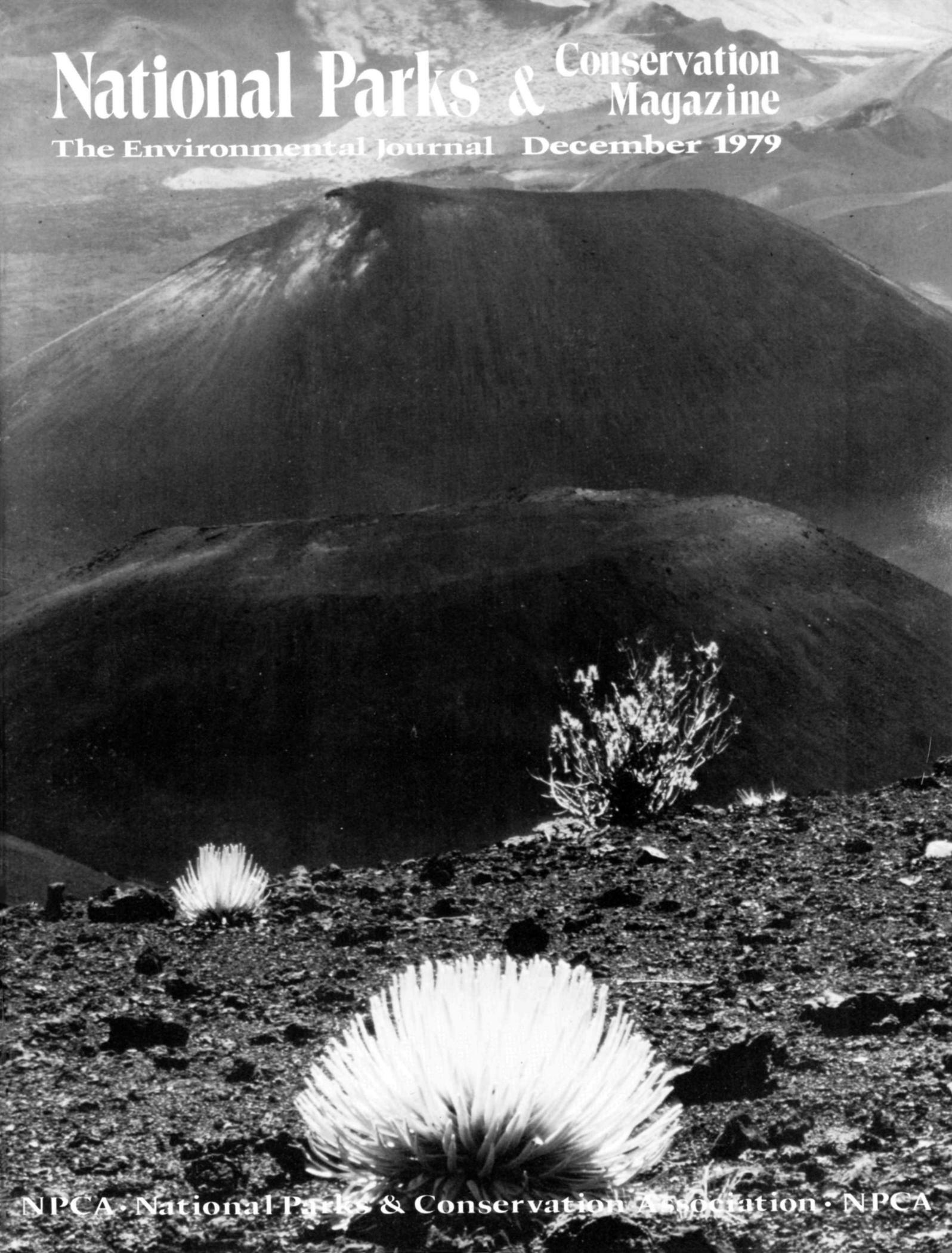


# National Parks & Conservation Magazine

The Environmental Journal December 1979



NPCA • National Parks & Conservation Association • NPCA

# Diamond Jubilee

**T**HIS MAGAZINE carries monthly reports to our members called NPCA at Work. We try to keep our members fully informed on all of our activities, and we appreciate the help they so often give in so many ways.

Some of our colleagues think an annual report would also be helpful, preferably chronological, and so we shall try our hand in limited space.

**T**HE MAGAZINE speaks for itself to all our members, and the current issue is the twelfth for our 60th anniversary year, our Diamond Jubilee. The index in this issue is in one way a running account of our work.

We dealt with the major park and environmental issues of the year and their implications on the editorial pages. We published a major article each month on a National Park and its problems; likewise another article in our long series on endangered species; and a major contribution on environmental issues. We reported on conservation news, on our own activities, and on forthcoming calendars in the Executive and Legislative branches of the government. This was educational and public service work of a very high order.

While the Magazine carries fine photographs, we do not publish a picture book. While our readers tell us that the articles are interesting, we do not print for entertainment. We have educational and conservation messages to carry, and that is the purpose of the Magazine.

Early in the year we published *Visions of Tomorrow—Work of Today*, a compendium of editorials in the Magazine between June 1971 and January 1979, a sequel to *Toward an Environmental Policy* containing editorials from July 1958 to May 1971.

**I**N OUR WORK with government—Legislative, Executive, and Judicial—we continued the battle for the protection of the natural environment in the Wilderness Parks. We led

the coalition of conservation organizations pressing for the Alaska Lands Legislation in the U.S. Senate, supporting the action of the President in protecting these lands by Executive Order last year. We worked throughout the year to establish a field organization for the creation of the proposed Tall Grass Prairie National Reserve in Kansas and Oklahoma, and coordinated the efforts of conservationists in Congress.

