NATIONAL PARKS *Magazine*

Sandstone fin and angry sky:
Arches National Monument, southern Utah

July 1964

The Parks as Prologue

An Editorial

As man in these middle years of the 20th Century achieves a tentative mastery over the forces of nature in both their friendly and their hostile aspects, he confronts inescapable questions as to the use he shall make of his powers.

It can be argued that the science of the West, and not merely its technology, has probably been motivated from its earliest beginnings by the impulse toward such mastery over nature, toward power.[1]

The impulse toward outward power was paralleled, or perhaps even preceded by, a similar impulse toward power over inward nature, over the supposedly anarchic emotional impulses of the self.

This doubly motivated power-seeking purpose makes the appraisal of viable social goals the more difficult as it represses deep-seated impulses unrelated to, or even in conflict with, the drive toward mastery over the outward environment: the impulse, for example, to lie idly at the margin of a free-flowing stream, instead of working. The momentum of the effort toward outward conquest carries beyond the conquest of the non-human world and fastens upon human nature itself, seeking to remodel it in the image of the power drive.

The insights of psychology and psychiatry are too often employed to enlist men in the conquest of nature, their fellowmen, and themselves, rather than in seeking such understanding of the inner world as might shed light on desirable social objectives.

Students of the emotions and the mind search nonetheless for criteria of the normal or the ideal by which to judge personal and social health.[2] Students of government, by the same token, search for dependable criteria of essential human nature as comparison points for judging political policy and social systems.

Observing, one may detect the slow emergence of a science of man which, beginning with postulates, and proceeding toward verifiable hypotheses, may eventually provide compass bearings for rational long-term social policy decisions.[3]

Under pressures generated by the increasing overcrowding of the planet, which are destined to become more intense with each succeeding shock-wave of the population explosion, we begin to discern among our fundamental human traits a deep-seated need for an amplitude of living space, for a readily available surrounding quietude, for a continuous experience of natural beauty, and for an intimate and dependable association with the other forms of life, plant and animal, which compose the biotic communities to which, before the prison cities arose, men always belonged.

The need is to dwell within an outward environment offering a continuing sense of communion with nature, but one which both reflects and reinforces an inward environment of serenity, balance, and freedom.[4]

The great treasure protected by our national parks, for the sake of which we in turn are so determined as a people to protect the parks, is precisely the surviving record of the once-general natural environment of great spaciousness and unsurpassed beauty. But this record is important, not primarily as record, but as foretaste of the future, prologue to a true civilization.

The original inhabitants of this continent lived within scenery of this kind as their constant habitation. Their lives, howsoever rigorous, were drenched in this spaciousness, quietude, grandeur; the seaboard, when the Europeans found it, was a lush jungle of flowering vines, blossoming hardwoods, and scented pines, opulent in wildlife; the Appalachians were an endless succession of densely forested ridgetops which lost themselves westward; the prairies and plains were vast grasslands under enormous skies; the Rockies and Sierra moved men to visions beyond this earth.

The normal experiences of the pristine American may be recaptured now in our temporary escapes from industrial civilization to the parks. The mystery-enshrouded summits of Mt. Rainier in cloud; the still, high immensity of the great mountain Sequoia groves; the moonlit corridors of Olympic Park, home of the bear, the elk, the cougar: all serve to re-create the primitive experience for modern man, and to commend a restoration, not a nostalgic backward glance.

It is entirely possible for the affluent and leisurely industrial society whose advent is presupposed by western science and technology to re-establish its human communities in an environment as magnificent as that which our neolithic predecessors enjoyed, though doubtless not identical with it; if our growing insights into our own deepest nature have enduring validity, these possibilities must become imperatives of modern social policy.

Among the preconditions of success in such an environmental restoration would obviously be the arrest of the population explosion. The religious and secular leadership of mankind is now converging insistently upon the imperatives of such arrest. The presently expressed intentions of American women in respect to family size reveal a rapidly broadening understanding of the need for limitation.

These are domains of conduct in which custom and group opinion will be controlling. The accepted practice seems likely to settle upon the two- or three-child family; if three, granted continuance or reduction of present death rates, population will continue to expand; if two, a slow decline over centuries might ensue.

By the time significant arrest has occurred, the present heavy population of the planet may have doubled or trebled; a slow decline would give relief from congestion and ameliorate pressures on resources and production. A population stabilization or reduction of some description, thanks to the ultimate common sense of the species, seems virtually inevitable; if so, a broad environmental restoration becomes possible.

The other, and perhaps more serious, precondition of restoration is a basic shift of deep-seated attitudes toward nature; not conquest, but empathy, appreciation, enjoyment, must become the watchwords. We need only recognize that it is precisely in the wonders and beauties of a normal natural environment that we find many of our greatest satisfactions, to modulate, abate, rescind the compulsion toward the domination of all things which is presently working toward the domination and destruction of our own kind.

There are many signs of profound, if slowly moving, changes in prevailing attitudes in this field; they could easily burst into the sunlight of clear, new skies, into a moral revolution.

In such event, the parks will be there, if resolutely protected, as symbols of a new world of natural beauty within which men may settle themselves permanently on a lovely and livable planet.—*A.W.S.*

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[1] See Marcuse, H., *Eros and Civilization*, Beacon Press, Boston, 1955; compare Whitehead, A. N., *The Function of Reason*, Princeton, 1929; Beacon, 1958.

[2] See, for example, Rinder, I. D., "Definition of Normality," *Psychiatry*, May, 1964, p. 107.

[3] Fromm, E., *The Sane Society*, Rinehart, New York, 1955.

[4] Compare Progoff, I., *The Symbolic and the Real*, Julian Press, New York, 1963.

NATIONAL PARKS *Magazine*

OFFICIAL PUBLICATION OF THE NATIONAL PARKS ASSOCIATION

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Front cover photograph by Peter A. Appleton

The photographer, standing in the "street" of Park Avenue in Utah's Arches National Monument, will soon be hustling for cover in the face of a fast-moving summer cloudburst. For the moment, a narrow, massive sandstone fin stands in ragged silhouette against the hurrying clouds—grand and impressive in a wild terrain. Arrival of the cloudburst also will mark a sudden quickening in the tempo of earth-shaping; water, the major erosional force in this rough world of red sandstone, will pick up its task of dissolution and transportation to change the natural scene again a bit; a force creative in its never-ending work of destruction.

The Association and the Magazine

The National Parks Association is a completely independent, private, non-profit, public-service organization, educational and scientific in character, with over 28,000 members throughout the United States and abroad. It was established in 1919 by Stephen T. Mather, the first Director of the National Park Service. It publishes the monthly *National Parks Magazine*, received by all members.

The responsibilities of the Association relate primarily to the protection of the great national parks and monuments of America, in which it endeavors to cooperate with the Service, while functioning also as a constructive critic; and secondarily to the protection and restoration of the natural environment generally.

Dues are $5 annual, $8 supporting, $15 sustaining, $25 contributing, $150 life with no further dues, and $1000 patron with no further dues. Contributions and bequests are also needed. Dues in excess of $5 and contributions are deductible for Federal taxable income, and gifts and bequests are deductible for Federal gift and estate tax purposes. As an organization receiving such gifts, the Association is precluded by law and regulations from advocating or opposing legislation to any substantial extent; insofar as our authors may touch on legislation, they write as individuals.

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An Indiana Dunes National Lakeshore

By Frederic Sicher

Photographs by Arthur E. Anderson

DURING THE FIRST SESSION OF THE 88th Congress, Senator Henry Jackson of Washington State introduced Senate bill S. 2249, for himself and Senators Paul Douglas, Clinton Anderson, Vance Hartke and Birch Bayh, "to provide for the establishment of the Indiana Dunes National Lakeshore, and for other purposes."

If passed by Congress, this bill would establish the first national *lakeshore* in America, climaxing nearly a half-century of bargaining and compromising about what should happen to the scenic beauties of the Indiana shoreline. Because of this seemingly endless altercation, the case of Indiana Dunes presents perhaps more strikingly than that of any other potential national preserve the problems inherent in the painful and difficult path that today leads to creation of a national park system unit.

The fact that this area has been a focus of industrial, residential, and conservation concern for so many years testifies to its value. No other shoreline has dunes exactly like these. At one time, after the great finger of glacial ice that created Lake Michigan had melted, a seventy-five mile crescent of sand—from what is now Winnetka, Illinois, to Michigan City, Indiana—swept around the southwestern tip of the lake. The dunes shifted under the direction of the prevailing westerlies, migrating as much as sixty feet in a year. Forests of jack-pine and oak were buried and then exhumed as the wind blew great slashes in the sand. As they moved from the lake, the dunes tended to stabilize through accumulation of soil produced by plants; as they blocked the normal flow of streams, they created bogs and marshy sinks, and ponds and lakes, which supported a rich variety of vegetation and wildlife. Within a width of a mile and a half, the character of the dunes area ranged from the swampy delights of cattails and blackbirds at the outer perimeter to sandhills richly carpeted with trees and plants, then to the stark sandscapes and barren "blowouts" of the active dunes, and finally to the storm beach on the lake itself.

