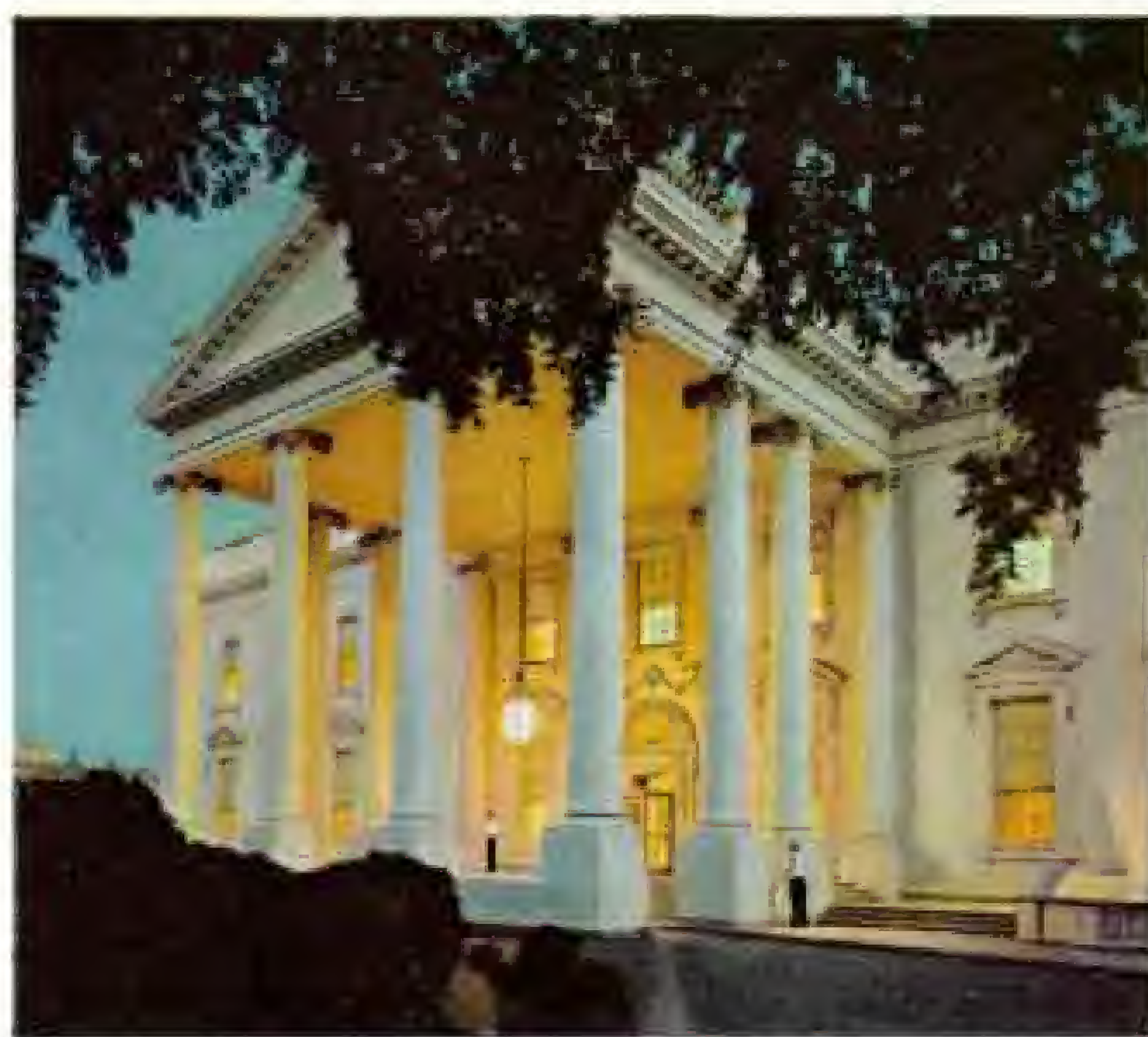
VOL. 119, NO. 1 JANUARY, 1961

# NATIONAL GEOGRAPHIC



Mrs. Dwight D. Eisenhower INTRODUCES
Inside the White House 3
LONNELLE AIKMAN
B. ANTHONY STEWART, THOMAS NEBBIA

Old-New Iran, Next Door to Russia 44
EDWARD J. LINEHAN, THOMAS J. ABERCROMBIE

New Look at Everest DAG HAMMARSKJÖLD 87
SECRETARY-GENERAL, UNITED NATIONS

Soaring on Skis in the Swiss Alps 94
CAROLYN BENNETT PATTERSON, KATHLEEN REVIS

Eye to Eye With Eagles in the Everglades 123
FREDERICK KENT TRUSLOW

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◀ COVER: *Dusk sets the White House aglow with lights; sandstone pillars grace the North Portico (page 2).*

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Frequent visits to the President's Mansion verified details. Illustrations editors even obtained samples of the paint in some rooms. As the artist's brush moved, color verification continued. Later, printers' proofs were checked in the White House. The educational and artistic result awaits you farther along in this issue.

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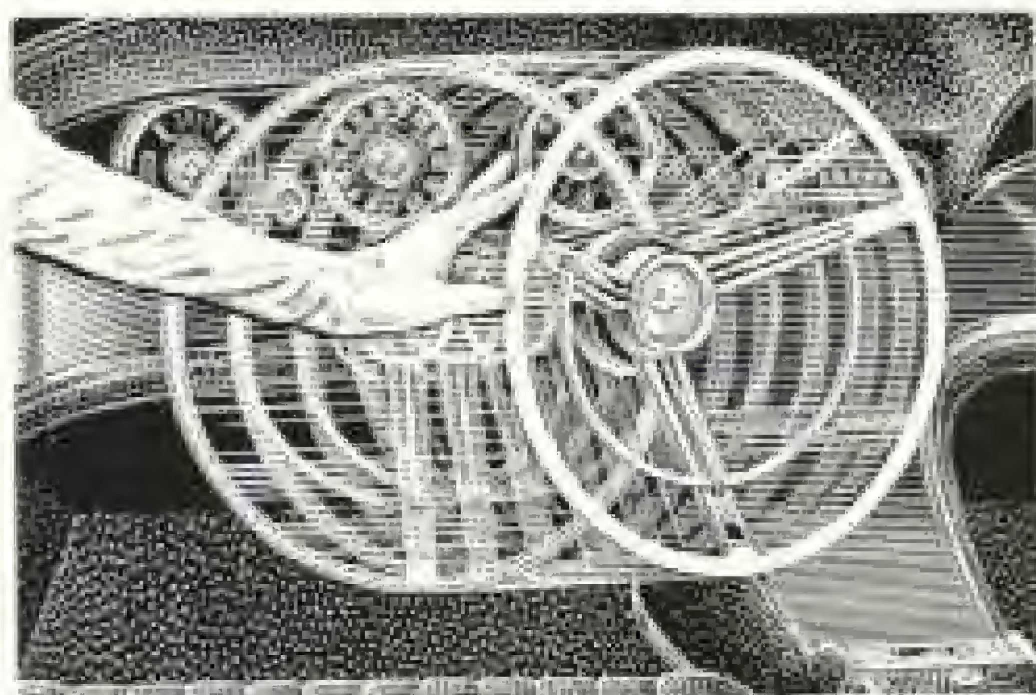

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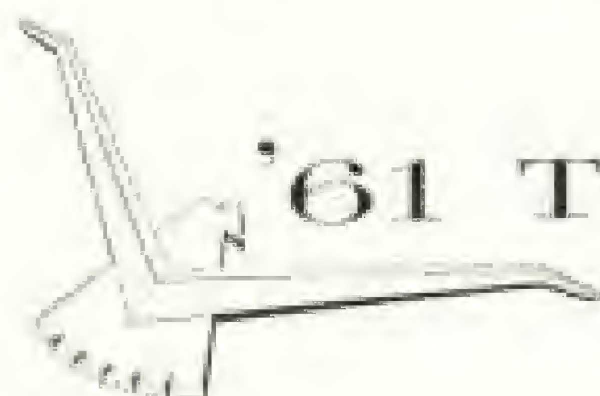

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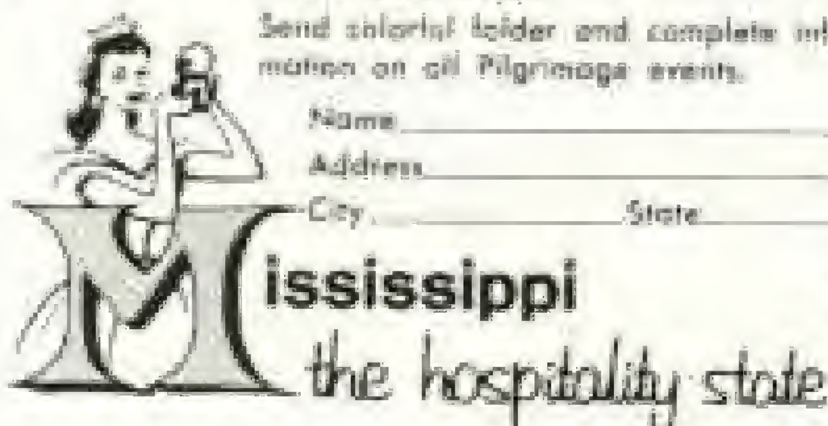




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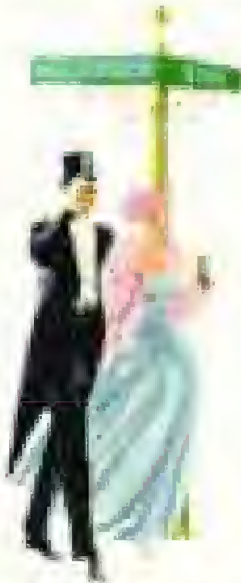

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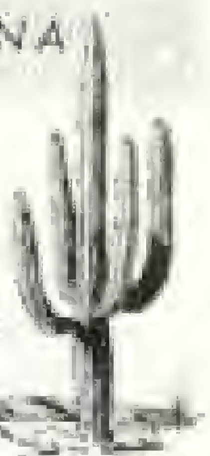

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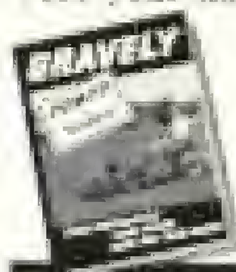


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Such advice makes it appear that the practice of medicine can be a sort of "do-it-yourself" activity.

Actually, self-diagnosis and self-treatment can be extremely risky.

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One of the most wasteful and possibly dangerous forms of self-medication is the use of over-the-counter reducing remedies—"medicated" pills, capsules, liquids, wafers and even chewing gum.

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Leave it to your physician to decide if you need any medication—along with a medically-approved diet—to control your weight.

**And never take left-over medicines** prescribed for a previous illness. Even if your present symptoms seem the same, you may have an entirely different ailment requiring an entirely different medicine.

When it comes to drugs or diagnosis or treatment, do the safe and sensible thing—rely on no one but your physician.

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*OUR DESTINY IS IN OUR OWN HANDS*

George Washington landing in New York City for his first inauguration, 1789. Painting by F. C. Yohn

*"All your strength is in your union. All your danger is in discord."*

HENRY WADSWORTH LONGFELLOW

The choice is made—we close our ranks. Now as then, the road ahead may be stony as well as smooth. Where it will lead depends upon our unity and national purpose.

But if our way of life is to be preserved, the cornerstone of that purpose will be the unshakable conviction in each of us that the exercise of free and reflective CHOICE—of a President, a career or an idea—is the thing that divides us from bondage.

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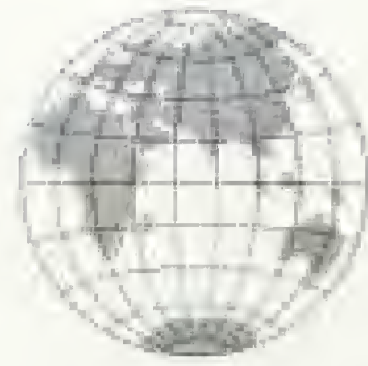

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VOL. 119, NO. 1 JANUARY, 1961

THE WHITE HOUSE
WASHINGTON

To The Members Of
The National Geographic Society:

I have a very personal interest in this story. For the past eight years the White House has been my home.

I have always looked upon it with a reverence and pride which I am sure all Americans share. But now it has become part of my life. I have seen my grandchildren growing up in these historic rooms; here my son and daughter-in-law have shared our family evenings. Strangely, my husband and I have lived in this home longer than in any other.

There is a wonder about living here which has never grown dim. Whenever I enter the White House grounds by the southern driveway I am struck anew by the beauty of the Mansion. The view from my bedroom windows across the lawn and fountains to the Jefferson Memorial will remain one of my favorites.

Living here has been a most rewarding experience. I am delighted that this story and these beautiful pictures make it possible to share it with all of you.

Sincerely,

Mamie Doud Eisenhower

# Inside the White House

By LONNELLE AIKMAN
National Geographic Staff

AGAINST VELVET NIGHT or sunny skies, the White House looks the way the home of the head of a great democracy ought to look—peaceful, unpretentious, and substantial. Its classic ten-pillared profile seems as serene and changeless as a painting by an old master.

Yet change is the very essence of life in the President's House. Behind its 18th-century walls, a new era is born with each administration. As one family moves out and another moves in, new personalities and policies take form in the public mind.

Americans think of their White House as the embodiment of history, the home of leaders who shaped the Nation's destiny: Of Jefferson, who planned here the Louisiana Purchase and the exploration of the West. Of Abraham Lincoln, putting aside the day's battle reports to romp in his study with his young son Tad.

Of rough-riding, trust-busting Teddy Roosevelt, "strong as a bull moose" and keeping that way by practicing jujitsu in the august East Room. Of a broken Wilson, in his wheel chair on the south lawn, holding stubbornly to an ideal conceived too soon. And of another Roosevelt, broadcasting fireside chats of hope to a depression-bogged people—"My friends. . . ."

Today's White House is still all this—plus modern living and working facilities to

**Mantled by dusk,** the White House exudes the warmth and graciousness of a home. Yet here abides history made by the Presidents. All lived and worked here except George Washington, who selected the site. Altered, expanded, and twice rebuilt, the stately mansion stands ready for the new President and his family (page 4).

EKTACHROME BY NATIONAL GEOGRAPHIC PHOTOGRAPHER B. ANTHONY STEWART © N.G.S.

**President-elect and Mrs. Kennedy,** with their two children, will move into the White House on Inauguration Day, January 20. Mrs. Kennedy holds three-year-old Caroline in this informal portrait made at their Georgetown home in Washington, D. C. A second child, John, Jr., was born November 25, 1960.

fit the needs and responsibilities of the man who directs the Executive Branch of Government.

Expanded and improved over the years—and almost entirely reconstructed a decade ago—the establishment now covers not only the President's residence, but also the inconspicuous East and West Wings, where all official business is conducted. It holds 150 rooms, including solarium, barbershop, and doctor's and dentist's offices, plus movie theater, swimming pool, and bomb shelter.

Like other Americans, I often wondered what it would be like to live in the President's House. As a NATIONAL GEOGRAPHIC staff member, I had the chance, during the past two administrations, to go behind its pillars.

I saw the old building, its interior scooped out like a watermelon, being painstakingly restored, floor by floor. After it was finished, I took notes on rooms from ground level to attic. And I found that the White House has indeed come a long way since its first mistress, Abigail Adams, complained that she lacked even a bell cord to call the servants and had to hang her laundry in the "great unfinished audience-room." Or since President McKinley, in the 1890's, had to put up with office seekers wandering by his invalid wife's room.

This January, as President John F. Kennedy takes over the Executive Office, the periodic wave of change is again under way.

Painters and decorators will redo the residential second and third floors to suit the new family's wishes. Mrs. Kennedy will meet

**The Author:** A lifelong resident of Washington, D.C., Mrs. Aikman has described the U.S. Capitol and Mount Vernon in previous GEOGRAPHIC articles. "New Stars for Old Glory," in the July, 1959, issue, won the George Washington Honor Medal of the Freedoms Foundation.

her household staff, inspect the kitchen, and look over the handsome, historic china collections that go with being the Nation's leading hostess. Wherever she likes, she will make changes to fit her own brand of homemaking. That is, except in one part of the house.

By law, the formal first floor—with its famous gold-draped East Room, Green, Blue, Red, and State Dining Rooms—is permanently furnished in 18th- and early 19th-century styles (foldout painting, pages 6-8). It is on public exhibit five days a week, and not even the President can change it without approval of the Presidentially appointed Fine Arts Commission of Washington.

Yet these museum rooms are constantly used for official entertaining. Here each First Lady in turn holds receptions for 2,000, teas for 500, dinners for 100.

When her husband's term of office ends, and reporters ask how it feels to face being plain housewife again, it is this glittering phase of White House life that comes to mind.

"It has been a great privilege to have lived in this lovely home, which is so much a part of our country's life," said Mrs. Dwight D. Eisenhower, in answer to my own question. "But it will be wonderful to get to my very own home at Gettysburg."

Traditionally, the President and his family occupy the west half of the second floor. These rooms have known the day-by-day home life, the intimate joys and griefs of 32 White House families.

Here Mrs. Andrew Johnson rocked and sewed, in 1868, awaiting word of her husband's impeachment trial by Congress. "I knew he would be acquitted," she said when she learned of his enemies' defeat. "I knew it."

On this floor, in 1893, Esther Cleveland was born, the only President's child ever to come

(*Continued on page 13*)

**Military aides in dress uniforms** line the entrance hall during a reception last fall for the Crown Prince and Princess of Japan. Here, at a farewell party in 1837, President Andrew Jackson provided a 1,400-pound cheese. Thousands of guests, filling stomachs and pockets, demolished the cheese in two hours, but its odor lingered for weeks.

EKTACHROME BY NATIONAL GEOGRAPHIC PHOTOGRAPHERS B. ANTHONY STEWART AND JOHN E. FLETCHER © N.G.S.

# ★ THE WHITE HOUSE ★

To show historic rooms to best advantage, the artist executed this exploded-perspective drawing from the southeast. Presidential families use the private entrance beneath the South Portico to avoid sightseers inspecting the main floor.

GROUND FLOOR

- G 1 LIBRARY
- G 2 VAULTED-ARCH HALLWAY
- G 3 GOLD ROOM
- G 4 CHINA ROOM
- G 5 DIPLOMATIC RECEPTION ROOM
- G 6 PHYSICIAN
- G 7 CLINIC
- G 8 HOUSEKEEPER
- G 9 PRESIDENT'S EXECUTIVE OFFICES

FIRST FLOOR

- F 1 EAST ROOM
- F 2 GREEN ROOM
- F 3 BLUE ROOM
- F 4 SOUTH PORTICO
- F 5 RED ROOM
- F 6 STATE DINING ROOM
- F 7 MAIN HALLWAY
- F 8 ENTRANCE HALL
- F 9 MAIN STAIRWAY

SECOND FLOOR

- S 1 QUEEN'S (ROSE) ROOM
- S 2 EAST SITTING ROOM
- S 3 LINCOLN SUITE
- S 4 MONROE ROOM
- S 5 TRUMAN BALCONY
- S 6–S 15 LIVING QUARTERS OF THE PRESIDENTIAL FAMILY

THIRD FLOOR

- T 1 STAFF LIVING QUARTERS, STORAGE ROOMS, AND EXTRA GUEST ROOMS
- T 2 SUN ROOM
- T 3 PROMENADE

EAST WING
Robert W. Nicholson
National Geographic Staff

EKTACHROMES BY NATIONAL GEOGRAPHIC PHOTOGRAPHERS B. ANTHONY STEWART AND JOHN E. FLETCHER © N.G.S.

**Gold-and-white Splendor Dazzles Visitors to the East Room**

Moving into the White House in 1800, President John Adams and his lady, Abigail, found only a part of it habitable. "The great unfinished audience-room," wrote Abigail, "I make a drying room of, to hang up the clothes in." Years later the room was still undecorated and "full of cobwebs, a few old chairs, lumbering benches, broken glass." President Jackson transformed it,



◀ THIS PAGE FOLDS OUT

spending nearly $10,000 on chandeliers, mirrors, draperies, and reupholstered chairs. He did it, as one newsman reported, for the people, so "they won't be kept standing upon their legs as they do before kings and emperors." During the Civil War President Abraham Lincoln allowed battle-weary soldiers to rest here; the furniture became so infested with vermin it had to be replaced. Today the room displays Louis XVI benches, Adam sofas, specially cut crystal chandeliers, and a grand piano supported by three gilded eagles designed by President Franklin D. Roosevelt.

**President John Quincy Adams** stares down at the Green Room from his seat above an Italian mantel bought by President James Monroe. President Thomas Jefferson delighted in giving small dinners here. Abandoning protocol for "pell-mell" etiquette, he seated guests at a round table and served them from revolving trays set in the wall between dining room and pantry—a Jeffersonian invention to keep servants out of earshot.



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PHOTOGRAPHED BY NATIONAL GEOGRAPHIC PHOTOGRAPHER B. ANTHONY STEWART © N.G.S.

**Shimmering silk damask** covers walls, windows, and chairs in the oval Blue Room, a stage for formal receptions. Here the young and beautiful brides of two Presidents scored social triumphs.

A sensation in European society, Julie Gardiner married John Tyler in 1844 and set up "court" in the Blue Room. "The lovely lady Presidentess," wrote an observer, "is attended on reception days by twelve maids of honor. . . ."

Forty-two years later Frances Folsom married Grover Cleveland in the Blue Room, becoming at 21 the youngest First Lady. After her husband's defeat in 1888, Mrs. Cleveland ordered a servant to "take good care of all the furniture and ornaments in the house. . . . We are coming back." They did—four years later. One of the ornaments preserved, a gold clock, appears at left.

White House florist (above) arranges a bouquet; yellow flowers are always used here.

into the world at the White House. Now Mrs. William S. B. Bosanquet, she lives in England.

William Henry Harrison and Zachary Taylor died in the spacious Presidential bedroom. In 1881, a metal-detecting device developed by Alexander Graham Bell was used in trying to save President Garfield's life after he was shot by an office-seeking fanatic.

It was hoped the instrument would locate the bullet and permit an operation. But the bed's steel springs were not removed, as Dr. Bell had ordered. The attempt failed.

For 16 decades Presidential furnishings have mirrored a growing Nation's taste, from the elegant European imports in the Federal period and the Victorian clutter in Grant's day to modern functional ease.

Widower Chester Arthur, who succeeded Garfield, made the cleanest sweep of all. He cleared out 24 wagonloads of old furniture, vases, moth-eaten rugs, and rusty mousetraps. He sold the lot at auction and refurnished the house in the gilt and plush then in style.

With every move came a bit of Presidential biography. Mrs. Taft's teakwood furniture and Oriental screens brought an exotic flavor of the lately acquired Philippines, where her husband had served as governor.

Mrs. Hoover made her quarters homelike with bookcases, bird cages, Latin American rugs, and other mementos of the Hoovers' travels.

From Hyde Park the Franklin Roosevelts shipped down an eloquent wheel chair. With it came sturdy Val-Kill furniture scratched during family pillow fights and wrestling matches in which "Pa," with his powerful shoulders, won as often as his sons.



FRANK LESLIE'S ILLUSTRATED NEWSPAPER, LIBRARY OF CONGRESS

The Trumans moved in and out, taking back to Missouri, among other possessions, a huge nonfiction library that the history-loving President had long been accumulating.

Unique among personal possessions temporarily lodged in the White House is President Eisenhower's military-and-civilian collection of awards, decorations, swords, and curios presented to him by world leaders and admirers. Many of the more valuable objects are destined for display at the Eisenhower museum and library in Abilene, Kansas.

### Formal Rooms Recall Historic Events

The everyday, intimate belongings of First Families are another matter. Because of Secret Service security rules and in deference to family privacy, photographs or detailed diagrams of the living quarters on the west side of the second floor may not be published. Yet in the curious fashion that the White House is part home and part national shrine, the east half of the residential floor has been turned into a combined museum and series of luxury suites for distinguished guests.

To foreign visitors of state, their surroundings recall some of the most significant events in American history.

In Lincoln's old office, now restored as his bedroom, the Civil War President signed the Emancipation Proclamation, January 1, 1863. For hours he had shaken hands with New Year's well-wishers. His right arm was "almost paralyzed." Deliberately he twice steadied his hand so that no quiver in his signature could ever suggest he had hesitated.

To me, the Lincoln Room with its oversize bed of the six-foot-four President is the most moving spot in the White House (page 22). Standing by his window, I could picture again the brooding President looking out toward Virginia for hope in a divided land.

Walking next door to the Monroe Room, with its sofa used by the fifth President as well as copies of his desk and other furniture (page 24), I moved backward in time to days of a young Republic brash enough to defy the Old World's monarchs. Here James Monroe in 1823 wrote his doctrine warning Europe to keep its power politics out of the Western Hemisphere.

In 1959, when Mrs. Eisenhower was showing descendants of former Presidents around the White House, the group stopped in front of the Monroe desk. Mr. Laurence Gouverneur Hoes, great-great-grandson of President Monroe, asked if anyone knew about the desk's secret compartment. Not even Mrs. Eisenhower had heard of it. So Mr. Hoes released two finger locks which opened a panel. Behind it was revealed a modern desk pen.

Across the hall from the Monroe Room, the Rose Suite glows with an atmosphere of 18th-century luxury: white marble fireplace, high-canopied bed, soft rose walls, and taffeta draperies (page 28). The 20th century intrudes only when one presses a spring panel and a closet door pops open automatically.

Five reigning queens have slept in the Rose Suite. Four of them, visiting years apart, were mother and daughter—Wilhelmina and Juliana of the Netherlands; Elizabeth, now Britain's Queen Mother, and her daughter Elizabeth II. Queen Frederika, visiting with King Paul of Greece (who was quartered in the Lincoln Room), was the fifth.

In 1942 a mysterious gentleman, identified on the guest list as "Mr. Brown," occupied the Rose Suite. He turned out to be Russia's Foreign Minister, V. M. Molotov. Unpacking the guest's bag, a valet found some black bread, sausages, and a revolver.

### First Lady Has Prodigious Job

It sounds glamorous, running the President's House and meeting the world's great. But behind the pride and glory, the First Lady faces practical and prodigious tasks.

Caught in the white glare of publicity trained on the Nation's highest office, she must project a personality that is warm yet reserved. She must strike the right note in greeting Girl Scouts or prime ministers, State beauty queens, or opposition-party politicians. She must meet any number of people, one to five thousand, and act as if she enjoys it.