We continued our efforts throughout the year for the reform of concessioner institutions in the National Park System: the acquisition of facilities on a willing-seller capital-budget basis and management by lease. We supported plans of the National Park Service to move a work training camp out of Mammoth Cave National Park to suitable adjacent lands to prevent pollution and vandalism and have carried the issue to the courts. We have pressed for the relocation of concessioner facilities to the periphery of the park or beyond and for public transit in the park.

We have continued our efforts to get free shuttlebus systems inside the parks and public transit from surrounding communities, to reduce traffic for the benefit of the visitors. This has settled down mainly to getting adequate appropriations.

**T**HE NPCA HAS been the leading conservation organization concerned with the U.S. Budget for the National Park System. In part this is a problem in appropriations for acquisition out of the Land and Water Conservation Fund; in part appropriations for operations; we think there are better places to save money than in the operation of the National Parks.

In respect to specific parks, we have worked for protective policies at Acadia, Appalachian Trail, Assateague, Badlands, Cape Hatteras, Channel Islands, Fire Island, Gateway, Gettysburg, Grand Canyon, Grand Teton, Great Smokies, Indiana Dunes, Lassen,

Manassas, Olympic, Redwoods, Shenandoah, Yellowstone, and Yosemite, which we have reported fully in NPCA at Work in the Magazine, to which the index will guide you.

We tackled the National Park Service on its original regulations permitting reckless use of snowmobiles in the National Parks and got the use restricted to roads; we shall see how the compromise works out. We have been battling for designation of National Parks and Monuments as Class I areas for clean air, to protect air quality and visibility.

A study of publications arising in lands adjacent to the parks which we undertook in 1978 was completed and a report published in March and April in the Magazine, reprinted and distributed under the caption "No Park is an Island." Another of our publications, likewise widely distributed, intended to stimulate citizen participation in park protection was a *Citizens' Action Guide to the National Park System*.

We have accepted the responsibility given to us by the other conservation organizations to coordinate efforts for basic legislation confirming the establishment of the Heritage Conservation and Recreation Service in the Department of the Interior, responsible for the Registers of Historic Places and Natural Areas and for protective activities.

**W**E BEGAN work with the urban regional parks like Cuyahoga National Recreation Area in Ohio with full-time staff on July 1, 1977. We continued our efforts with these parks throughout 1979. A large number were added to the System in 1978, and management plans have been under preparation. We commented on these plans to the Service and in public hearings and have been effective in getting them improved.

Other units of this type in the System include Chattahoochee near Atlanta, Santa Monica near Los Angeles, Golden Gate at San Francisco, and Gateway at New York. We have held

*Continued on page 31*



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# National Parks & Conservation Magazine

The Environmental Journal Vol. 53, No. 12, December 1979  
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- 2 **Diamond Jubilee**  
*by Anthony Wayne Smith*
- 4 **Exploring the mysterious cave of the winds**  
*by George Cruys & Lawrence E. Cantera*
- 10 **The Student Conservation Program is a growing experience**  
*by Catharine Osgood Foster*
- 14 **Haleakala's silversword has a chance**  
*by John J. Doria*
- 17 **NPCA at Work**
- 19 **Senate committee cripples Alaska bill**
- 20 **NPCA Yesterday and Today**
- 22 **News Notes**
- 23 **Hubris at Cape Hatteras is courting disaster**
- 25 **Conservation Docket**
- 27 **Index to Volume 53, 1979**

**COVERS** Silversword at Haleakala National Park, Hawaii  
Front cover by David Muench; back cover by Ed Cooper  
*A century ago, silversword flourished so abundantly in Hawaii's lofty Haleakala Crater that the slopes and cindercones seemed bathed in moonlight. Although unchecked human and animal depredation had pushed the plant to the verge of extinction by the 1920s, the Haleakala silversword is now holding its own, thanks to the NPS. (See page 14.)*

**Eugenia Horstman Connally, Editor**  
**Joan Moody, Assistant Editor**  
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National Parks & Conservation Association, established in 1919 by Stephen Mather, the first Director of the National Park Service, is an independent, private, nonprofit, public service organization, educational and scientific in character. Its responsibilities relate primarily to protecting, promoting, and enlarging the National Park System, in which it endeavors to cooperate with the National Park Service while functioning as a constructive critic. In addition, the Association engages in domestic and international programs involving parks, forests, wildlife, wilderness, recreation, open space, rivers, oceans, pollution, pesticides, ecology, environment, population, transportation, historic and archeological preservation, natural resources, and related or comparable matters. Life memberships are \$750. Annual membership dues, which include a \$7 subscription to National Parks & Conservation Magazine, are \$150 Sustaining, \$75 Supporting, \$30 Contributing, \$22 Cooperating, and \$15 Associate. Student memberships are \$10. Single copies are \$2. Contributions and bequests are needed to carry on our work. Dues in excess of \$7 and contributions are deductible from federal taxable income, and gifts and bequests are deductible for federal gift and estate tax purposes. Mail membership dues, correspondence concerning subscriptions or changes of address, and postmaster notices or undeliverable copies to National Parks & Conservation Association, 1701 Eighteenth Street, NW, Washington, D.C. 20009. When changing address, allow six weeks' advance notice and send address label from latest issue along with new address. Advertising rates are available on request from headquarters in Washington.



NPS ASSISTANT NATURALIST LARRY FREDERICK IN WIND CAVE'S TINY NATURAL ENTRANCE, PHOTO BY CRUYS & CANTERA

Many mysteries still linger in the unexplored caverns beyond Wind Cave's tiny surface opening

**O**N A CALM NIGHT in the Black Hills of South Dakota the prairie grasses are bent by a mysterious breeze. Sometimes the earth seems to whistle through a hole in its rocky teeth; at other times it howls. The Sioux Indians believed this was the entrance to the legendary "Cave of the Winds" from which Wakan Tanka, the Great Mystery, sent the buffalo to the Sioux hunting grounds.

Much revered by the Sioux people, the Cave of the Winds attracted national attention around the turn of the century and is the namesake of Wind Cave National Park.