By the early 1900's the area was already prized by botanists, ecologists, ornithologists, biologists, geologists, and zoologists. Naturalist E. Stileman Bailey wrote in 1917 that "there is a greater concentration and variety of species located here than any other place in this country. It is a meeting place for plants more usual in northerly, southerly, easterly and westerly areas." Today there are still more than a thousand species of plants and trees. Ground-pine and jack-pine, sand cherry and poplar, barberry and cedar, all look out on the water from above the silver-green dune grass and thick masses of grapevine. Farther inland there is the violet, sunflower, hepatica, phlox, buttercup, Jack-in-the-pulpit, and blue flag; crab apple and dogwood; the wild rose, an unusual kind of dune cactus, and many species of ferns and orchids. Wildlife is equally diverse and abundant.

Arrowheads and other Indian artifacts are found from time to time along the lip of debris left around the end of the lake by the glacier. The Pottawatomies lived for many years along this shore, believing its beauty was the result of a touch from the hand of God. Their village was in the shadow of Mount Tom, the largest dune (192 feet high) which they named *Wud-ju-*

«

Tall blades of silver-green dune grass cast their long shadows on the Indiana Dunes storm beach. By holding the sand together, the grass helps to stabilize such beginning foredunes.

These partly stabilized, partly migrating dunes support many shrubs, ferns and flowering plants, but constitute only part of the botanical wealth of the proposed national lakeshore.

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A mile inland from the rugged beaches, the dunes give way to quiet forests of oak and maple (above). The photograph below shows a typical swamp area, created through drainage disturbance by migrating dunes.

nagow, or the "Sand Mountain."

Because of its historic, scientific, scenic and recreational values, Stephen Mather, first director of the National Park Service, proposed in 1916 that the area be preserved as a national park.

The momentous events of 1917 eclipsed this plan temporarily, but determined conservationists kept the idea alive. In 1921 the Governor of Indiana sent a committee to visit the potential park site. The Committee was favorably impressed, and a bill to purchase lands for a State park was introduced into the State Legislature. It failed to pass. In 1923 it was reintroduced; the committee chairman of the Indiana Federation of Women's Clubs spoke for the bill before the House of Representatives for two hours, presenting facts and pictures to the legislators and their wives. Her arguments took effect; a law was passed providing for the purchase of lands to be known as the "Indiana Dunes State Park." Much of the total cost of approximately one million dollars was acquired through private gifts rather than appropriation, including—ironically enough in the light of subsequent events—a $250,000 contribution from the United States Steel Corporation. Three and a half miles of shoreline were finally brought under State protection.

In the meantime, however, the northwest portion of Indiana was becoming the economic backbone of the State; from the east, suburbs of Michigan City spread down to the boundary of the new park, and from the west, over the course of just a few years, commercial interests leaped the Illinois State line and swarmed down the Indiana shoreline to develop the Calumet region and the city of Gary.

Since it is a central factor in the tangled skein of events and the ultimate form to be taken by the dunes preserve, it is worth noting that the area is particularly advantageous for the manufacture of steel. In 1929 Midwest Steel purchased a large tract in the heart of the dunes flanking Burns Ditch, which drains the Little Calumet River into Lake Michigan. Since then there has been pressure to turn this portion of the Dunes into a deepwater port for oceangoing vessels; this would obliterate a considerable stretch of the shore area west of the State park.

In 1931 the Army Corps of Engineers made an initial study and reported what seemed obvious: that public funds used for such harbor construction would benefit Midwest Steel alone. Midwest tried again in 1935 without success: but in 1937 Congress authorized a preliminary study of the entire Indiana shoreline to select the most likely site for a harbor. The Army Engineers did not report on this study until 1944, when they concluded the matter was not worth further examination because of existing port facilities at Chicago, Calumet and Michigan City. Despite this recommendation, in 1949 the Corps district office in Chicago came up with a preliminary report favorable to the Burns Ditch harbor, and cleared the way for a more serious study.

The Engineers' methodical pace had the effect of frustrating the two driving forces behind the harbor idea: the State of Indiana and the steel companies. A private study of the port was financed by the New York Central Railroad, whose lines border the area; National Steel, Midwest's parent company; and a real estate firm. At the same time, the Governor tried to persuade the Indiana Legislature to appropriate funds for land in the Burns Ditch area. State officials were primarily concerned about economic development that would follow the construction of a deepwater port and the new revenues it would produce.

The privately-financed feasibility study was favorable, and was used in an attempt to get private backing for the Burns Ditch project. Both this and the Governor's attempts to legislate the money were unsuccessful. In June, 1956, the real estate firm sold most of its acreage to Bethlehem Steel, who then stepped into the picture as the second steel company with interests in the area.

Economic Boom Foreseen

In 1959 the tempo quickened. The St. Lawrence Seaway opened, causing government and industrial officials to point out the possible economic boom that increased shipping might bring to the shores of Indiana; the Governor now appointed a new Northern Indiana Lakefront Study Committee to assess harbor sites along the shore. With steel and State urging each other on, Midwest began building a $103 million plant on their Burns Ditch property.

In 1960 the Indiana Port Commission was established to help secure the harbor at Burns Ditch.

All of these events received newspaper coverage, and gradually public dissent arose. Nearly seven and a half million people within a radius of fifty miles had traditionally enjoyed the excellent beaches and scenic trails (including Chicago residents, whose Prairie Club of Chicago first promoted preservation of the dunes in 1912 and which donated its sixty-seven acres of dunelands to the State in 1923), and many deplored the seeming misuse of this priceless natural area. Sparked

by a nucleus of residents from Ogden Dunes and Dune Acres—small communities just to the west and east of the Burns Ditch steel holdings—a Save-the-Dunes Council was formed in 1952. It accepted the stated need for a deep-water port and economic development, but asked why the port should be constructed with a maximum despoiling effect in the middle of the dunes when there had been no real study of alternative locations.

In 1958, unable to sway official views concerning location of the harbor, the Council turned to Senator Paul Douglas of Illinois, who was familiar with the area and who represented many interested persons in Illinois. Senator Douglas promptly proposed legislation for a national park which would include the State park, the proposed port site, the steel holdings in the area, and other privately-owned land. Secretary of the Interior Udall and Park Service representatives once again recommended the area as a preserve, and tramped the sandy reaches of the dunes along with Senator Douglas and the mayors of Chicago, Whiting, Hammond and Gary, and Congressman Ray Madden.

The Army Engineers re-entered the picture in 1960 with their long-awaited final report. On the surface the report upset the delicate stalemate with a conclusion favorable to the Burns Ditch site.

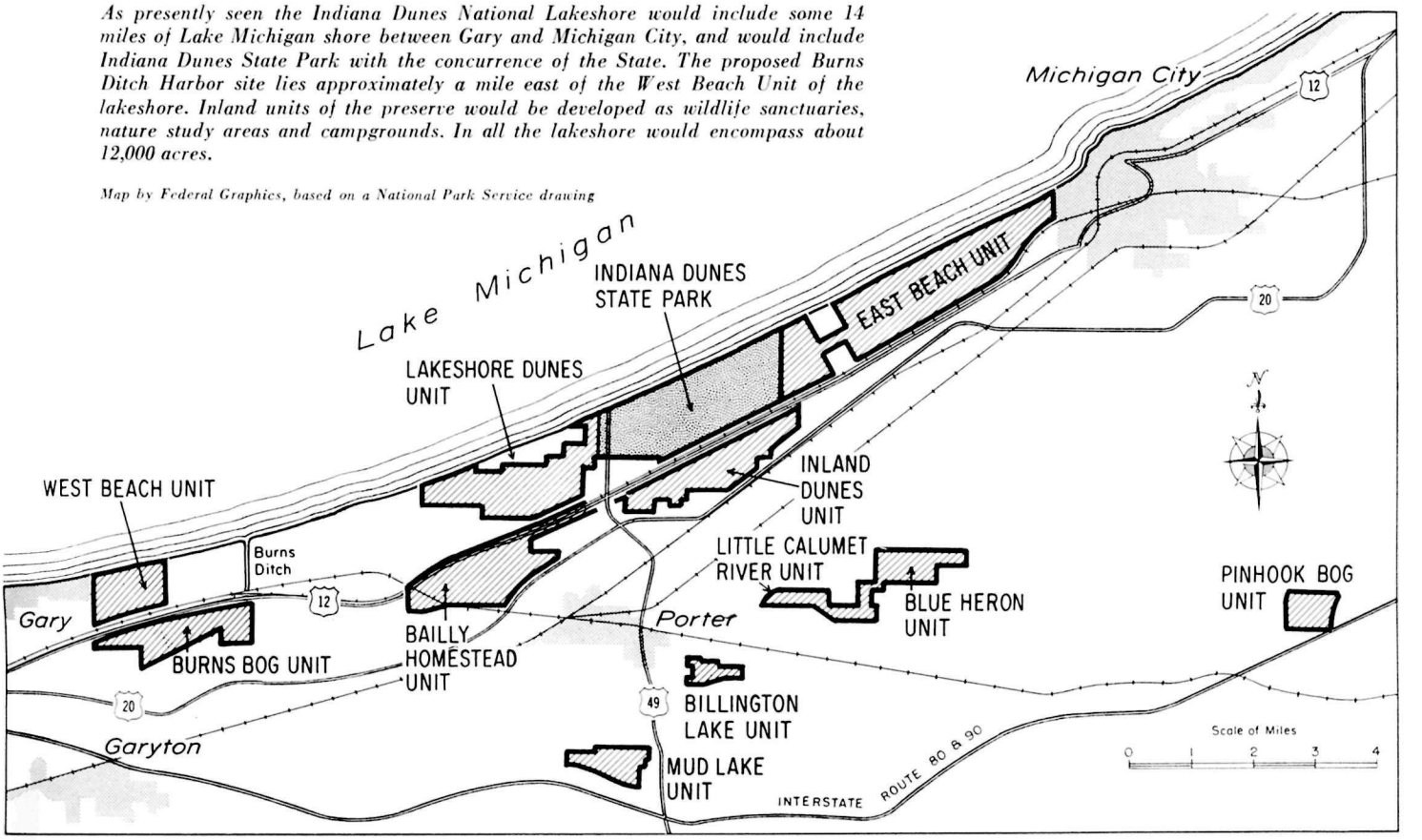
There was still, however, the old question of the expenditure of Federal funds for the benefit of one or two steel companies; the government wanted assurances that if the harbor were to be used principally by Bethlehem and Midwest, the volume of business would produce enough jobs, products, and revenue to substantially benefit the economy of the entire area. This would necessarily be a large commitment, and there was no real guarantee that Congress would furnish the money. In addition, Senate hearings again pointed up the fact that there had been no thorough study of alternative harbor sites.