Take a typical day in the life of today's mistress of the mansion.

As she breakfasts, she consults in turn with the chief usher (the major-domo of the house), the chief butler, and the housekeeper.

*(Continued on page 19)*

**Red Room Provides a Sumptuous Setting for Tea Parties**

Dimming the lights, President Lincoln joked with the "spirits" during a seance held here in April, 1863. Later the room echoed with the hymns of Cabinet members and Congressmen invited by President Rutherford B. Hayes and his wife Lucy. Portraits of Presidents Woodrow Wilson (left) and William McKinley adorn the walls.



[illegible] BY NATIONAL GEOGRAPHIC PHOTOGRAPHER [illegible] © N.G.S.

KODACHROME BY NATIONAL GEOGRAPHIC PHOTOGRAPHERS THOMAS J. ABERCROMBIE AND JOHN E. FLETCHER © N.G.S.

**Orchids and Carnations Festoon the State Dining Room for Denmark's King and Queen**

Lafayette, dining here on September 6, 1825, lifted his glass as the Marine Band played the "Marseillaise." "The Fourth of July," he toasted. "Birthday of liberty in both hemispheres!" From that day to the present, kings, queens, and heads of state have traveled to this room to break bread with Presidents. When King Frederik IX and Queen Ingrid of Denmark arrived last October, Mrs. Eisenhower ordered a favorite floral arrangement for the E-shaped table that she devised for large dinners. Later the flowers—400 orchids and 1,000 carnations—went to Washington hospitals. The painting over the mantel, "Sundown" by George Inness, is on loan from the Smithsonian Institution.

**Medallions made from coin gold** rim the Castleton service plates added to the White House china by the Dwight D. Eisenhowers; gold flatware dates from Monroe's time. Although Presidents may use china acquired by any previous administration, they usually choose complete modern sets. President Wilson was the first to buy American-made dishes.

**"Best of blessings"** for the White House, lettered in gold above the fireplace in the State Dining Room, was written by President John Adams the day after he moved in. His sense of history must have inspired it, since the appearance of the house itself was discouraging. Rising in a "wilderness city," the incomplete building surveyed treeless fields strewn with rubbish. Mrs. Adams found faults in the "great castle," yet shared her husband's faith in its future. "This house," she wrote, "is built for ages to come."



I Pray Heaven to Bestow
The Best of Blessings on
THIS HOUSE
and on All that shall hereafter
Inhabit it. May none but Honest
and Wise Men ever rule under This Roof!

NOV. 2, 1800
JOHN ADAMS

Result: appointments cleared, menus selected, and household details taken care of.

Afterward her secretary brings the mail for decisions and for personal answers when possible. Mrs. Eisenhower has received an average of 1,000 letters a week, from birthday greetings to suggestions for her hair style.

With the preliminaries out of the way, the First Lady is ready to step out before the public. She may attend a benefit luncheon for a national health or charity drive. Perhaps an afternoon garden party is scheduled for a thousand war veterans. Or a tea for Congressional wives, followed by another an hour or so later for Service wives.

### "Small" Tea Party Has 400 Guests

As a member of the Women's National Press Club, I went to one of Mrs. Eisenhower's teas for Washington newswomen. It was by no means a big affair for the White House—merely 400 guests to greet.

Shaking hands warmly with all, the First Lady stopped often to chat, with surprising memory for names and faces. Such talents in a President's wife, I reflected, may not make headlines. But certainly they increase the effectiveness of a Nation's leader.

Shaking hands is, of course, the inescapable White House chore. According to their bent, Presidents and their ladies have protested it, tolerated it, and even at times enjoyed it.

Frances Folsom Cleveland, the beautiful bride of Grover Cleveland, not only shook hands with 7,000 guests at a New Year's reception but stepped forward each time.

Mrs. Lincoln avoided the ordeal by standing just behind the President while he worked, as a contemporary bystander put it, "as though he had been splitting rails as of yore."

Solemn, hard-working President Polk adopted a practical way to avoid bone crushing. "I can generally anticipate a strong grip from a strong man," he said, "and I then take advantage of him by being quicker than he and seizing him by the tip of his fingers."

To James and Sarah Polk, who in 1848 introduced gas lighting with some misgivings, the Executive Mansion now would seem a palace of mechanical marvels. Mrs. Polk, something of a housekeeping paragon herself, would surely goggle at the huge staff.

Today's First Lady can take on as little or as much as she likes of the management chores. Mrs. Truman's staff recalls that though she left details to others, "she knew what she wanted." Mrs. Eisenhower's standard has been efficiency in its most sparkling form. As a former Army wife, she has been known to take unexpected "white-glove" dust-inspection tours of the house.

Whatever her way, the latest mistress will inherit a smoothly operating maintenance and service staff of 70 employees: engineers, electricians, carpenters, painters, and plumbers; maids, laundresses, cooks, waiters, butlers, doormen, housemen, and gardeners.

Working staggered eight-hour periods, some of these people are always on duty. They use vast amounts of household supplies. Floor wax alone comes to 50 pounds a month.

### Congress and President Share Expenses

Off the North Portico entrance I found the small office of the Chief Usher of the White House, whose job as general manager calls for superb organization and the tact of angels. In fact, he does just about everything but usher.

In running the house, I learned, the Government shares expenses with the President. Congress pays for upkeep and personnel, and picks up the check for official entertaining. The President is expected to pay for his own servants, such as a personal maid or valet, for nonofficial telephone calls, food and laundry for his family and all private guests.

When a new administration comes in, there is an additional appropriation for repairs and redecorating. The outside is painted every four years. The last regular appropriation—for 1960-61—came to $505,000.

Such a sum hardly seems excessive when you consider the scope and significance of this many-sided house. Every President con-

**Crystal Reflects Candlelight Flickering in the Private Dining Room**

Starting his working day early, President Calvin Coolidge entertained with 8 o'clock breakfasts in this room. One morning guests stared in astonishment as the President silently and solemnly poured coffee and cream into his saucer. Some nervously followed suit before Mr. Coolidge sprang his joke and lowered the saucer to the floor for his dog. Table and chairs came to the White House after Mrs. Coolidge appealed for gift antiques. The Trumans installed the chandelier, only nonelectric one in the house.

KODACHROME BY NATIONAL GEOGRAPHIC PHOTOGRAPHER THOMAS NEBBIA © N.G.S.

tributed something to it. Though George Washington was out of office before the building was habitable, he chose its site and approved the design that Pierre L'Enfant said should have "the sumptuousness of a palace . . . and the agreeableness of [a] country seat."

Its cornerstone was laid in 1792, before the Capital had been moved from Philadelphia to the Potomac wilderness. First official building to go up, it was designed by Irish architect James Hoban, who won the public competition for the job, a $500 prize, and a footnote in history to go with it.

**House Grew With the Nation**

Like the Nation itself, the house began with a large foundation and grew piecemeal to fit it. Jefferson made the first additions after moving in as third President in 1801.

With his flair for the useful arts, he designed and built terraced wings that concealed workshops, wine cellar, stables—even a henhouse—behind classical columns.

Jefferson also helped design the future South and North Porticoes. But before work could begin, the War of 1812 broke. The Redcoats invaded and burned Washington, leaving the building a fire-blackened wreck.

Reconstructed, the President's residence was reopened by the Monroes at a great public fete on New Year's Day, 1818. The curved South Portico was added in 1824; the massive North Portico in 1829.

Thus, by Jackson's time, the White House stood complete—and ready for alterations. For 120 years, Presidents added to it, altered it, sliced and bored through it. Pipes and wires honeycombed the walls for running water, gas, central heating, and electricity. Each convenience and structural change took its toll in weakened walls, sagging floors, and precarious ceilings.

The bill for damages was finally presented

during the Truman Administration. It came as a warning when President and Mrs. Truman were receiving guests in the Blue Room early in 1948. Suddenly, over their heads, the massive chandelier tinkled a threat of dangerous insecurity.

A check of the house revealed it as a potential fire hazard and deathtrap. "It was standing up," one investigator put it, "purely from habit." The only solution was to abandon or rebuild it.

Congress, supported by country-wide appeals, voted funds to save the White House. The entire interior was rebuilt within the original walls in a four-year, $5,800,000 operation; it was like breaking up a gigantic jigsaw puzzle and putting it back together. Much of the old material—precious hardwood doors and floors, antique mantels and cornices—was preserved and carefully restored.

For safety, the whole structure is now supported by a steel skeleton, resting on deep

**Citizens, Who Elect the Tenant, Inspect the House They Own**

From earliest days the White House was open to the people. "The President's every action is watched," wrote Frank G. Carpenter of President Cleveland. "Crowds come to his back door and peep into his kitchens. . . . The good public has the right at any time to walk through his great palace and make their remarks about his furniture and the way he keeps house."

Today the White House door is open only at certain hours, but still some million visitors a year tour its historic rooms.

"I never forget," said President Franklin D. Roosevelt, "that the house I live in belongs to all the people."

**Camera records a proud moment** in a family's history. Ionic columns of the North Portico face Pennsylvania Avenue.

foundations. The new-old building, say engineers, is built for ages to come.

It is also built for comfort such as earlier Presidents never knew. "Hell itself couldn't warm that corner," Jackson once complained. "A temple of inconveniences," President Fillmore described the place.

Today, a maze of equipment in the new basement and subbasement keeps the air-conditioned, highly mechanized building running with quiet efficiency.

Soon after the 1952 reconstruction, I was invited—together with other reporters—for a tour of the President's living quarters. Mrs. Truman welcomed us to her second-floor apartment with the pride of any housewife.

The innovations were startling.

Along the broad central corridor that runs the width of the house, doors opened on bedroom suites radiating soft colors and modern comfort. East and west ends of the hall were partitioned off to create informal sitting rooms with bright wallpaper and draperies, easy chairs and reading lamps (page *26*).

### Eagle Decorates President's Tub

For the first time in 150 years, White House bedrooms had spacious built-in closets. The most impressive connected the President's bedroom with the First Lady's suite.

**Lincoln's eight-foot bed dominates** the room he used as an office. Here the Civil War President signed the Emancipation Proclamation declaring free three million slaves. A copy of the Gettysburg Address rests on his desk.

President Theodore Roosevelt, who cherished every link with Lincoln, chose the Victorian bed for his own use. "I think of Lincoln," he wrote, "shambling, homely, with his strong, sad, deeply-furrowed face, all the time. I see him in the different rooms and in the halls. . . . He is to me infinitely the most real of the dead Presidents." Many distinguished foreign visitors who slept in this room have felt the same way.

KODACHROMES BY NATIONAL GEOGRAPHIC PHOTOGRAPHER THOMAS NEBBIA © N.G.S.

Cedar-lined and equipped with rows of shelves for hats and shoes, it made a room in itself.

In new bathrooms, too, old fixtures were replaced by gleaming porcelain and metal—with such exotic touches as an eagle etched on the side of the President's bathtub, and a fan on the First Lady's.

The old attic, where Theodore Roosevelt almost lost an eye while playing with son Quentin in the dark, is now a 14-bedroom annex to the President's second-floor apartment. It contains a children's playroom and a solarium with one of Washington's finest views of the Potomac. Since the Coolidges raised the roof to make an informal "sky parlor," Presidential families have spent much leisure time here. President Eisenhower sometimes uses the next-door kitchenette to cook a steak or prepare his famous "old-fashioned beef stew" for close friends.

### Marines Herald State Receptions

When I first walked through the formal state rooms on the first floor, I felt as if I had drifted into a dream of the past. For here history and the decorator arts have created brilliant stage sets.

I saw the stage come to life half a dozen times one year when I had a newswoman's privilege of going to all the official receptions.

FROM LOSSING'S HISTORY OF THE CIVIL WAR; LIBRARY OF CONGRESS

KODACHROMES BY NATIONAL GEOGRAPHIC PHOTOGRAPHER THOMAS NEBBIA © N.G.S.

The curtain rises as the red-coated Marine Band—which has played at White House functions since 1801—assembles in the marble entrance hall.* As guests stream into the main corridor, the President's military aides channel traffic by rank (page 5).

Suddenly, a hush. Aides snap to attention, and the band swings into "Hail to the Chief." Down the grand stairway marches a two-man color guard, carrying the Presidential and United States flags. Behind them, in time to the music, step the President and First Lady, followed by Cabinet members and their wives. It is a royal scene—paradoxically the more moving as a symbol of an office to which all those born in the United States may aspire.

Reception guests follow a traditional course from the East Room, through Green, Blue, and Red Rooms, to the huge State Dining Room. On their way they greet the President and his wife, standing in the Blue Room.

Visitors on guided public tours (Tuesdays through Saturdays, 10 a.m. until noon) take this same path—in only ten minutes, and minus the greeting and refreshments (page 9).

Even so, the perceptive tourist, undistracted by social chitchat, may get a deeper

*See "The President's Music Men," by Stuart E. Jones, NATIONAL GEOGRAPHIC, December, 1959.

**Monroe Room Saw Three Presidents Grapple With Wartime Decisions**

President Lincoln, his Cabinet, and Gen. Winfield Scott discuss strategy. The Washington Monument, a stub in the Civil War (left), looms beyond a window, as the finished needle does above.

During the Spanish-American War, President McKinley worked here far into the night, reading dispatches that told of deaths caused by graft and mismanagement. "The anger and disgust and sorrow that they brought him made his face gray," wrote McKinley's mail clerk.

Just after Pearl Harbor, President Roosevelt and Britain's Prime Minister Winston Churchill studied maps hung on these walls.

**Gilt-framed mirror** reflects the portraits of James Monroe and his wife Elizabeth, who gave teas here. The room was named for the Monroes after Mrs. Herbert Hoover installed copies of their furniture. The sofa, an original, was acquired during the Eisenhowers' tenancy.

EKTACHROME BY NATIONAL GEOGRAPHIC PHOTOGRAPHER B. ANTHONY STEWART © N.G.S.

**First Families Use the Second Floor's Wide Corridor as a Sitting Room**

Each day the Franklin D. Roosevelts met for tea in this comfortable west-end corner. And here on Christmas Day they gathered around their candlelit tree to hear the President, known to them as Pa, read *A Christmas Carol* by Charles Dickens

sense of what the White House means. For these rooms are steeped in memories of a Nation's triumphs and tragedies, and personal events that touched the hearts of the very human people who lived here.

The East Room was popular for weddings, with top billing to Presidents' daughters. President Ulysses S. Grant was merely "the father of the bride" when his daughter Nellie married Algernon Sartoris in 1874. So were Theodore Roosevelt and Woodrow Wilson at the fashionable and festive weddings of "Princess Alice" Roosevelt to Nicholas Longworth, and Jessie Wilson to Francis B. Sayre.

### The Power and the Glory End

Sorrow, too, has brooded over the East Room. Amid banks of flowers, surrounded by mourning friends and relatives, six Presidents have lain there in death: William Henry Harrison, Zachary Taylor, Abraham Lincoln, William McKinley, Warren G. Harding, and Franklin Delano Roosevelt.

One of the most touching of funeral services was held in 1924 for 16-year-old Calvin Coolidge, Jr., who died of blood poisoning from a toe blistered while playing lawn tennis at the White House. "When he went," the President wrote later, "the power and the glory of the Presidency went with him."

Coming to the East Room, I am always stopped by the full-length portraits of George and Martha Washington hung above two blue 18th-century Adam sofas.

The Stuart painting of George Washington is the oldest original possession in the White House. It's true that Dolley Madison saved it from burning during the War of 1812. But the often-told legend that it was cut from its frame by a kitchen knife just isn't so. Mrs. Madison ordered the frame broken open to get the painting away before Gen. Robert Ross's troops came.

Memories of quieter times linger in the Green Room, used at first as a family dining room (page 11). President Monroe turned it into a gentlemen's card room. But the ladies apparently didn't mind. They found

its hue "odious," a writer of Jackson's time noted, "from the sallow look it imparts."

Many people regard the oval-shaped Blue Room, set like a satin-and-gold centerpiece among the state chambers, as the most strikingly beautiful in the house (page 12). Presidents usually receive royal visitors here, as well as ambassadors presenting credentials.

Here, too, on April 22, 1956, President and Mrs. Eisenhower's granddaughter Mary Jean was christened. In 1828, the only President's son to be married in the White House chose the Blue Room for the ceremony. He was John Adams, son of one President and grandson of another.

This room saw also the first and only White House wedding of a President, 58 years later, when Grover Cleveland married lovely Frances Folsom, 27 years his junior (page 13). The President himself saw to the decorations. Flowers climbed marble columns and spilled out of fireplaces. The happy bridegroom wrote his own invitations, and deleted the word "obey" from the ceremony.

In the less formal Red Room (page 15), President-elect Rutherford B. Hayes was secretly sworn into office during a dinner party given by outgoing President Grant.

Hayes had lost the popular vote but won the election over his rival, Samuel J. Tilden, by a single electoral vote. In view of the controversy that developed, and the fact that Inauguration Day in 1877 fell on a Sunday, it was arranged for the oath to be administered quickly and privately. Not even the dinner guests knew what was happening.

The adjoining State Dining Room, now furnished in Georgian style, has changed more

**Mrs. Eisenhower's Favorite View Stretches to the Jefferson Memorial**

Each morning the First Lady looks out her bedroom window across the fountains and grassy reaches of the south lawn, photographed here from just outside the President's study. In spring a pink haze around the Tidal Basin testifies to the vision of Mrs. William Howard Taft, who promoted the planting of 3,000 Japanese cherry trees.

AN EKTACHROME BY NATIONAL GEOGRAPHIC PHOTOGRAPHER THOMAS NEBBIA © N.G.S.

than any other on the first floor (page 16). In the early 1800's it was the Cabinet Room. Later the stiffly proper Monroes made it their banquet hall. Theodore Roosevelt enlarged it in 1902 by eliminating a stairway. But critics complained that the big-game-hunting President spoiled its sweeping grace by installing elaborate oak paneling on which he hung stuffed animal heads.

### Precise Color Proves Hard to Get

In 1952 the Commission on the Renovation of the Executive Mansion decided to restore the State Dining Room's early-American look by painting over the dark wood, as was customary when the building was young.

"We had trouble getting the shade of green we wanted," recalls Maj. Gen. Glen E. Edgerton, the commission's Executive Director. "The painters mixed sample after sample. 'No-o-o-o, not quite,' the committee members kept saying. At last the precise tint was achieved—a soft celadon green. But to me it will always be committee green."

Recollections of famous guests who have dined here with Presidents at the Nation's head table could, and do, fill books.

There were such Alice-in-Wonderland scenes as that in Grant's term when the King of the Sandwich Islands (as Hawaii was then known) sat with three of his retinue behind him and ate only food handed him by his chief cupbearer.

There was the time when President Taft delayed a diplomatic dinner to accommodate the Russian Ambassador. Arriving in civilian dress, the emissary had taken one look at guests resplendent in gold braid and decorations and rushed home to change into uniform.

Writer and raconteur Alexander Woollcott —a popular guest of the Franklin Roosevelts—was called by the staff "The Man Who Came to Dinner." Like the character in the play, he gave orders freely, and stayed weeks. Winston Churchill came often, and once luxuriated in war-rationed beef that the household paid for later with meatless days and skimping. At a formal white-tie and décolleté dinner given by the Eisenhowers in 1959, Russia's Nikita Khrushchev arrived in a dark business suit, his wife in a simple short-sleeved blue gown.

How eagerly people everywhere await details on the glamorous state banquets was amusingly demonstrated during the 1957 visit of Britain's Queen Elizabeth II (page 35). Through a secretarial error, the gown described for the press was not the one actually worn by the Queen to the Eisenhower dinner. The mistake was corrected too late to catch

**Fit for Queens, the Rose Room Has Welcomed Five as Guests**

When Britain's King George VI and Queen Elizabeth visited the Roosevelts in June, 1939, Washington was sweltering in a heat wave. Notwithstanding, the Queen's maid ordered heavy blankets and hot-water bottles for her mistress's bed in the Rose Room, saying, "My lady likes to sleep warm." Housekeeper Henrietta Nesbitt changed the bedding and put on blankets scented with moth balls. "The English nobility," she wrote, "slept under them with ...the thermometer bubbling close to a hundred." Other royal guests included Wilhelmina and Juliana of the Netherlands, Frederika of Greece, and Elizabeth II of Great Britain.

most newspaper editions, and the responsible official ruefully noted that his blooper had gone around the world.

President and Mrs. Eisenhower have entertained more royalty and heads of state than any other couple in the White House. Among their guests have been Emperor Haile Selassie of Ethiopia; the Presidents of Panama, Haiti, Turkey, Italy, and Ireland; the rulers of Greece, Nepal, and Denmark.

It is a heartwarming indication of international friendship that many of the royal visitors to the White House represent return calls and continuing generations.

Like Queen Elizabeth II and Prince Philip, Denmark's King Frederik IX and his Queen Ingrid knew the house as the young couple of a fairy-tale romance.

When Princess Beatrix of the Netherlands lunched with the Eisenhowers in 1959, she followed in the steps of her mother Queen Juliana, and grandmother Wilhelmina.

White House protocol has often raised storms in teacups. But most questions of precedence for high-ranking guests have now been solved by custom and common sense.

When the President entertains foreign guests, the State Department sends the White House the list by rank, along with hints on food preferences and any religious taboos.

Coptic Christians, for instance, were not permitted to eat meat on the Wednesday that Emperor Haile Selassie and his party dined with the Eisenhowers. So the First Lady made up her dinner menu accordingly.

I asked to see it, and found listed melon balls, water-cress soup, fish, vegetables, nuts, candies, and demitasse.

Hostesses at the White House have played

*(Continued on page 32)*



KODACHROME BY NATIONAL GEOGRAPHIC PHOTOGRAPHER B. ANTHONY STEWART © N.G.S.

**Portraits of First Ladies on Canvas and China Adorn a Reception Room**

FOUR FAMOUS HOSTESSES grace a room they knew in life: from left, Mrs. Abraham Van Buren, daughter-in-law of the President; the second Mrs. John Tyler; Dolley Madison, and Mrs. Theodore Roosevelt. In 1960 the National Society of Interior Designers furnished the room with American antiques. Cupboards hold 26 gold-framed plates bearing the likenesses of First

EKTACHROME (ABOVE) BY NATIONAL GEOGRAPHIC PHOTOGRAPHER B. ANTHONY STEWART; KODACHROMES BY THOMAS NEBBIA © N.G.S.

**Where Diplomats Gather Before State Dinners Given in Their Honor**

Ladies. Painted by a German artist, the plates below show Martha Washington, Martha Jefferson Randolph, Mrs. James Madison, and Mrs. Grover Cleveland. The title "Mrs. Thomas Jefferson" is an error. Jefferson was a widower nearly 19 years before he took office; his daughter is shown. President Franklin D. Roosevelt, sitting by this hearth, broadcast his fireside chats to the Nation.

KODACHROMES BY THOMAS NEBBIA © N.G.S.

**Three Graces** encircle the pedestal of a French punch bowl used by Dolley Madison.

**China Room** holds porcelain from every Presidential table. Schoolboy Quentin Roosevelt, roller skating in a corridor, fell and nearly wrecked the collection begun by Mrs. Benjamin Harrison. A few years later T. R.'s youngest son died in air action during World War I. Mrs. Eisenhower's interest in the china inspired donations representing five administrations, completing the collection. Painting shows Mrs. Coolidge and dog Rob Roy.

the role in as many different ways as there were Presidents' wives, daughters, daughters-in-law, sisters, and nieces who served.

Intellectual Abigail Adams, borrowing court etiquette from Europe, greeted guests from a thronelike chair. Beside her stood "His Rotundity," John Adams, hair powdered, dressed in velvet knee breeches and lace.

Jolly, buxom Dolley Madison set such a lavish table that the British Ambassador's wife, Mrs. Merry, loftily remarked that it was "more like a harvest home."

Pious Mrs. Polk banned all dancing and card playing in the White House. Mrs. Hayes earned the nickname "Lemonade Lucy" as a strict teetotaler who instituted Sunday evening hymn sings, attended by members of the Cabinet and Congress. John Tyler's young bride Julia received on a platform with a queenly air and twelve maids of honor.

"Last evening I had a most brilliant reception," Mrs. Tyler wrote her mother with girlish glee. "The British Minister Pakenham was there with his Secretary, and devoted to me. At least fifty members of Congress paid their respects to me, and all at one time."

### Roosevelts Bypassed Protocol

By far the most active and precedent-breaking First Lady in the history of the White House was Eleanor Roosevelt.

Protocol was the least of the Roosevelt clan's worries. Guests of all ages—undergraduates to prime ministers, poets, princes, and labor leaders—crammed the house.

With her abounding energy and many interests, Mrs. Roosevelt herself might give a luncheon, two teas, and a dinner one day.

**Lincoln's china,** banded in purple, shows the American eagle mounted on the national shield above the motto "*E Pluribus Unum.*" The set was made in the Haviland kilns at Limoges, France. After President Chester A. Arthur auctioned off 24 wagonloads of White House discards, Congress passed a law forbidding such "decayed furniture sales." Today all broken White House china is reduced to powder before being discarded.

and be up early the next to catch a plane to speak in New York or San Francisco.

Each Presidential family sets its own social pattern. But official entertaining now includes six state dinners and as many formal receptions each winter. The dinners honor the Vice President, Supreme Court, Speaker of the House, Cabinet, and Chiefs of Foreign Missions. Two diplomatic dinners are needed to take in all of today's foreign emissaries.

The receptions stretch White House hospitality to cover Congressional, Judicial, Government, Service, and Diplomatic groups. During the Franklin Roosevelt Administration, a sixth was added for Washington press and radio, and more recently, television staffs.

I was struck with the smooth routine and uniformity of the big receptions. I learned later how much work and planning goes on behind the scenes to make them that way.

Today's White House kitchen, off the ground floor's arched, portrait-lined corridor, is a cook's dream of stainless steel and white enamel. In it I saw choppers, mixers, grinders, slicers, juicers, coffee roasters, electric ovens, freezers, and a spice cabinet (page 58).

Only one chef-capped man was in sight. But it was not hard to imagine the bustle when a major dinner is scheduled.

The State Dining Room holds at most only 106 guests. But there may be six or seven courses. So serving calls for perfect preparations and split-second timing.

The large, informal teas and garden parties are simpler. For these the staff makes cookies and sandwiches, about three for each guest.