The wind from which Wind Cave draws its name is apparently caused by changes in atmospheric pressure. Because the cave is large and entrances are few, air rushes into the cave when atmospheric pressure is high, out when atmospheric pressure is low. This wind supposedly led to the discovery of the cave by white men. In 1881, Tom and Jesse Bingham were following a deer Jesse had wounded. The day was calm, yet the grass was waving. They heard a whistling sound coming from the ground and went to investigate. Finding a hole less than a foot across, Jesse bent down for a closer look. The wind was said to have blown his hat off. Later, when he returned, his hat was drawn off and disappeared down the hole.

by GEORGE CRUYS and  
LAWRENCE E. CANTERA, JR.

# Exploring the mysterious cave of the winds

**T**HE LIMESTONE BED containing Wind Cave was formed during the Mississippian Period, about 350 million years ago. At that time all the continents of the earth were joined into a single land mass, and the Black Hills area was covered by a warm, shallow sea. Sediments rich in calcium carbonate settled to the bottom of the sea and were eventually compressed to form solid limestone. This limestone layer was extensively fractured when the Black Hills region later uplifted. Slow dissolution by ground water widened these cracks to form caverns, while a change in climate and further uplifting of the region pushed the newly formed passageways above the water table. This formation process, thought to have begun some 10 million years ago, places Wind Cave among the oldest known cavern systems on earth.

Known portions of the resulting cave extend about 30 miles under rolling, grass-covered hills, to a depth of 450 feet. Large passages lie along a northwest-southeast axis, following the lines of stress created when the Black Hills uplifted. These are joined by smaller crawlways, generally at right angles to the larger areas. The extremely complex pattern of intersecting fissures can be divided into three levels: an upper zone of smaller rooms and relatively few cave deposits; a middle zone of wide pas-

sages, large rooms, and frequent deposits; and a lower zone with high, fissurelike passages coated with calcite, called the "calcite jungle." Developed portions of the cave include areas in all three zones, which remain at a year-round temperature of about 50°F.

**B**EFORE THE AREA was designated a national park, the cave was managed as a private tourist attraction by the McDonald and Stabler families. In 1890 Jesse D. McDonald was hired as manager of the cave by the South Dakota Mining Co., which claimed mineral rights there. When no minerals of economic value were found, McDonald was discharged. He and his family stayed on as homesteaders, built a house over the cave entrance, and attempted to develop the cave for paying customers.

Shortly after arriving in nearby Hot Springs, South Dakota, John Stabler bought an interest in the cave and derived an income from entrance fees and concessions. Stabler's arrival immediately preceded a promotional campaign designed to attract more visitors to "Wonderful Wind Cave."

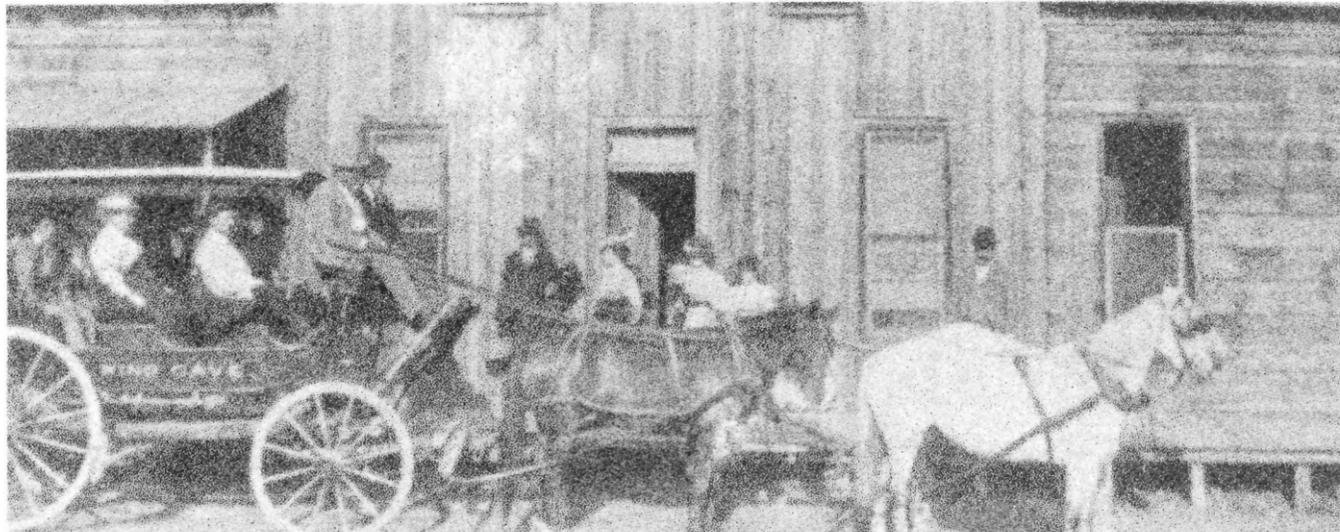
A so-called "petrified man" was found near the cave in 1892 and put on display. The "discovery" was not original with the Wind Cave specimen; petrified men seemed to be showing up all over the country in those days. The petrified man

was displayed at Wind Cave about a month, and the *Hot Springs Star* pronounced it genuine. John Stabler displayed the petrified man briefly in Hot Springs then took it on the road to further advertise the cave. He finally sold his interest—and McDonald's—in Topeka, Kansas.

The promotional campaign continued. A brass band once played in the cave and religious services were held underground. The publicity stunts reached their height, though, with the arrival of a Professor Johnstone, mind reader.