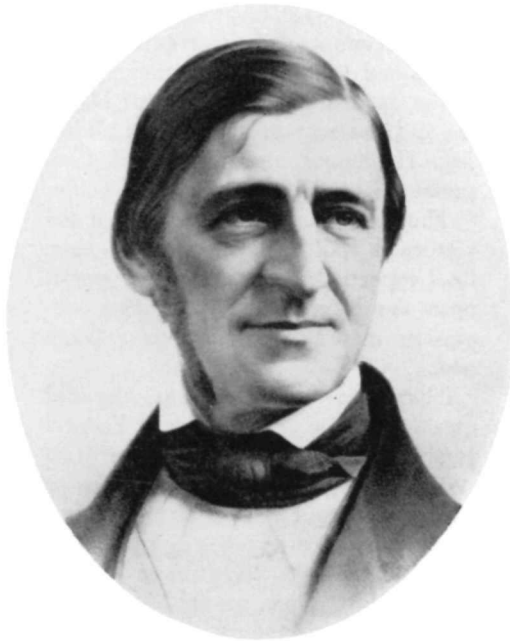
Suddenly the deadlock seemed to shift against the Burns Ditch promoters. Hearings resulted in a request for $25,000 to study other possible sites. At this point Bethlehem announced a contract to sell sand to Northwestern University as fill for its campus expansion program. Bulldozers and steam shovels began to level dunes just three miles west of the State park, while conservationists denounced the destruction of such irretrievable beauty. In December, 1962, Bethlehem Steel announced the construction of a $250 million fully integrated plant on its Burns Ditch holdings "to be started as soon as possible."

(continued on page 15)

As presently seen the Indiana Dunes National Lakeshore would include some 14 miles of Lake Michigan shore between Gary and Michigan City, and would include Indiana Dunes State Park with the concurrence of the State. The proposed Burns Ditch Harbor site lies approximately a mile east of the West Beach Unit of the lakeshore. Inland units of the preserve would be developed as wildlife sanctuaries, nature study areas and campgrounds. In all the lakeshore would encompass about 12,000 acres.

Map by Federal Graphics, based on a National Park Service drawing





Ralph Waldo Emerson

Photograph courtesy Library of Congress

Two Concord Men in a Boat

By Freeman Tilden

"I GO WITH MY FRIEND," WROTE Ralph Waldo Emerson in one of his essays on Nature, "to the shore of our little river, and with one stroke of the paddle I leave the village politics . . . and pass into a delicate realm of sunset and moonlight, too bright almost for spotted man to enter without novitiate and probation."

Who was this friend of Emerson's? Was it Henry David Thoreau? It is altogether likely. In that event, the paddling was done by the younger man —by him who built the cabin on Walden Pond and spent two years there with the woodchucks and the field mice and the ruffed grouse he called "my hens and chickens." It was not because the elder philosopher would have been unwilling to lend a hand with the oar. Henry would simply have distrusted the sage's watermanship. He regarded Mr. Emerson with high respect and almost with affection. He could appreciate better than most readers the beauty and truth of the Emersonian meditations upon nature in the abstract. He had no illusions about his companion's dexterity in the use of tools.

In lecturing upon "Man the Reformer" Emerson perhaps surprised even himself with the discovery that "manual labor is the study of the external world." Then he added something which must have made Thoreau smile. "When I go into my garden with a spade, and dig a bed, I feel such an exhilaration and health, that I discover that I have been defrauding all this time in letting others do for me what I should have done with my own hands." Thoreau, who spent two years in the Emerson household as a sort of handyman-guest, had observed that it was only necessary for the sudden death of a pear-tree that Mr. Emerson should spade up around it. Besides, the total Emersonian spading in a hundred years would not have worn out a wooden implement. Yet there is no insincerity here. Emerson, paddling his literary canoe, bumped aground on a metaphor.

In moments of calmer examination, Mr. Emerson knew well that he was no tiller of Concord soil. "With brow bent, with firm intent, the pale scholar leaves his desk to draw a freer breath and get a juster statement of his thought in the garden walk. He stoops to pull up a purslain, or a dock, that is choking the young corn, and finds there are two: close behind the last is a third; he reaches out his hand to a fourth; behind that are four thousand and one. He is heated and untuned, and by-and-by, wakes up from his idiot dream of chickweed and redroot,

Henry David Thoreau

Photograph courtesy Library of Congress

to remember his morning thought, and to find that, with his adamantine purpose, he has been duped by a dandelion."

There you have it, in as delicate humor as ever was written. The "pale scholar" is Emerson himself. He is drolly viewing his own estrangement from the intimate contact with nature. He honestly prefers his meditation unmixed with vegetables. He declines to be "drugged by the smell of the plants." "The genius of reading and gardening are antagonistic," he says.

Even Thoreau, at Walden, admitted this much. "I did not read books the first Summer: I hoed beans."

But there was a wide gulf here between the two men. Emerson, freed from weed-pulling, wrote up his journal and composed an essay, and kept up with modern scientific advance. What did Thoreau do with this broad margin of leisure? "I sat in my sunny doorway from sunrise till noon, rapt in a revery . . . while the birds sang around, or flitted noiseless through the house."

This contentment to sit in the doorway and simply to let nature flow over him—no ambition even to make a practical use of the revery—was what Mr. Emerson could not understand about Henry. With all that obvious talent of his young friend, why didn't Thoreau *effect* something, instead of just being "captain of a huckleberry party"? He could be a capable civil engineer. Emerson confided this sentiment to his Journal. Had he mentioned it to Henry, the reply would have been obvious. "My pressing engagements with nature, Mr. Emerson, leave me no time for such things. I had to spend the whole morning of this day trying to outmanoeuver a loon on Walden pond." Besides, Thoreau had a deep suspicion of applied science. "Our inventions," he said, "are but improved means to an unimproved end." Had Henry foreseen such a device as an electric toothbrush, he never would have left Walden.

Exploitation of America

It was a time of what Emerson called "small, sour and fierce schemes," when these two men were moving along the sluggish current of the Concord River in their skiff. The schemes were mostly devoted toward getting rich quickly by exploiting the seemingly endless natural resources of a frontier. Already the primeval pines of northern Maine were about gone. Emerson was an investor in railroad shares, to discover later that this was not only one of those small and sour schemes, but disappointing, too. A visiting Frenchman of the period compared the feverish devastation of the American landscape to the ruin left by "an army on the march."

In general, these two men in the boat were in agreement. They were both, in their ways, trying to flag down the rush of materialism and to warn that any reckless plunder of nature leaves man inevitably sick and sorry. But one of them was a born naturalist, and the other, for want of a better term, we might call a humanist. And thus we see them, as they paddle along, Emerson sitting at the stern, eyes neither wholly open nor shut, conscious of a vague wealth of beauty around him; but Thoreau observing the wedge-form wake of a muskrat, the skating insects inshore, the shape and texture of leaves; nothing escapes those eyes. There is a bittern standing at the river edge, with his bill pointed upward questioningly. Mr. Emerson has been meditating on man's place in nature: the bittern escaped his notice.

Emerson could write, so beautifully and truly, "At the gates of the forest the surprised man of the world is forced to leave his city estimates of great and small, wise and foolish. The knapsack of custom falls off his back . . . here is a sanctity which shames our religions, and reality which discredits our heroes,"—and so for two pages of lovely prose about man "nestling

in nature," and "drawing his living . . . from her roots and grains." But when he wrote his poem *Each and All* we find Emerson indulging in a rhetorical figure that for Thoreau would have been unthinkable.