### Ike Invites 2,000 Extra Guests

Does the White House ever run out of food, even as you or I? No—unless the President suddenly invites 2,000 extra people. That happened last August just before the American Bar Association garden party, too late to order an extra supply from caterers.

Beyond the parties and the pomp, the serious business of Government goes on in the East and West Executive Wings. On the west side, the nerve center of the administration throbs in the President's big oval office (page 43). From it his authority reaches to every part of the world.

In the Cabinet Room down the hall, the

**Library books sit in a frame of panels** made from timbers used in the White House before the 1952 reconstruction; National Geographic photographs hang above the mantel. Mrs. Millard Fillmore, a onetime schoolteacher, was shocked to find that the White House lacked a library. Even the Bible was missing. Congress voted an appropriation to remedy the situation. Today the mansion's library keeps three shelves of Bibles in 75 languages for the use of visitors from foreign lands.



KODACHROMES BY NATIONAL GEOGRAPHIC PHOTOGRAPHERS B. ANTHONY STEWART AND DONALD McBAIN © N.G.S.

**Elizabeth II and Prince Philip** on a visit in 1957 pause with the Eisenhowers before a state dinner in their honor. Both royal guests wear Sash and Star of the Order of the Garter; the President's decoration is the Order of Merit, given to him by the Queen's father, George VI. Mr. Eisenhower later presented the autographed photograph to the President of the National Geographic Society.

Chief Executive meets with his advisers. There, Franklin Roosevelt planned New Deal programs and met the crises of World War II. And there, on April 12, 1945, Vice President Truman took the oath for the highest office.

Curiously, Congress was slow to provide executive facilities. Before Theodore Roosevelt won a grudging appropriation to build the West Wing in 1902, Presidents had their offices on the residential second floor.

For the first hundred years, clerical help was surprisingly sketchy. Early Presidents paid secretaries out of their own pockets.

Grover Cleveland, burning the gas alone in his office, wrote his major speeches by hand. Woodrow Wilson sometimes answered letters on his own battered typewriter.

Today the East and West Wings buzz with activities of 133 men and women on the President's White House staff. Assistants, aides, and secretaries may themselves have

## "Little Fort Knox," the Gold Room Stores a Glowing Treasure

President Monroe started the White House gold collection with French flatware; a place setting shows on page 17. Two decades later Whig orator Charles Ogle used the flatware to attack President Van Buren. "Your house glitters," he thundered in Congress, "with all imaginable luxuries and gaudy ornaments."

Nonetheless, Presidents and First Ladies continued to add golden plates, goblets, vases, and bowls. In 1956 Mrs. Eisenhower's close friend, the late Mrs. Margaret Thompson Biddle, left to the White House her priceless vermeil (gold fired into silver), made in Europe between 1700 and 1900. Flower containers and decorative pieces such as the knights in armor add glitter to the State Dining Room when chiefs of state are entertained.

Frenchmen, who invented the vermeil process, cleaned objects of this kind in champagne.

substaffs of assistants, aides, and secretaries.

The White House switchboard handles an average of 7,000 calls a day—sometimes 10,000 if the public is stirred about some such issue as old-age health legislation.

Since the Executive Mansion's number is openly listed, the operators also get practical jokers, children with homework problems, and people who want to tell the President how to do his job.

Eleven operators, trained for speed and tact, work in shifts around the clock. To locate persons for the President and his staff, they show detective skill. One quiet Sunday calls went out asking every Cabinet officer to report at once to the White House. Two were in Maine and Michigan, but all made it by that evening. The date: December 7, 1941.

"If I ever want someone in Timbuktu," said President Truman on a visit to the operators, "I'll know where to come."

**How to Handle 100,000 Letters a Week**

Looking at the stacks of mail addressed to the President, you think that all those who can't telephone must write.

The White House mail room processes about 20,000 pieces a week. But that figure

can suddenly jump to 100,000 or more. During the depression, President Roosevelt once suggested that people write him their troubles. They did, and it took the staff weeks to dig out from under.

Back in McKinley's time, one postal clerk took care of all executive mail. In his book, *Dear Mr. President*, Mail Chief Ira R. T. Smith recalls that Mr. Coolidge used to drop into the office, sit in a chair with his feet on the desk, and read some of the letters.

Modern Presidents seldom, if ever, see the rooms where 30 full-time workers now sort, read, and analyze the mail. Much of it, such

KODACHROMES BY NATIONAL GEOGRAPHIC PHOTOGRAPHER THOMAS NEBBIA © N.G.S.

**Chef** beside the dumb-waiter telephones that a birthday cake for an Eisenhower grandchild is on the way.

### All-electric Kitchen Shines With the Best in Equipment

On April 20, 1946, a Spanish-speaking gentleman appeared in the White House kitchen and began giving orders to the apron-clad First Lady and her friends. The occasion was a luncheon for Mrs. Truman's Spanish class. Preparing *picadillo* under the eye of their instructor, Prof. Ramon Ramos, the ladies chopped and mixed four varieties of meat with rice, then seasoned with spices, garlic, almonds, pimentos, olives, and raisins.

Later, in the State Dining Room, 66 members of the class feasted on the culinary triumph. Mrs. Dwight D. Eisenhower, whose husband was then Army Chief of Staff, served as one of the waitresses. After she became First Lady, she hung the Madonna of the Kitchen on the side of the cabinet in center.

The regular kitchen staff works with quiet efficiency, turning out everything from tea cakes for an intimate party in the Red Room to a six-course meal for a hundred guests in the State Dining Room (page 16).

**President and Mrs. Eisenhower Welcome Guests to a Garden Party**

One August evening last year the White House gates swung open for more than 4,300 members of the American Bar Association and visiting barristers from the British Commonwealth. When the President and First Lady stepped out from the South Portico, the United States Marine Corps Band (right) struck up "Hail to the Chief." Then Mr. Eisenhower moved out into the throng, shaking hands and sharing laughs (above). Mrs. Eisenhower talks with Mrs. John D. Randall, wife of the ABA President.

as veterans' requests or income tax complaints, goes to the Government agencies concerned. The rest is handled by Presidential assistants or shown to the Chief Executive for decision. All letters are answered.

But because the President cannot read all his mail, it doesn't mean he is uninformed. The mail department sends him a weekly report on how many people have written in, about what, and how opinion is running.

Packages mailed to the White House get even sharper scrutiny than letters. Suspicious ones are fluoroscoped, and any doubts about explosives are resolved by bomb experts, who test, and if necessary even destroy, the package.

Precautions against dangerous crackpots are essential. But it is the constant outpouring of gifts from the American people to their man in the White House that impresses.

Offerings include anything from a necklace of real pearls to a box of snakes. Probably the hardest to handle was a truckful of cement pieces that came with directions for assembling. It turned out to be an eight-foot-square miniature castle, with electric

lights, bells, radio, and a moat for running water. They plugged it in, down in the basement, and it blew a fuse.

The Executive West Wing is the news-making part of the White House. Off its big central lobby is a crowded office with 30 telephones. In it 25 full-time reporters cover the President for newspapers, magazines, wire services, radio, and television.

Each morning the President's Press Secretary posts a list of his boss's appointments for the day. When an important visitor comes to see the President, photographers crowd around, shouting instructions. Newsmen pounce, notebooks in hand.

The big news-makers, however, are the Chief Executive's own press conferences, at which the entire Washington news corps quizzes him on anything from satellites to his plans for running for another term.

These meetings, begun by Woodrow Wilson, were held in the President's Executive Office until 1950. They were then moved next door to the old State Department building.

White House correspondents were not always so welcomed. It was Theodore Roosevelt—seeing a shivering group of reporters outside his window one winter night—who first invited them inside his new West Wing. Nor were newsmen always well mannered. President Cleveland called them "Ghouls of the Press," after reporters flippantly referred

to his bride as "Yum-Yum," and spied on the newlyweds during their honeymoon.

Today, both editors and public respect the privacy of the President, his family, and his home. Thoughtless citizens or fanatics with other ideas are kept in line by the Secret Service of the U. S. Treasury. In boxlike buildings at entrances to the White House grounds, armed guards challenge all who approach. Without a pass or previous clearance, you remain outside the iron fence.

Before the Civil War, little effort was made to protect either the President or the White House. Thousands of Andrew Jackson's followers mobbed the mansion at his inaugural party. They broke up china and stood with muddy boots on damask-covered chairs, until some genius lured them out to the lawn by setting up tubs of free punch.

When Lincoln took office on the eve of the Civil War, Congress assigned some of Washington's newly organized Metropolitan Police to guard him. Yet sheer neglect permitted John Wilkes Booth to reach the Presidential box in Ford's Theater four years later and fire the fatal shot. Even after the murder, people roamed the White House, slashing wallpaper and draperies for souvenirs.

In 1901, after McKinley had been shot at Buffalo, New York, by a pistol barely concealed behind a handkerchief, Congress finally charged the Secret Service with responsibility for the President's life. Secret Service special agents now remain near the President and his family day and night.

In white tie and tails at formal White House functions, alert young men eye unfamiliar guests. The highest dignitary is not immune to a polite request to remove his hand from his pocket in approaching the President, as happened once to a new ambassador.

In protecting the President, all Secret Service men stand ready to give their lives. One member of the grounds force, Pvt. Leslie Coffelt, made the sacrifice in 1950. He was killed in a gun battle with the Puerto Rican nationalists who tried to reach President Truman, then living in Blair House during White House reconstruction.

**Leadership Resides Here**

What is it that makes America's White House unique, and touches with magic all those associated with it? Memories, of course, are part of the fascination. So is the knowledge that the man who lives in the White House is subject to hope and pain and error, even as other men.

But the emotion may go deeper. Americans look to this building for leadership and the wellspring of a security rooted in power that cannot be shared. "The lonesomest place in the world," President Taft called the White House.

Above all, the President's House—born with the Nation's Capital at Washington—is a tangible symbol of the Government the people themselves have chosen.



NATIONAL GEOGRAPHIC PHOTOGRAPHER B. ANTHONY STEWART

**Prince and President** greet the press after Mr. Eisenhower bestowed on His Royal Highness Prince Philip the Special Gold Medal of the National Geographic Society. The award recognized the Prince's "questing spirit" that "brought to millions a better understanding of our planet and its peoples." Mr. Eisenhower was the eighth President to present a medal in The Society's behalf; six awards were made at the White House.

KODACHROME BY NATIONAL GEOGRAPHIC PHOTOGRAPHER THOMAS NEBBIA © N.G.S.

**President's-eye view of his office.** During the Eisenhower Administration this room has seen the President confer with more than 120 heads of foreign nations and thousands of United States leaders.

Mr. Eisenhower's glasses lie where he left them. Silver blotter holder bears autographs of the men who went to Paris in 1952 to persuade him to run for the Presidency. Miniatures of Mr. Eisenhower's wife and mother appear at right. Telephone at left, with gold dial and 48 gold stars, was given in 1953 to commemorate the 50-millionth telephone put in service in the United States.

When President and Mrs. Eisenhower walk out through the white pillars, they will become part of that symbol. They brought many things to the President's House: the dignity that befits the Presidency and a warmth and informality which typify America as we like to believe in it. With them it has known laughter, and serenity, and a sense of destiny. When they go, they leave behind a reflection of these gifts.

The Eisenhowers take with them, of course, a Nation's salute for their bearing and strength through eight turbulent and trying years. And they leave for their successors a home, and a history, worthy of the President of the United States.

KODACHROME © NATIONAL GEOGRAPHIC SOCIETY

**Carvings on a palace wall** at Persepolis commemorate Persia's storied days of empire under Darius and Xerxes. Blazing jets signal the modern nation's riches; they flare off surplus gas at Āghā Jāri, Iran's most productive oil field.

# Old-NEW

SIGNING THE REGISTER at the hotel desk in Tehrān, I pondered the date. Was it the 20th or the 21st of March, 1960? An English-language newspaper at my elbow settled the matter.

It was the 29th of Esfand, 1338.

Three months later, after driving with photographer Tom Abercrombie from Iran's tense, barricaded border with the Soviet Union to the oil-rich rim of the Persian Gulf and flying on 20th-century wings above lands of the ancient Persian Empire, I concluded that this was the essence of the country's baffling charm: You are never quite sure what century you're in.

Moslem Iran reckons its dates from the Hegira, the flight of Mohammed to Medina in the year 622. But the visitor's illusion of overlapping time is no mere quirk of conflicting calendars.

### Iran Greets the New Year in Spring

On our first full day in Tehrān, a bustling, modern city of nearly two million, we stepped effortlessly into antiquity.

"You've come just in time for *No-Ruz*, our springtime celebration welcoming the New Year," said Parviz Raein, Iranian correspondent for the Associated Press. "Tonight the Shah holds his annual *Salaam*, a ceremony that dates back to Cyrus the Great. I've arranged for you to attend."

With the seasoned newsman's knack for side-stepping red tape, Parviz was to "arrange" many things for us in the coming weeks—travel permits, purchases, transportation, interviews. His motive was simple: He likes Americans, and wants them to like Iran.

In daylight, the 150-year-old Gulistan Palace in

By EDWARD J. LINEHAN, National Geographic Staff
*Illustrations by National Geographic photographer THOMAS J. ABERCROMBIE*

# Iran, Next Door to Russia

**His Imperial Majesty Mohammad Reza Shah Pahlavi,** Shahanshah, receives dignitaries in Tehrān's Gulistan Palace. Uniformed as commander in chief of the Iranian Army, he wears the blue sash of the Order of Pahlavi, Iran's highest decoration.

downtown Tehrān is a royal museum. But the softness of this night and the stir of arriving dignitaries transform it (opposite).

You mount the grand staircase, sprung to life with the pomp and glitter of the 19th-century Kajar dynasty. In the great Salaam Hall, arches faced with mosaics of tiny mirrors shatter the light of crystal chandeliers and shower it extravagantly over the famous Peacock Throne, ablaze with 20,000 jewels. Priceless porcelains and marble, gifts to Persia's monarchs from Napoleon, Tsar Nicholas, and Queen Victoria, line the walls.

The formally dressed diplomatic corps of 40 nations stands precisely ranked on splendid carpets, waiting. His Imperial Majesty Mohammad Reza Shah Pahlavi, Shahanshah, "King of Kings," enters with solemn stride, heralded by his Minister of Court. Broad-shouldered, hair graying, generous of brow and jaw, he can look regal even in the tennis garb he often dons to beat professional players. This night, in sash and gold epaulettes, he more than fits his role as ruler of one of the world's oldest surviving monarchies.

Hands clasped behind his back, he accepts elaborate greetings from each ambassador, as Achaemenid kings did six centuries before Christ. He nods in grave courtesy, responds in a voice you strain to hear. It is a dazzling spectacle, too soon ended.

#### Shah Deals With Today's Problems

You will revisit the Gulistan, but as a museum again, where carpets are worn and mirrors need resilvering. You will see the Shah once more, but as a blue-suited businessman, brow furrowed over taxes and inflation, the price of oil, and land reform.

Modern Iran, with its 21,281,000 people,

covers but a fraction of the Persian Empire of Cyrus, Darius, and Xerxes, and the later Sassanian kings with magical names like Ardashir, Shapur, and Yazdegerd.

Still it is a vast land, some 636,000 square miles, larger than Great Britain, France, Italy, and Germany combined, and far more varied (map, next page).

We found mighty mountains there: The great spine of the Zagros slanting 1,300 miles southeastward from Azerbaijan, the Elburz walling off the north. The sulphurous cone of the highest, Mount Damāvand, dwarfs Mont Blanc by more than 3,000 feet (page 54).

These ranges clutch between them the great central plateau, high and fertile but discouragingly dry. In its midst stretch two salt-caked deserts shunned by living things.

And at the extremes, the torrid coast of the Persian Gulf lies a world away from the rain-soaked *jangal*—whence our word "jungle"—of the brooding Caspian Sea.

It was on the gray sand beaches of that largest of landlocked seas that I sorely disappointed my host, Mr. Youssef Nabavi, Secretary of the Shilat, the nationalized Iranian Fisheries Society; he had accompanied Tom and me to Bandar-e Pahlavī to show us the caviar industry.

Sturgeon roe, he told us, ranges from the rare golden "imperial caviar," reserved exclusively for the Shah, to a tarry black, although the color does not affect the flavor. First-quality caviar sells in Tehrān for 1,800 rials a kilogram—about $11 a pound.

"The Russians buy our best, put a new label on it, and sell it as their own," Nabavi said glumly. "In their part of the Caspian the water is very cold; the sturgeon have more fat and less room for eggs."

### Caviar Expert Uses a Surgeon's Touch

At an Iranian fishing station I learned that there is more to caviar preparation than spooning fish eggs into a can (page 57).

Assistants kept a discreet distance as the caviar expert, clad in white smock, surgical cap, rubber gloves and boots, made a delicate incision with a spade-shaped knife.

Carefully he rolled a thick rope of brownish-black roe from the fish into a white basin. Gently he rubbed the caviar through a sieve,

**Glittering Gulistan Palace** heralds the Iranian New Year on March 21 with the Shah's *Salaam*. Garden lights blend with the rose glow of crystal chandeliers in the halls.



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Caspian Sea

Iran exports caviar from its Caspian Sea fisheries

Azerbaijanis form Iran's largest minority group

Kurds, fierce and independent, have often campaigned for autonomy

Warlike Turkmen, migrants from Central Asia, have become farmers and herders

START OF EACH TRIP

Dasht-e Kavīr (salt desert)

I R A

Zagros Mountains

Elburz Mountains

Nomadic Kashgai summer in the Zagros Mountains and winter along the Persian Gulf

Iran's nationalized oil industry centers at Āghā Jāri

Stately ruins call to mind the glories of Persepolis, ancient Persia's ceremonial capital

Sailing dhows in the shallows of the Persian Gulf load and unload ocean-going ships

Persian Gulf

Strait of Hormuz

AZERBAIJAN

KURDISTAN

LORESTĀN

ESFAHĀN

KHUZESTĀN

FĀRS

BAKHTIARI

TURKEY

IRAQ

U.S.S.R.

KUWAIT

SAUDI ARABIA

NEUTRAL ZONE

BAHRAIN

QATAR

TRUCIAL COAST

MUSCAT AND OMAN

Yerevan

Ararat

Nakhichevan

Lake Van

Baku

Krasnovodsk

Nebit Dag

Kizyl Arvat

Tabrīz

Lake Rezā'īyeh

Rezā'īyeh

Mahābād

Marāgheh

Mīāneh

Ardabīl

Astara

Lenkoran

Bandar-e Pahlavī

Rasht

Lāhījān

Zanjān

Qazvīn

Chālūs

Bābol

Bandar-e Shāh

Gonbad-e Kāvus

Gorgān

Shāhrūd

Damāvand

Tehrān (Teheran)

Semnān

Qom

Lake Namak

Kāshān

Sanandaj

Hamadān

Kermānshāh

Bīsotūn

Arāk

Borūjerd

Heshmatābād

Khorramābād

Dezfūl

Masjed Soleymān

Ahvāz

Khorramshahr

Ābādān

Āghā Jāri

Behbahān

Bandar-e Shāhpūr

Gach Sārān

Khārk

Būshehr

Kāzerūn

Shīrāz

Persepolis

Pasargadae

Fīrūzābād

Jahrom

Lār

Bandar-e Lengeh

Bandar-e 'Abbās

Mīnāb

Hormuz

Qeshm

Kermān

Sa'īdābād

Yazd

Nā'īn

Ardestān

Najafābād

Eşfahān (Isfahan)

Ābādeh

Bāfq

Tabas

Nineveh

Al Mawşil (Mosul)

Irbīl

Kirkūk

As Sulaymānīyah

Khānaqīn

Sāmarrā'

Baghdād

Karbalā'

Babylon

An Najaf

Al 'Amārah

An Nāşirīyah

Ur of the Chaldees

Al Başrah

Al Kuwayt (Kuwait)

Al Aḩmadī

Wafra

Safaniya

Ra's at Tannūrah

Az Zahrān (Dhahran)

Al Manāmah

Ad Dawḩah

Abū Zabī

Al Buraymī

Ash Shāriqah

so as not to break a single egg. Precisely he measured 44 grams of salt for each kilogram of eggs.

"Now, the mixing!" whispered Nabavi at the crucial moment. "Too little, and the salt is not distributed – the caviar spoils. Too much, and he crushes eggs – second-grade caviar."

The expert mixed just right. He scooped up a spoonful of the glistening beads and murmured, "*Befarmaid*" – "Please."

I must admit my experience with caviar had been infrequent. But even in this perfect product, not five minutes out of the fish, I detected none of the ambrosia others have raved about. The sad truth remains that I just do not like caviar.

"*Kheli khoob*," I said in my best guidebook Farsi. "Very good."

Mr. Nabavi was undeceived by my forced smile, but took it philosophically.

"You will come back again, and we will go hunting," he offered in mingled French and English. "Near here we have fine shooting for the savage ducks!"

### Eşfahān Bazaar Winds for Miles

An old Persian saying claims that "Eşfahān is half the world."

"I think we've brought the other half with us," said Tom as he tugged his photographic gear out of our jeep, crammed with luggage, sleeping bags, and gas and water cans.

No flowers beckoned his cameras on the Chahar Bagh – the Four Gardens laid out by the 17th-century builder-king, Shah Abbas. That stately promenade was paved for traffic and flanked by *jubes*, the open water supply ditches still in use in some Iranian cities and most villages and towns.

But no matter. Eşfahān's flowers bloom

**Three times the size of France,** with less than half its population, Iran stretches across deserts and mountains from Iraq to Afghanistan, from Caspian Sea to Persian Gulf. Map traces eight thousand miles of travel by GEOGRAPHIC writer Linehan and photographer Abercrombie (far left), who stop their jeep for roadside tea.

Diacritical marks that appear on many Iranian place names indicate Persian letters that differ from their closest English equivalents. The letter "ā," for example, represents a Persian vowel spoken as in "all"; a plain "a" stands for a different vowel, pronounced as in "hat." The letter "ī" is spoken as in "machine." Without such marks the town of Nā'īn, in the center of the map, might seem to rhyme with "cane"; with them, it is "nah-een."

**Balconies** encircling a nine-story apartment house in downtown Tehrān give tenants a superb view of the snow-covered Elburz Mountains to the north. Each of 30 units rents for about $160 a month.

Thriving Tehrān couples Western-style boulevards, shops, and office buildings with Oriental bazaars, palaces, and mosques. Its population nears two million.

Persia's name was changed to Iran in 1935 by Reza Pahlavi, father of the present Shah, to honor the ancient Aryans who built a mighty empire.

**Mannequins' gowns** on Naderi Street reflect the latest skirt lengths from Paris: Two window-shoppers wear Western garments, but a third clings to the tentlike *chador* worn by tradition-minded Moslem women.

EKTACHROME BY THOMAS J. ABERCROMBIE, NATIONAL GEOGRAPHIC STAFF © N.G.S.

**Swinging 50-pound wooden clubs,** Tehrān musclemen exercise to the rhythm of drums and chanted verses in a House of Strength, a private athletic club. Spectators edge the pit. Mirror mosaics adorn the walls; the bas-relief portrays a Persian legend.

everlastingly in the tiles of its places of worship: in the Shah Mosque's cerulean dome bound in yellow tendrils; the masterpiece crowning the Lutfullah Mosque; the fragile calligraphy of Koranic verse ornamenting the Madrasah (pages 58-59).

The Armenian artisans Shah Abbas transplanted from the Russian-border town of Jolfā built Eşfahān to last—and to be admired for all time.

It remains a city of craftsmen. In the vast bazaar, reputed to wind some seven miles, bespectacled silversmiths still tap out their delicate scrollwork. Coppersmiths shape trays and bowls and pitchers with clanging hammers; woodworkers turn pipe bowls on bowstring lathes, guiding chisels with fingers and toes; artists thump carved wooden blocks on unbleached cotton, producing exotic printed *Ghalamkar* fabrics.

### Jousts and Polo Entertained Court

At the bazaar's main portal, when the late sun gilds the Maidan, old Eşfahān's quarter-mile-long central plaza, it is no trick to conjure up the "Diversions" and "Combats" that amused the great Shah and emissaries from Elizabethan Europe: wild animal fights, contests with the lance, and milling polo matches with 150 horsemen to a side.

And it is easy, too easy, to fancy that Eşfahān has changed not at all in 350 years. But several blocks away at the Ostandari, the government seat of Eşfahān province, I was quickly relieved of the notion.

"Things are getting done in this province," said Governor General Abbas Farzanegan. "So much so that I hear myself condemned on Radio Moscow every other night."

The governor, a former cabinet minister, catalogued the achievements and plans that had made him a propaganda target.

"His Imperial Majesty has ordered the worker's lot improved. I have gotten a 40 percent across-the-board wage increase in the leading industry here, textiles, and production has nearly doubled! We have built 200 new homes for our workers—modest ones, it's true, but homes. And we'll build 10,000 more in the next five years.

"We're building a 300-bed hospital, and motels for our many visitors. A piped water system for the city will be finished within two years. We're organizing a cooperative supermarket that will sell government-monopoly items like sugar and tea at lower prices. Iran, as you know, is a tea-drinking nation."

He paused to let my pencil catch up.

"A few months ago a wonderful thing happened to Eşfahān: A storm tore down the city's old spiderweb of telephone lines. I told the people then that they would exchange their No-Ruz greetings over a new automatic telephone system. And so they have."

The phone on his desk chose that instant to ring. The governor general lingered a satisfying moment before picking it up.

"*Bali?*" he smiled. "Yes?"

I left there to stroll the enchanting dirt-floored bazaar a final time, and wonder to which century Eşfahān really belongs.

Eastward, beyond the hogback ridges to Nā'īn, a broad and alluring lake shimmered amid dun-colored plain. Cool islets dotted its surface; it harbored a flotilla of small boats. But it was only heat and a chain of *kanat* mounds, I found, painting an elusive mirage.

Each earth heap marks access to a watercourse below, sometimes 300 feet deep at the source, and hand-burrowed as far as 30 miles across the plain. Kanats march across much of thirsty Iran, umbilical ties between villages and distant ground-water reservoirs.*

### Hassan Welcomes Author to Nā'īn

Standing before Nā'īn's thousand-year-old Friday Mosque, you feel a pair of liquid brown eyes fixed upon you.