Johnstone was to be blindfolded to find a hat pin hidden in the cave. There was no time limit, but some citizens made bets of \$1,000 and \$2,000 that the pin would not be found. Johnstone was accompanied into the cave by a group of Hot Springs' prominent citizens. The party was lost for three days, with Johnstone yet to find the pin. Then, still lost and supposedly "out of his mind," Johnstone went to a formation in a room called Standing Rock Chamber and miraculously found the hidden hat pin. Once again the *Hot Springs Star* graced the affair as genuine, and news of the feat and Wind Cave spread across the nation.

**I**N THE MIDST of this ballyhoo was Jesse McDonald's teenage son, Alvin. Ever since his family had arrived at Wind Cave in 1890,



PHOTOS COURTESY OF NATIONAL PARK SERVICE

Alvin had been exploring the cave on his own, mapping it, and keeping a diary of his adventures. He called his daily record, "The Private Account of A. F. McDonald, Permanent Guide of Wind Cave."

Alvin spent hours in the cave exploring. In January 1892 he recorded twenty-seven trips underground. In February and March he spent more than 254 hours in the cave during sixty-eight trips. On Friday, January 23, 1892, he took visitors on a nine-hour fifteen-minute trip, noting, "have given up the idea of finding the end of Wind Cave."

Shortly after a promotional trip to the 1893 World's Fair in Chicago Alvin fell ill with typhoid, possibly from the drinking water in Chicago. He died December 15, 1893, and was buried on an overlook east of the cave entrance. The gravesite is commemorated by a bronze plaque. Alvin was only twenty when he died, but his long hours in the cave are still evident to visitors today, who find bits of twine he left as markers and initials on the rock walls of many rooms.

Ever since John Stabler had convinced Jesse McDonald to sell him an interest in the cave, disagreements about its management and the disposition of funds had arisen. After Alvin died, disputes between the McDonalds and the Stablers became more frequent and intense. Disputes over book-

keeping and questions about land claims in the area of the cave led the families to seek a resolution in the courts. The court battle over ownership of the cave was complicated by the claims of the South Dakota Mining Co. and those of other parties. The court case drew the attention of many who thought the cave should be used for the benefit of the people. In 1899, government officials discussed a proposed Wind Cave National Park; the Department of the Interior took control of Wind Cave in the spring of 1901. On January 9, 1903, Theodore Roosevelt signed legislation making Wind Cave the nation's first national park featuring a cave as its major attraction.

**T**HE FIRST AREA of the cave to be seen by modern visitors is the natural opening that prompted the discovery of the cavern system. Swept by barometric winds as forceful as 50 m.p.h., the opening, which today is about 13 inches wide, at first was the only entrance to the cave. Although winds have slackened slightly since the larger entrance was cut and an elevator shaft was built in the southern section of the cave, it is doubtful they ever reached the 150 m.p.h. speed reported by the *Omaha World Herald* in 1893.

Modern visitors enter the large, man-made opening and descend a long stairway to reach underground

*Perhaps attracted by advertising cards like that at far right, visitors arrive at Wind Cave in the 1890s (above). Their guide to sights such as the unusual calcite boxwork formations (below) may have been the proprietor's teenage son, Alvin McDonald (right), one of the cave's most dedicated explorers, now buried near its entrance.*



**THE**  
**WONDERFUL**  
**WIND CAVE**

HAS

**More Miles of Passages,  
Larger Rooms, and . . . .  
More Magnificent Scenery**

**THAN ANY CAVE EVER YET EXPLORED.**

*Near the Famous Hot Springs of South Dakota.*

DAILY STAGE FROM  
HOT SPRINGS.

(OVER)

JOHN STABLER,  
GENERAL MANAGER.  
GEO. A. STABLER,  
CORRESPONDING SECRETARY.

J. D. McDONALD, PROP.,  
WIND CAVE. S. D.

trails. Approximately 100,000 cave tourists are led through developed areas every year, where electric lighting and steps replace the candles and rope and wooden stairs of earlier times.

Much of the cave is closed to tourists, but four different tours are available at modest fees, allowing visitors to see the underground system from a variety of perspectives.

The cave's 1¼-hour regular tour covers half a mile and departs frequently, especially during the summer season. A longer version requires 1¾ hours, traversing one mile and 700 stairs.

The Historic Candlelight Tour is an especially interesting attraction. Guides dressed in 1890's costumes lead visitors by candlelight through unimproved portions of the cave. Tour routes are similar to those of earlier days, and participants are urged to think back to the turn of the century as they carry candle lanterns through the timeless darkness. This 1¾-hour tour covers one mile.

A 4-hour spelunking tour is also available, for people who want to visit more remote areas of the cave. Limited to persons in good physical condition, this unusual tour introduces participants to the science and sport of caving, with equipment provided by the park. Several hundred feet of passageways are included, and participants often are

allowed to explore passages independently, marking their trails with tape as they go and returning to a designated area at a specified time.

Finally, special group tours of the cave can sometimes be arranged by contacting the superintendent of Wind Cave prior to visits.

**V**ISITORS to the cave are often disappointed at the lack of stalactites, stalagmites, dripstone, and flowstone common to many other underground attractions. For a number of reasons, including the region's dry climate, these features are rare in Wind Cave. They are replaced, however, by a number of unusual deposits found in few other areas of the world.

Probably the best known of these unusual Wind Cave deposits is "boxwork," formed of crystallized calcium carbonate (calcite) that filled cracks formed during the cave's creation. When less resistant limestone between the filled cracks weathered away, delicate ridges of calcite were left, paper thin in some places. These ridges cover the walls and ceilings of many cave areas, including a room called the "Post Office," where the boxwork resembles pigeonholes for sorting mail. Although other caves in the Black Hills may have boxwork, no other cave in the world exhibits the variety, size, and amount found in Wind Cave.

Equally unusual, and even more bizarre, are the helictite "bushes" found in the lower areas of the cave. Coral-like calcite formations that seem to defy gravity, these bushes reach as much as six feet in length and project from floors and ceilings alike. "It looks like you picked up a shrub and all you've got are roots hanging from the ceiling," says Larry Frederick, a spelunker and assistant naturalist at Wind Cave. Only a few other caves in the world have similar formations.

