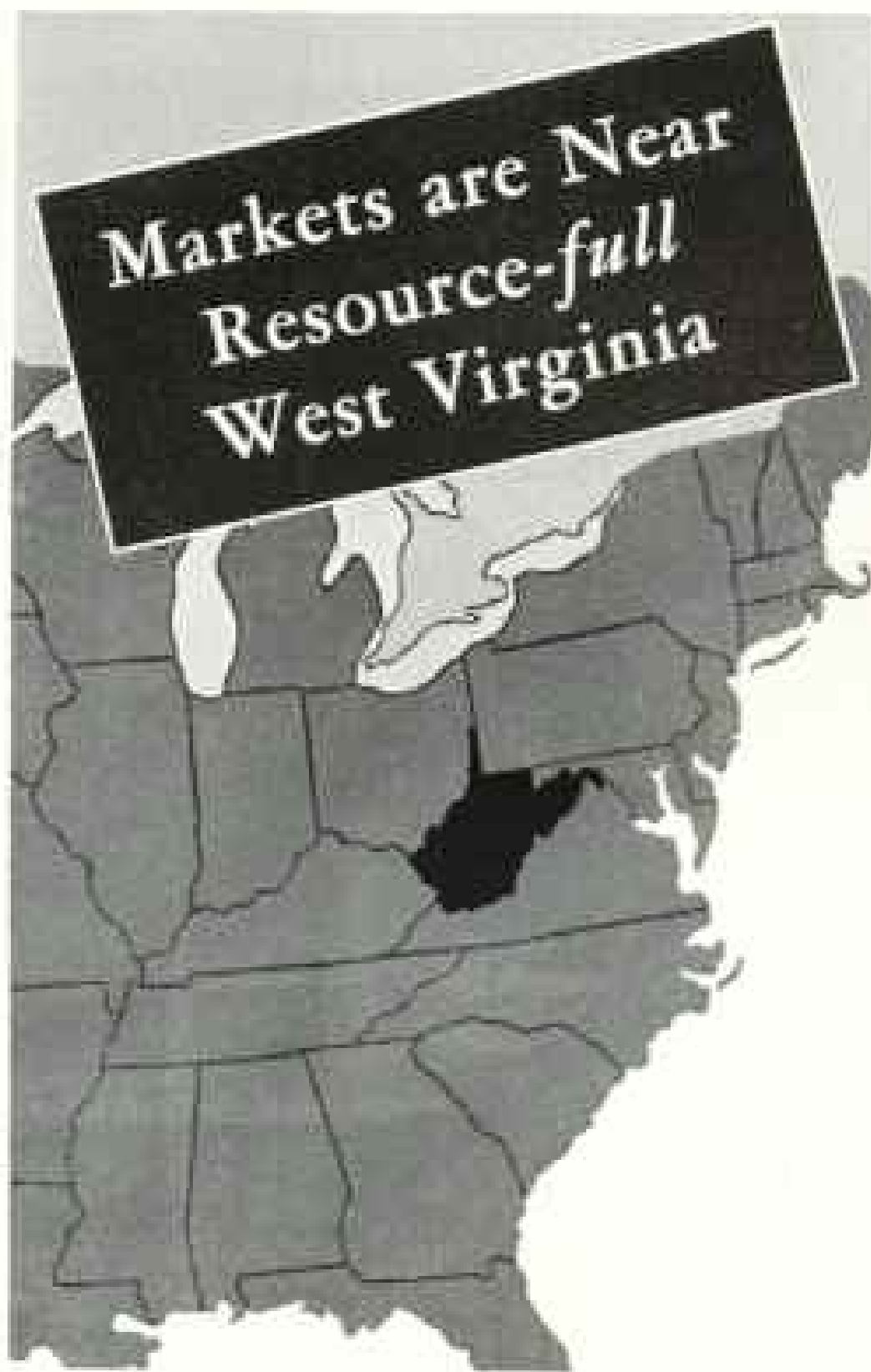
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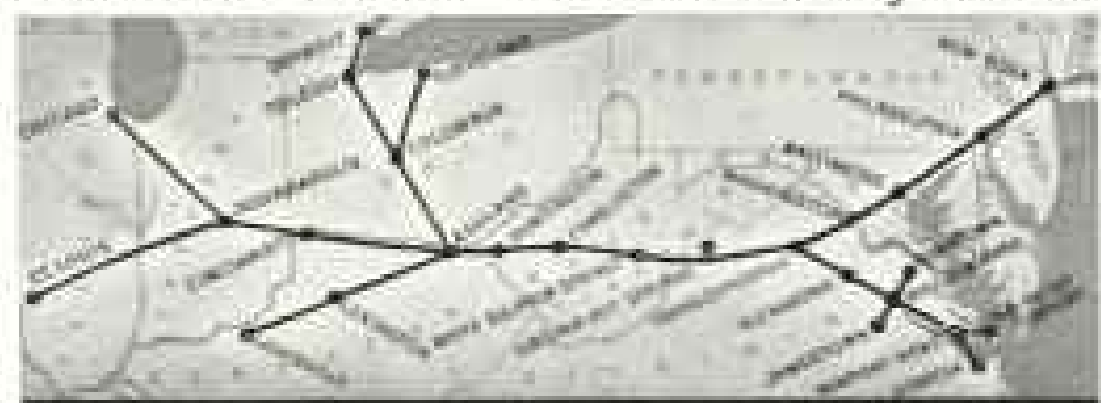
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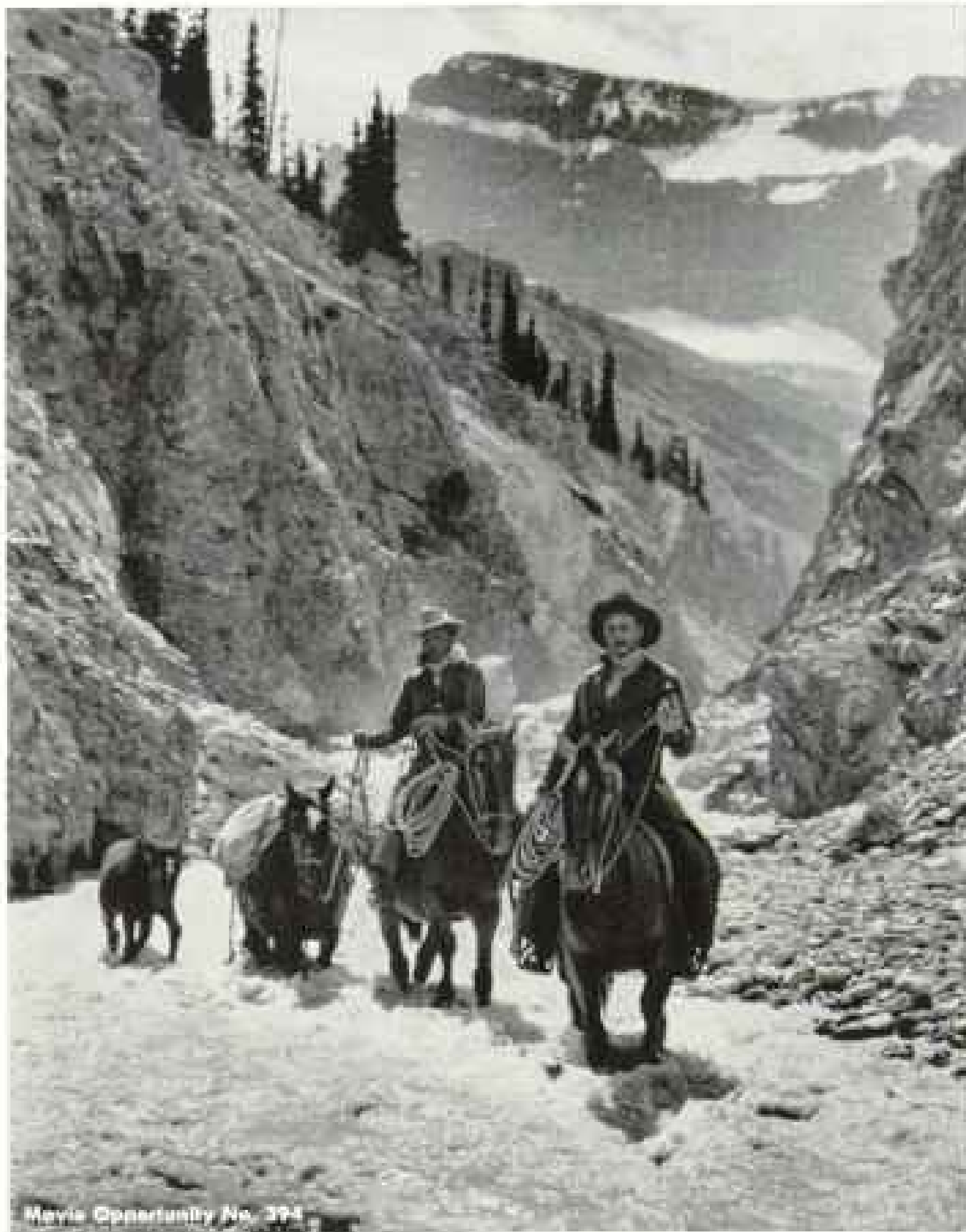