The gaze musters courage and materializes into a tentative, "Hello, mister?" Hassan Sehhat, schoolbooks under his arm, wants to be an interpreter and gladly plays hooky to practice his faltering English. He leads you up the dark, tight spiral of a minaret for the best view of Nā'īn. Its domed roofs resemble a caldron of bubbling mud suddenly congealed.

*Supreme Court Justice William O. Douglas discussed Iran's underground water system in "West from the Khyber Pass," NATIONAL GEOGRAPHIC, July, 1958.

**Sun's Searching Rays Cast Scant Light Into the Tehrān Bazaar**

A huge covered market, the dirt-floored arcade winds beneath arched brick ceilings. Woman with baby in arms clutches the black chador in her teeth to cover her face. Shirt-sleeved waiter distributes tea, the Iranian national drink, to merchants in their booths. Sign in Persian script advertises a textile mill.

بافندگی خامنه

**Shepherds Drive Home Their Flocks Beneath Snow-streaked Mount Damāvand**

Late afternoon clouds mask the foothills of the 18,934-foot cone, a dormant volcano in northern Iran. The folk hero Faridun supposedly chained the usurper Zahak in a cave near the summit,

KODACHROME © NATIONAL GEOGRAPHIC SOCIETY

legend pictures the crater's sulphurous vapor as the tyrant's breath. Pre-Islamic Persians believed the prophet Zoroaster lived on the lower slopes; the *simurgh*, a fabulous bird of immense size and great wisdom, dwelled on the very top.

These villagers round up sheep and goats for the evening milking. By day the herds browse the rocky slopes for thistle and thornbush.

KODACHROME © NATIONAL GEOGRAPHIC SOCIETY

**Tea pickers harvest a hillside** overlooking the Caspian. Though plantations in this region yield seven thousand tons a year, Iran must still import tea. Blessed with four to five feet of rainfall a year, the coastal belt also produces tobacco, cotton, flax, and fruits; its mulberry trees feed the moth larvae that support this center of the nation's silk industry.

The brick domes typify a region where timber is a curiosity.

"My father has married to three wives . . . eleven children!" Hassan practices with some irrelevance, yet with pride, as we go on.

"Please—first you." He ushers you through a green door, and the women of his household scurry for cover. With appropriate compliments, you quaff a glass of *sharbat*—sweetened, fruit-flavored water—and he coaxes a sister to return to her loom. She will show you how the "finest carpets in Iran"—and Iranian carpets are excelled by none—are woven.

Perched birdlike on a wooden beam, she clenches her all-enveloping *chador* in her teeth and suppresses a giggle. Her fingers blur in a motion as natural as breathing: knot, pull taut, cut . . . knot, pull taut, cut (page 62).

Tight strands of the warp thump with a bass rhythm, and imperceptibly a carpet grows, duplicating the floral pattern painted on graph paper beside the loom.

Some 700 looms like this thump dawn to dusk throughout Nā'īn, as flying fingers cram an incredible 200 woolen knots into each square inch. Hassan's sister has been weaving since the age of 8; at 20 she is halfway through her ninth silky-textured carpet.

"My eyes, my heart—while I live they are yours," says Hassan in best Persian tradition as you part. And you make a note to send him the English books and magazines he craves but will not ask for.

**Jeep Races a Dust Storm**

The road southeast ran arrow-straight through a parched valley. Workmen endlessly shoveled dust back into its potholes. The dust was bad here: flour-fine, drifting like snow, building ramps against occasional village walls.

A towering dust cloud perhaps five miles long threatened to cross our path. We raced it for ten minutes and lost. A half-lit world of coffee-colored fog enveloped the jeep, squeezed through floor

**Gill nets of Caspian fishermen** capture sturgeon ranging from 25 to 2,500 pounds. Gourmets the world over prize the fish's eggs, known as caviar. Different kinds of caviar take their names from the species of sturgeon that yield the roe – sevruga, assetrine, beluga. These seiners stake their net a few miles offshore to trap fish heading upstream to spawn in cold rivers of the Elburz Mountains.

**Chief taster** at Bandar-e Pahlavi packing station examines a tin of the golden imperial caviar, which the plant reserves exclusively for the Shah. Last year this expert sampled 146 tons of caviar, determining its quality by taste, look, or feel.

After extracting the sturgeon roe, processors gently force the eggs through a coarse sieve, wash them carefully, and add salt.

Packed in ice and sawdust, the delicacy is shipped at temperatures just below freezing.

**Eşfahān Citizens Relax Where Shahs Played Polo**

When Shah Abbas the Great moved his court from Qazvin to Eşfahān in 1598, he built a magnificent new capital around this huge square, the Maidan-i-Shah, 1,680 feet long and 520 feet wide.

A century later, at the zenith of its fortunes, the city was nearly as populous as London, and Persians called it "half the world." So many buildings remain from its days of glory that the city still ranks as a treasury of Persian architecture.

This view looks south from the bazaar gate. Dome, minarets, and portal of the Masjid-i-Shah, the royal mosque, flash in the sun. To its right, the colonnaded veranda of Ali Kapu, gateway to the royal palaces, seated Shah Abbas and his courtiers during polo matches and parades.

**Blaze of blue and gold,** a slender minaret complements the turquoise-tile dome of the Madrasah, a religious college in Eşfahān.

EKTACHROME (OPPOSITE) AND KODACHROME © NATIONAL GEOGRAPHIC SOCIETY

boards, doors, and rolled-up windows. Headlights could not pierce this swirling gloom. We stopped.

Now I could believe a fantastic news report of a week or two before. A shepherd not far from here, it said, had been dug out of a dust drift with his entire flock, barely alive. Yet even here it was not so bad as across the barren Dasht-e Lūt in Sistān region, where the Wind of 120 Days scours the land from June to September with gale-force gusts.

### Music From a Ghostly Caravan

We listened to pulverized soil hiss against metal, and inexplicably heard music—an odd cacophony that came nearer, identified itself, and loomed as a camel train. Muffled drivers raised a hand in perfunctory salute; a dozen clumsy wraiths passed, laden with sheepskins, and melted again into the world of dust. The music of their bells died quickly, as did the storm.

Bicycles swooped and darted like swallows before the ungainly jeep as it nosed into Yazd, Iran's most central city. The clerk at the tiny hotel put down the Persian edition of *How to Win Friends and Influence People*, apologized for his fragmentary English, and telephoned for an interpreter.

Minutes later the Reverend Parviz Aristoo Sayyah leaped nimbly from his bicycle. A hawk-visaged man with the soul of a lamb, he wages a gentle, not-too-successful campaign to bring Christianity to Yazd. In this city of 70,000, his flock numbers 15.

"You want to know about Yazd? We think the name comes from the old Persian word for God. Some say Alexander the Great used

the city as a prison. Now it is best known for agriculture, for many fine fruit gardens, for textile weaving—and for Zoroastrians."

When the sword of Islam swept through 7th-century Persia, most of those who refused to embrace Allah either perished or fled eastward. Their descendants in India, 110,000 strong, are now known as Parsis. Nearly half—some 8,000—of the Zoroastrians left in Iran are found in the region of Yazd.

Marco Polo, when he passed this way, noted that "they weave there . . . a certain silk tissue known as Yasdi, which merchants carry into many quarters to dispose of." And so today hand looms clack behind many doors in Yazd, creating colorful silks and cottons.

In contrast to this clatter, a heavy quiet hangs outside the city atop three barren hills, each crowned by a low, circular tower of stone. These are the Zoroastrian *Dakhmah*—the Towers of Silence.

### Human Bones Pave Gardens of the Dead

A vulture flapped away clumsily, annoyed at our approach up the curving ramp to the central tower. At its base we found a padlocked iron door, a circle of fire-blackened stones, the stumps of a few candles. A Moslem

youth accompanying us translated part of an inscription on the wall: "... The Garden of Our Dead."

Beyond a crumbling wall on a near-by hill, another such "garden" displayed its harvest of the centuries. Bleached human bones lay like jackstraws across a rocky slope.

"We believe the earth was given to produce crops, not to be contaminated with our bodies," explained Mr. Mehraban Goshtasb-pur, a prosperous Zoroastrian landowner. "So, like our ancestors, we take our dead to the Dakhmah and leave them on the stones to be consumed by the birds."

He spoke in the sun-filled courtyard of the Atash-i Varahrān, the Zoroastrian fire temple in Yazd. In the court lay a heap of gnarled firewood. Inside the spotless building a white-masked priest tended the eternal flame blazing in a bronze urn, and chanted verses from the holy writ, the Avesta (page 66).

"Most people call us fire worshipers," continued Mr. Goshtasb-pur, eyes twinkling behind horn-rimmed glasses. "In ancient Persia four natural fires burned without wood—in Azerbaijan, Khūzestān, Sīstān, and Khorāsān.

"We realize now that they probably were fed by underground natural gas. All our temple fires came originally from these four, and have been kept alive for thousands of years. But the flame to us is merely a symbol; a sign of cleanliness and purity."

The prophet Zoroaster, born probably in the 6th century B.C. in Azerbaijan, preached that every human being is a battleground hotly contested by Angra Mainyu and Spenta Mainyu, the forces of darkness and light. For deliverance, one must follow three simple precepts: Think good, speak good, do good.

**Point Four: $500,000,000 Bootstrap**

Those who travel from Yazd, wrote Marco Polo, will find "many fine woods upon the way, such as one can easily ride through; and in them there is great sport to be had in hunting and hawking, there being partridges and quails and abundance of other game. ... At the end of those seven marches over the plain you come to a fine kingdom which is called Kermān."

I counted three pigeons on the entire trip—a long, uninteresting day's drive to the Point Four Guest House in Kermān. That city of 63,000 remains memorable to me for its carpets, delicious pistachios, and Huston D. Crippen.

"Jim" Crippen tosses a white mane when he talks, and he talks with a conta-

KODACHROME BY THOMAS J. ABERCROMBIE, NATIONAL GEOGRAPHIC STAFF © N.G.S.

**Hands uplifted, knees on the floor,** devout Moslems chant Friday midday prayers in Tehrān's Sepahsalar Mosque. Facing Mecca, the worshipers follow a prescribed ritual in which they bow foreheads toward the ground. One man, cloaked in a robelike *aba*, fingers prayer beads. His turbaned companion wears the baggy *shalwar* so popular in rural Iran.

gious enthusiasm. He is the Kermān Area Operations Officer of the United States Operations Mission. Iranians know it simply as *Asl-e Chahar*—"Point Four."

Since 1951 that assistance program has spent half a billion dollars in cooperation with the Iranian Government to build roads, schools, and factories; to dig wells and install waterworks; to import needed vehicles and machinery; to fight plagues of locusts and all but eradicate malaria.

"We're about finished with that phase," Crippen told me. "We're simply advising now—helping Iranians to help themselves." Experts range the area teaching community development and educational and farming techniques.

We toured the city with him and saw a new hand-loom factory turning out cotton piece goods, providing 125 new jobs. A municipal water system was under construction. In the heart of the city a fine old home was being renovated as the modern Sahara Hotel; its completion would enable Point Four to close its Guest House.

"A group of Iranian businessmen got together to finance the hotel," said Crippen. "Another group got together to build a date-

**Stealing a peek** at the photographer, a young artisan in a Kermān rug factory pauses in her dawn-to-dusk labors. "Most girls pulled the concealing chador over their heads as soon as they saw my camera," says photographer Abercrombie.

Children as young as nine or ten work in carpet factories. Their average wage: 50 cents a day.

Irregularities in patterns and colors, strangely enough, often account for the Persian rug's beauty and brilliance. Power looms can weave fairly exact copies, but the product lacks vitality and luminosity.

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**Cross-legged on a scaffold** in Nā'īn, a girl weaves a beautiful Persian rug. On a base of cotton cords, she knots strands of wool or silk, her fingers moving faster than the eye can follow. She works at home on a loom and color pattern provided by the contractor.

Iranian women and children prove the best rugmakers, for their small, agile fingers can tie as many as three thousand knots a day. A good carpet takes months, sometimes years, to weave; a few are the work of a lifetime.

When finished, this 7-by-10-foot rug will be dusted, washed in a river, and laid in the sun to dry. Its vegetable dyes will not fade or run.

packing plant at Bam, southeast of here."

I wondered who or what "got them together," but not for long. I am certain that somewhere behind it lies the mane-tossing enthusiasm and personal diplomacy that has inspired an American-style Kermān Civic Club and a once-a-week square dance group in this ancient Persian city.

### Author Travels With Camel Patrol

From Kermān we drove 120 miles to Bam with young Āhang Kossar. Āhang's father, Gen. Said Aminollah Kossar, commands a force of 2,000 Gendarmes who police 120,000 square miles of southeastern Iran.

A Gendarme detachment was leaving Bam on a patrol to inspect the garrison at Raḩmatābād-e Borj, toward the Baluchistan border. Would we care to go along?

Later that day I jogged beside Sgt. Abdullah Sarafrazi over a camel's-thorn desert. The sergeant wore an olive-drab uniform, a rifle slung across his back, and a gold-toothed smile that nearly matched the breadth of his magnificent mustache (opposite).

"We have proverb," he was saying. "The camel eats useless weeds, carries heavy burdens for us, and does no one harm."

"I'm not so sure about that last part," I replied between gritted teeth. Tom agreed. "Riding a camel," he said, "is like straddling a railroad tank car bumping along on the ties."

The commandant, riding ahead, suddenly pointed. Abdullah's smile vanished, and the pair galloped ponderously up a ravine.

A score of pack camels knelt amid the brush; as many unshaven tribesmen in baggy trousers and long-tailed Baluchi shirts squatted at cooking fires. The Gendarmes questioned them, appeared satisfied, and returned.

"They are from the Sabaki tribe near Īrānshahr," the officer explained. "They go to Bam to sell their wool and cooking oil."

Later we learned the reason for their con-

**Masks veil countrywomen** near Bandar 'Abbās as they head home with straw for fodder. Photographer Abercrombie, focusing from his jeep 40 feet away, made the picture with telephoto lens. "As soon as they spied me," he reports, "they fled."



EKTACHROME © NATIONAL GEOGRAPHIC SOCIETY

KODACHROME © NATIONAL GEOGRAPHIC SOCIETY

**Mustachioed Sgt. Abdullah Sarafrazi patrols the desert with his camel**

cern. Baluchi bandits had killed three Americans, a woman included, in this southeastern corner of Iran three years before.

Inside the gates of Raḥmatābād I slept that night, head to an open door, on a magic carpet. It transported me to a storybook Persian dawn, complete to the musical argument of nightingales and the unfamiliar sigh of a breeze in treetops.

In the village bath, or *hammam*, a grizzled attendant named Youssef poured basins of warm water over me, soothing my stiffness. After breakfasting on thin, flat bread, strong cheese, oranges, and tea, I strolled through the village. Women churned butter by patiently rocking milk-filled goatskins slung from wooden tripods. Men tended neat groves of date palms, pomegranates, and citrus trees. The first grapefruit in Iran, I learned to my surprise, were planted 11 years before in this obscure community.

Outside the 14-foot village walls I waded through irrigated fields of henna and barley and waist-high wheat, flushing an occasional plump *durraj*—the beautiful Iranian black partridge. And I found an odd contentment in the soft early sun of this desert-bound place. I could understand, here, the Persian's almost mystical affection for his soil.

Or even for soil not his. Most of Iran's villages are owned, from dwellings to fields, by landlords. Raḥmatābād is no exception. Much has been written about the economic serfdom of the Iranian peasant, who may receive only a fifth of his crop for his toil. A land reform bill aimed at redistributing large private holdings has been passed by the Majlis, Iran's House of Representatives.

I later spoke to the owner of Raḥmatābād, himself a member of the Majlis.

"It is true, times are changing," he told me in Tehrān. "Perhaps one day every Iranian farmer will work his own field. But first he must learn to use it wisely."

### Port Dreams of Proud Past

Bandar 'Abbās dozes in the heat haze of the Persian Gulf, a beachcomber dreaming of long-spent wealth. Once a fishing village called Gombrun, it was built by Shah Abbas into Persia's greatest seaport.

Here in the port's 17th-century heyday, British and Dutch merchantmen loaded gold, silver, and mother-of-pearl; fine horses, dates, rose water, and the incomparable treasures of Persian looms. From Bandar 'Abbās's warehouses, camels plodded northwestward to Shīrāz and Eṣfahān, laden with stout Eng-

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**Zoroastrian priest guards a temple fire,** symbol of purity. He wears a mask lest human breath contaminate the flame. Small colonies in Kermān and Yazd still follow Zoroaster, founder of the faith that was the national religion before the Moslem conquest in 641.

**Beach market at Bandar 'Abbās** offers fish from the Persian Gulf, tomatoes, and squash. Woman with gold nose rosette eyes the camera disapprovingly. Palm-mat lean-tos shade merchants from a scorching sun. Summer temperatures here reach 130° F.

lish textiles, gunpowder, hardware, copper, and spices from the Indies.

Shallows fend off today's deep-draft vessels; the few that call here anchor several miles offshore. Only two ships rode the harbor when we arrived: a converted LST, mother ship to a tiny shrimp-fishing fleet, and a squat German freighter taking on chromite ore.

I threaded through the port's beach market, a narrow strand where produce arrives by both donkey and dhow. The gabble of merchants and patrons proclaimed a polyglot people: Arabs, Baluchi, and Kashgai among them, and others whose blood clearly mingled with that of Europe, India, and Africa.

Sardines, tuna, red snapper, and a dozen fish varieties strange to me lay heaped on straw mats, wafting notice of a fine morning's catch to the nostrils.

"We have 150 different kinds of fish in these waters," a resident told me. The near-by Conserve, a 20-year-old cannery, was being renovated by the Plan Organization, the Iranian agency responsible for executing the nation's ambitious development program.

Pat Hickey, a California cannery expert, put down a wrench and shouted above a clattering machine. "We're packing 100, sometimes 150 cases of sardines a day. In full operation we should turn out a thousand. One trouble is, we can't work through the summer. Without refrigeration the catch would be half cooked before it reached the dock."

We asked at the customs house, rebuilt from the Dutch East India Company factory of another century, for passage to Hormoz Island, hanging like a cloud on the horizon.

"*Farda*," we were told. "Tomorrow." Not until then would a boat be free to take us to that old Portuguese stronghold.

The delay cost us a precious day of travel time—and possibly saved our lives.

### Wooden Pegs Hold Dhow Together

In the morning we clambered aboard a 40-foot motor dhow, her planking fastened with wooden pegs. As the ancient engine wheezed and shuddered, I thought of Marco Polo's ominous comment:

"They have no iron to make nails of, and for this reason they use only wooden trenails in their shipbuilding. . . . Hence 'tis a perilous business to go a voyage in one of those ships, and many of them are lost. . . ."

**Earthquake in Iran Leaves Lār in Ruins**

Two major shocks last April 24 devastated this city of 17,000 people. NATIONAL GEOGRAPHIC reporters Linehan and Abercrombie, arriving 24 hours later, found a scene of "incredible chaos." More than 500 persons lay buried in the debris.

This telephoto view surveys shattered rooftops and louvered wind towers that served as air-cooling systems for lower floors. Survivors camp on a hillside.

**A distraught father,** arms upraised, pleads with soldiers to dig out his wife and children. But the pickax squad faced a more urgent task: the rescue of a hundred children entombed in a school close by.

But the raffish-looking Arab skipper had not read Marco Polo. He cracked melon seeds between his teeth, spat out the husks, and steered confidently with his toes.

We waded ashore in the lee of the island's great red fortress, still in astonishingly good repair. From a cluster of flat buildings a few fishermen stared at us with bland curiosity.

Had we landed with Portuguese Admiral Affonso de Albuquerque some 350 years earlier, we would have found a teeming trading city of 40,000 persons—"The Moors of Ormus," wearing "many rich silk garments, and others of camlet and scarlet in-grain."*

Albuquerque took Hormoz from the Persians, and Shah Abbas cajoled British merchantmen into helping him wrest it back again. Then the great Shah, lacking sea power to defend the island, pulled down its houses and rebuilt the port on the mainland, where it stands today.

A village of several hundred fishermen and iron oxide miners remains beside the brooding fortress, but even most of these abandon the searing island in the summer for the mainland oasis of Mīnāb.

### Baleful Sun Warns of Disaster

The dashed line on the road map means "suitable for animal transportation." Caravans have used this broken, twisting track for centuries, and after all, why else is a jeep equipped with four-wheel drive?

You decide to follow it.

A day of driving through, up, and over the crumbled southern edge of Iran's plateau, crossing the same cobble-strewn streambeds a dozen times, and you reach a long, dry valley. But the sun ahead is all wrong.

It is not the friendly caldron of molten cop-

*The remarkable record of Portugal's early navigators and colonizers is detailed by Alan Villiers in "Prince Henry, the Explorer Who Stayed Home," NATIONAL GEOGRAPHIC, November, 1960.

KODACHROMES (ABOVE) AND EKTACHROMES BY THOMAS J. ABERCROMBIE, NATIONAL GEOGRAPHIC STAFF © N.G.S.

per you have seen in so many sunsets before, but now a malevolent, lemon-colored eye. Its light filters through a heavy, unnatural screen of dust hanging over the distant city.

The first approaching vehicle of this day's travel tears twin brown streamers from the dusty road. It is a pick-up truck crowded with people.

The driver stops, points at the ground, and rocks his hand. You know now what he means by "*Zelzeleh!*"

Earthquake.

Not twenty-four hours before, the city of Lār was torn asunder. But for a day's delay in chartering a boat for Hormoz, you would have been there.

**Rescuers Work Amid Shaking Ruins**

A woman sits beside a darkened street amid tangled telephone wires, clutching a bundle of belongings. Army and Gendarme jeeps career past, seemingly without purpose. Headlights pick out great cracks in brick walls; here the front of a house is sheared away, exposing furniture in perfect array.

But you see no bodies, no one in need of first aid, only an occasional bandage.

Drive, then, away from weakened walls, skirt a rockslide, to sleep beside a kanat mound.

Sleep does not come. At intervals the earth writhes, and in some distant hollow place roars its torment. With each tremor the chorus of the dispossessed sounds near by: "*Allah! Allah!*"

Overhead a meteorite streaks its exclamation point across the sky. Through the night the headlights pass—soldiers, rescuers, doctors for the stricken city.

At daybreak join a platoon bearing shovels and stretchers and sheets. Pick your way through rubble-filled alleys to the center of destruction—and realize with a shock that you are walking on collapsed rooftops (preceding page).

Observe the anguished one pleading with the soldiers to dig; seven are buried here. They shake him off gently. Twenty lie under the next wall. A hundred children are buried in their school near by.

Watch and listen to this old one keening over a fragment of a girl child's dress, and that one, in the bazaar square, quietly washing a husband's face before burial. Few injured will be found here; mud-brick roofs weigh too much.

Stand helpless, feet apart, as the earth moves again—and topples a wall on 10 of the diggers you left a few minutes before. As the day grows hotter, and you can no longer

**Persepolis: Show Place of Persian Monarchs**

Here 25 centuries ago Darius I and his son Xerxes built a magnificent capital. When Alexander the Great conquered the city in 330 B.C., his troops burned its palaces. Rock carvings in the Apadana, the royal audience hall, depict Assyrians (top panel) and Afghans bearing tribute to Xerxes.

These Kashgai tourists, the women in tribal garb, inspect the antiquities. Each year thousands of Iranians and foreigners explore the sun-baked ruins, which are preserved as a national shrine.

**Colossal columns,** two of thirteen still standing, supported the Apadana's roof, which was timbered with Lebanon cedars.

Women from near-by Shīrāz wear white chadors above Western dress.

stomach the sight and sound and smell of death's aftermath, depart.

And feel the sharp, irrational guilt of those who can leave tragedy behind.

Only about 500 died at Lār, far from the worst disaster to strike geologically unstable Iran. One 18th-century quake killed 40,000, and six temblors since 1953 have taken more than 5,000 lives.

### Shīrāz, City of Poets

Shīrāz is a city of show places, attracting thousands of Iranian and foreign tourists every year.

Iran enshrines its poets as sumptuously as its kings, and two of the most famous, Sa'di and Hafiz, lie buried here. I watched the reverence of pilgrims to the tombs, and wished for fluency in Farsi.

This much, at least, I could appreciate—the lines of Hafiz engraved on the stone of his sarcophagus:

*My soul, like a homing bird, yearning*
*for Paradise,*
*Shall arise and soar, from the snares of*
*the world set free.*

In the magnificent gardens of Shīrāz I could appreciate, too, the Persian love of flowers. Once along the road I had witnessed a small event most odd in any other land: a burly Gendarme sergeant delivering a crisp salute, and presenting his commanding officer with a single red rose. The commandant nuzzled the bloom thoughtfully, returned the salute, and strode off.

In the Khalili and Iram gardens of Shīrāz the incident seemed not unusual. Here the clamorous color of rose, carnation, and morning glory demanded the affection of the eye.

But the greatest show place near Shīrāz lies 35 miles northeast of the city, in the ruins of Persepolis (pages 70 and 71).

It was fitting that we saw Persepolis in spring, for here the Achaemenid monarchs feasted and welcomed the vernal equinox. Winters they spent at Susa to the west; summers near Hamadān to the north.

As we wandered amid the sprawling stones, some perhaps lying where Alexander left them in his puzzling orgy of destruction,

**Full-skirted** Kashgai shepherdess prods her goats and fat-tailed sheep.

A typical Kashgai may own 150 sheep, a few goats, and a dozen or so horses, camels, and donkeys. His flocks are his capital: They provide milk, cheese, meat, and wool.

**A Kashgai's Home Is His Goat-hair Tent**

Seminomadic peoples—Kashgai, Lur, Kurd, Bakhtiari, and lesser tribes—make up an estimated sixth of Iran's 21,281,000 population. Many of the tribes are a law unto themselves, taking orders only from elected or hereditary chiefs.

From time immemorial the hardy, self-sufficient Kashgai have wandered Iran's valleys and mountains. Spring's first sign starts their migration to lofty pastures with grass-hungry herds. In autumn they retrace the long, slow trek to southern plains.

This family camps for the night near Shîrâz. Mother prepares supper while father tends the flock.

**Polka-dot chador** and eye-level bangs partly conceal a young weaver in the village of 'Aliabād, near Kermān.

Reza Shah Pahlavi outlawed the veil 25 years ago, but custom dies hard. In rural Iran many women feel uncomfortable without a veil and clutch their robe tightly about the face or clench it in their teeth.