"I thought the sparrow's note from heaven,
Singing at dawn on the alder bough;
I brought him home, in his nest, at even;
He sings his song, but it pleases not now,
For I did not bring home the river and sky;—
He sang to my ear,—they sang to my eye."

"Fine as the thought is, Mr. Emerson," Thoreau could have said, "here is a false note. You just *cannot* bring home a singing bird in his nest; and if you could, he wouldn't sing."

Similarly, Emerson has a tiny poem called simply *Fable.* The mountain and the squirrel have a dispute in which the squirrel is jeered for his littleness. The animal retorts:

"If I cannot carry forests on my back,
Neither can you crack a nut."

Thoreau could have told Emerson that the word "crack" conveys an entirely wrong idea. He might have shown the sage a half-eaten hickory nut and pointed out how neatly the animal chisels a panel through the thinnest part of the shell, which is directly over the lobes of meat. Mr. Emerson was of course thinking of the way *he* cracked nuts, which was probably with a hammer, and a flatiron held between his knees.

It seems a bit ungenerous to offer such objections where the poet's intent is so lofty; nor does it actually invalidate that intent; it only dilutes the total effect.

* * *

Though they had so much in common, as natural and moral philosophers, there was one cardinal point on which Emerson and Thoreau never could have agreed. When the Walden dweller said, "I love the wild not less than the good," or, "What man calls wildness is a civilization other than his own," or when he completely identified himself with nature in the simple words, "Morning is when I am awake and there is a dawn in me," Emerson shook his head. He would have replied: "In the divine order, intellect is primary; nature secondary." Or, "The beauty of nature must always seem unreal and lacking until the landscape has human figures that are as good as itself. If there were good men, there would never be this rapture in nature."

Bluntly put, Emerson feared nature. He was not physically afraid. He resented its competition with those high hopes he entertained for man. Once, he apologized for taking this position. "I have no hostility to nature, but a child's love to it. I expand and live in the warm day like corn and melons . . . I do not wish to fling stones at my beautiful mother, nor soil my gentle nest. I only wish to indicate the true position of nature in regard to man, wherein to establish man, all right education tends."

It is clear, as we read the extensive Journals kept by these Concord thinkers, that each served as a whetstone for the other. They agreed far more than they disagreed as to ultimate truths. Intellectually, Emerson was as much non-conformist as Thoreau. The important point is that both of them sowed the seeds of an appraisal of nature which, though it took years to arrive, are today fruiting in the efforts of preservationists and interpreters everywhere. ■

BASKET OF SUMMER

Summers follow summers in an endless chain,
The bill of greenness is not paid in full—
Deeper in dust the Piper plays and still
They follow him into the beauty hill.

For the fine flower, for the white silk bird,
For the deep fire and the plum we lost in dreams—
Each summer comes and sways and touches us
Each summer dies and leaves us all alone.

Upon the terrace summer tinkles now,
Into the fairy darkness it puts summer stars—
Only the seller of this scarlet knows
The pain of broken arms swinging his basket home . . .

—Marion Schoeberlein

National Parks in Australia

By William C. Robison

DRIVING EAST ACROSS THE GENTLY undulating tableland of northern New South Wales in Australia one is hardly prepared for the scene soon to be encountered. A few miles past the hamlet of Wollomombi the traveler leaves the main road to the coast and drives through forests of eucalyptus and banksia to wind among granite outcrops and to climb a series of short grades that marks the limits of old basaltic flows. A final uphill pull brings him to a small parking area fringed with stunted snow-gums. A few steps, and he is at the edge of an escarpment with a sheer drop of a thousand feet, below which a tangle of rugged ridges and valleys is clothed by unbroken forest.

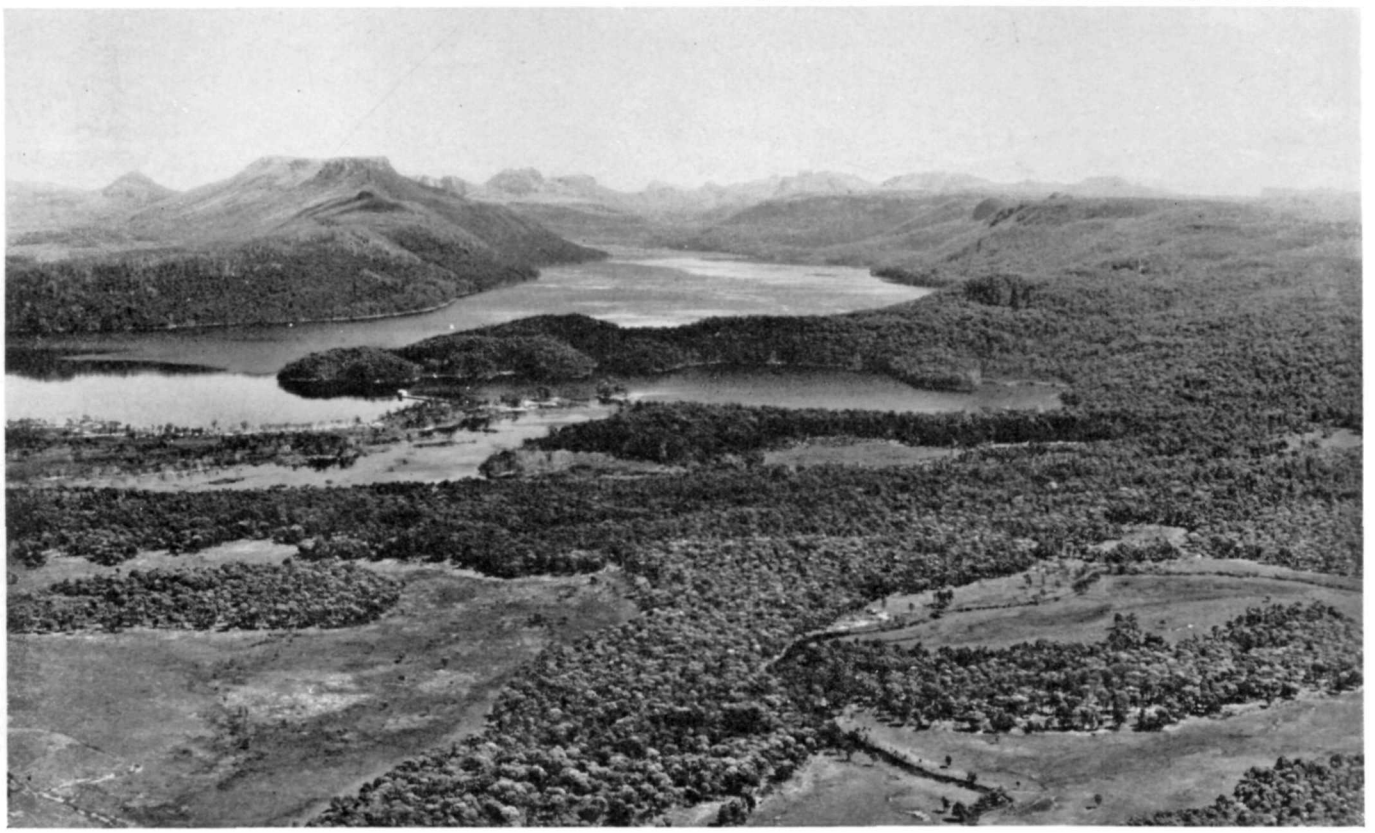
This is the New England National Park—47,000 acres of magnificent scenery in which a splendid series of vegetation types is preserved, from eucalyptus woodland on the tableland to subtropical rainforest in the damp and sheltered valley-bottoms. Although many visitors come to Point Lookout in the park to admire the view from the rim of the escarpment, the barely accessible forests below are visited only by occasional hikers and naturalists.

Off to the left of Point Lookout, and visible on a clear day, is the Dorrigo Plateau, a rich dairy region that formerly was covered with rainforest. The mountain face below it is still forested, and some 3800 acres of it have been set aside as the Dorrigo National Park.

These are but two of the twenty-two areas and nearly two million acres that have been set aside as national parks in New South Wales. Several of these,

Lake St. Clair, 2419 feet above sea level and eight and a half miles long, lies in the southern portion of Tasmania's largest national park, Cradle Mountain-Lake St. Clair, which encompasses a third of a million acres.

Photograph courtesy Tasmanian Government Tourist and Immigration Department



A typical stand of wet-sclerophyll forest (trees of which have tissue cells specialized to minimize loss of water) occupying intermediate elevations in the New England National Park of New South Wales.

such as the New England, Blue Mountains, and Kosciusko Parks, are comparable in size and quality of scenery to the well-known national parks of the United States. Others have more in common with State or local parks.

Administratively, none of Australia's parks are really "national," although the term is widely used. They are all owned and administered by the various States, each of which has sovereign powers over its lands and resources. This leads to much variation in terminology, policies, and legal status of parks from one State to another. A survey of the progress and prospects of the national park movement thus must consider each State individually.

New South Wales, the most populous State of Australia, also has the largest acreage in national parks. Kosciusko State Park alone comprises about a million and a half acres, including the highest mountains of the Australian continent and the mainland's best examples of glacial landforms. Although known officially as a State park, being the only one created by a special act of the State Parliament, Kosciusko is also a national park as the term is applied in Australia.