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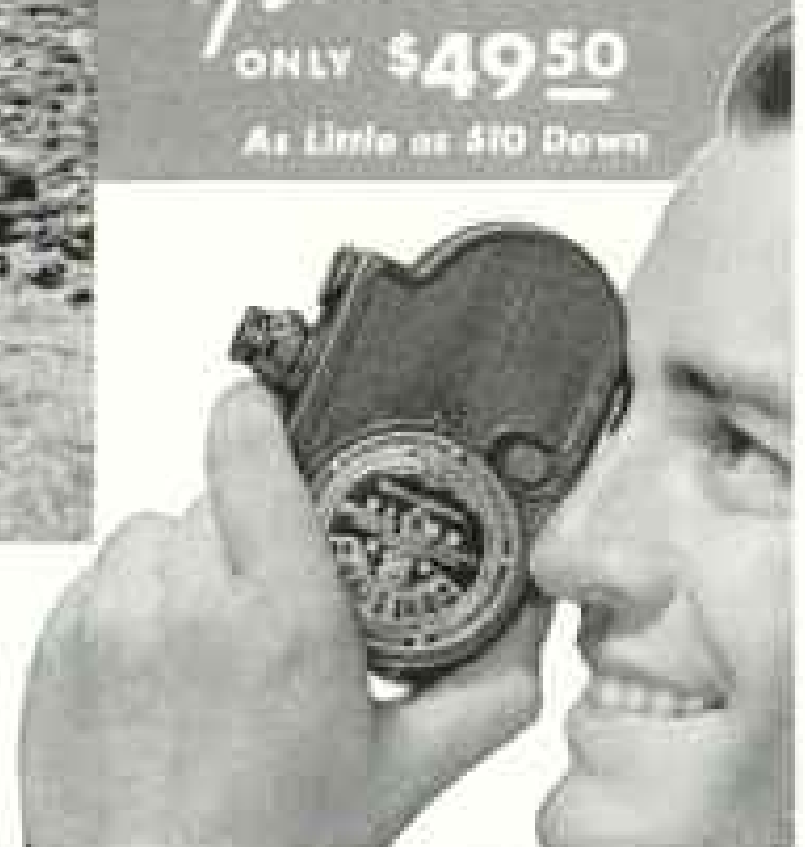
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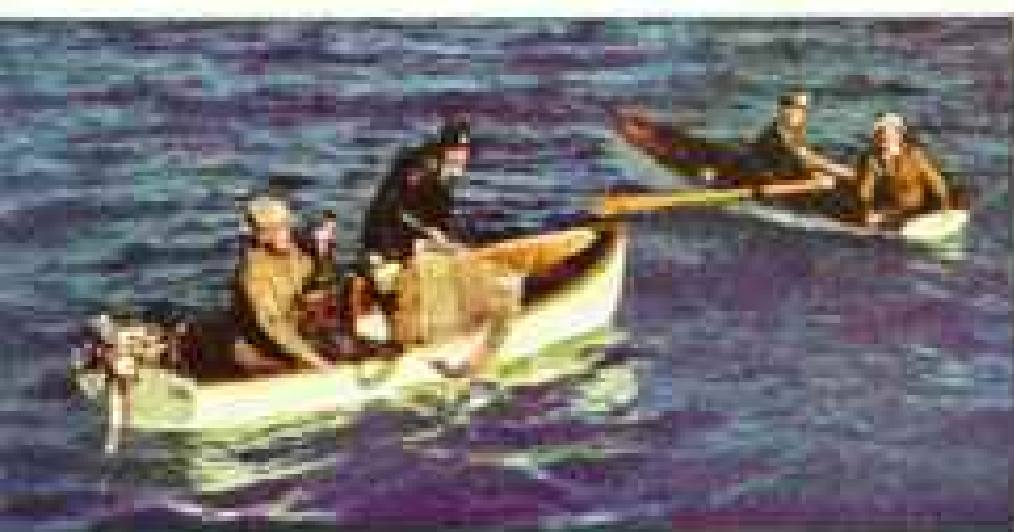
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