Other cave deposits include needlelike frostwork, which resembles delicate snowflakes, and "calcite rafts," a formation so thin

it appears—like broken ice—to be supported by water surface tension alone. Still other deposits bear such exotic names as popcorn, moon milk, Christmas trees, soda straws, euhedral quartz, birds' nests, and dogtooth spar.

**A**LTHOUGH Wind Cave was one of the first national parks, large portions of it are still unexplored, and many mysteries remain. Approximately 30.5 miles of passages have been mapped to date, making the cave the fourth longest in the Western Hemisphere. No one can say, however, how far unexplored crevasses may probe beneath the Black Hills. At

the end of the nineteenth century. Elmer McDonald thought the cave might extend all the way to Yellowstone; others thought Wind Cave and nearby Jewel Cave were linked in the subterranean darkness. Today, it is interesting to speculate on how many of Wind Cave's passages probably lie undiscovered although we may never know its entirety.

According to Assistant Naturalist Frederick, exploration of the cave is backbreaking work that will take years to complete. "One of the limiting factors in Wind Cave is its ruggedness," he says. Modern technology can't be of much help, he adds, so exploration

has to be done on hands and knees. A struggle through several hundred feet of narrow crawlspace may be rewarded only by a dead end. Dark trails may end in sheer drops to jagged rocks, with the risk of becoming lost in mazelike passages likened to a giant underground sponge.

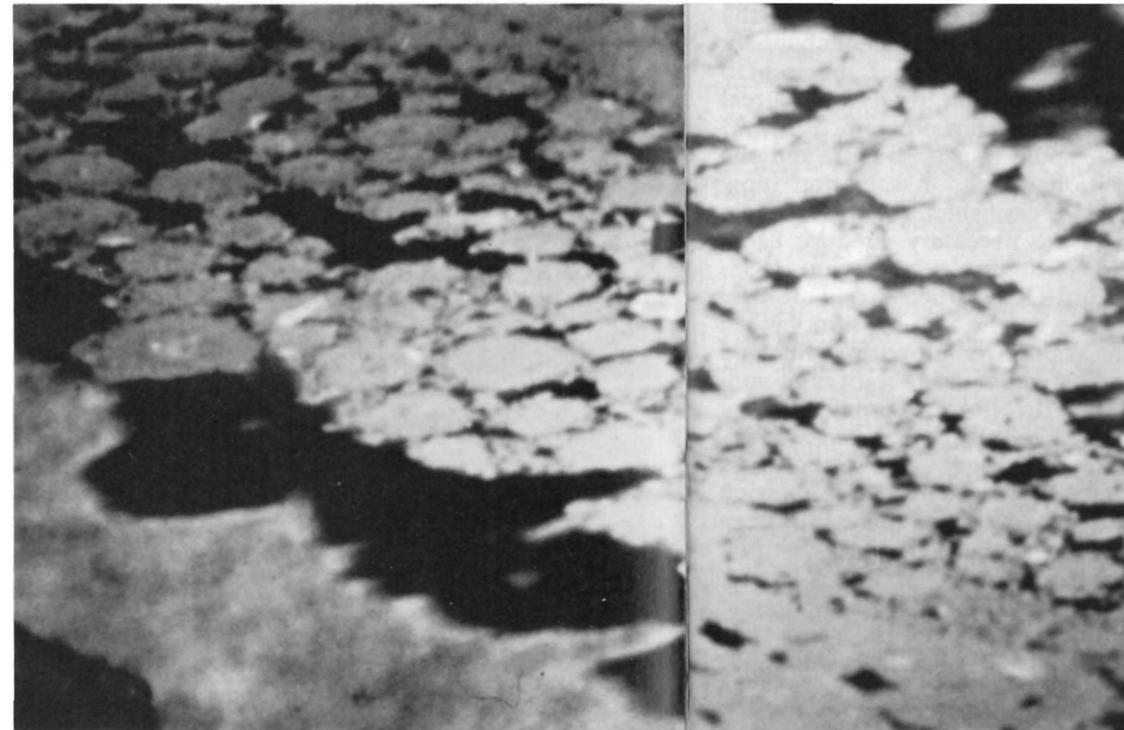
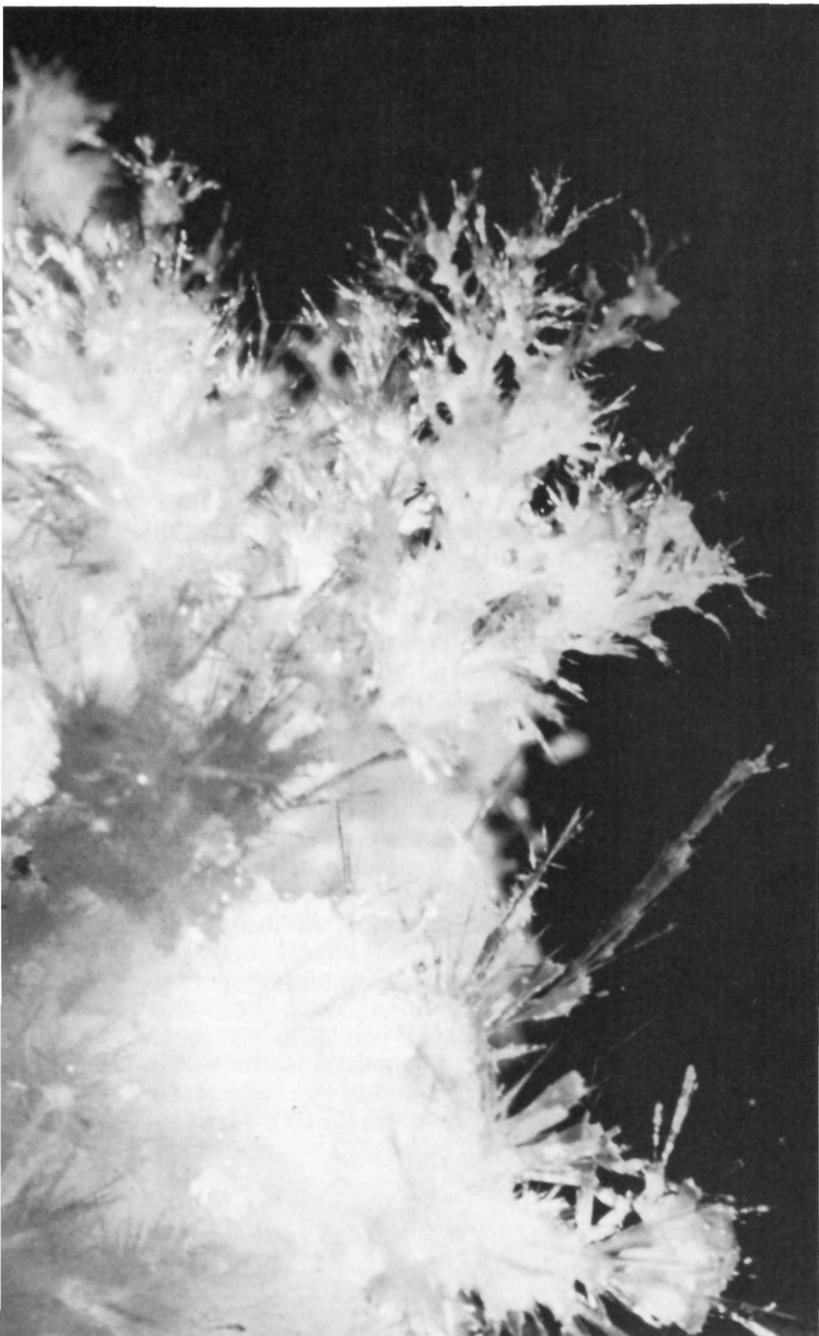
If the difficulties of cave exploration are great, so are the rewards. According to Frederick, a crawl to the cave's untraveled hideaways is a "wilderness experience." Undisturbed sand and silent caverns that have never seen light greet those who struggle to the cave's farthest reaches. "You know right then and there," says Frederick, "that you're