Parks of Sydney Area

The densely populated Sydney area includes two large national parks—the Royal and Ku-ring-gai Chase—and several smaller reserves which are maintained for public recreation and preservation of the natural fauna and flora. Royal National Park, just south of Sydney, was created in 1878—only six years after Yellowstone Park was established in the United States—but the State failed to maintain this initiative and for years the park's potential was neglected and its values impaired by fire and vandalism. In recent years it has been extensively developed for recreation, and it is estimated that more than a half-million people visit it each year. Ku-ring-gai Chase, a rugged sandstone area north of Sydney near the mouth of the Hawkesbury River, attracts about an equal number of visitors.

National park advocates in New South Wales are currently working toward two objectives. First, it has long been recognized that the State needs a legislative act to provide for an authority with a coordinated policy for management of its parks. At present each park is controlled by its trustees with only general supervision from the State Department of Lands. Moreover, with the exception of Kosciusko State Park, any national park reservation can be revoked by the Minister for Lands provided Parliament does not dissent from the proposal within thirty days.

The second step under consideration has to do with creation of new parks. At present nearly all of the parks in the State are within a hundred miles of the coast and lie in, or east of, the Dividing Range. Only the Warrumbungle National Park, preserving a group of volcanic formations near Coonabarabran, and Mount Kaputar National Park near Narrabri, are west of the main range. This distribution is natural in view of the fact that both the bulk of the population and the most scenic areas are near the coast.

But conservationists are concerned about preservation of the country's wildlife as well as its scenic attractions. There is a growing realization that preservation of many species requires not only restrictions on hunting but also maintenance of sufficient areas of suitable habitat. So far the species of the forests and brushlands have fared better than those of the western grasslands. As yet there is no national park or faunal reserve in the grassland region, which is the home of the red kangaroo and the emu. Both of these species are regarded by stockmen as competitors for livestock forage, and therefore as "pests"; but most Australians want to preserve them from extinction.

One of the basic problems confronting the various park trusts in New South Wales, as in most other States, is lack of funds. Although the State's contributions have been increased in recent years they are still insufficient to provide adequate protection and development of the parks. Not long ago a fire did considerable damage in Royal National Park because there was not enough equipment for the use of volunteer fire-fighters. The trustees of another park reluctantly gave a concession to a lumberman to take out some valuable trees in return for construction of a badly-needed fire road and enough money to provide minimum visitor facilities. Only with substantially increased Government grants will adequate protection be provided.

The Queensland Preservations

Queensland has a progressive policy with respect to its national parks, which began in 1908 with establishment of a park at Tamborine (aboriginal for "big cliff") Mountain. Aware of the tourist value of the world's largest barrier reef, impressive tropical rainforests, and rugged mountains, Queensland has created a park system second only to that of New South Wales in size, and somewhat more generously supported by its State Government. It is administered by the Department of Forestry under provisions of the Forestry Act of 1959. This act provides for protection of the parks from hunting, logging, introduction of exotic plants and animals, interference with the native flora, and "attempts to adorn nature" by landscaping.

A distinction is made between scenic areas, comprising less than 1000 acres, and national parks, which are larger

than 1000 acres; otherwise there is no difference between these categories. As of June 30, 1962, Queensland had sixty-three national parks and 167 scenic areas, totalling 928,000 acres. Outstanding national parks include Lamington, in the McPherson Range on the southern border of the State; Bunya Mountains in the interior, where some fine stands of bunya pine (an *Araucaria*) are preserved; and Eungella ("land of cloud"), a beautiful forested area which is the State's largest park. Other parks afford protection to crater lakes, aboriginal cliff paintings and burial caves, rugged gorges, volcanic plugs (the Glasshouse Mountains), historical sites, and the State's highest mountain. There is also a chain of island parks off the coast, including Magnetic Island near Townsville, Green Island near Cairns, 150-square-mile Hinchinbrook Island between these, and a number of smaller islands.

The smallest State, *Tasmania*, ranks third in total area of parks, with 3.2 percent of its land reserved for park purposes. The 586,900 acres of "Scenic Reserves" include eight national parks and a number of other areas variously classified as Coastal Reserves, Waterfalls, River Reserves, Cave Reserves, Scenic Roads, Forests, and Historic Sites, Buildings and Monuments. These are all administered by the Scenery Preservation Board, a subdivision of the Lands and Surveys Department, under the Scenery Preservation Act of 1915.

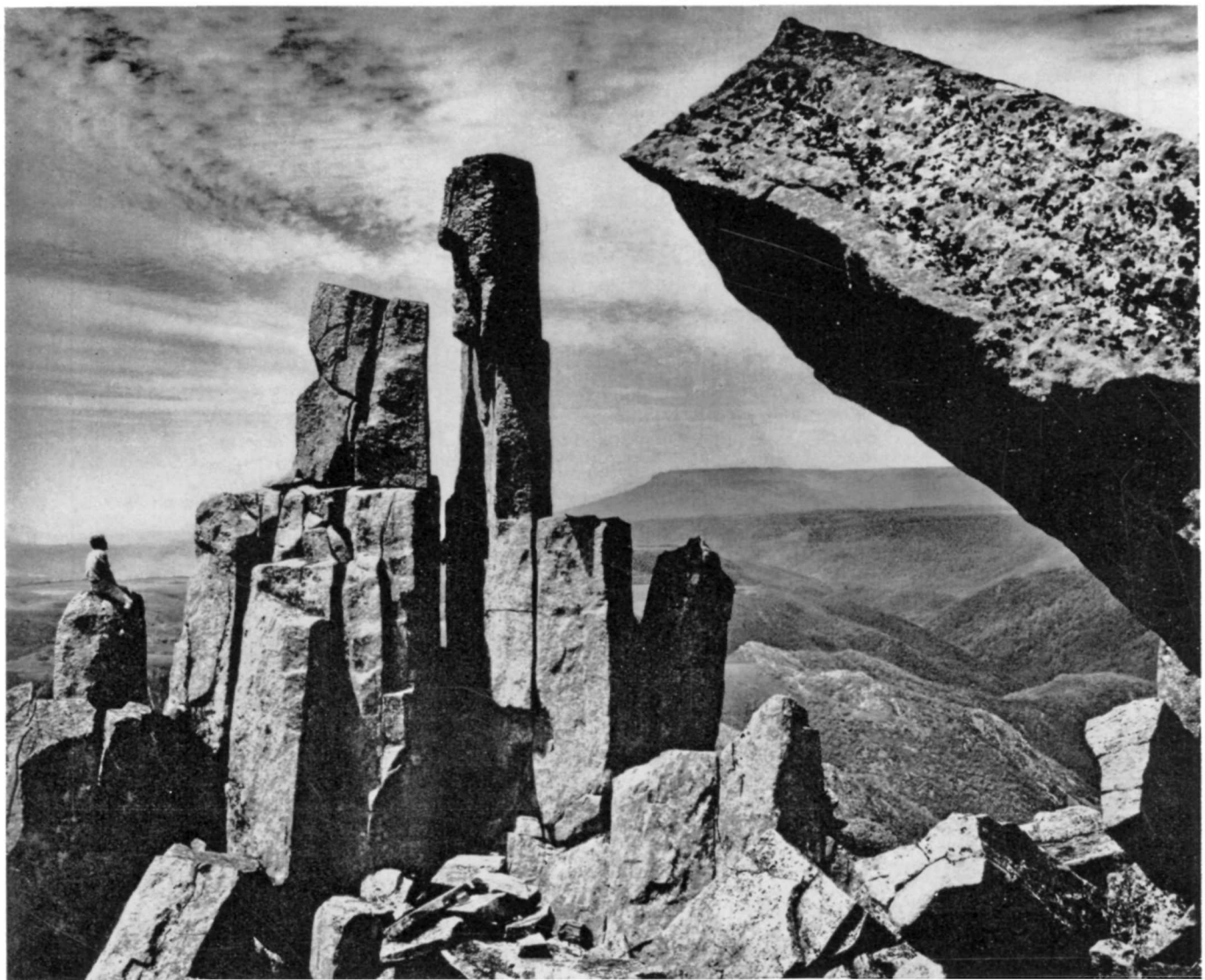
The largest national park in Tasmania is Cradle Mountain-Lake St. Clair, in the island's central highlands; a third of a million acres of rugged mountains where the visitor can see cirques, tarns and other glacial landforms, and vegetation varying from tall forests of mountain "ash" to subalpine communities on mountain tops. Sixteen species of marsupials, including the very rare "Tasmanian tiger," and the two monotremes (the platypus and spiny anteater) have been reported within this park.

Although Tasmania has a system of parks to be proud of, they are not without external pressures. A stand of *Eucalyptus regnans*, the world's tallest hardwood, in Mount Field National Park was felled for pulp after an enabling bill was carried through Parliament. Lake St. Clair, in the Cradle Mountain-Lake St. Clair National Park, is used as a source of water for a power station, and a control dam was constructed which raised the lake level by seven feet.

South Australia made an early beginning with enactment of the National

A typical rock formation near the summit of Cradle Mountain in the Cradle Mountain-Lake St. Clair National Park, largest of the eight national parks of Tasmania. Sixteen species of marsupials, including the rare "Tasmanian tiger," have been reported from this park.