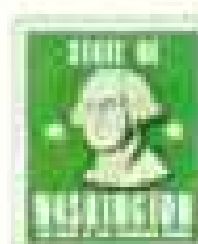
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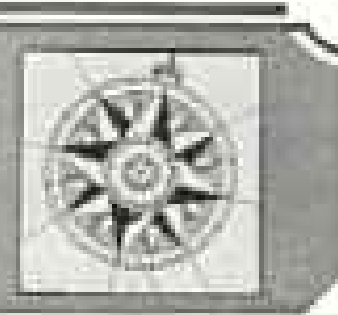
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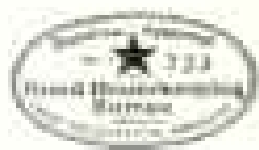
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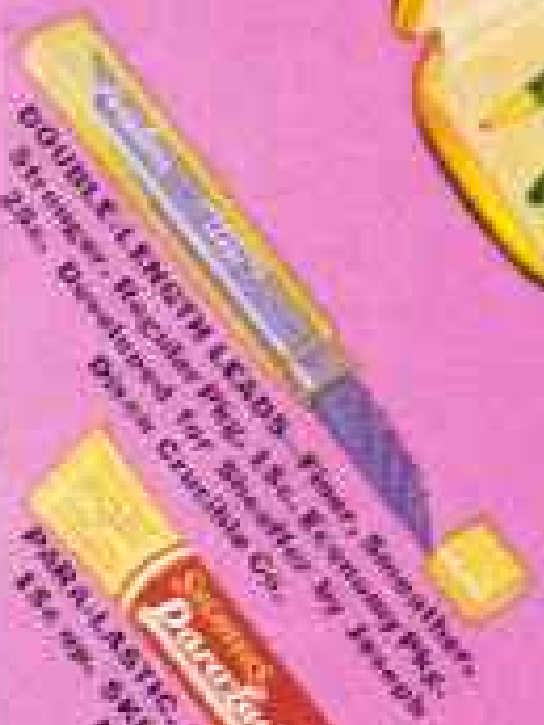
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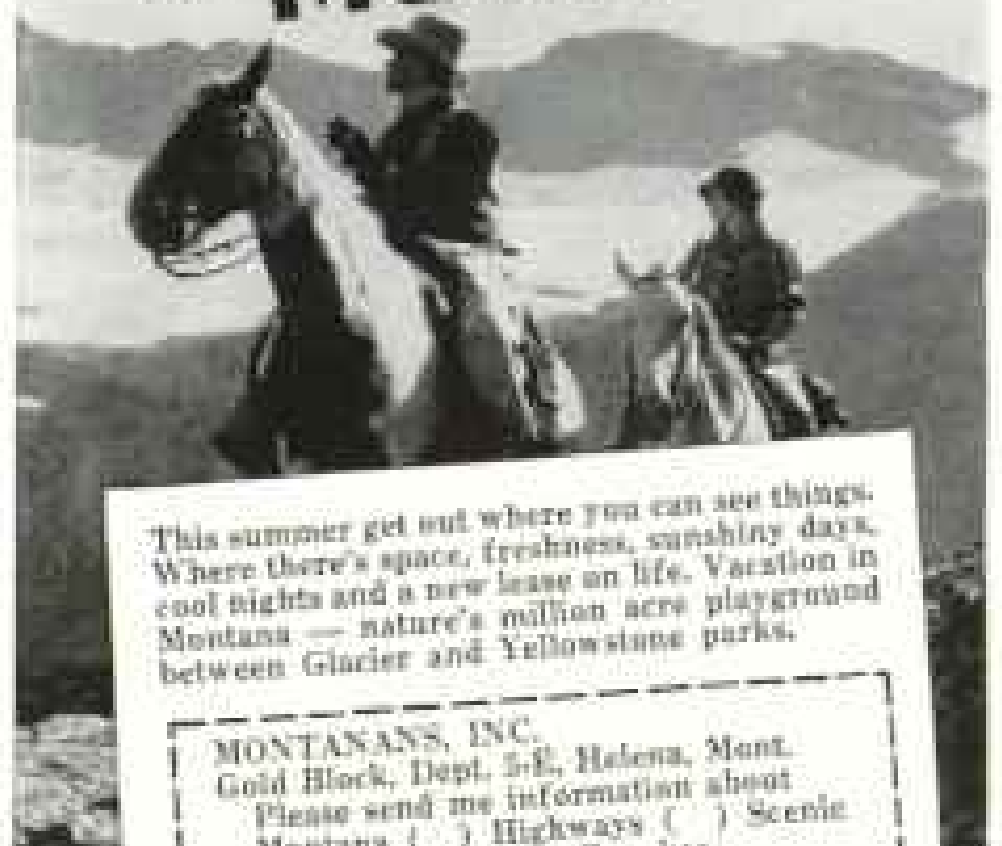