**Sedate Kurdish girl** and her jovial companions attend a wedding party in Bowkān. Several million Kurds dwell in the mountainous region where Iran, Iraq, and Turkey meet. Tribesmen of Aryan stock, they speak an ancient language akin to Persian.

**Lur mother and child** pose for a roadside portrait near the town of Behbehān. One of Iran's four major tribal groups, the Lurs live in the Zagros Mountains, south of the Kurds. They are known as superb hunters.

a guide pointed to a splendid polished frieze.

"*Salaam No-Ruz*," he said. And surely it was the same ceremony we had witnessed in modern Tehrān some 2,500 years later.

There the diplomatic corps offered greetings of their varied nations to a 20th-century king. Here Phoenicians in stone brought articles of gold and a chariot; Elamites offered weapons and a lioness with cubs; Egyptians, Bactrians, Medes, Assyrians, and a dozen other ancient peoples brought the best their kingdoms had to give.

Skilled artisans from Babylon, Egypt, Sardis, Media, and other parts of the far-flung empire helped build Persepolis, even as today's Plan Organization draws on world-wide technical skills. We would see roads built by Danes, dams built by Frenchmen and Italians, communications networks by Germans, and a seaport by British, Dutch, and Americans.

**Nomads Trek to Summer Pasture**

Two days of hard driving across razorback ridges and baking plains brought us to the southwest corner of the country and the tall smokestacks of Ābādān.

En route we witnessed yet another stirring symbol of spring. Descending a narrow mountain pass, the jeep was blocked by a wall of wool—hundreds of bleating sheep and goats. Behind them plodded camels loaded with black goat-hair tents, stakes, carpets, and household utensils (pages 72-73).

Men in blue robes and sashes and winged felt caps shouted and switched the livestock on. Women and infants rode donkeys. A healthy, handsome people, I thought, bronzed and curious, but reserved. These were the Kashgai, making their annual trek from the hot lowlands of Fārs to cool, high summer pasture.*

After 3,000 miles of hot, dusty roads it was exquisite pleasure to be served by white-jacketed attendants at the beautiful air-conditioned Riverside Guest House at Ābādān.

The Anglo-Iranian Oil Company relinquished control of the Ābādān refinery after Iran's oil industry was nationalized in 1951.† The British touch can still be seen in the many miles of tidy hedge around the city's brick cottages.

Today Ābādān and most of Iran's oil industry is run by 17 foreign companies, together known as the Consortium. It operates under an agreement with Iran and the National Iranian Oil Company, which in turn helps pay for Plan Organization's multiple projects.

The heart of the industry is Ābādān, the biggest and only complete oil refinery in the Middle East. It can convert more than 400,000 barrels of crude oil daily into 102 types and grades of petroleum products.

A British Dove, a swift little eight-seater plane, whisked us from Ābādān over the wild, bare ridges of southern Khūzestān to Āghā Jāri, then producing 700,000 barrels of oil a day—nearly three-fourths of Iran's output.

"So far this field is 3½ to 4 miles across, 35 miles long, and we're still looking for the other end of it," Field Superintendent Assad Abolfathi told me. "It's an oil man's dream—it takes a lot of skill to drill a dry hole here!"

Āghā Jāri's Well 59 had come in at 7,300 feet several days before. "Should flow 25,000 to 30,000 barrels a day, about average for this field," drawled the "toolpusher" in charge, a Texan. "And back home we get excited about a 500-barrel well!"

Seventy-five miles to the east, tongues of flame licked from the hillsides as we landed at Gach Sārān. The Consortium is sensitive about these flares, for they burn up millions of cubic feet of natural gas that roars out of the ground at tremendous pressure—a thousand pounds per square inch. The fires now are the only safe way to dispose of the dangerous gas, which is necessarily produced with the oil. Soon, however, the gas from Gach Sārān will be piped to Shīrāz for the manufacture of chemical fertilizer. That from Āghā Jāri goes by pipeline to Ābādān for refinery use (page 45); part of it may someday be converted into vinyl plastic.

**Gazelle Plus Goat Equals "Gazoat"**

On near-by Khārk, a two-by-four-mile island in the Persian Gulf, 2,000 sweating workmen were building a dozen oil storage tanks, among the world's largest, and a half-mile-long pier able to dock supertankers.

Several gazelles scampered off as we bounced over the island's eastern end in a Land-Rover. "The Iranian Navy landed a pair of them here about fifteen years ago,"

*The proud, wandering life of this Iranian nomad tribe was described by Jean and Franc Shor in "We Dwelt in Kashgai Tents," NATIONAL GEOGRAPHIC, June, 1952.

†George W. Long reported on the country's oil nationalization in "Journey Into Troubled Iran," NATIONAL GEOGRAPHIC, October, 1951.

our guide told us. "Now we have a wild herd of eighty."

He nodded toward a flock of tame goats grazing near by. "Those odd-looking brown ones are hybrids—half goat, half gazelle."

"Goatzelles?" I suggested.

"Gazoats!" Tom proclaimed.

### New Dam Will Turn Wasteland Green

At the island's end we found a 30-inch pipeline emerging like a black serpent from the gulf. Its far end lay 99 miles away and 2,215 feet higher, at Gach Sārān. A few months later, in August, 1960, the first oil flowed to waiting ships through this longest gravity-fed pipeline in the world.

Tires hissed on molten asphalt as we drove north through scorching Khūzestān. Here was the fertile granary of Cyrus and Darius.

Today, as when Lord Curzon saw it in the 19th century, it is a parched place "over which the eye may roam unrested for miles." Its people can glean only a meager crop of stunted wheat.

Arab and Mongol invasions and centuries of neglect laid waste to Khūzestān by destroying its ancient irrigation works. But the Khūzestān Development Service will soon



Adobe houses of Ḩeshmatābād suggest an Indian pueblo in the American Southwest;

restore the region's one-time green glory.

The ambitious scheme, modeled after TVA, envisions a system of 14 dams across the province's five rivers. They would irrigate some 4,000 square miles, grow sugar cane where none has grown for 500 years, generate six million kilowatts of hydroelectric power, and prevent several million dollars' worth of flood damage annually.

Keystone of the project will be a thin concrete arc soaring 620 feet above the Dez River in the Bakhtiārī foothills—the highest dam in the Middle East, seventh highest in the world (next page).

Winding north through the mountains of Lorestān, we encountered other dynamite crews and bulldozers engaged in the bridge-building and road reconstruction one finds through much of Iran. Nearly a fourth of Plan Organization funds is earmarked for 3,700 miles of new main highways and improved provincial roads.

### Dervish Tells an Epic Tale

But here, too, it seemed a short step back into legendary Persia. Near Khorramābād we met a green-turbaned dervish, one of an order of religious mendicants.



**a snow-fed stream from the towering mountains of Bakhtiāri irrigates fields of Lur farmers**

**Camels Plod Past Iran's New Karaj Dam**

Spring thaws turn rivers into torrents, which shrink to trickles by midsummer. Three multipurpose dams now under construction will harness the runoff and prevent flooding. The Karaj project will provide supplementary power and water for Tehrān, 30 miles southeast.

**Human flies drill walls** of the Dez River gorge in southwest Iran, where 2,000 technicians and workmen are building the Middle East's highest dam. After completion in 1962, the 620-foot Dez Dam and its offshoot canals ultimately will irrigate thousands of square miles of desert. An underground power plant will send current coursing to villages that have never seen electric lights.

"I think he will tell us a story if we ask," said our interpreter.

The dervish seemed dubious. He took his life's work seriously, wandering the countryside reciting to hushed gatherings tales from Iran's national epic, the *Shah Namah*, or Book of Kings. Finally he nodded. We were Americans, but he had decided that perhaps even our souls could be stirred by the glorious 11th-century verse of Firdausi.

In the shadow of an old watchtower he intoned a tale of Rustam, the champion of Iran, and his battle with the monstrous White Div.

The dervish's eyes gleamed in the afternoon sun like Rustam's sword, as that great hero, girt in a tiger skin, slew a hideous dragon and contemptuously tore the ears from the guardian of the White Div's forest.

Then, in a cavern deep in the Haftkūh—"Seven Mountains"—the hero and the monster met hand to hand. Great streams of gore gushed from both combatants, and the issue was in doubt. But Rustam called on his god, and with a mighty effort raised the demon high and dashed it lifeless to the earth.

"As so often before, the great Rustam, the invincible Rustam, had saved Iran."

We left the dervish in Khorramābād, where that evening he would hold teahouse patrons spellbound with legends of the past.

"Where will you sleep tomorrow?" I asked.

"I am a dervish," he shrugged. "We are people of today."

Two days later we sat in a Tehrān hotel room planning the remainder of our route. Our time was growing short, and there was far more of Iran to see. The northwestern and northeastern provinces of Azerbaijan and Khorāsān, centered on Tabrīz and Mashhad, span a thousand miles, flanking the Caspian regions of Gīlān and Māzandarān.

### Azerbaijan Lies in Shadow of a Bear

Since the days of Peter the Great, a long shadow has hovered over uneasy Azerbaijan.

You first detect it when you squeeze into a tiny taxicab at the Tabrīz airport. The machine, you note, is a Soviet-made Moskvich. The feeling grows as you stroll past drab shopwindows full of plumbing fixtures and sewing machines, and hear the clip-clop of droshky horses in Iran's second metropolis. At the Arg, a ruined 14th-century citadel, you examine a simple "war" memorial; it honors those killed overthrowing the Soviet puppet Republic of Azerbaijan in 1946.

The shadow seems to darken as you drive north past lush grainfields and fruit orchards, following the Russian-built railroad to Jolfā.

Finally, through strategic Daradiz Pass, the gloom descends with oppressive weight. There across the Aras River lie the brooding, cloud-capped mountains and dark bulk of the country that casts a shadow.

"Russian sugar," apologizes the Iranian Border Guard officer, only half in jest. It does seem that you have to stir the rocklike lump twice as long.

**Kurds play** *as*, an ancient Persian card game similar to poker. Tribesmen love to gamble; stakes often run high.

KODACHROME © NATIONAL GEOGRAPHIC SOCIETY

After the tea formality—two small glasses in silver filigree holders—he shows you the customs yard, where crates of Russian plate glass lie stacked beside Czechoslovakian chemicals and a dozen bright-red East German harvesting machines.

Then to the wood-planked bridge, barred at mid-river by a steel gate (page 82). It is opened nowadays only to toss mail sacks from one truck to another.

Peer between the bars and release them in odd haste—your fingers have strayed into Russia.

Sweep binoculars over sentry boxes, machine shops, barracks, power lines, and the long sandwich of plowed earth between barbed wire at the river's edge. Settle on the wooden tower to the left . . . touch the focus knob . . . ah, *there*.

It is absurd. The cold glass eye of a telescope is aimed straight back at you.

"We have 400 people on this side of the river—all railroad workers," the officer says. "Over there 25,000 sometimes work in the railroad shops. And on other things, I presume."

What other things?

"Who knows? But one hears that, from downstream, concrete works can be seen behind

KODACHROME BY THOMAS J. ABERCROMBIE, NATIONAL GEOGRAPHIC STAFF © N.G.S.

**Dagger in Belt, a Kurdish Patriarch Surveys the Village of Hamāmian**

Yard-long shirt cuffs wrap around the forearms. "In the old days," their owner told the author, "there were many battles, and we carried our bandages with us."

that hill, and objects pointed into the air."

South again, beyond Tabrīz, almond, peach, and pear orchards huddle thickly behind mud walls. Azeri peasants in visored caps and Western garb switch sleek cattle out of vegetable gardens; grapevines turn earth mounds green. The gray loam yields bountifully here, even without kanats.

### "We Have Been Iranians for 6,000 Years"

Here colorful Kurdish turbans with "fly-whisk" fringes move among Azeri caps, and military headgear appears in profusion.

Near-by Mahābād, capital of the abortive Kurdish Republic of 1945, is now headquarters of the Iranian Army's crack Third Corps. Its commander, Gen. Karim Varahram, sipped his tea and talked of the Kurds.

About one million of these handsome, independent tribesmen inhabit the plains and hills of northwest Iran, from Khvoy to Kermānshāh. Two million more live in eastern Iraq and Turkey.* They have long been of special concern to the Iranian Government.

"The problem with the Kurds is their living standard," said the general. "We must improve it. His Imperial Majesty has ordered a three-year building program—hospitals, roads, and schools. We have put up six new schools in two years in this area of Kurdistan alone. Already more than 5,000 of Mahābād's 22,000 people are students."

Meanwhile the general keeps a watchful eye on his borders. It was from Iraq and Turkey that most of the agitation for Kurdish autonomy came some 15 years ago.

In the town of Bowkān, 30 miles away, a Kurd explained it to me.

"The Kurds in Iraq are not Arabs; those in Turkey are not Turks," said Qassim Ilkhanizadeh, a leader of the Dehbukri tribe, 50,000 strong. "That is why they want their own republic. But we, we *are* Iranians, and have been for 6,000 years."

We dined with the Ilkhanizadeh brothers—eight of them—on savory Kurdish specialties: broiled chicken with green plum sauce, *dolmeh* (meat, rice, and peas in grape leaves), and sweet preserved squash and eggplant.

*Justice Douglas writes of the Kurds in "Station Wagon Odyssey: Baghdad to Istanbul," NATIONAL GEOGRAPHIC, January, 1959.

KODACHROME © NATIONAL GEOGRAPHIC SOCIETY

**Steel Gates at Jolfā Separate Iran From the Grim, Gray Hills of Russia**

Sentry towers stare down on a bridge which no traffic crosses, wheeled or pedestrian. Trucks exchange mail at midpoint, where the author talks with an Iranian border guard.

Next day before leaving we visited their father's village, Hamāmian. At 81, that white-bearded patriarch still rode a horse every morning to inspect his fields of wheat, sugar beets, and tobacco (preceding page).

**Hercules Guards a Modern Highway**

Kurdistan ends at Kermânshâh, now as centuries ago a way station between Baghdād and eastern Iran. Carved high on a cliff at near-by Bīsotūn, a proud Persian surveys ten captive monarchs and proclaims: "I am Darius, Great King, King of Kings, King in Persia, King of Countries. . . ."

Below, the asphalted road abruptly narrows to a single lane, then widens again. A few months earlier, workmen straightening the highway had uncovered a splendid statue of Hercules, too massive to be moved. Hercules blocks the road there now, a startling reminder of Alexander's conquest and of the Seleucid Greeks who ruled Persia after him.

An archeological team we met in Kermānshāh paid little heed to such recent turning points in Persian history. They sought the hinge of civilization itself.

"When did man first move out of a cave and learn to grow a crop and tame an animal for food? That's what we want to learn," said Dr. Jack Harlan of Oklahoma State University, senior agronomist of Iranian Prehistoric Project.

His colleagues, packing the flint fragments, potsherds, and animal bones of a season's digging, included a score of specialists in archeology, geology, botany, zoology, ceramics, even ethnology.

Dr. Harlan took us to see the digging sites. In one cave the scientists had found flaked-flint points and scrapers, 40,000 years old or more, characteristic of Neanderthal man. Out in the Kermānshāh valley they had dug up not only remains of wild goats, sheep, and pigs, but a few flint sickle blades, suggesting an incipient agriculture 10,000 to 12,000 years ago.

In humanity's long drama, civilization

waited interminably in the wings for the cue that finally came: a man stoops, scratches the earth, and buries a seed.

The span of overlapping centuries in all of Iran was longest here. I glanced up from this pit of the past and saw the smoke of Kermânshâh's modern oil refinery, heard the take-off roar of an airliner.

### Holy City of Iran

A DC-3 of Iranair, the national airline, took us back to Tehrān; another winged us 470 miles eastward to Mashhad.

On the bumpy flight to Iran's holiest city, dust devils danced like chiffon pennants among raw, red hills below. To the north rose the Elburz ramparts; ahead lay the valleys of Khorāsān and the Turkmen tribesmen who farm them. Southward lay 700 miles of desert.

Beyond Neyshābūr, where Omar Khayyam lies buried, a fleck of gold glimmered in the distance: the shrine of the Imam Reza, eighth spiritual leader of Iran's predominant Shia Moslem sect, who died in the year 818.

KODACHROME BY ROBERT F. SISSON, NATIONAL GEOGRAPHIC STAFF © N.G.S.

**The Shahanshah and Queen Farah** stroll with the author and photographer in the garden of their summer palace near Tehrān. Five months later the Queen gave birth to a prince and heir to the Iranian throne.

The director of the shrine museum in Mashhad showed us its religious treasures of the centuries: ancient tapestries of silk, silver, and seed pearls; a collection of priceless Korans, some a thousand years old, illustrated with brilliant miniature paintings; religious poems engraved on gold plates four centuries ago by Persia's most famous calligrapher, Ali Reza Abbasi. Handwriting is still regarded as a classic art in Iran.

I wandered through the library of 40,000 volumes and rare manuscripts on religion, history, philosophy, and literature, written in many languages. Among the English books I stopped short and pondered the museum's most enigmatic acquisition: *The Merriweather Girls and the Mystery of the Queen's Fan.*

As for the high-walled shrine itself, we could watch the pilgrims performing their ablutions in its sunny courtyards from the roofs of near-by buildings. But the sacred tomb inside was not for Western eyes.

Our most intimate glimpse of living Islam would come some days later at the beautiful Sepahsalar Mosque in Tehrān.

### "Let Them See How We Pray"

It was Friday, nearly noon. Might we observe and photograph the faithful at their prayers?

The affable superintendent conferred with the mullah, the mosque's religious leader, who readily consented.

Hard stares greeted Tom's cameras as we slipped off our shoes and placed them sole to sole beside a whitewashed pillar.

"If anyone wishes to leave, do so now!" said the white-turbaned mullah sternly; no one did. Then, more softly, "Let them see

how we pray. It is better that they know. We are all human—all brothers."

He led his flock through the chant and ritual of the prescribed eight cycles of prayer; women, behind a green curtain, prayed unseen.

As these men stood, bowed, knelt, and lowered foreheads reverently toward the floor, submitting their souls together to Allah, I could not escape the tremendous sense of unity in Islam (page 60).

Even in this cosmopolitan capital with its American cigarettes, British automobiles, and Italian movies, Iran's national religion is no spent force.

Prayers over, reserve gave way to curiosity, smiles, and handshakes.

### Prince Born to the Peacock Throne

Another hand, extended in regal greeting a few days later, solved a nagging problem of protocol for me: Does a visiting journalist bow to the monarch of 21 million people?

With the Shah and Her Imperial Majesty Queen Farah, Tom and I strolled the garden of the White Palace, the royal summer residence in the cool, foothill Tehrān suburb of Shemīrān. Queen Farah then was a striking, radiant mother-to-be; on October 31, 1960—the 9th of Aban, 1339—she gave birth to Iran's new heir to the throne, the Crown Prince Reza (preceding page).

Ensconced in comfortable rattan, I found most of my carefully prepared questions needless. The Shah speaks easily and frankly, in flawless English.

What, I wondered aloud during an hour-long interview, is it like to be a king?

"Dangerous," His Majesty replied with a wry smile. He pointed out faint scars on his cheek and upper lip. In 1949 a would-be assassin, later linked to a Communist cell, had shot him in the face and shoulder and put three bullets through his hat.

"I thought when I was younger"—he is now 41—"that I would like medicine as a career. There is not much pleasure or fun in this job. But still it has a great reward—I know that in my position I can do a great deal for my people."

He built a tower of his fingertips and spoke of 20th-century Iran's problems and accomplishments: land redistribution, labor laws, fair taxation, social justice, and what he called a "positive nationalism."

"We have tried to do in four or five years what other nations have spent four or five centuries to achieve," he said. "Mistakes are natural. But we have a great asset—we have no inferiority complex; we feel equal to anyone!"

Now he provided me with what I think is the key to the puzzle of old-new Iran.

"Twice in my reign I have seen Iranians rise up when all seemed lost," he said, and there was no question of this monarch's pride in his people. "It happened once during the Azerbaijan crisis, and again in 1953, with the Mossadegh affair. Even today we don't have good communications, but then it was like telepathy—a kind of human antenna. The whole nation acted as one to save its past and its future.

"Iranians are old, mature," he continued. "They have been able to remain on their feet, independent, for more than 2,500 years. There must be great qualities in them to have resisted so many invasions and calamities through the centuries, and still retain their traditions and their character."

### Iran Melds the Old and the New

To me the centuries suddenly fell into order. Ages *do* overlap in Iran, I thought, but there is more here than a confusing admixture of old ruins and new highways, No-Ruz and hydroelectric dams, dervishes and a modern-thinking king.

Through it all runs a consistent thread, the nature of its people. A resilient strength, an optimism, a pride that has enabled them to absorb their conquerors throughout history, to cope with a 20th-century technology foreign to them, while holding firmly to old, good ways.

There seemed no conflict of dates now, as I boarded a plane for home on the 27th of Khordad, 1339 . . . or was it June 17, 1960?

It could be both, and it was.

**Drainage Channels Etch a Ghostly Tree in the Kārūn Delta Flats**

Alternately swollen and shrunk by tides in the Persian Gulf, the watery fingers advance and retreat through a muddy, uninhabited wasteland. Silting and erosion constantly change the land's profile. Inlets appear and vanish overnight. Photographer Abercrombie, flying out of Ābādān, took the air view at 10,000 feet.

KODACHROME © NATIONAL GEOGRAPHIC SOCIETY

**Howling winds** chase a snow plume from Everest's glittering crest. The author took the picture from an unpressurized Douglas DC-3 lent to him by the King of Nepal.

**Figures from Hindu mythology** adorn a wooden pillar of a temple in Katmandu.

# A New Look at Everest

Article and photographs by DAG HAMMARSKJÖLD, Secretary-General, United Nations

WE FLEW NORTH from Calcutta to Katmandu in the early afternoon. The season was beginning to change, and heavy clouds had already condensed over the mountains.

I was sitting in the cockpit with the pilot – a man as able as he was pleasant – and he told me eloquently about what I did *not* see. He spoke with glowing enthusiasm about his flights into the Himalayas, during which he found a sense of freedom and elation that gave him the best moments of his life.

After a reception in Katmandu, a representative of the government, knowing of my interest in mountaineering, asked me whether I would like to fly into the eastern ranges of the Himalayas early the next morning before the start of official discussions that had brought me to Nepal. The King would put at our disposal his plane and pilot, the same young Sikh who had flown us from Calcutta.

I accepted eagerly. From then on I kept my fingers crossed, hoping that the weather would make its contribution to what promised to be a unique experience snatched from work in a couple of morning hours.

**Wind-swept ridges of a peak near Annapurna sweep above a wilderness of ice and snow**

In the late evening we went strolling through the old city. The moon was bright, and over the narrow streets, lying in dark shadow, the roofs with their stern but festive architecture glimmered in the light.

**Street Vendors Vanish for the Night**

It was the time when people went to bed. The shops were closing, and the street vendors, who had spent the afternoon selling and buying before their charcoal fires and spinning their long tales, were going home. Finally, we drifted practically alone among the temples and palaces with their fantastic multicolored wooden carvings, which seemed to come to life in the shimmering light.

Our Nepalese friend and guide suggested a visit to the great Buddhist shrine of Swayambhunath on a hill outside the city. Although it was late, I accepted, as I knew that the rest of our time would be mostly taken up by work. I did so not only because of my wish to see this famous place, but also because I hoped that in the clear moonlight we might get a view over the foothills toward the mountains.

We went as far as the car would take us. Then we walked the narrow, circular road up the steep hill on the top of which the stupa dreamed its dream of a world beyond pain

and vicissitude in the shadow of the timeless mountains.

The air had the freshness of a spring night at Easter time in Burgundy. The association may seem farfetched, but the hills around led my thoughts to the land about Vézelay, where a shrine rises in the same way as a goal of pilgrimage.*

The stillness was broken by chattering screams and noises, and soon we were surrounded by monkeys, surprised but seemingly also pleased to get this unexpected company at a late hour.

**Visitors Join in Tribute to Buddha**

Two Tibetan monks in their high boots were walking around the stupa, turning the prayer wheels as they passed. At the side open toward Katmandu we stopped and looked out over the wide valley. A few lights still shone in the city and in Patan. For the rest, everything was asleep in a quiet that seemed to be in deep harmony with the spirit to which the shrine was dedicated. We were not far from the birthplace of the Buddha, and back of us the stupa rose against the night sky in a silence broken only by the light metallic sounds from the prayer wheels.

One of the monks opened the screen doors to a side chapel in which a big Buddha could barely be seen. Silently the monk invited us in and gave us candles and flowers. To share with him his reverence for the mystery of life was easy in this setting, so intensely reflecting the endlessness of man's search and the greatness of the world to which he belongs.

The clouds had disappeared, but a haze had arisen in the cool night and cut us off from the view of the high mountains. Although they were invisible, we could nonetheless strongly feel their presence in the deep blue behind the foothills.

I have described this evening because it gave me such a perfect introduction to our flight the next morning into the mountains. They are holy to the people as the dwelling of the gods, and for that reason they should be approached in the spirit into which our visit to the stupa had initiated us.

I learned later that because of this reverence for the mountains—but naturally also for more secular reasons—the government heretofore had permitted only a few persons to photograph the high ranges from the air.†

After sunrise the next morning, the haze had gone and the sky was without a cloud. When we came down to the airstrip, the icy summits of the closest mountains stood out sharply over the green hills around the valley.

We flew through the valleys in the direction of Gauri Sankar and Everest (map, page 92). Even if we had never come to these mountains, it would have been a great experience just to see the beauty of the valleys and of the hillsides in the early morning light, the structure of the landscape, and the picturesque way in which cultivation and villages have developed.

The plane in which we were flying was a DC-3, nonpressurized and without oxygen. That naturally set an altitude limit for the flight; we flew at a height of twelve to fifteen thousand feet.

Our route took us first in under the overwhelming south wall of Gauri Sankar, with its beautiful double summit consecrated to the two Hindu deities that give the mountain its name (next page). At our altitude we seemed to approach it at mid-height. Its vast size gave the impression that we were even closer to the mountainside than we were.

A somewhat lighthearted association was that this must be the way a fly feels as it approaches a house where it hopes to sit down on the wall for a nice quiet rest in the sun. Then, as we came closer, my climber's instincts were aroused and I started speculating—in vain—on possible routes of access for those who one day might brave this most inaccessible south mountain wall.