Photograph courtesy Tasmanian Government Tourist and Immigration Department



Park and Wild Life Reserves Act in 1891. The Commissioners appointed under this act administer some 409,000 acres, mostly in fifteen wildlife reserves varying considerably in size. Except for a certain amount of fencing these reserves are generally not improved at present. Two "national parks," maintained primarily for public recreation, also are administered by the Commissioners. These are both in the vicinity of the capital city, Adelaide, and are in fact more in the nature of regional than national parks.

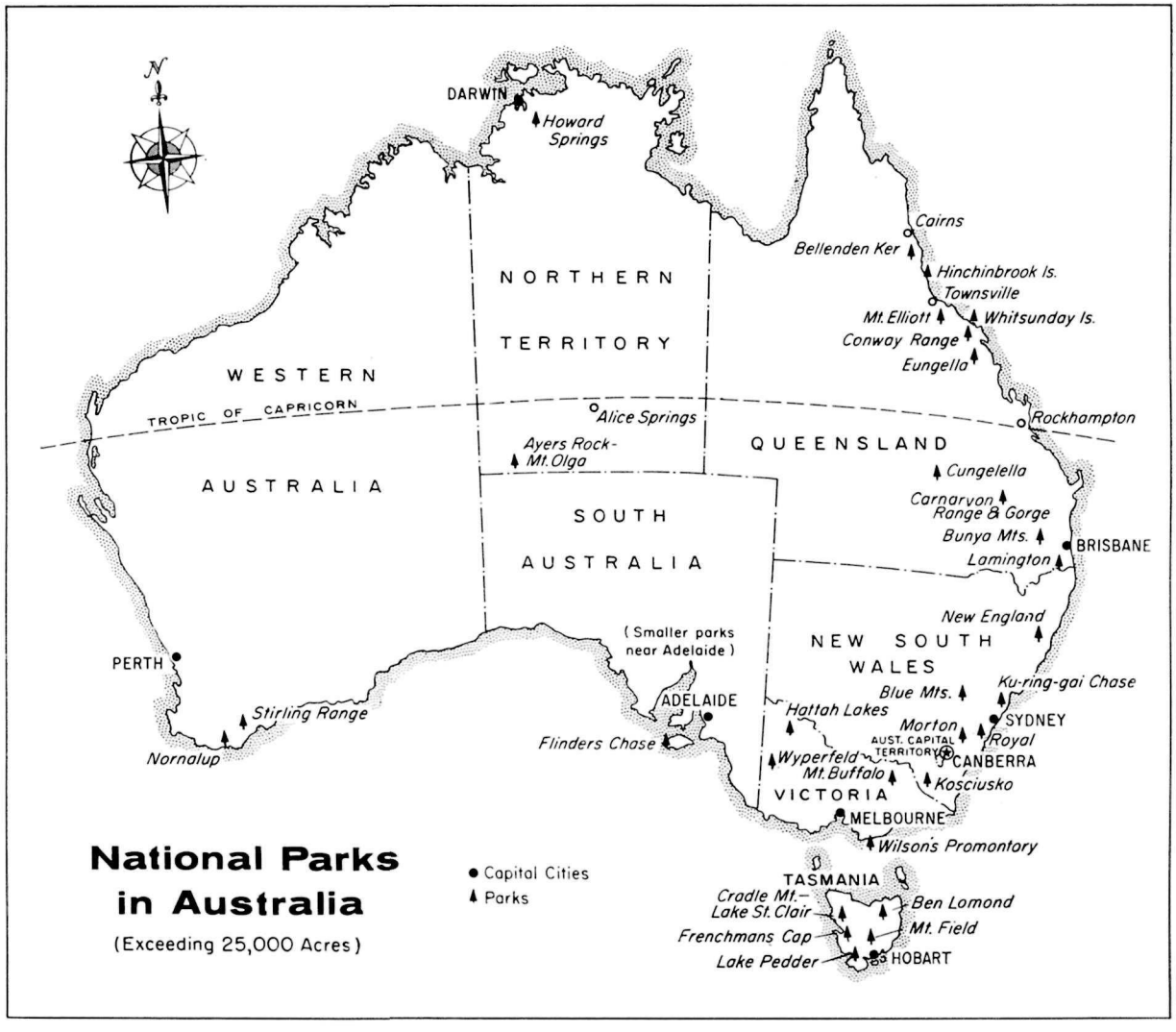
Other recreational areas come under a totally different authority, as National Pleasure Resorts. Most of these are only a few acres in size, but three exceed a thousand acres and one—Wilpena Pound in the Flinders Ranges—includes nearly 20,000 acres. They are controlled by the Government Tourist Bureau, an agency of the Department of Immigration, and afford protection and recreational facilities for a variety of places of scenic and historical interest.

Still a third authority is involved in supervision of South Australia's recreational reserves: the Fauna and Flora Board, which was set up to administer Flinders Chase, a sizable area at the western end of Kangaroo Island.

Victoria began its national park system in 1909 with reservation of 11,225 acres around the shores of Mallacoota Inlet as a sanctuary for native animal life, including the rare ground parrot. In subsequent years several outstanding areas were reserved, such as Mount Buffalo Park, a winter sports area on a high granite plateau; The Lakes (Spermwhale Head) National Park among the Gippsland Lakes; the Wyperfeld National Park, a large area in the dry mallee country [eucalyptus brushland] where a protected habitat is maintained for parrots, emus, the unique mallee-fowl or lowan, and other bird life. Progress in developing the parks was slow until passage of the National Parks Act of 1956, which created a National Parks Authority for the State. This Authority has been

Shown below are Australia's twenty-nine national parks and one fauna and flora reserve (Flinders Chase, on Kangaroo Island just off the coast of South Australia) of 25,000 acres or more. Although designated as "national parks," the areas are owned and administered by the Australian States and management policy varies considerably from one State to another.

Federal Graphics



energetically attempting to enlarge and develop Victoria's park system. Since 1957 the Fraser, Hattah Lakes, Mount Eccles, and Mount Richmond National Parks have been established, bringing the total area under the Authority's control in 1961 to 367,053 acres.

Special problems encountered in managing these parks include fire hazards, illegal shooting and vandalism, introduced animal pests (fox, rabbit, deer), and the need for facilities for public use of the park areas.

Western Australia, the largest State, has nearly 320,000 acres in national parks, which are administered by a National Parks Board under provision of the Parks and Reserves Act of 1895 and 1955. Largest is Stirling Range National Park, a region of scenic mountains just inland from the port of Albany. All the parks are in the southwestern corner of the State, where most of its population lives. In addition the more remote parts contain a number of extensive Fauna Reserves which are vested in the Fauna Protection Board. Still other reserves which have been created for various purposes remain under the Lands and Surveys Department. These areas are regarded primarily as reserves for future generations and are now given little attention.

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Australia comprises not only the six States but also the Northern Territory, several Territories outside the continent, and the Australian Capital Territory (which has no national parks designated as such). The Northern Territory Legislative Council passed a National Parks and Gardens Ordinance in 1955 providing for a Reserves Board to administer parks and reserves within the Territory. Its recreational areas now total 317,724 acres, and other scenic areas are expected to be transferred to the Board. Chief parks are Howard Springs, a major recreational center for the people of Darwin, and Ayers Rock-Mount Olga National Park in the desert southwest of Alice Springs. Ayers Rock is a remarkable reddish boulder measuring five miles around its base and rising 1100 feet above the surrounding plain; it has become a notable tourist attraction despite its remoteness from centers of population.

Throughout Australia there is a new interest in the country's outstanding scenic resources and its fauna and flora. This interest is manifested in the growth of National Trusts and National Parks Associations in the various States; by the number of proposals for creation of new parks; by publicity in the press and television; and by legislative measures, considered or recently enacted, in the State Parliaments.

Nevertheless, progress at the State level has been rather uneven, and a desirable measure would be establishment of a central coordinating authority in the national government. Some progress has been made toward the preliminary step of effecting closer relationship between conservation organizations in the various States; but real unification of effort still seems remote. The prevailing attitude of both urgency and optimism was summed up by an official of the majority party in New South Wales, who told the writer: "I think we are on the verge of some great forward strides in the field of conservation." ■

Indiana Dunes

(continued from page 7)

There had still been no serious study of alternative locations in already industrialized areas. However, Bethlehem's decision spurred developers, who took the attitude that, if a steel mill was to be built at Burns Ditch, why should the new port be located elsewhere? Less than a year later—in September, 1963—the Bureau of the Budget sent the Secretary of the Army a letter stating: "It is the President's wish to see a deep-draft harbor for Indiana made a reality, while at the same time preserving as much as possible of the priceless heritage of the Indiana Dunes for future generations."

This, in effect, represented the compromise that had been reached following Bethlehem's announcement. The Bureau of the Budget now felt an Indiana Dunes preservation could not include Burns Ditch, since with proper assurances concerning air and water pollution it would probably be the chosen harbor site. On the other hand, there could be a national preserve, too. A month after this decision was reached, S.2249, the lakeshore plan which represented the compromise, was introduced into the Senate.