the first person to ever set foot there and that you're about to see a place no one has ever seen before." In 1970, spelunkers discovered the cave's largest lake—220 feet long, 16 feet deep, and 50 feet wide. The next year a group of Chicago spelunkers found Half Mile Hall, a 2,800-foot-long cavern reaching 100 yards in width and lying at the end of a difficult six-hour crawl from the cave entrance.

At the bottom of the cave, hours of crawling from the entrance and far from the lighted stairways, damp cavern walls drip endlessly, the only sounds at subterranean lakes that have never seen the sun. There, far from the rasping winds

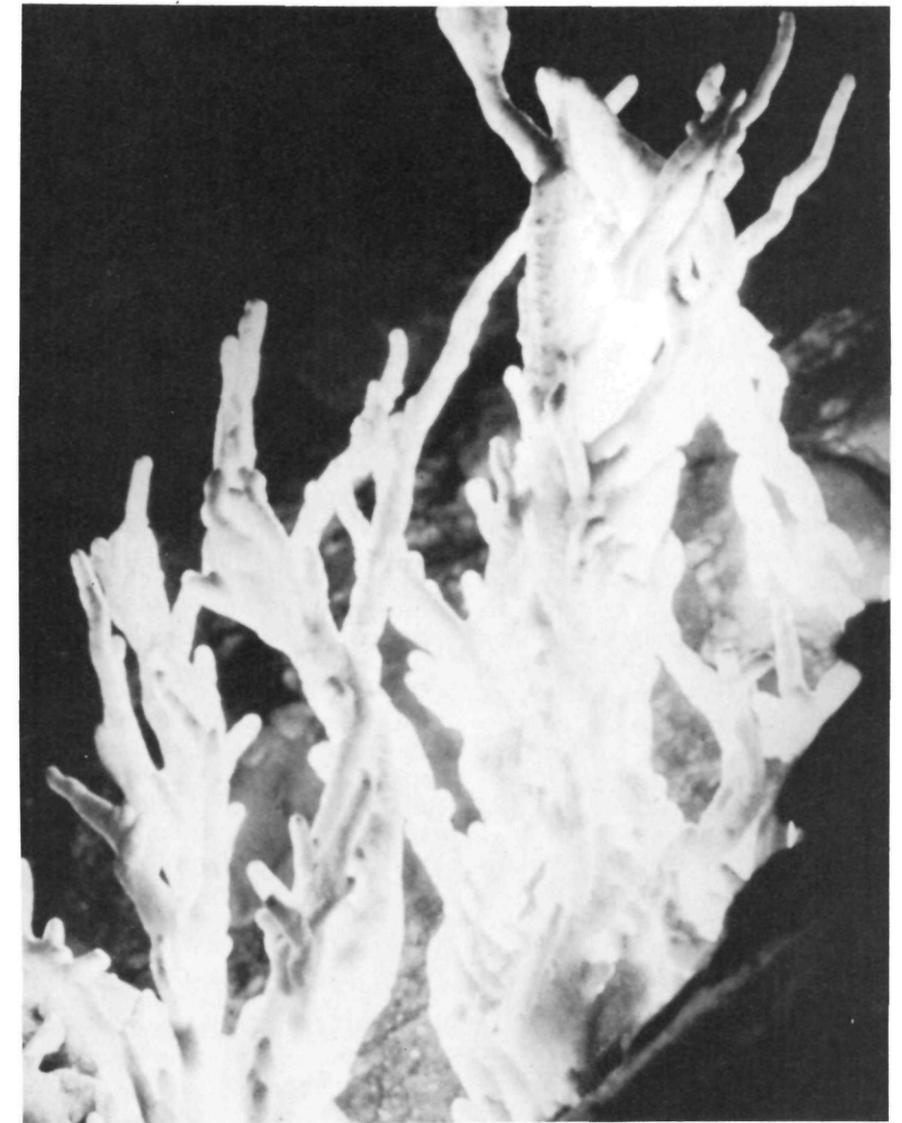
of the cave entrance—far below where early explorers dared descend—lie unexplored passageways toward the unknown. Future expeditions could yield more lakes, another entrance, and even an underground room larger than Half Mile Hall. But it is hard for visitors to imagine a cavern more mysterious than Wind Cave today. ■