**Regal Plume Marks Everest**

But planes move fast, and a few minutes later we had, so to speak, rounded a corner and were looking in over the icy wastes of the Himalayas. Forbidding in its bold, sculptural structure, it was a world far beyond human comprehension and of the harsh purity we are accustomed to find in the miniature world of crystals. But here it met the eye in proportions that reduced our human world to a microcosm.

Swinging southeast, we left these areas behind us and headed toward Everest. Over the highest green hills, which seemed to be clad in dark green moss, the Everest range stretched out in compact strength. The pilot pointed to a sharp peak behind the nearest ice-clad mountains. It wore a plume of snow, made by strong

*See "Vézelay, Hill of the Pilgrims," by Melvin Hall, NATIONAL GEOGRAPHIC, February, 1953.

†See "The Aerial Conquest of Everest," by L. V. S. Blacker, NATIONAL GEOGRAPHIC, August, 1933.

northwesterly winds. This was Everest, its special rank and position marked with a truly regal ornament (page 86).

From here on the route became somewhat confusing to me. The pilot found his way through valleys, over passes, and between mountains with an impressive familiarity that left me far behind in my effort to orient myself. It added to my confusion that I developed a kind of hunting fever with my camera; I felt I must try to get a chronicle in pictures of the constantly changing views and renewed experiences of stunning beauty.

Mount Everest? Is it heresy to say that it somewhat let me down? Beautiful in its clean outlines? Yes, both that and impressive. But it stood, from the angle at which we saw it, without that accent which separates one mountain from another and gives it a personality to stamp its mark on your mind.

Now I ranged Everest in the files of my memory in very much the same way as I could Mont Blanc – a mountain singled out by its proportions and by its history in human terms more than by other qualities. I thought of Hillary's gaunt stride and ruddy face, I remembered Tenzing's soft handshake and subtle smile.

Superficially, they were an oddly matched pair, but combining qualities that brought

**Gauri Sankar's awesome wall** pierces the sky between Nepal and Tibet. When seen from the valleys to the south, the huge ridge appears to dominate the Himalayas. Its 23,440-foot summit remains unconquered. A Japanese party tried in vain to scale the north side in 1959. Veteran mountaineers consider the massif's sheer Nepalese face (below) impassable. Sankar (Siva),

the Hindu god of destruction, and his wife Gauri (Parvati) give their names to the twin peaks at left.

Mr. Hammarskjöld made two separate photographs as his plane flew past Gauri Sankar. Placed side by side, they form a single panorama.

**Nepal's Mountain Ramparts Crown the World's Roof**

Mr. Hammarskjöld flew north from Calcutta to Katmandu, then east to Everest, and finally west past Annapurna and other giants of the Himalayas on the way to Delhi.

them to that summit we saw in front of us. There, expressing an attitude I have often met in the fraternity to which they belong, they displayed the flags not only of their countries but also of the United Nations.*

However, while thinking of those who had succeeded, I could not forget those who had failed. They have been many, and their glory, written into the history of the mountain, is that they went to the limits of the humanly possible and were defeated only by circumstances beyond human mastery.

The first hour had flown away. It was necessary to return if we were to be back in time, and if we wished to avoid the assembling clouds. We came back to Gauri Sankar, and I decided to try to get a full picture of the south wall.

On my first attempt, I felt that I did not succeed, and, forgetting the situation, I asked the pilot to make a second round under the mountain. This time I succeeded and got the pictures on pages 90-91. Meanwhile, however, we had lost altitude, and I could not help smiling—perhaps a little apprehensively—when I saw the pilot looking down through a side window to judge if he would get safely over the range we had to pass.

The experiences of this first contact with the Himalayas from the air were such that I asked the authorities if, on our flight to Delhi somewhat later, we could follow the high mountains west of Katmandu for a distance, in order to cover at least Annapurna. In their generous hospitality, they at once agreed.

During short visits to a country for professional purposes, there is little time for sightseeing. Before we left Katmandu, however, I had another experience that, in its way, tied together the first visit to the Himalayas and what we were to see the next time. Linking the two flights, it also created a bridge to the night at Swayambhunath. Again, it was a visit made with friends, and on a moonlit night.

Just outside the city lies a meadow surrounded by high trees but with a view across the valley to Swayambhunath. It is called the Twenty-two Fountains, for just where a steep hillside breaks the plain, there is a long stone ramp through which the cold waters of a mountain stream burst forth in many openings. It is a place steeped in the atmosphere of the mountains and yet stamped with the mark of ancient, high civilization, as sure in its artistic sense as in its sense of how to create a harmonious interplay between the work of men and the surrounding landscape.

At the side of the ramp lies a small square pond built of stone, eroded by water and frost. Down into it lead worn steps. Resting in the pond lies a statue of the sleeping Vishnu, sunk so deep in the water that only the upper parts of the body break the surface.

The moonlight played on the wet figure, contrasting with the red glow from fires burning a short distance from where we stood. The silence was of the kind that is to be found only in the mountains, a silence that is audible.

### Pilgrims Cook Over Charcoal

The charcoal fires were burning at a rest site on one of the roads from the north. Round them were grouped pilgrims on their way to Swayambhunath, preparing their evening food without a word and without a glance at the strangers who passed.

The sleeping Hindu god and the silent Buddhist monks crystallized two of the great spiritual currents that have grown out of the meeting between man and the mountains. They were of the mountains and of one spirit with the mountains. But they fused into the scenery the soul and the human perspective without which our feeling for nature is sterile and empty aestheticism.

The morning of our flight to Delhi was perfect. The route took us first straight

*Sir John Hunt, the expedition leader, and Sir Edmund Hillary told the story of the famous climb in "Triumph on Everest," NATIONAL GEOGRAPHIC, July, 1954.

toward Tibet. Over the broad pass we could look from a great distance onto the high Tibetan plateau. Then we were in the mountains again, but with a great change of atmosphere. Here the peaks seemed to be isolated giants, each with its own personality.

The first new shock was the Machhapuchhare (the Fish's Tail), a Matterhorn in its bold, towering greatness and its pure balance of lines up to the sharp summit. But soon this impression was surpassed by another.

### Temple Built by the Gods

Climbing in a half circle over a lower range, we suddenly had before us Annapurna, with a beauty of structure and a majesty far surpassing that of Everest or Gauri Sankar. It seemed a Potala, built by the gods for their incarnation not as frail human beings but as giants. The contrast between the sovereign quiet of the mountaintop and the wild ranges leading in toward it added to the other-worldliness, the feeling that we had penetrated into a world of cosmic purpose and character.

In spite of his long experience, the pilot was plainly moved by the sight. If it is possible in an airplane to simulate a tender stroke of affection, that is what he did, using the plane as his fingertips when rounding the glaciers and the rocks.

So we reached the final point, Dhaulagiri, a brutal mass, uninviting with its steep fields of ice and snow furrowed by innumerable ravines, as forbidding as a clenched fist. It is indeed appropriate that this is one of the latest of major Himalayan peaks to be conquered by man. A six-man Swiss team reached the top on May 13, 1960.

To someone who has learned to love the mountains and see in mountaineering one of the most satisfactory ways we can test our ability against nature—yet basically as a tribute to nature—it is somewhat shameful to approach the Himalayas by plane. My last words here should be a tribute to our pilot, who did his job with the deep insight and love of the mountains that characterize the true mountaineer. He managed to convey, at least to this passenger, a bit of the feeling of liberty, strength, and harmony we achieve when we fight a mountain and live with it, helped only by our body and our mind.

UNITED NATIONS

**The distinguished author** (right) welcomes King Mahendra and Queen Ratna of Nepal during their visit to the United States in the spring of 1960. They stand here below the emblem of the United Nations at its New York headquarters.

In 1953 Mr. Hammarskjöld relinquished his duties as Deputy Foreign Minister of Sweden to become the U. N.'s Secretary-General. A mountain climber since boyhood, he served for years as president of the Swedish Alpinist Club.

Hurtling from a snowy ridge,

# SOARING ON SKIS IN

By CAROLYN BENNETT PATTERSON, National Geographic Staff

WE MET in the valley where the snow-packed path snakes off the mountain to become a narrow lane in the village of Zermatt. Both of us had just skied down from a peak called Stockhorn, following a course that begins on a precipitous hanging glacier high in the Alps.

The young aeronautical engineer from New Jersey was breathless. So was I.

"When I started the run, the slope seemed so steep and so high I was scared even to look down it," he said. "Matter of fact, I didn't dare look back up either."

Then a grin spread across his sun-tanned

KODACHROME © NATIONAL GEOGRAPHIC SOCIETY

skiers appear to take wing beneath the Matterhorn

# THE SWISS ALPS

*Illustrations by National Geographic photographer KATHLEEN REVIS*

face. "Glorious, wasn't it?" he said happily.

"Absolutely," I answered.

Six weeks before, the notion that it is a delight to quake in one's ski boots on a mountainside that barely misses being a cliff would have struck me as a form of madness. But six weeks earlier I did not know how to ski, and I had never seen the wonder-world of Zermatt.

Photographer Kathleen Revis and I had been given a challenging assignment. "With the new jet air service over the Atlantic," the editor had said, "more Americans are going abroad to enjoy wintertime sports in Europe.

KODACHROME © NATIONAL GEOGRAPHIC SOCIETY

**The author,** locking the safety binding of her ski, prepares for take-off from the summit of Gornergrat (page 112). On tumbles, a spring automatically releases the binding's grip on her boot. Ankle straps prevent a loose ski from skidding down a slope. Red bag worn across the back serves as a purse.

A onetime newspaper reporter, Carolyn Bennett Patterson joined the National Geographic staff in 1949. She is a native Mississippian. Switzerland introduced her to high mountains and deep snow as well as to the sport of skiing.

**Zermatt** is Switzerland's southernmost ski resort (map, right). Its chair lifts, cableways, T-bars, and platter-pull ski tows are lined in red below.

Find out what they can expect if they go skiing in Switzerland."

It was decided that we should go to Zermatt, where the skiing was reported to be high, hard, and handsomely set among such famed peaks as the Matterhorn and Monte Rosa. The village maintains some 30 *pistes*, or ski runs, in three different areas – Gornergrat, Blauherd, and Schwarzsee. And from Zermatt a skier can climb to the Theodulpass and swoop down to Breuil in Italy (below).

Such an assignment fitted Kathleen like a pair of stretch pants. An accomplished skier, she had gained broad experience at ski centers in the United States and Canada.* As for me, it was a jump into the unknown. Once, years earlier, I had stood laced to a pair of skis only long enough to conclude it might be fun to head down a mountain on them.

Obviously, I had to learn how to ski in order to write about the sport. So, to introduce me to basic techniques and to put Kathleen in running trim, we went to Zermatt by way of Switzerland's Davos, whose ski school is

rated one of the largest and best in Europe.

Five days later, with colorful bruises, aching muscles, and swollen ankles, I managed to kick-turn down the Parsenn Run from the Weissfluh to Klosters. The performance utilized all the skills I had by then acquired: how to schuss (put skis together and run straight downhill), how to snowplow (put skis together in front, splay them wide in back, and slow down or stop by pushing hard on the inner edges), and how to fall down (position of skis varies, just relax).

Preview over, we set out for Zermatt.

Our sturdy Swiss train, rooted in cogs, climbed slowly up the defile of the Visp and

*See in the NATIONAL GEOGRAPHIC: "Skiing in the United States," February, 1959; and "Winter Brings Carnival Time to Quebec," January, 1958, both by Kathleen Revis.

Matter Valleys. The sun had gone; the land of raw stone patched with snow seemed cold and cruel. Pine trees clung bravely to knife-thin ledges. Thousands of feet above, snow peaks vaulted to the sky.

Suddenly the crown of the mighty Dom changed from white to burnished gold. As we sat warmed by the thrill of the alpenglow, the sun's final salute, the train nosed into a tunnel. Emerging from the other end, the engine pulled us onto the topmost landing of the valley staircase, where Zermatt crouches beneath the Matterhorn. Alone and matchless, the peak rules like a faceless god.

### Village From a Christmas Card

We had come to the end of the line. Beyond Zermatt and nearby hamlets, living space runs out in an up-and-down, crag-punctured, glacier-bound world.

In the twilight Zermatt evoked nostalgia for the old-fashioned Christmas that lives in the dreams of children. The bell tower of the parish church soared above a cluster of hotels, wooden chalets, and huts (page 102). Each rooftop wore a thick comfort of snow. As our train pulled to a stop, lights flickered on and glowing windows bespoke islands of warmth in the chill sea.

At the station yard a dozen sleighs—automobiles are forbidden in Zermatt—stood ready to take travelers to their hotels and *pensions*. We sank into the fur-cushioned seat of a red-and-gold taxi and our horse, jingling bells, trotted out into Zermatt's main street.

The Street has no other name and needs none. It is less a street than a village square, a promenade, a forum, a meeting ground for all Zermatt, its 1,500 residents and three times as many winter visitors. Along the five-minute walk between the railroad station and the town hall stand hotels and pensions, teahouses

**To skiers coming from Blauherd,** Zermatt looks like a toy town. Villagers regard the craggy mountainside at right as a mere hill. Youngsters scrambling over it in summer develop the fearless agility that makes for expert skiing.

KODACHROME © NATIONAL GEOGRAPHIC SOCIETY

PHOTO
POLLUX
photo optik

and restaurants; wine *Stuben*, or taverns, and little shops called *boutiques;* sports shops, bootsellers, and banks; pharmacies and groceries; the post office, the Roman Catholic church, and the ski school.

### The Street Stages Zermatt's Pageant

During our sojourn in Zermatt, Kathleen and I saw the Street as a stage with a different play for each hour of the day. The first actor appears in the cold, white light of early morning: a lone cleaner who shovels horse droppings into a sled and moves on. Shortly after, the most dedicated skiers start down toward the Gornergrat railroad station to catch the 7:30 train. This trickle of skier traffic swells to a flood between 8 and 10 o'clock, when nine trains leave for the mountaintop.

About midmorning—when the village's guests are high on the ski slopes or competing on the ice rinks—the Zermatters claim their Street. Shopkeepers step outside for conferences in the sun, horse-drawn sledges make the hotel rounds with supplies, and housewives turn out to shop, carrying string bags for vegetables and plastic buckets for milk. Pushing wooden sleds or buggies mounted on runners, mothers air fat, red-cheeked babies. Grandmothers in black dresses and babushkas shepherd cows and sheep on walks from one barn to another (page 111).

The Street drowses through the afternoon, a time of intermission before the carnival that begins with the setting sun. Then, as the day wanes, thousands of skiers sweep down off the mountains, and a booted horde marches into the Street.

Traffic clogs as friends stop to exchange greetings and experiences: "The run from Gornergrat through the Kelle was smashing.... Didn't I see you on the National?... Binding came loose just as I turned.... Martha broke her leg.... Tea, yes, I'm dying of thirst...."

Stacking their skis in racks, the crowd pours into the tearooms. The sound of excited talk

**Sleighs and strollers** pre-empt Zermatt's snow-paved main street; automobiles are taboo. Here, in midmorning, most skiers are away on the mountain slopes. Upon their return at twilight, the Street will come alive with shouts and laughter.

**Fresh snow whitens the station yard, where taxi-sleighs await a trainload of skiers**

EKTACHROME (ABOVE) AND KODACHROME BY NATIONAL GEOGRAPHIC PHOTOGRAPHER KATHLEEN REVIS © N.G.S.

in French, German, Italian, and English mixes with music from orchestras playing for tea dancing.

Bronzed ski instructors in flaming red jackets congregate outside the Zermatt Ski School. Their pupils of the day, strolling toward hotel rooms and hot baths, stop to ask advice or to extend an invitation to the evening's party. The mountain guide speaks seriously, with dignity, as becomes a leader. His smile, so slow and hard won, is like a word of praise.

The Street grows quiet during the dressing hour, but 7 o'clock finds it booming again. Women have exchanged stretch pants and parkas for *après ski* slacks of velvet and shirts of Italian silk. Hotel-hopping for cocktails, dinner, and dancing, the holiday throng fills the Street with shouts, song, and laughter. By midnight their ranks are thin, but a hardy few go on with snowball fights, careening rides on sleds, and shoe-skating on the Street's icy crust.

Not until early morning do die-hard revelers find their beds at last. Then, often, a fall of snow whitewashes the Street in the silence and peace of dawn, leaving it clean and refreshed for the day ahead.

**Skiers Jam Cog Railway Car**

On my first morning out, I joined the crush of skiers waiting to do battle for seats aboard

KODACHROMES © NATIONAL GEOGRAPHIC SOCIETY

**Snow Bunnies Eagerly March to an Ordeal of Falls and Spills, Bumps and Bruises**

Strapping on skis for the first time, the beginner learns one thing quickly: He is scared. He heads down a slight incline and feels he is flying. He knows no way to stop except to fall. A crash in the snow requires another maneuver, getting up. One ski goes north, another south; poles fly east and west. The instructor is patient. "Keep skis together," he repeats. "Relax!" As bruises accumulate, legs and hips turn blue. Ankles swell to twice normal size.

When the tyro gains a few skills, the instructor finds practice hills that are ever higher, ever steeper. With longer runs, his student may fly down a mountainside out of control.

"Where are you going, babee?" shouts the guide. Then, resigned, "Bye-bye, babee."

**Vigorously sweeping the ice,** curlers help speed a moving stone into the House. Eight superb curling rinks attract players from all over Europe, including Scotland, home of the game. Zermatt itself provides some of the keenest competition; its team holds the championship of Switzerland.

the 9:06 train, a single coach powered by electricity. In the breath-squeezing surge through train doors, heavy boots bruised legs, pointed ski poles probed ribs, and steel-edged skis knocked heads. Once aboard, passengers flung skis into the racks, leaped down the aisle, and fell onto benches with happy cries of *jawohl* . . . *voilà* . . . *buono* . . . great! When the last square inch of floor space had received its passenger, the train began a slow-motion climb on cogs.

Up and up we pulled through pine and larch forest, across a gorge-straddling bridge, in and out of tunnels cut in the rock, and around the Gallery that hangs above a snowy amphitheater. Passing Riffelberg station, the train

**At Night Zermatt's Bright Eyes Shine Across a Moonlit Sea of Snow**

One evening photographer Revis and the author went for a walk under a full moon. Passing hotels and pensions murmurous with music and voices,

[illegible] © NATIONAL GEOGRAPHIC SOCIETY

they stood at last on a hilltop beyond the village. One by one the lighted windows winked out. All else was bone-chilling glitter, utter silence, and the heart-stopping immensity of hovering mountains. Working knee-deep in snow, Miss Revis captured the moment of midnight magic.

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**Skiers Cook Their Own Dinner: Fondue *Bourguignonne***

Reveling by day in the freedom and solitude of mountain heights, skiers hunger for companionship by night. After cold, dazzling ski slopes, they crave soft lights, enveloping warmth, the comfort of laughter and talk, food and wine.

Here the author (center) spends an evening with friends at the Otto Furrer Stube, a restaurant named for the Zermatt guide and ski champion who lost his life on the Matterhorn in 1951. Feasting on fondue Bourguignonne, they fry bite-size pieces of steak in pots of boiling oil and swirl them in sauces flavored with curry, lemon, tomato, and herbs.

For dessert the party chose bananas *flambées*, a dish also cooked at the table.

**Pretty skier from Germany** thrusts a bite of steak into the pot. Cups hold sauces and relishes.

broke out onto wide, open snow fields where colored disks marked three pistes.

At Rotenboden station, last stop before Gornergrat's top, I elbowed a way off the crowded train to join my ski school class and instructor Urban Kronig. Looking across the broad brow of the ridge, where beginners make their runs to Riffelberg, I felt as safe as on a vast playground. No jagged rocks loomed in the path; no trees reared obstacle courses; no precipitous slopes inspired fear.

My classmates and I set our skis together and schussed the gently rolling hillocks. We edged our skis into the snow and made long, easy traverses. We copied our guide and congratulated one another.

"You do not know how to ski," said Urban, shattering our illusions, "until you learn to sideslip and make a stem christie. Now watch me." And he was off, a slim, graceful bird in flight.

Slipping is a way of skiing sideways. Take the traverse position, but allow the skis to lie flat instead of edging into the snow. Push the upper part of your body away from the mountain, and gravity will carry you down. It sounds simple, but you must fight the instinct that warns you to hug the earth, not teeter out in space.

The stem christie is a way of turning in motion. Skiing across a slope, you bend the knees, move the uphill ski out at the heel (stemming), and throw your weight onto it. Swing the other ski around and, *voilà!* You now travel in the opposite direction.

**Frosty Lunch on a Mountainside**

At lunchtime, a ravenous horde cleaned the Riffelhaus cafeteria out of sausages and noodles, thick soup, and *Fendant*—the fresh, white table wine of the Valais. Too tired to buck the line, I settled on the terrace of the near-by Hotel Riffelberg for luncheon with a view.

The Matterhorn, incomparable beneath a brilliant sun and cloudless sky, seemed almost near enough to touch; Zermatt, far away on the valley floor, distant enough to be a toy. My eye roamed past the Dent Blanche, the Tête Blanche, and the almost perfect pyramid of the Weisshorn to rest on faraway snow peaks of the Bernese Alps, floating aloft like a mirage.

A waiter brought me a sizzling steak and salad, but when the lettuce froze in the bowl, I realized it was time to go.

"This afternoon we will ski from the top of Gornergrat," Urban announced as we climbed aboard the train.

"How do we get down the Wall of Death?" asked a British classmate.

"Slip," said our guide with a grin.

**Slipping Down the Wall of Death**

Gornergrat station, built like a castle with granite towers and battlements, stands exposed to the whip of wind on the crest of the ridge. On one side a sheer precipice drops 1,700 feet to the Gorner Glacier. The other side falls away a little less abruptly, and that descent is called the Wall of Death.

Peering over the edge, I felt my breath catch in my throat. To me it seemed monstrously high, cruelly steep, and treacherously bumpy. And yet the most awesome sight was not the Wall, but a band of skiers in another class. Yelping in excitement, they came over the top, sweeping first to the right, then to the left with stem christies and parallel jumps. Near the bottom they took a long schuss that carried them over the next hill and out of sight.

"Follow me," Urban called and started off on a traverse, slipping downhill all the while. One by one, members of the class followed. I was the last to start.

At first I dared not slip at all, but crept along with the edges of my skis firmly rooted in the mountainside. The maneuver only changed my position at the top of the Wall; I was no nearer its foot.

Desperately I tried to flatten my skis into the sideslip position but, leaning toward the mountain, I moved not an inch; I looked down, and my stomach turned over; I looked around, and saw that Urban and the class had disappeared. I was alone on the Wall.

Closing my eyes, I pushed away from the mountain. The skis slipped a few feet down, and I felt wildly out of control. To stop, I toppled sideways, uphill onto the slope. And there I lay, frozen with fear.

"Let me help you." Urban's voice was kind. Opening my eyes, I saw his hand outstretched.

"Don't worry," he said. "Just hold onto my arm. I'll pull you down and catch you if you fall." With my guide between me and the abyss, I relaxed at last and we slipped down the Wall of Death together.

Late that afternoon Kathleen and I stretched tired legs in the lounge of the Hotel Mont Cervin, our Zermatt home. Sipping tea,

PHOTOGRAPHS BY MARVIN NEWMAN (BELOW) AND NATIONAL GEOGRAPHIC PHOTOGRAPHER KATHLEEN REVIS © NATIONAL GEOGRAPHIC SOCIETY

**Photographer Kathleen Revis** works on despite a broken leg suffered when she attempted a turn on skis. Stiff from standing in snow while shooting pictures, she fell and fractured a bone.

**Zigzagging between poles** in the annual Gornergrat Derby, Swiss racer Willy Mottet makes the slalom look easy. He competes with skiers from France, Austria, Italy, Germany, and the U. S.

we watched from a window the jubilant return of skiers to the Street.

"Zermatt," Kathleen observed, "is just like a big house party."

And it is true. Small and isolated, lacking a highway link with the outside world, Zermatt never sees the motorist with a daily mileage record to make. Visitors come to stay in Zermatt, and the village atmosphere is such that they soon feel at home.

### Zermatters Bought Their Freehold

Yet, in another sense, the outsider can never be more than a guest in the mountain realm that belongs in fact as well as in spirit to the Zermatters. Proud and independent, they are like owners of a great family estate.

Ancestors of the present-day inhabitants acquired the estate in highly legal fashion: They bought it. Between 1538 and 1618 the 189 families living in the valley purchased their freedom from ruling barons and founded the Bourgeoisie, or free society. The price

**Into the black of night,** an expert jumper sails off a snowy platform, his body tilted far forward. Judges rate him on both form and distance. The shield of Switzerland hangs above the jump.

**Arms and skis askew,** a junior jumper tries his wings. Young Zermatters ski almost as naturally as they walk. Fearlessly hurtling downhill, they take tumbles with squeals of glee.

included all the property in sight—meadows, forests, glaciers, and peaks, including the Matterhorn itself.

Today descendants of the founding families jealously guard their ancestral rights. Although a few families from the outside have settled in the village during the past century, the Bourgeoisie remains in the majority—an exclusive aristocracy enjoying profits and benefits from common holdings.

"I paneled this room with my wedding pine," said Theodor Welschen in response to my admiring glance around the coffee room of his hotel, the Walliserhof.

"Who gave you the tree?"

"I'm entitled to it as a member of the Bourgeoisie," he said. "Each year our forester selects and numbers some twenty to thirty trees, picking those not needed as avalanche barriers. Any member who has married or has celebrated a ten-year anniversary during the past twelve months has a right to draw a number. My own tree was halfway to

Findeln, a good distance away. It was up to me to cut it and bring it down."

Mr. Weischen explained that a Bourgeoisie bridegroom is given enough lumber to build a small house, if he needs one. Those who cook and heat with wood get a supply for burning. Members who use electricity have part of their electric bill paid instead.

Forest rights hark back to medieval times, but Bourgeoisie dividends from modern investments are far more lucrative. Members own jointly five hotels, two large restaurant-cafeterias, and half interest in the chair lift from Zermatt to Sunnegga, the T-bar lift from Sunnegga to Blauherd, the aerial cable car from Zermatt to Schwarzsee, and the Zermatt power plant. Profits are shared equally.

### Mountains Keep Men in Order

Yet it is mountains rather than money that have shaped the Zermatter's character. Although he works hard at his business—be it as a ski instructor, climbing guide, hotelier, restaurateur, or a combination of all four—

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**A Matchless Pyramid, the Matterhorn Stands Like a Shrine in the Sky**

As long as men climb mountains, they will associate the Matterhorn's name with that of Edward Whymper, English leader of the first expedition to attain its 14,690-foot summit.