The idea of a national lakeshore had been originally conceived as a means for preserving the unspoiled and largely unpopulated shoreline that stretched unbroken for about eight miles west of the existing State park. However, the compromise plan exempted the steel holdings and the two communities of Ogden Dunes and Dune Acres; Indiana Dunes State Park would be included with the concurrence of the State. If the preserve could not include most of the shoreline to the west of the State park, it would include most of it to the east. Secondary inland areas slated for trails and nature study would remain largely as originally planned.

Looking at the plan on a map, it appears that the National Park Service would inherit some highly desirable, if fragmented, shoreline areas. There are eight units proposed for the lakeshore, encompassing about 12,000 acres and spread over an area of about a hundred square miles. All except a small portion of Beverly Shores, a community of 475 homes just to the east of the State park, has been annexed to the proposed park by virtue of its excellent four and a half mile beach; there is now local controversy over whether all or part of Beverly Shores will be included in the preserve.

After initial public hearings on the bill on March 6, 1964, the proposed lakeshore remains in a state of flux. But public opinion is probably already strong enough to counter adverse proposals for invasion of the remaining natural country along the lake, and conservationists all over the country look forward hopefully to the time when the Indiana Dunes National Lakeshore will become a reality. ■

News and Commentary

NPA's 1964 Annual Meeting

The annual meeting of the board of trustees of the National Parks Association was held at the Association's Washington headquarters on May 21. Meeting-day commenced with a session of the organization's executive committee, the "housekeeping" trustees who must be in close touch with the Association's financial affairs and day-to-day operations. The balance of the meeting was occupied with the session of the full board, which considered the nomination of officers and trustees, heard the President's annual report and discussed current national park system and general conservation problems, and the Association's position in regard to them. Appointed to three-year terms to fill vacancies on the board of trustees were: Professor Ian L. McHarg, chairman of the Department of Landscape Architecture at the University of Pennsylvania; Charlton Ogburn, Jr., of Oakton, Virginia, author and conservationist; and Michael Straight, editor and writer, of Alexandria, Virginia. All officers were re-elected to their respective positions.

At the end of the day many of the trustees, the staff, and invited guests had an outdoor dinner at Stronghold, beautiful estate and preservation of the late Gordon Strong, near Frederick, Maryland. Stronghold is administered by Stronghold, Inc., non-profit organization to whose trustees the Association is deeply indebted for this and past courtesies.

Anti-Pollution Program

In 1963 more than three-quarters of a billion tons of petroleum and petroleum products were moved by the world's tanker fleet—the largest single item of commerce on the high seas. Pollution of ocean waters by oil and accompanying biologic disasters and human annoyances have been reported and discussed in these pages many times in the past. Now one big American oil company, Standard Oil of New Jersey, has taken steps to help eliminate one of the major causes of sea-water pollution by oil, and has indicated that several big European oil companies are also cooperating in its anti-pollution program. Biggest single source of pollution is the discharge at sea of oily waste water from tanks which are cleaned after discharge of cargo. Standard Oil of New Jersey has ended this practice on all its tankers; the oil-water emulsion resulting from cleaning of tanks is now brought to port and, through techniques perfected recently by the company, the emulsion is "broken" and the water extracted from it. Tanker captains are required to record details of their use of the new pollution-avoidance plans, which vary according to the type of oil cargo, in special voyage reports. To date, the firm reports, more than 1500 cargo deliveries involving more than 46 million tons of oil have been handled under the program with almost complete elimination of sea-water pollution.

The company is continuing work on the problem of ocean contamination by oil, and the results of its research will be made widely available, it is said.

Concord in Reverse

Ever since the redcoats were routed by minutemen in shabby trousers, Americans have boasted that they can do things better than the British. However, a new British land-use plan should puncture swollen American egos: the British are taking definite steps to ease urban blight, protect open spaces, and stop the waste of natural resources, while Americans generally plod on with their traditional misuse of the natural environment around cities.

The British plan includes provision of

Seen in the photograph below are some of the hundred-plus people in Virginia's Fauquier County who successfully halted plans for the blacktopping of their graveled country road.

Washington Evening Star photograph

Improvement Not Needed

In April we had a news item noting that the Kuskokwim in Alaska is the sole remaining major river in the nation uncrossed by bridge and unblockaded by dam, a situation that seemed strange enough to one newspaper to warrant comment.

Now we report another circumstance that is the subject of newspaper comment, this time from Fauquier County in north-central Virginia, where the State has proposed to blacktop several miles of a certain back-country graveled road. But the people of the vicinity do not want their road blacktopped; they like it as it is, safe for dusty children and horses and dogs. They claim that graveled roads are part of their way of life, and that if the State must blacktop a road it should be someone else's road. The State has agreed to withhold its blacktop pending a higher traffic count on the road. We hope this does not materialize, and we further hope that a few representative dusty country roads in every State will be spared from improvement.

more space for the eight million people jammed into London by creating new major cities and towns so that suburbanites will not crowd into the city during working hours. There will be a green belt of open space around the city, and natural areas will be doubled in size. Suburban sprawl will be halted through the building of multiple-story housing developments.

As the human population explodes irreversible defacement of the natural environment, especially around our cities, becomes more and more evident; but Americans still seem more concerned with reaching and exploiting the moon than with intelligent planning for the earth, on which most of us will live for some little time yet.

Birth of a French Park

In 1960 the French Parliament authorized establishment of a national park system for France (*National Parks Magazine:* June, 1961) initially to consist of six areas of scenic beauty and scientific, cultural or social interest. The parks were to be set up in a rather different fashion than those of the United States, and would consist essentially of a strictly controlled nucleus, roadless and without facilities of any sort; a surrounding zone in which regulations would be a little more flexible, and where there might be a few roads; and around all a third zone with administrative facilities and visitor accommodations. Private enterprise would be encouraged to furnish the latter.

NPA has learned that the first of the proposed French national parks will soon be out of the planning stage—a painful stage, incidentally, in a nation that has since time out of mind supported a large population—and will become a reality. It will be the Vanoise National Park in the Savoy Alps, a preservation of more than 100,000 acres in the headwaters of the Isère and Arc Rivers, adjacent to Italy's present Gran Paradiso Park. (It has been pointed out that with some administrative cooperation these two parks will provide a splendid sanctuary for a number of threatened European animal species in addition to superb scenery and high scientific interest. The ibex, for example, which is now making a strong bid to retain its viability as a species, will find the combined areas a great haven. Another animal which will be benefited by the adjacent preservations is the exceedingly rare royal eagle.)

It appears that the Vanoise Park will be operated according to original plan. Thus, its "core zone" will be visited only on occasion by scientists making faunal or floral studies. The second zone, or "park proper," will be open to tourists, and policed by armed keepers; the third zone, or "special tourist region," will have hotels and youth camps for skiing, hiking, and other outdoor recreation. Villages in this latter zone which are not financially able to provide proper tourist accommodations may receive assistance from the French Government.

Price of Concentration

Nowadays campers are piling into Yosemite National Park at the rate of nearly a million and a half yearly, and a new burden is being placed on the shoulders of park rangers during the busy season: that of policing campsites in an effort to stem a growing tide of lawlessness. Parts of Yosemite (and some other national parks) seem in danger of becoming cities rather than wilderness areas; and, as in most cities, there are some undesirable inhabitants. More than 900 of these were arrested in Yosemite last year for offenses ranging from reckless driving to murder. Perhaps overdevelopment has a part to play in this picture. Overdevelopment must inevitably attract people seeking carnival-type atmospheres, and in Yosemite Park alone there are 214 buildings; stores, hotels, markets, service buildings, and so forth.

We Are Sorry

For the past several years a bridge has been a-building to connect Bodie and Hatteras Islands in Cape Hatteras National Seashore. Visitors to the lower islands of Hatteras and Ocracoke up to now have taken the free ferry from Bodie to less developed Hatteras and the Pea Island Wildlife Refuge, and so south. It was a pleasant trip by water, consuming forty minutes or so—depending on the route dictated by Oregon Inlet's shifty sandbars—filled with the low drumming of Diesel engines and dashes of salt spray and youngsters tossing bits of bread to laughing-gull ferry-followers; a soothing introduction to sandy, sunbroiled Hatteras Island.

Now the bridge is finished, and the visitor can zoom across Oregon Inlet in a matter of moments. The Park Service has billed the bridge as one of the "added attractions" of the Seashore. At the risk of sounding cantankerous, we would like to make two observations concerning this bridge. The first is, that thousands of people are going to miss those ugly, slow, relaxing ferryboats that furnished a little extra touch to a Cape Hatteras visit at the cost of forty minutes one way. The second is, that units of the national park system do not stand in need of added attractions. Areas that need added attractions do not belong in the national park system.

(continued on following page)

Clusters Save Open Space

An ancient theory of urban planning, used in New England villages, has recently been revived to cope with the loss of open land caused by overpopulation and urban sprawl.

The theory, called "cluster development," is described in a report published by the American Conservation Association. The author of the report, William H. Whyte, indicates that cluster development, which is the grouping of individual dwellings on small land plots to preserve open space, promises greater conservation of the natural environment with its esthetic and recreational benefits.