**George Cruys has studied geology and has a degree in journalism. He is the former national media director for the whale-saving Greenpeace Foundation. Lawrence Cantera, Jr., formerly employed by the U.S. Forest Service, has spent the past eight years exploring the forests and parks of the West.**



PHOTOS COURTESY OF NATIONAL PARK SERVICE

Although Wind Cave may lack the stalactites and stalagmites we commonly associate with caves, it abounds in beautiful and unusual formations of crystallized calcium carbonate (calcite), some of which—like the "boxwork" illustrated on pages 6 and 7—are found in few other of the world's caves. "Frostwork," a helictite formation so delicate that it resembles frozen tinsel, glitters in some caverns (left). In others, fragile calcite "rafts" float like crystalline lily pads on the surfaces of subterranean lakes (above). And from the floors and ceilings of still others, Wind Cave's rare helictite "bushes" extend graceful coral-like branches (right).



Lucky participants in a unique volunteer program have fun, learn, and grow while doing useful and challenging conservation work in some of the most beautiful spots on earth

by CATHARINE OSGOOD FOSTER

## The Student Conservation Program is a growing experience

**V**ISITORS to Olympic National Park during the past twenty years have sometimes been surprised at being greeted by an eager, good-looking student wearing a blue shoulder patch with a bald eagle on it and the letters SCA. This student is only one of many who are sponsored by a unique organization that provides young people opportunities for rewarding volunteer work in national parks, national forests, and other public lands. The Student Conservation Association, Inc. (SCA) matches high-school-age and older volunteers with work assignments in some seventy areas from the rocky shores of Acadia National Park to the High Sierras, and from the rainforests of the Olympic Peninsula to the desert canyon country of the Southwest.

For three to four weeks in the spring, summer, and fall high school students work in small groups under two supervisors building trails, bridges, and portages; restoring compacted earth; and other conservation projects. They usually live in tents in remote areas. At the end of their work period they spend a week hiking and exploring. Although the volunteers are not paid, they have the satisfaction of performing useful conservation work, learning, and growing. The SCA provides supervision, food, tools, and group equipment. The volunteers provide their own transportation to and from the work location and their own personal equipment, although financial aid is available for students who may not be able to afford

the total cost of travel and equipment.

College-age volunteers work as park or forest assistants for eight to twelve weeks each. They help with the regular work of rangers, staffing information desks, leading nature walks, doing field research, or patrolling backcountry. Some of them conduct discussion groups or give slide shows in the evenings. Although these young people receive no salary, the SCA provides them a subsistence allowance and a travel grant; the cooperating area provides housing. Many receive college credit for their field work, and some later obtain paying jobs with the National Park Service or the Forest Service.

The SCA sponsors two other programs for especially sturdy "graduates" of the high school program. Volunteers in the "High School Alumni" program do heavy work, and "Sherpas" pack supplies into the backcountry, and trash (or sometimes injured people) out.

**T**HIS FAST-GROWING, popular Student Conservation Program grew out of a proposal made in 1955 by Elizabeth Cushman Titus, who believed that practical conservation work by young volunteers would help to alleviate the wear and tear by millions of visitors on the understaffed national parks. She believed that the experience of such work would also help to ensure generations of young people who would understand and care about protecting and conserving parks and wilderness areas. After Liz Titus had made a

proposal for a "Student Conservation Corps" in her senior thesis at Vassar, her professor, A. Scott Warthin, suggested that she pursue her idea.

Liz and a Vassar friend, Martha Hayne Talbot, then spent about six months doing further research to make sure that there was a real need for such a program.