Whymper's party took off from Zermatt at dawn July 13, 1865. Easily mounting the east face at the left of the ridge at center, they pitched camp at 11,000 feet. "Long after dusk," Whymper wrote, "the cliffs above echoed with our laughter . . . for we were happy . . . and feared no evil."

Climbing a "huge natural staircase" the next morning, Whymper recalled, "the slope eased off . . . and [Michel] Croz [a French guide] and I, dashing away, ran a neck-and-neck race, which ended in a dead heat. At 1:40 p.m. the world was at our feet, and the Matterhorn was conquered."

On the descent, disaster struck. High on the north face at right, 19-year-old Douglas Hadow slipped and dragged Croz, Lord Francis Douglas, and the Reverend Charles Hudson with him.

"For a few seconds," Whymper wrote, "we saw our unfortunate companions sliding downwards on their backs, and spreading out their hands, endeavoring to save themselves. They passed from our sight uninjured, disappeared one by one, and fell from precipice to precipice . . ."

Besides the leader, two Zermatt guides survived. Whymper, who achieved his triumph over the Matterhorn after seven unsuccessful attempts, went on to explore heights in Greenland, the Andes, and the Rocky Mountains. He was the first to scale 20,561-foot Chimborazo in Ecuador.

Here Kenneth Watson, a representative of the British Ski Club, turns between Arolla pines. These trees grow at a higher elevation than any others in the Alps.

he is much more than just a businessman.

On the Bahnhof Hotel terrace, I talked one day with Bernhard Biner, president of the Zermatt Ski Club for 20 years. A big man, powerfully built, Mr. Biner mentioned his many years as a mountain and skiing guide. He recalled World War II days when, as a representative of the International Committee of the Red Cross, he visited Allied prisoners in German camps. After a lifetime of working with people, he spoke with compassion and understanding.

"In the winter," he said, "these young ski instructors walk the streets like gods, admired and sought after. On the slopes their word is law. But the mountains always put them back in order. They put us all in order.

"You can't live with this," his hand swept around the panorama of peaks, "and not learn humility.

"Do you ski?" he asked me suddenly.

"I'm learning. I want to ski."

Mr. Biner nodded. "Zermatt appeals to the

*(Continued on page 114)*

### Freshly Fallen Ammunition Triggers a Snowball Fight

At first glance Zermatt appears as up-to-date as tomorrow. Neon lights blaze along the Street. Glass-fronted shops display exciting sports fashions. Hotels and pensions offer every luxury; one has installed an indoor swimming pool. But other sections of the village remain unchanged from medieval times.

These barns, which store feed for livestock, stand on a crooked lane no wider than a path. Cows and sheep live out the winter in stone-walled cells beneath the sheds.

Many a Zermatt boy will never have to tend the animals that gave his grandparents a living. Each year the ski school accepts 10 to 20 teen-agers for training as instructors. Summer offers jobs as porters on climbing expeditions.

**A fountain made from a hollow tree** spouts refreshment for sheep at Winkelmatten. Skiers coming from Riffelberg often drink here.

**Cows go for a rare winter's walk** along the Street. Cooped in stables much of the year, cattle romp like colts when they finally return to green pastures on the mountain slopes in late spring.



KODACHROME (UPPER) AND EKTACHROME © NATIONAL GEOGRAPHIC SOCIETY

pioneering instinct; it answers a need for adventure. The mountains are high, the slopes are steep, the runs are long. But the people who come here find freedom, not only in a physical way but spiritually."

At parting he smiled and said, "You keep skiing. It's good for you."

### Training Ground for Olympic Stars

In the days that followed, I took Mr. Biner's advice, shifting from ski school classes to private instruction to speed my progress. I tackled the Gornergrat Derby course, skiing 4½ miles from the top of Gornergrat to Zermatt. Moving over to the Blauherd ridge, a smaller version of the Gornergrat area, I learned to navigate the hanging meadows, bumpy gullies, and tree-lined paths of the Standard and Tuftern runs.

Luck smiled the day I was able to engage ski instructor Erwin Aufdenblatten for a full week. A highly skilled skier, broad-shouldered, narrow-hipped, Erwin was an inspiration to watch. With the born teacher's understanding of a pupil's capability, he demanded the best, and got it.

Under Erwin's tutelage, I finally began really to ski, linking turn after turn, feeling the rhythm, increasing my speed. We made the Kelle Run, turning with stem christies down the Wall of Death and swinging through a broad canyon to Findeln. With him I skied the Paradise on Blauherd without a fall and went on to take the National, the course that Olympic stars trained on before competing at California's Squaw Valley last winter. We rode the cable car to the top of Schwarzsee and came down nearly vertical runs known as Momatt and Grand Canyon.

"I think you're ready for Stockhorn," Erwin said near the end of the week. The eight-mile course is the longest and one of the most difficult that Zermatt has to offer. It was my graduation exercise.

The ride up by cable car was magnificent. From the top of Gornergrat we swung over a knife-thin ridge to Hohtälligrat, then climbed on to Stockhorn, where we looked across the very crown of Monte Rosa's monstrous tooth.

When I peered over the edge of the ridge onto the face of the course we would ski, I had no breath for speaking. Below hung a snowy glacier, precipice-steep, mountain-long.

"You can do it," Erwin said. Tipping his skis downward, he disappeared over the rim. I followed.

At first we went slowly, sweeping across the top on a long traverse. When Erwin made the first stem christie, I turned in his track, not daring to look down the hundreds of feet where I might fall. We swept back, this time running faster. With speed came the rhythm —dip, turn, run; dip, turn, run; dip, turn, run. Zigzagging the steep slope, we moved faster, ever faster.

The skis whirred merrily as they slipped across the glistening powder, and the wind whistled in a high monotone. Suddenly Erwin burst into wild, joyous yodeling. I too felt like singing. This was skiing, this was freedom, this was a love affair between the mountain and me.

At the foot of the glacier we came to a snow-pluming stop and solemnly shook hands.

"You can ski anywhere now," Erwin said.

### To Italy and Back on Skis

From the beginning of the assignment, I had hoped to learn to ski well enough to make the tour to Italy. The idea of traveling on skis from one country to another was intriguing. But the 25-mile round trip from Zermatt to Breuil to Zermatt appealed to me mostly as a challenge and a climax to my whole adventure.

◀ **Skiers Rally on Gornergrat. Clouds Veil the Face of the Matterhorn**

Red-coated guides organize classes for a run down the Wall of Death, a bumpy drop-off greatly feared by beginners (article, page 105). Two electric cars carry other skiers to the assembly ground. Theodul Glacier (upper left) flows beneath the Matterhorn; the author and photographer climbed the icy river on a trek to Italy.

**Animal skulls and wood carvings** decorate Ritty Hut, a teahouse along the ski run from Riffelberg to Zermatt. Known as the Mazze, from an Italian word for "club," the bearded, contorted face at left served as a symbol of revolt in feudal times. Displayed in villages of the Valais, the Mazze called insurgents to action against aggression. Those who wished to join in the fight drove a nail into the face.

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KODACHROMES BY NATIONAL GEOGRAPHIC PHOTOGRAPHER KATHLEEN REVIS © N.G.S.

**Comets of Snow Trail a Somersaulter in Mid-air**

Up on Schwarzsee one morning Miss Revis found two young Zermatters enjoying a special brand of the sport. As she crouched under a snowbank, Aloys Perren streaked down a slope and flipped off the cornice directly above her. The camera caught him halfway through a turn.

**Swinging on his poles,** Simon Biner executes a snow-flinging jump turn at high speed.

Both Biner and Perren wear sweaters identifying them as members of the Swiss National Ski Team.

"All right," I said to Erwin, "when do we go to Italy?"

"Is tomorrow soon enough?" he asked.

The next morning Kathleen was up at 6, scanning the skies. "It's a beautiful day," she said happily, packing photographic gear into a knapsack.

We had invited two others to go along: petite Mary Owens from San Francisco, and tall, blond Sylvia Coe from New York City. By the time we all reached the top of Schwarzsee, clouds were beginning to gather over the Matterhorn. Straddling the border between Switzerland and Italy, the peak—called Monte Cervino by the Italians—serves as a weather vane for both countries.

"I hope the weather holds," Erwin said. "If not, it can be bad up on the pass."

Skiing into a small valley, we caught a fast tow up to the Theodul Glacier. There we hit a snag: The snowmobile that pulls skiers on up to Theodulpass was not running.

"We'll have to walk," said Erwin.

For such a climb, skiers usually fit their skis with sealskin jackets that prevent backward slides on snow-slick hills. Expecting to ride the snowmobile, we had failed to bring skins. As a substitute, Erwin dabbed blobs of heavy wax on the soles of our skis.

"Now," he explained, "walk easy, relaxed. Set each ski down firmly; dig in with the heel. Make no unnecessary movement. Go slow, steady. It's a three-mile climb, but there's no hurry. We can make it in three hours."

We marched single file and, at first, stops were frequent. But soon we were all stepping with a kind of slow rhythm. Around us loomed the faces of glacier-hung peaks—Castor and Pollux, the Breithorn, the Little Matterhorn, and Monte Rosa (page 120). We moved through a world of sky and rock, ice and snow, cloud and wind.

### Sky Turns Dark and Cold

When we stopped to rest after two hours of climbing, the sun was gone. The sky had turned gray and sullen. A cold wind swept down from the pass and out across the glacier.

"How are you doing, Carolina?" asked Erwin. "Fine," I panted.

"It will be harder now with the wind."

We pushed on. Coming now in gusts, the wind broke the rhythm of the pace, but my companions, laughing and talking, seemed

**As free as birds on the wing, racers whip up clouds with each twist in the powder**

not to mind. Kathleen, taking pictures despite the overcast, was leading the line one moment, tailing it the next. Doubling back and forth, she walked twice as far as the rest of us, at twice the speed.

At the head of the glacier we zigzagged up a steep saddle to the pass. There, in bitter cold, we rested beneath a rock and nibbled on oranges, while Erwin scraped the climbing wax from our ski soles (opposite). Before us lay the 5½-mile ski run to Breuil, Italy.

### Skis Serve as Passports to Breuil

The Italian piste cuts across an immense mountain bowl. Gloriously open and wide as the sky, the slope falls away on a pitch just steep enough to be interesting. Playing follow-the-leader, we wheeled and soared like gulls, stopping at intervals to let delight bubble out as laughter. During one such pause, Italian skiers whisked past, singing with operatic gusto: *"O sole mio. . . ."*

"We don't need a signpost to say we're in Italy," said Mary, and took off after the singers to keep their concert in hearing distance.

Within the hour after leaving the pass, we checked our skis in Breuil.

Unlike Zermatt, Breuil is a resort only, a collection of hotels and shops in the Valtournanche below the Theodulpass.

As we signed into the ultramodern Grand Hotel Cervinia, the Italian desk clerk reminded us that we had crossed an international border. "Does anyone have a passport?" he asked, and then waved Kathleen's away when she tried to show one. In Breuil, apparently, skis are passport enough.

That night we dined on spaghetti and strolled down the main street, window-shopping. Though the hotel orchestra blared an invitation to dance, we decided that ski boots might not be proper garb for a night club.

We awoke to find it snowing. When by noon it seemed to be clearing, we decided to try the

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A cave shelters the author's party on the run to Italy. Parkas bulge with extra sweaters

return to Zermatt. Taking three cable cars in succession, we swung nearly a mile up to the Plateau Rosa near the Theodulpass.

Strapping on our skis in the shelter of the station, we stepped out into a howling 40-mile-an-hour gale. Through blinding snow, Erwin led the way down the saddle with a slipping traverse. His red jacket was only a blur six feet ahead of me.

Down on the glacier, wind had whipped the snow into hardened waves, a maze of traps that could catch a ski tip and topple the skier. Erwin snowplowed to a stop. I tried to follow suit but, with the wind pushing at my back, I slammed into him.

"I can't see," I shouted above the scream of wind. We were cut off by then even from the mountains, trapped in a fury of snow. The cold had begun its bitter work, numbing my hands and feet.

### Wind and Snow Force Skiers Back

Kathleen, Mary, and Sylvia drifted down beside us like ghosts. We huddled together, our faces stinging with needle pricks of driven snow, and considered what to do.

"I think," said Erwin, "I can guide you through the storm. But if any of us got hurt or separated from the others, we would be in a very bad position. It's up to you."

As the weakest link in the chain, I kept silent, knowing they would turn back if I said the word. But Kathleen didn't hesitate: "It's not worth the risk of lives. Of course we should go back."

So we turned to face the wind and begin the tortuous climb. As we snaked up and up through the swirling snow, Erwin broke trail. Kathleen matched her steps to my slow pace, stopping often with me, steadying me on slips, calling encouragement through the whitened gloom. An age passed before we reached the top of the pass and headed down the Italian side through enveloping clouds.

In Breuil the next morning the world was bright for our return trip to Zermatt. The sun shone in a cloudless sky; the fresh, virgin snow was dazzling. Up on the Theodul we sailed down the saddle and set our skis for the long, lovely schuss to Schwarzsee.

Near the end, our route led to the very foot of the Matterhorn. There we stopped. The great peak, rearing its head high into a wind we could not feel, seemed to roar with a voice like that of an endless avalanche.

At that moment, memory of past perils faded. I felt serene, at home with eternity. The mountains, indeed, had put me in order.

**Ice, cloud, and wind challenge climbers**

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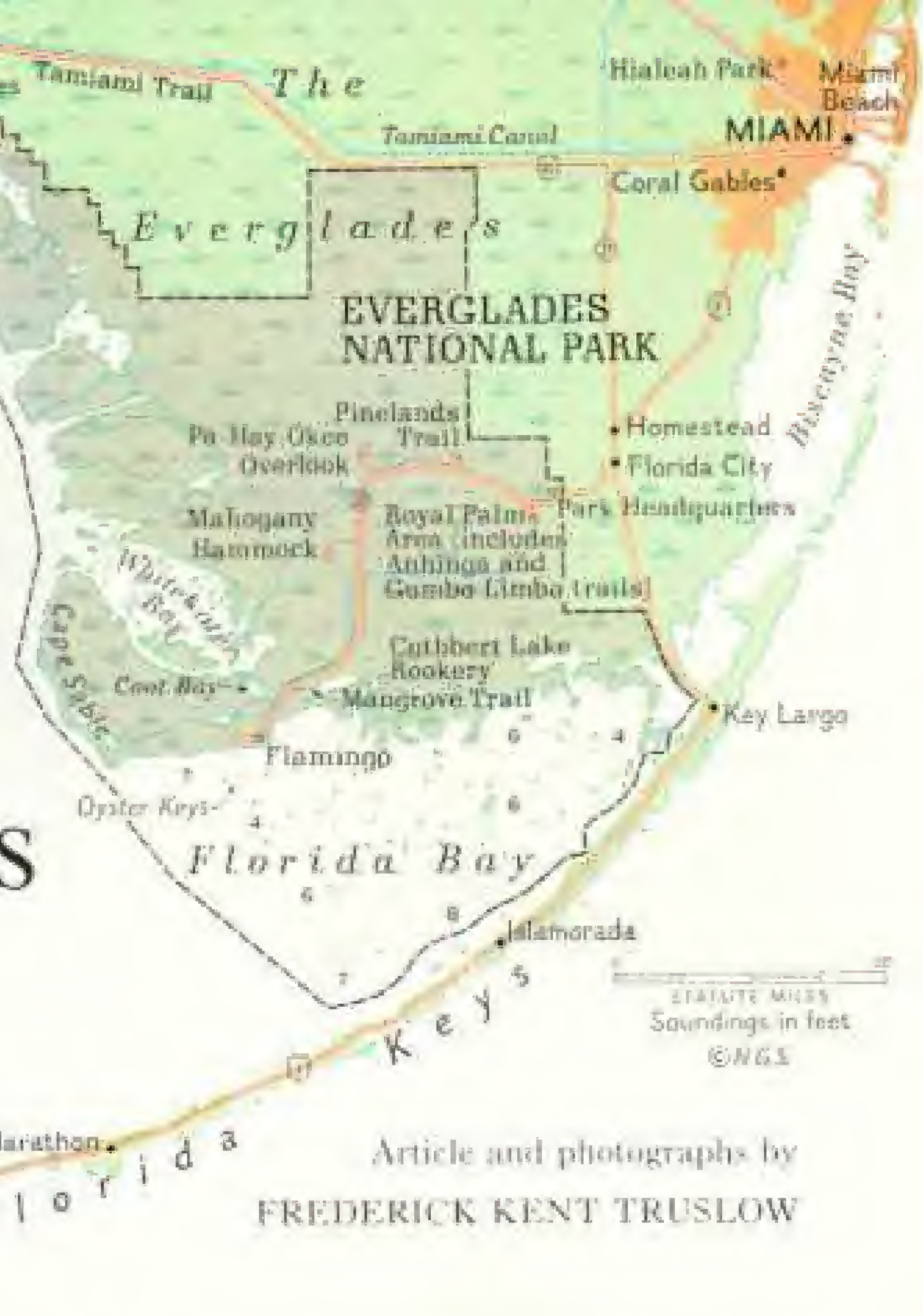
on Theodul Glacier. Monte Rosa's jagged fangs probe the Alpine sky

*In Everglades National Park, unique color photographs record the family life of our national bird, now sadly reduced in numbers*

# Eye to Eye With Eagles




Article and photographs by
FREDERICK KENT TRUSLOW

FOR TWELVE WEEKS last winter I had a reserved seat at one of nature's most fascinating dramas—the nest life of that magnificent but fast-disappearing bird of prey, the American bald eagle.

Almost from the beginning of the United States, the bald eagle has been our national symbol, fierce of eye, majestic in bearing, unawed even by his only enemy, man. Yet civilization's relentless pressures are driving him from many of his former haunts.

Today the number of bald eagles in North America stands far below what it was a century and more ago, say the National Audubon Society and U. S. Fish and Wildlife Service. Exactly how many there are, no one knows (box, page 128); best guess is fewer than 500 pairs, outside of Alaska and Canada.

Even in Alaska, where the bald eagle lives in greatest numbers, it is much less plentiful than a few decades ago. There, in 1923, one observer counted 40 in a single tree and 700 along three miles of shoreline by an inlet where herring were spawning. But the great bird had a price on its head. For 35 years, from 1917 until 1952, Alaska paid a bounty for killing a bald eagle. More than 100,000 were slain and their talons turned in for payment; untold others were shot for "sport."

### Illegal to Possess an Eagle

Elsewhere in the United States, Federal law has protected the bald eagle since 1940. It is illegal even to possess one, except by special permit for scientific or educational purposes. Alaska came under this law in 1959.

Bald eagles still nest in the Great Lakes region, around Chesapeake Bay and the tidewater sections of the Middle and South Atlantic States, along the Mississippi River,

**The Author:** Retired businessman Frederick Kent Truslow has previously given GEOGRAPHIC members striking photographic close-ups of birds of paradise, limpkins, whooping cranes, trumpeter swans, and shore-wading, spindle-legged stilts.

**Empress of the Keys,** a female bald eagle glares from a mangrove stub in Florida Bay. Bald in name only, *Haliaeetus leucocephalus* wears the white head and tail feathers of an adult in its prime. Everglades National Park (map above) provides haven for the last significant concentration of American eagles south of Alaska.

KODACHROME © NATIONAL GEOGRAPHIC SOCIETY

and occasionally in other parts of the country. But one of the few remaining places where they nest in numbers, undisturbed by man, is that wonderful reservoir of wildlife in Florida–Everglades National Park.

Thus it came about that I headed south when the NATIONAL GEOGRAPHIC entrusted me with the task of photographing the bald eagle for its series of articles on vanishing or threatened American birds.*

The gateway to the park lies only about an hour's drive from Miami (map, page 123).

*See "Whooping Cranes Fight for Survival," by Robert P. Allen, November, 1959; and "Return of the Trumpeter Swan," by Frederick K. Truslow, July, 1960.

**Visitor Center** at Flamingo, Everglades National Park, encourages nature lovers to explore shell-strewn beaches, labyrinthine mangrove channels, and keys inhabited by flocks of birds. Much of the modern center stands on 10-foot piers as protection against high tides and hurricane-blown waves from Florida Bay. Notwithstanding, Hurricane Donna in September, 1960, caused extensive damage as 150-mile-an-hour winds tore off part of the roof and water swept into motel units near by.

**Only wild flamingos** in the United States, this flock of six forages the shallows of Florida Bay. They presumably are strays from the tame flock kept at Hialeah Park, Miami. Flamingos once visited Florida regularly from the West Indies but did not nest on this continent. Lone brown pelican flies escort at rear.

At the entrance a new headquarters building and visitor center were being built, part of the National Park Service's extensive "Mission 66" program. Begun four years ago, the project is named for 1966, when the service will celebrate its 50th anniversary.*

Everglades National Park is a biological showcase, a land where the temperate zone meets the subtropics, blending the wildlife and vegetation of both. It safeguards remnants of the huge flocks of resplendent birds which impressed Audubon in 1832, but which met death by the tens of thousands at the hands of plume hunters half a century ago.

Two miles beyond the entrance, I turned off to the Royal Palm Visitor Center. Alligators basked in the early Jan-

*The Park Service's improvement program is described by its Director, Conrad L. Wirth, in "Heritage of Beauty and History: the National Parks," NATIONAL GEOGRAPHIC, May, 1958.

Everglades visitors wind through a primeval world of mangrove forests;

KODACHROME BY CHARLES ALLMON, NATIONAL GEOGRAPHIC STAFF © N.G.S.

KODACHROME BY THOMAS R. SMITH, NATIONAL GEOGRAPHIC STAFF © N.G.S.

tidal channels and arching roots weave a maze between saw-grass glades and Florida's rim

**Anhinga** perches on an Everglades signpost between dives for fish. Often only the long curving neck shows above water when the bird swims, leading Floridians to call it snakebird.

**Snowy egret,** "the bird with golden slippers," rests above an Everglades slough. Almost exterminated by plume hunters in the late 19th century, *Leucophoyx thula* has made a comeback over most of its original range.

**Great white heron** takes flight. Florida Bay's population of some 900 fell nearly 40 percent after the 1960 hurricane, a National Park Service count shows.

**Your Chance to Help Save the Bald Eagle**

Concerned over the dwindling number of bald eagles, the National Audubon Society recently launched a nationwide survey to determine how many of these great birds survive, and where.

National Geographic Society members having helpful information are asked to write directly to the National Audubon Society, Audubon House, 1130 Fifth Avenue, New York 28, N. Y.

uary sun. Snaky-necked anhingas in the dense willows stretched their wings to dry after a dive for a fish. Louisiana herons and little blues stood on their sticklike legs by the water's edge. Long-toed purple gallinules trod the lily pads beside the Anhinga Trail.*

Down the Gumbo Limbo Trail orchids and other epiphytes—plants that draw their nourishment from the air—clung to toe holds on cabbage palmettos or live-oak limbs. And from the spongy soil grew the reddish trees with the peeling bark that give the trail its name. Caribbean natives used to make a medicine for colds by steeping gumbo limbo bark in chicken broth—"the original chicken gumbo," quips a sign along the trail.

But unlike other visitors, I had not come to walk the alluring and rewarding nature paths. My purpose was to ask about eagles.

Forty-eight bald eagle nests, I learned, had lately been counted in an aerial survey of the park by Dr. William B. Robertson, Jr., regional biologist of the National Park Service. These huge eyries, each capping a tall tree not far from a body of water, are easily spotted from an airplane.

Eagles of many different species can be found over much of the world. But the bald eagle, *Haliaeetus leucocephalus*, white-headed, white-tailed monarch with a corn-yellow scimitar of a bill, rules from his dead-limb throne almost exclusively in North America. His only outposts beyond this continent are on islands and the mainland of easternmost Siberia, across the Bering Sea from Alaska. That the bald eagle seemed truly an American bird was the argument advanced nearly 180 years ago when it was chosen as our national emblem.

On July 4, 1776, the same day that the Declaration of Independence was adopted, the Second Continental Congress resolved that "Dr. Franklin, Mr. J. Adams and Mr. Jefferson, be a committee, to bring in a device for a seal for the United States of America."

Some weeks later this notable committee submitted its recommendation, a seal showing on one side an ornate coat of arms and on the other the Israelites fleeing Egypt's Pharaoh. Its motto was "Rebellion to Tyrants Is Obedience to God." The proposal was tabled while the Congress went about the more pressing business of the Revolutionary War.

Thereafter two more committees studied the matter. William Barton, a Philadelphian consulted as a man proficient in heraldry and drawing, submitted a design with a small heraldic eagle. None of the proposals, however, met with approval.

**Spread Eagle Adopted by Congress**

Finally, in June of 1782, the Secretary of the Congress, Charles Thomson, was asked for a report. He made the eagle the central figure of the seal, specifying that it be "an American Eagle," clutching an olive branch in one foot and a bundle of arrows in the other. Of the original committee's design, only the words "*E Pluribus Unum*" and the eye of Providence survived.

Thomson's design was refined somewhat by Barton. The result, featuring a noble bird "displayed" (with wings and legs outspread), was adopted by Congress in 1782 as the Nation's official seal.

Ben Franklin preferred the wild turkey, but the eagle was thought more appropriate.

* "Haunting Heart of the Everglades," by Andrew H. Brown, NATIONAL GEOGRAPHIC, February, 1948; "Wildlife of Everglades National Park," by Daniel B. Beard, January, 1949; and "Saving Man's Wildlife Heritage," by John H. Baker, November, 1954, all describe this great Florida sanctuary.

**Nesting Wood Ibises Receive Visitors at Their Mangrove Apartments**

Colonies of "flintheads," the only North American storks, breed 10 miles from Flamingo. Accomplished flyers, the birds often soar on thermal currents until they vanish from sight. Legs down, bill grotesquely open, one bird comes in for a landing like an extinct flying reptile. Telephoto lens makes the boat seem closer to the birds than it is.

From earliest history it has been a symbol of strength and courage. It went into battle with the Persian hosts and marched on the standards of Rome's legions.

Today this country's bald eagle symbol appears on every dollar bill, on coins, buttons of military uniforms, medals, flagstaffs, on hundreds of public documents, and on the President's own seal (page 11). Yet glimpses of the real bird, glaring regally from some gnarled tree perch or climbing on air currents with hardly a wingbeat, are all too rare.