Mr. Whyte points out that housing developers favor the cluster plan because they find that people prefer homes near woods and streams rather than impersonal dwellings in an overdeveloped community. Concentration of building also brings decreased costs of roads, sewers, and other utilities and, according to Mr. Whyte, can "make the whole community a better place to live in."

The 128-page report may be obtained from the American Conservation Association, 30 Rockefeller Plaza, New York, New York. Price is three dollars.

Fish & Wildlife Aid

Beginning July 1, 1964, over $14 million in Federal aid will be available to States for wildlife restoration and sport fishing projects. The funds come from Federal excise taxes collected from dealers in hunting and fishing equipment, and are based on the number of paid license holders in a state. States finance their own approved programs and are reimbursed for up to seventy-five percent of the cost. Texas and Alaska will receive the biggest share of the funds, with over $543 thousand each for wildlife restoration and $163 thousand each for fish. Guam, Puerto Rico, and the Virgin Islands are entitled to ten thousand dollars each under the plan.

Whale Species Endangered

The nearsightedness of people who depend on wildlife for a living has contributed greatly to depletion of the world's wildlife resources. Land mammals have in many cases either been brought to extinction or overprotected; and a tragedy is now being visited upon animals of the sea, which are being killed in the Antarctic by commercial factory-ship fleets at a faster rate than they can multiply.

The number of blue and humpback whales is so low that the scientific committee of the International Whaling Commission reports that at least fifty years of complete protection will be necessary to restore the two species. Fin whales need five years of protection; pygmy blue whales are already economically extinct.

Conservationists Are Honored

Twenty professional and non-professional conservationists were honored at the American Motors Conservation Awards Dinner on May 20 in Washington, D. C.

The awards are presented annually to individuals and groups for outstanding achievements in various fields of conservation. They were started ten years ago by American Motors as a way to highlight the need for protection of the nation's wildlife, water, soil, and forests.

Ten professional and ten non-professional conservationists received individual awards. Winners of group awards were the Massachusetts Audubon Society, and Ducks Unlimited, an organization which purchases breeding grounds.

Protection for Everglade Kite

The Interior Department's Fish and Wildlife Service has recently announced temporary closure of part of the Loxahatchee National Wildlife Refuge in southern Florida as an emergency measure toward saving the Everglade kite from joining the long list of birds that have become extinct since settlement of the New World. The Service estimates that from 9 to 14 of the birds still exist, a figure which places the future of the species in even greater doubt than that of the California condor or the better-known whooping crane. Partial closure of the refuge will be in effect until the end of July to prevent the kites from being molested or disturbed during nesting season; nine of the birds are residents of the refuge, while two sightings have been claimed in the vicinity of Lake Okeechobee, to the northwest.

Land drainage in central and southern Florida appears to be directly responsible for the near-extinction of the bird. Its single-item diet consists of a large snail; and as surface and ground water supplies have steadily diminished in the southern part of the State in response to canalization projects that discharge fresh water directly into the sea from the central part of the State, the snail has diminished in numbers. Thus the kite is losing its sole source of food.

Fish and Wildlife personnel say that the only hope for the Everglade kite now lies in restoration and maintenance of adequate water areas in which the snails will flourish and in which the bird will find ample marsh vegetation for nesting.

Book Reviews

FAMILIAR REPTILES AND AMPHIBIANS OF AMERICA. By Will Barker. Harper and Row, New York. 220 pages. $5.95.

From the time a snake supposedly tempted Eve and caused man's expulsion from Paradise, all creatures that slither, crawl, slink or slide have been feared and misunderstood. But any reader who approaches Barker's book with trepidation will quickly discover that instead of being slimy monsters, most reptiles and amphibians are essential to human welfare, and fascinating in their own right.

Barker calls snakes, lizards, turtles, crocodiles, salamanders, frogs and toads "first lords of the land," and gives the reader enough scientific history to insure an understanding of the phrase. Each of the continent's most important species of reptiles and amphibians is briefly and vividly portrayed, including habitat and range, patterns of courtship, mating and reproduction, and relationship in the biological chain of life. Familiar animals with unfamiliar and often odd characteristics are described, such as the hognose snake, which falls on its back and "plays dead" to discourage predators; the fringe-toad lizard, which swims in sand; the female alligator, who forces her bellowing mate into submission; and the glass lizard, which breaks off its tail when pursued and leaves the writhing appendage to distract the enemy while the lizard wriggles away.

The book contains a short glossary of biological terms, is well illustrated with fine color plates, and drawings by wildlife artist John Cameron Yrizarry.

—M.A.R.

THESE FRAGILE OUTPOSTS: A GEOLOGICAL LOOK AT CAPE COD, MARTHAS VINEYARD, AND NANTUCKET. By Barbara Blau Chamberlain. Natural History Press, 501 Franklin Avenue, Garden City, New York. 1964. xxii + 327 pages, illustrated, with appendices. $6.95.

Interpretation of natural history subjects for the unspecialized intelligent is not easy, and can be disastrous. The interpreter must drive with the reader down a highway that has many hidden potholes; a road lined with the wreckage of futile writing and replete with turnoffs that lead only to mystification, irritation, or complete disinterest. Natural history interpreters are either very good or very bad; there seems to be no room in the field for the mediocre.

Mrs. Chamberlain is very good. The geological story of Cape Cod, on the outer portion of which the new Cape Cod National Seashore is building, is not an especially complicated one, but neither is it a particularly easy one to present to the layman. This because of the nature of the principal forces that have played the larger part, during fairly recent geological time, in shaping the Cape—the crudely powerful forces of Pleistocene ice and wild Atlantic. Combined, the two left a surficial melange that well might present challenge to the geological picture-painter.

The author has accepted the challenge and has met it with success and with considerable color and verve. Mrs. Chamberlain is a graduate of Columbia University, and it might be noted here that this institution has turned out perhaps more than its fair share of good natural history interpreters in recent years, notable among which are a number specializing in geological interpretation.

Prospective visitors to the Cape and its national seashore who intend to take home with them considerably more than windburn and souvenirs will find *These Fragile Outposts* pleasurably helpful. The reviewer will add one note missing in the section dealing with the Cape's rocks and minerals: specimens found within national seashore boundaries should be admired, perhaps photographed, but in any event left for the next visitor to enjoy. *—P.M.T.*

THE CONSERVATION DOCKET

During late May the Senate Subcommittee on Public Lands held public hearings on S. 1870 (Anderson and Mechem), revised version of an earlier bill (S. 47, Anderson) to establish a Valle Grande-Bandelier National Park in the Jemez Mountains of northwestern New Mexico. The national park would incorporate the 30,000-odd acres of present Bandelier National Monument and would total about 60,400 acres over-all. Proposed development of the park would consist of some 13 miles of roads, 10 miles of trails, a visitor center and four shelters, and interpretive exhibits, picnic areas and visitor-use facilities, according to the Interior Department. The Department has recommended favorably on the bill, and the Budget Bureau has indicated no objection. Land to be acquired lies within a very large tract known as Baca Location #1 and is in single ownership; no serious local opposition has developed.

A bill (S. 2082, Holland) which would transfer 4420 acres of a large inholding in Everglades National Park—the so-called "hole in the doughnut"—to Park Service jurisdiction was favorably reported in June to the Senate Committee on Interior and Insular Affairs by its Subcommittee on Public Lands. The tract referred to in the bill is presently under jurisdiction of the Agriculture Department's Farmers Home Administration, and constitutes a little more than half of the "hole in the doughnut."

(Just before presstime NPA learned that this bill has been favorably reported out of full committee).

In early 1964 a bill (H.R. 9893, Matsunaga) was introduced into Congress to create a corporation called the National Tropical Botanical Garden. Purpose of the corporation would be establishment of a tropical botanical garden on the Island of Oahu, Hawaii, for basic research in tropical botany; dissemination of knowledge acquired in tropical botany; cultivation of tropical plant species threatened with extinction, and the education, instruction and recreation of Americans. Backers of the bill hope that, after initial Federal assistance in establishment of the Garden, its financing would largely be accomplished by private donation. H. R. 9893 has been reported favorably from one of the House Judiciary Committee's numbered subcommittees, and is quite likely to have been reported out of full Judiciary Committee by the time this Docket is in print.

Photograph by Arthur E. Anderson

On the southerly slopes of the foredunes along Indiana's Lake Michigan shore many species of beachside plants flourish in a seemingly hostile environment. The flowering plant is a beach cherry.

THE AIRLINE DISTANCE between two of the gems of the American national park system—Everglades in Florida and Mt. McKinley in Alaska—is nearly four thousand miles. In terms of scenery and natural history the two preservations are separated even more widely; the first, an example of the nation's modest portion of sub-tropics, the second a sub-arctic mountain wilderness. Diversity of scene and form is one of the hallmarks of a park system which has served as a model for similar systems in other lands.

ONE OF THE important educational functions of the National Parks Association is the evaluation of proposed preservations and the dissemination of information concerning them. In this educational and public service work you can help your Association in any of these ways: by raising the class of your membership; by helping to secure new members; by contribution to the general funds of the Association over and above regular membership; or by making provision for a bequest to the Association. Contributions are deductible from federal taxable income, and bequests are deductible for federal estate tax purposes.

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