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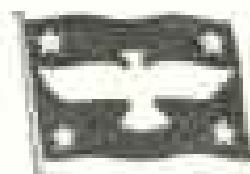
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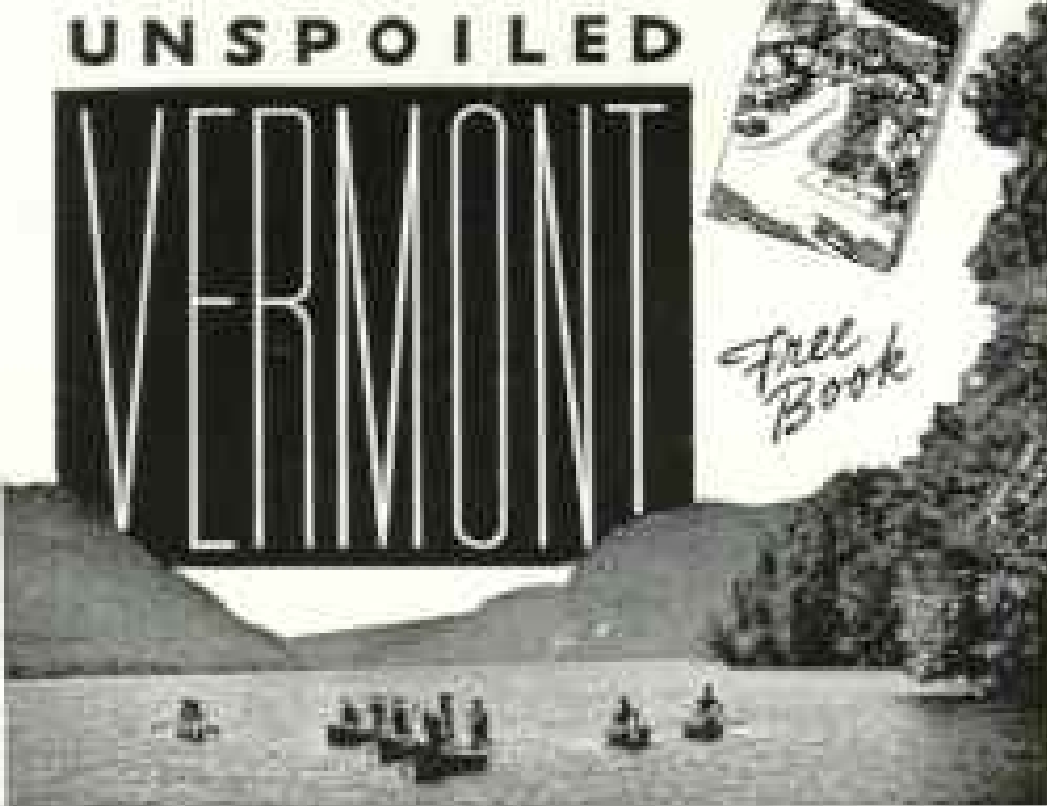
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