### Island Eyrie Fills the Bill

Carefully Bill Robertson and I studied and restudied the nest sites he had located. We wanted an eyrie that wasn't impossible to get to on a commuting basis—an important factor since I planned to visit the spot practically every day for 12 weeks. We wanted one that wasn't too far from camouflaging foliage for my blind, yet one with good sunlight. Photographic conditions would have to be just right, or the delicate shadings of the eagles' plumage would merge in a black-brown blob on film. And we needed a nest that had a history of raising families—where there was a good chance of getting a full sequence of pictures from hatching to flight.

The eyrie that seemed to meet all these requirements lay on a mile-long and quarter-mile-wide key off Florida's southern tip, only a three-mile boat run from the park center at Flamingo.

Like the hundreds of other islands that dot shallow Florida Bay, this one had been built by that odd "walking forest"—the mangrove. The trees' spidery roots trap soil and debris washed through their latticework by the tides; in time the muck and decayed vegetation become solid ground, and new generations of mangrove seedlings drop farther out into the water's edge to continue the building process.

Sprawled in a three-pronged crotch of a black mangrove stub, our nest was only a few yards from the fringe of red mangroves ringing the island. It was perched 20 feet above the

**Almost ready for flight,** young bald eagles stand alert as Mr. Truslow climbs to his blind (opposite) on an island three miles from Flamingo. The eyrie, 20 feet in the air, bulges with sticks and grasses added year after year by the parent birds, who mate for life.

Like other eagle islands in Florida Bay, this key held only one nesting pair.

KODACHROME BY F. K. TRUSLOW © NATIONAL GEOGRAPHIC SOCIETY

marly soil of the key's open center—not as high as bald eagles like to nest, but on the loftiest perch the island offered (left).

Usually these high-flying raptors build at heights of 60, 70, 80 feet or more, in some towering pine, cypress, or other tree. They will, however, nest atop a cliff or rock pinnacle if no tall tree is handy.

Once mated, the same pair of bald eagles stays together year after year and returns to the same nesting site each season. When one of a pair is killed, however, the survivor will often take up housekeeping promptly with a new partner.

Years of repeated use build the bald eagle eyrie into a remarkable platform. Each season new sticks are added, new grass and vegetation trampled into the center of the nest bowl. I've seen sticks an inch or so thick deftly worked into the structure. The sticks are picked up off the ground or broken from the tree by an eagle flying against a dead branch and carrying it off in its talons.

Sometimes odd bric-a-brac is worked in—broomsticks, lumber, and even such oddities as fishing plugs, a tablecloth, or light bulbs. A pair of captive eagles at the Smithsonian Institution's National Zoological Park in Washington, D. C., once made a nest largely from torn popcorn boxes and peanut bags.

In time the nest may grow to tremendous size. One near St. Petersburg, Florida, measured 10 feet across and 20 feet from top to bottom. Another, near Vermilion, Ohio, contained two tons of material when a storm felled the tree that had held it for 35 years.

### Photographer Waits for a Hatching

Bill and I waited until air reconnaissance revealed that eggs in our selected nest had hatched before daring to make our first trip to the site. We did not want to frighten the birds into abandoning their clutch—as eagles may do if disturbed during the 35-day incubation period.

Meanwhile Bill gave me some good news.

"Thought you'd like to know that the boss has given your project his warm approval,"

**The author scales the ladder** to his blind, 33 feet from the nest. In this sweatbox he endured oven heat and numbing cramps for 12 weeks. A black-painted can projecting from the canvas conceals the camera lens. Without it, the parent birds took alarm whenever a lens was changed. The click of the camera shutter could not be muffled, but the eagles became accustomed to it.

KODACHROME BY THOMAS R. SMITH
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he said. The "boss" was affable Warren F. Hamilton, Superintendent of the park.

At last came word that the eggs had hatched, and Bill and I drove together from Royal Palm down the 37-mile road to Flamingo.

On the way we passed two beguiling turnoffs. One takes tourists on a nature walk through the pinelands part of the park. The other leads to an overlook in the saw-grass country, which stretches so far that you can understand why early explorers thought the glades went on forever. Flooded in summer, the region was called Pa-Hay-Okee—"river of grass"—by the Seminole Indians.

Farther along, we drove past a nature trail which winds through a grove of mahogany trees—the largest such trees anywhere on the U. S. mainland. In this jungle bower of strangler figs and fishhook vines and air-growing orchids lives a barred owl. My friend

Hugh Muller, a park naturalist and grandson of the famous plant explorer and National Geographic Trustee, the late Dr. David Fairchild, likes to point out that this barred owl belongs to the "southern subspecies." This variety is distinguished, says Hugh, by its call. Its northern relative sounds as if it were saying, "I cooks for myself. Who cooks for you-o-o-o?" The southern bird says the same thing – but ends with a "you-all."

**Two-week-old eaglets** call for food. Darker bird at left, which the author named Blackie, quickly established supremacy in the peck order. Brownie submissively accepted second place. Mr. Truslow observed "only one squabble": Blackie pecked its nestmate, whereupon Brownie lay down quietly.

The author never learned their sex, although females are larger and stronger.



KODACHROME BY FREDERICK KENT TRUSLOW © NATIONAL GEOGRAPHIC SOCIETY

PHOTOGRAPHS © NATIONAL GEOGRAPHIC SOCIETY

**Henpecked Father Gets a Lesson in Etiquette**

During the first three weeks after the eggs hatched, the male did all the fishing, bringing his winnings to his mate, who then offered them to the youngsters.

Here father, abandoning routine, neglects to drop the fish into the nest and, instead, offers a morsel to the nestling partly concealed behind the mother (upper). She sternly shields her brood from their provider.

Snubbed, father sits dejectedly (lower). He himself devoured the offering. Only when the nestlings grew older was he permitted to feed them.

**Mother serves a tidbit.** Mouth agape, her offspring covers her beak and rakes in the meat.

At the beginning of this century Flamingo was an isolated fishing village of half a hundred souls, including alligator poachers and plume hunters whose depredations wrote a saga of bloodshed, both animal and human. Today it is a busy park facility at the end of the road through the Everglades.

Here fishermen's huts once stood on sun-bleached pilings. Now a modern visitor center, with motel, restaurant, museum, gas station, curio shop, and campground, caters to the public (page 124). Last year nearly 600,000 saw at least some of the wonders of this third largest of our national parks, surpassed in size only by Yellowstone and Alaska's Mount McKinley.

Through the mangrove-screened waterways where poachers' rowboats once sneaked, sightseeing craft today take nature lovers to such heron haunts as Coot Bay, or to Cuthbert Lake Rookery, in winter the nesting area of some 3,000 wood ibises (page 129).

Other trips from Flamingo take visitors into the labyrinth that is Whitewater Bay, or out toward the Oyster Keys at sunset to watch flocks of white ibises, herons, and egrets flap in to roost from feeding grounds scattered through the park.

### Shallow Bay Isolates Eagles' Isle

From Flamingo, Bill and I took a park patrol boat for the run to our eagle islet. Cutting through the shallow waters, our outboard motor churned up the mud from the bottom of the channel. In all its 850-square-mile expanse, Florida Bay seldom is more than 10 feet deep. At low tide its exposed bars form a happy hunting ground for hosts of wading and shore birds.

Like herons ourselves, we waded ashore at the western tip of the mangrove key, tying our boat to the lacework of roots and branches that made the thicket fringe a formidable barrier. Then we threaded our way toward the key's open interior and through the waist-high grass and weeds of its long meadow.

KODACHROME © NATIONAL GEOGRAPHIC SOCIETY

Warblers fled from the mangrove branches. Egrets and a great white heron took off in pumping flight down the island's length.

Then we sighted the eyrie—and two regal birds upon it. They flew off at our approach, and a quick look showed that there were two young in the nest bowl. They were covered with light-gray natal down, and we judged them to be four or five days old. We left after quickly planning the best blind arrangement, because at this stage the eaglets might perish in the hot sun if deprived too long of their parents' protecting shade.

Two young make up the usual eagle brood. Sometimes only one egg is laid, sometimes as many as three, and very rarely four. There is a theory that the bald eagle population is dwindling partly because the birds are becoming sterile. Some observers have reported that in many nests where young once were raised, eggs fail to hatch, or no eggs are laid at all. However, we saw no evidence of this in the Florida Bay area.

Undoubtedly one reason for the disappearance of bald eagles in the eastern United States is the spread of waterside real estate developments, with consequent draining of swamps. Man's usurpation of waters where the eagle once could nest and secure its food may be an important factor.

**20-foot Tower Becomes an Oven**

A week after Bill and I had made our first visit to the nest site, I returned, this time with District Ranger Ernest J. Borgman and Park Rangers Bruce Shaw and James D. Arnott. We carried a plywood platform and a four-legged tower I had built from 2-by-2-inch lumber.

Let me say here that without the wonderful cooperation of Bill and Ernie and Jim and all the other Park Service employees who helped me, I could never have made my eagle pictures. They did extra duty to take me out to the key and to walk with me to and from the blind, so that when they departed, the

**Mother's Scimitar Bill Carves a Fish Dinner; Eaglets Need No Coaxing**

How like the human family—mother (or father) cutting a steak into bite-size morsels for junior to chew! But the baby eagles required no scoldings or promises to whet their appetites. In 12 weeks they grew from 3 to 36 inches in length.

A sea catfish, arriving still alive and squirming, provided a full meal. When the parents departed to forage, the young snacked on leftovers.

The female invariably offered a morsel to one eaglet, then to the other. The male poked food at one bird until its crop was full.

Occasionally the father chose to sun himself on a mangrove stub rather than go fishing. Mother then offered her hungry nestlings the dried wing of a blackbird as a pacifier, but they refused it and buried their heads in the nest. The unwanted wing remained in the eyrie for weeks.

Here mother inserts her bill into a fish (above); one powerful tug slits the prize from gills to tail. In the close-up, she peels a rubbery strip of skin. Her twins, who lean forward with anticipation, soon learned not to do so, for the snapped skin could strike a stinging blow.

 KODACHROMES © NATIONAL GEOGRAPHIC SOCIETY

eagles were fooled into thinking no human remained near the nest.

The tower was a two-section affair that we bolted together on the edge of the island. We lashed my canvas blind—a tent three feet square and five feet high—to the plywood platform and carried the whole structure down the length of the key to the nest site. There we set it up, guying its legs with wires to the slender trunks of near-by mangroves. I checked to see that the peephole of the blind stood on a level with the nest, 20 feet above ground (pages 130 and 131). Then we left.

The activity around the eyrie had taken scarcely 15 minutes. We had been careful to make no sharp sounds of hammering, sawing, or digging to alarm the eagles hovering overhead. And as we walked out of sight into the mangroves at the far end of the key, I saw the adults settle back to their nesting chores. The blind had been accepted as part of the scenery.

Two days later I started the weeks of photography that were to keep me in my tiny cubicle for as long as nine hours at a stretch. I worked my cameras on days when the sun made the inside of the blind a veritable oven. Perspiration streamed from me in rivulets—a blessing in a way, because I lost 11 unneeded pounds. I worked on days when the wind blew so hard I literally had to time my shooting in rhythm with the passes the lens made back and forth across the nest during the swaying of the tower. And I was rewarded with details of eagle behavior never before recorded on film.

### Gum-shy Eagle Flees the Nest

There were times, though, when I thought I would never succeed. Once I placed a stick of chewing gum on my camera tripod, to use after I had eaten lunch. Gum keeps my throat moist, a guard against any chance cough that could startle my photographic subjects. Finished with my sandwich and coffee, I turned back to my camera.

As I did, my hand brushed the gum from its resting place. It fell to the plywood floor of the blind with an almost inaudible plop. But faint as it was, the sudden noise was enough to scare the eagle from her perch beside the nest. She flew off with a cry of

**Training for the game of life.** Blackie exercises wings and legs, sometimes walking on all fours or falling beak first. A month's growth reveals pinfeathers emerging from the sooty-black wool on head and neck. Natal down is gone save for a few white flecks.

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KODACHROMES BY FREDERICA KENT TRUSLOW © NATIONAL GEOGRAPHIC SOCIETY

**Landing gear down,** tail and wing feathers spread as brakes, father comes in for a landing. When mother was fishing, he occupied a favorite perch 50 feet from the nest, but every half hour or so he left it to check his offspring. His wingspread approaches seven feet.

**Hungry Blackie** cranes a neck to follow a parent circling overhead with a fish clutched in one foot. Ten weeks old, the eaglet displays juvenal plumage, the tail feathers not fully developed.

Brownie, as a rule, kept out of the sun and remained quiet.

**Startled nestlings** watch father drop a green vine into the eyrie long after the nest-building period, as if bringing a gift to his family. Science cannot fully explain this odd aspect of eagle behavior. The author observed it twice.

Both birds participated in construction of the nest, the male carrying materials to the female on the platform. Even after incubation began, the mother bird rearranged nest materials. Light bulbs, broomsticks, and tablecloths stolen from clotheslines have shown up in other eyries.

**Shade-seeking fledgling** nestles beneath the other's drooping wings. When younger, the eaglets were sheltered by the parents against the sun but left to their own devices during rain and cold. In wet weather the offspring snuggled in the nest while the adults perched near by.

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**Nine weeks old,** the twins doze after exercising. Juvenal plumage indicates they will fly soon. Snowy head and tail feathers will appear in three to four years.

alarm; her two young cowered in their rampart of sticks and grass. It was two and a half hours before the old bird returned.

Whenever the parent birds brought food to the young in the 12 weeks I watched, invariably it was a fish—usually a catfish so recently caught it was still squirming.

Eagles have been accused of robbing farmyards and—until protected by law—have been ruthlessly shot by farmers and hunters on the excuse the huge birds preyed upon poultry, small game animals, and waterfowl. But the late Charles Broley, who earned the sobriquet of "eagle man" because in his lifetime he climbed into more than 800 nests to band young eagles for migration studies, only twice found the remains of poultry in the nest debris. (Broley's studies, incidentally, showed that eagles migrate to a greater extent than previously thought. Some banded in Florida were recorded as far north as Canada the summer after hatching.)

It is true that bald eagles will seize ducks, coots, or even geese for a meal. But usually these will be stragglers from the flock, cripples perhaps doomed to an early death anyway. The eagle harries them, drives them to dive under the water until they are exhausted, and then pounces. Rarely is a strong-flying bird an eagle's victim.

It is also true that our national bird is a carrion eater, roaming the beaches for fish cast up by the tides or soaring over the highways in search of a flattened carcass. But the eagle usually sticks to that which is freshly killed. Should he be censured for learning that the highways will give him a far easier meal than he can catch himself?

### Deft Fisherman or Devious Thief?

Undoubtedly the food in an eyrie will vary with the game in the locality. But most persons who have studied the bald eagle agree that his favorite food is fish, and that he is a deft fisherman. He soars above the water until he spots his quarry, then sets his wings for a long diagonal glide. As he skims the surface, his extended talons dip into the water to seize his prey. Sometimes, however, he'll plunge his whole body in, then rise with wings flapping and water droplets flying.

Much has been said about how the eagle robs the osprey of its catch. Benjamin Franklin, in his protest against the choice of the bald eagle as our national emblem, called him a bird of "bad moral character" and "too lazy to fish for himself." Such a statement, however, unjustly stretches the truth.

The eagle is fiercely predatory around the osprey, or fish hawk, swooping to force it to drop its catch and then snatching the fish for himself in mid-air. But such encounters happen only occasionally; the eagle gets but a small part of his meals that way. And I've seen ospreys turn the tables—attacking the king of the skies to make him drop a fish he had just caught.

### Mother Carves a Fish for Her Young

When my gun-shy eagle returned to her nest with a squirming catfish, I watched a routine that was repeated scores of times in the weeks it took the eaglets to grow large enough to feed themselves—and on occasions even after that. The adult bird hooked her beak into the fish at its gills, and with a single motion of her head ripped open its belly down to the tail (page 136). Then she snipped off half-inch-sized pieces of meat and daintily fed her young a bite at a time.

All birds have personalities, and when you live with a family of them for 12 weeks, you get to know their quirks and individualities. The female invariably offered a morsel to one eaglet and then a morsel to the other. But when the male did the feeding, he would poke food at one young bird until its crop was full, then concentrate on the other.

If a snippet of flesh was dropped, either parent would search the nest until it was found, before turning back to the carcass for a new bite. And I never saw either of the old birds take anything for itself—except perhaps a piece of tough skin, part of the head or tail, or a bit refused by the young. The adults did their feeding elsewhere.

At first the little ones sat patiently awaiting their turn to be fed. Only when the adult offered the bite in the tip of its bill would the eaglet cock its head to the side and, with a raking movement of its beak clamped over the parent's, scrape the morsel into its mouth (page 135). After a few weeks of growth, however, the young became impatient. They clamored for tidbits, pushing and tumbling in their desire to be fed.

As is usual among broods and litters, one eaglet developed more aggressiveness than the other, and from the time it was three weeks old dominated its nestmate. At this stage a dark-gray wool of secondary down had replaced the lighter natal down, and black-

**Insect intruder** disturbs mother's siesta. First she registers annoyance as the pest plainly appears in her neck feathers (above). Then she raises a talon and wonders where to strike. Finally she delivers the blow—on the wrong side! First one foot, then the other jabbed and scratched until the bird seemed satisfied.

KODACHROMES BY FREDERICK KENT TRUSLOW © NATIONAL GEOGRAPHIC SOCIETY

brown pinfeathers were beginning to appear on wings and along the backs. The aggressive nestling had many more black feathers showing, so I began calling it "Blackie." The other bird I named "Brownie" (pages 132-3).

The two eaglets were about a month old when they began feeding themselves on fish left in the nest by the parents. Blackie almost always was the first to clutch at the food with sharp talons and to tear with hooked beak. When Blackie was sated, Brownie's turn came. Afterward both usually crouched down in the nest to sleep, or perched and dozed.

### Blackie and Brownie Learn to Preen

Each adult, after feeding, ordinarily settled on its favorite limb and went through an elaborate toilet. All eagles spend hours in this preening ritual. Food on the scaly legs and toes is carefully picked off, and beaks stropped against the perch.

Then comes a combing exploration of the plumage. Quills in wing and tail are drawn from base to tip through quivering mandibles, as if the bird were giving itself a vibratory

**One-way stretch** exercises Blackie's right wing and exposes new flight feathers. At eight weeks, secondary wool still covers the legs; later it will recede, leaving shanks bare.

As flying time grew near, the youngsters turned the nest into a gymnasium, exercising wings, leaping into the air, and dragging sticks across the platform.

**Heavy wings** create problems for six-week-old Blackie, who lacks strength to extend both. When the bird tried, the heavy pinions collapsed. To fold them again, Blackie sidled first to the right, then to the left, letting them fall in place.

massage. Neck, back, sides, and underparts also receive a combing, and occasional anointings with oil squeezed from a gland at the rump.

As the youngsters grow, they, too, adopt this preening routine. By the time they are nine weeks old, their juvenal plumage is nearly complete, and they ape their elders in the thoroughness with which they care for their brown-black mantles.

It is not until the third or fourth year, and sometimes later, that beak and iris turn yellow and the snow-white feathers of the adult appear on head and tail.

### Mock Attacks Toughen Young Talons

The spacious eagle eyrie makes an ideal gymnasium and landing field for the growing young. Beginning in the down stage, they scrabble around as if on hands and knees, but using wings and shanks instead. Later they exercise feet and leg muscles by prancing about, clutching and even snapping nest sticks with their growing talons. They may toss a twig into the air with their beaks and leap upon it, or broad-jump across the eyrie as if pouncing on their prey—unconsciously training for the game of life ahead.

Wings are raised and stretched and folded, initially only one at a time, later both. In the nest I watched, Blackie was always the leader, the experimenter.

I'll never forget the day Blackie first stretched both wings at once. The effort was so much for untried muscles that the young bird couldn't retract the wings, and they drooped spread-eagled to the nest. But Blackie met the situation—by side-stepping toward one wing until it accordioned into place, then sidling along in the opposite direction to close the other (above).

Exercise periods for eaglets usually are followed by intervals of rest. The young birds nod their heads onto their breasts and drowse. Sometimes their eyelids are closed; other times only the nictitating membranes—

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**Bold, flapping Blackie tests wings at 11 weeks. Timid Brownie huddles behind the stub**

the thin coverings that serve as winking inner lids – cover the eyes. Occasionally the young birds mimic the adults and perch with one foot drawn up, clenching and unclenching their talons (page 146).

Cramped there on my campstool in the blind, I used to envy them this stretching. Many times my legs got so numb from immobility that I had to rub the circulation back into them before I could climb down from the tower at day's end.

### Fledglings Try Their Wings

As the eaglets' size and strength increase, their wing exercises develop into flight training. Desultory flapping becomes rhythmic beating, then powerful sweeps that raise the birds from the nest if their talons aren't locked tightly to the perch (page 147). Then come brief flights to a height of three or four feet straight above the eyrie, and finally hovering hops as much as 10 feet in the air that last a full minute at a time.

Aggressive Blackie always set the pace. Flapping strongly, the eaglet would often rise overhead, while Brownie looked up as if in almost incredulous admiration. Actually, the two nestmates got along with remarkably little fussing and feuding. Blackie was early established at the top of the peck order, and that was that.

All during their long nest life, Blackie had the edge. So it was no surprise when Ernie and I walked in toward the blind one morning and found Blackie hopping on the ground near the nest. As we approached, the youngster flew uncertainly to a perch the adults frequented, 300 feet from the eyrie.

A week later Brownie also was mature enough to start flying. The birds were then nearly three months old. But their nest life still was not over.

Eaglets, unlike most other young birds, hang around their old homesite for weeks after learning to fly. With their parents, they use the eyrie as a family dining table and

**Neck stretched,** eyes rolled back, the impatient female gives a tongue-lashing to her mate, who sometimes shirked his fishing duties for as long as three hours. When screaming, an eagle ends by tilting back its head like a baying hound, but the cry is surprisingly weak.

**Mother relaxes a leg** cramped by perching (below). Foot extended, she opens and closes her talons. Facing about, she repeated the operation with the other foot.

KODACHROMES © NATIONAL GEOGRAPHIC SOCIETY

sometimes as a bedroom. Blackie and Brownie were still in their old neighborhood late in March when the GEOGRAPHIC's Editor, Melville Bell Grosvenor, visited the site.

Other birds I have photographed get more or less conditioned to goings-on within the canvas. But the bald eagles never for an instant let down their guard. An unexpected creak from my stool or an unnatural motion of the blind invariably triggered them into intent alertness. When that happened, the completely natural behavior I sought to capture in photographs was spoiled.

Even so little a thing as changing the size of the camera lens while the eagles were away from the nest was enough to be spotted and to alarm them on their return. I avoided this problem by cutting the ends from a big tomato-juice can, painting it black, and fastening it as a permanent dummy to the front of the blind. Then I could poke any of my lenses into it without alarming the birds.

### Bravery Without Bravado

It is often said that the bald eagle is a coward. Benjamin Franklin scornfully wrote that "the little kingbird, not bigger than a sparrow, attacks him boldly and drives him out of the district." Crows will harry him, darting and cawing raucously while the eagle flies majestically along.

But this is only part of the story. Let the kingbird or crow follow the eagle into territory near his favorite perch or approach the eyrie when there are eaglets in residence, and the situation changes. Then no such harrying nonsense is brooked.

I'm convinced that the eagle—far from being craven—is just too confident of his superior strength to deign to bother with common tormentors.

He has also been criticized because he will seldom swoop at men climbing about his nest, as will many birds of prey and even some songbirds. But perhaps he has learned

KODACHROME © NATIONAL GEOGRAPHIC SOCIETY

**At 12 weeks of age, Brownie grips the stub and flies standing still**

that caution is the better part of valor. His size and distinctive plumage make him conspicuous, and over the centuries he has absorbed the painful lesson that man is the only enemy he need fear.

The eagle's strength and hooked weapons make him a formidable adversary. I've seen one with a broken wing fight like a demon against the efforts of three men to subdue him, glaring defiance even after his capture.

No, the American bald eagle is not a coward. He is a bird of power, of self-reliance, and of majesty—a lover of freedom who effortlessly soars the air currents until he is but a speck in the sky. Master of the domain he surveys, he is not easily provoked. Cornered,

**Broad pinions cleaving the air,** sharp-taloned feet held straight back, a bald eagle screams in flight above Alaska. Ranging from southern Florida to the northernmost State, this majestic bird makes a fitting national symbol.

he becomes a fury who will not willingly wear any man's shackles. What a tragedy if his kind should vanish from the earth!

Now, as I write, I learn that when Hurricane Donna roared northward last September, it swept away the eyrie I knew so well. In fact, all but one of the 32 bald eagle nests in the Florida Bay region of Everglades National Park were blown away. Yet, a few days later, our birds returned to their island, even though their tree and nest were gone.

Here was an epic demonstration of another of the hazards faced by our national bird in its stand against extinction—and of the tenacity with which it fights to survive.

**Coming in February**—Next month's NATIONAL GEOGRAPHIC will be as big and as colorful as all Texas, which former New York newspaper editor Stanley Walker will range from Panhandle to Rio Grande. Paul A. Zahl tells by word and photograph the wondrous story of how the sun gives life to the sea. John Scofield takes members to Haiti, the black republic of the Caribbean. E. Thomas Gilliard leads a National Geographic Society-American Museum of Natural History expedition into the mountainous heart of New Britain and finds jungle birds previously unknown to science.

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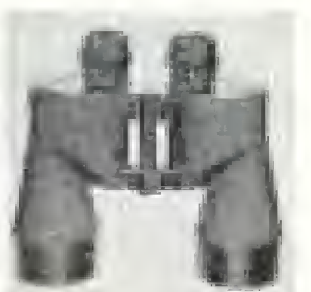

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***And whatever happened to the rich uncle?***

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***Air fares: down, down, down***

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The point we're making is that most people still consider a trip to Europe as an extended vacation and an event so special that it *must* require years of saving and planning. That may have been true once. Not any more. For through the new 17-day excursion fares it is now possible to see Europe, all expenses paid, for less than the regular jet air fare alone. (Here, proudly, we speak only for Swissair.) And you'll be able to spend 16 of your 17 days right *in* Europe!

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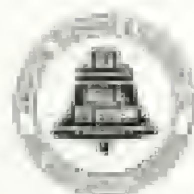

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