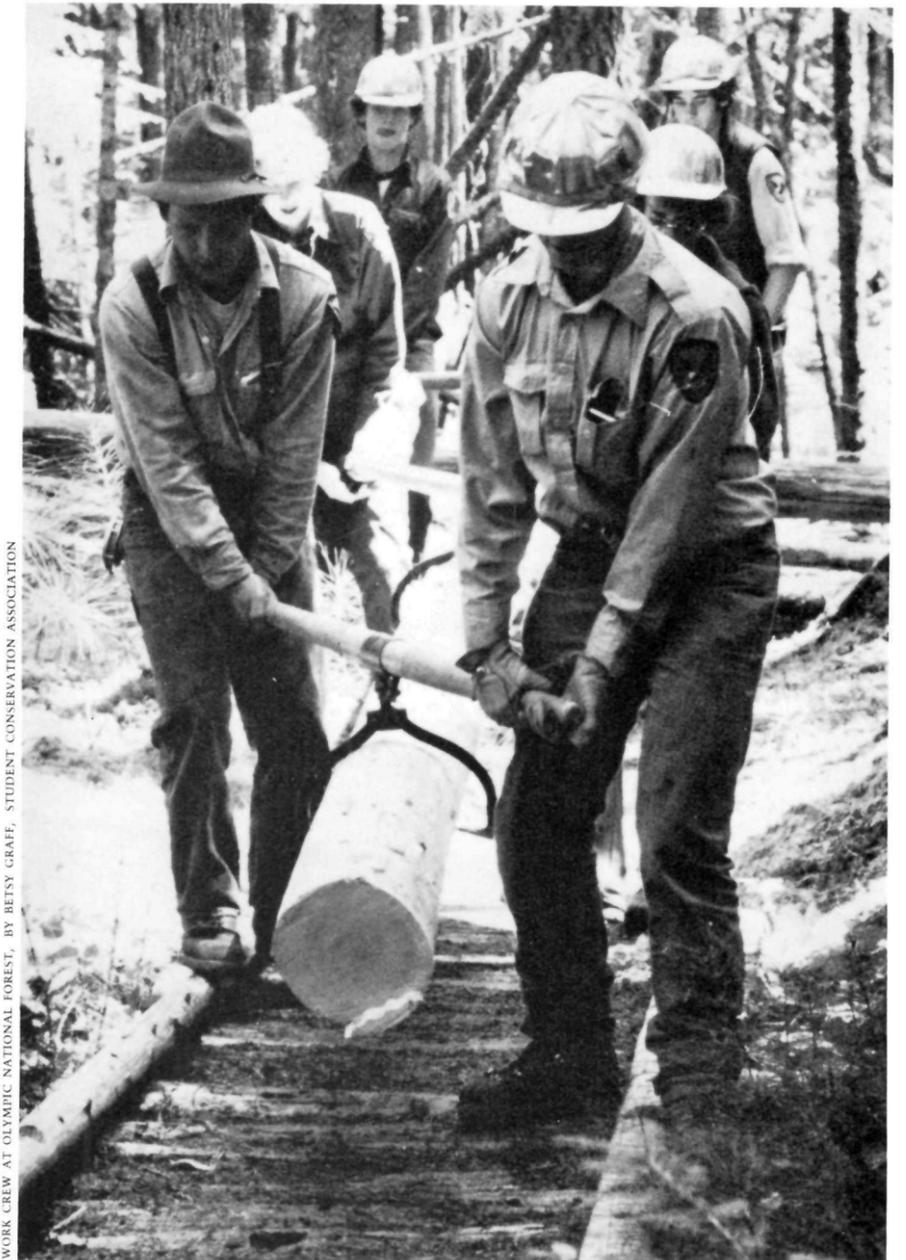
A sponsor was sought, and the National Parks Association (now NPCA) gave them exactly the help that was necessary. Fred M. Packard, executive secretary in 1955; Sigurd Olson, then president; and others at the Association helped the young women with advice and indicated potential sources of support. The NPA also provided office space. Because the office was already crowded, during that first year the Student Conservation Program staff ran a night shift from five in the afternoon until eight the next morning, writing letters, speeches, and articles to interest students and potential supporters or donors. It was thanks to NPA belief and backing from 1955 to 1960 that the program came into being and thrived. After that initial boost, the Student Conservation Program was no longer under the wing of the NPA. In 1964 the non-profit, tax-exempt Student Conservation Association, Inc., was formed to manage the program.

From the small beginnings in 1957, when 53 students were sent to work at Grand Teton and Olympic national parks, the program has greatly expanded. At least 3,000 young people will probably apply for the 775 openings this

coming year. In 1979 684 volunteers out of thousands of applicants were sent to forty-five parks, twenty-one forests, and five other cooperating areas that needed volunteers for outdoor work.

These programs are supported by tax-exempt funds raised from the 1,500 members of SCA. Its supporters include the Garden Club of America and a score of corporations and foundations. Cooperating agencies share costs of the services they receive.

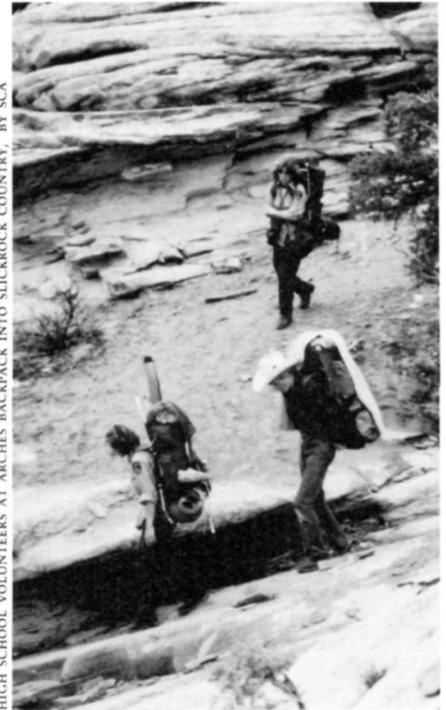
**T**HE NATIONAL Park Service, the U.S. Forest Service, and the other conservation agencies that utilize SCP volunteers are uniformly enthusiastic about the SCA programs. Reports from the park coordinators about the volunteers glow. One at Bryce Canyon National Park wrote, "The 14 young people did an excellent job of trail maintenance, and were very enjoyable to be around when I visited their backcountry camp." Another at Colonial National Historical Park reported, "Our summer interpretive program at Yorktown would be far smaller without SCA's assistance. We feel that the volunteers profit from their experience, but the park profited most." The group coordinator at Chaco Canyon National Monument reported of the students who spent their work period moving tons of rock and dirt, "This work group performed an outstanding amount of the quality work needed to stabilize and landscape Pueblo Alto Archeological dig. An excellent bunch of people, always in good



WORK CREW AT OLYMPIC NATIONAL FOREST, BY BETSY GRAFF, STUDENT CONSERVATION ASSOCIATION



SCA VOLUNTEERS AT OLYMPIC NATIONAL FOREST ENJOY A MEAL AFTER WORK, BY BETSY GRAFF, SCA



HIGH SCHOOL VOLUNTEERS AT ARCHES BACKPACK INTO SLICKROCK COUNTRY, BY SCA



A CREW DOES MASONRY WORK ON A COO CANAL LOCK, BY STUDENT CONSERVATION ASSOCIATION

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**“Now I feel strong and alive with more self-confidence than I have ever had.”**

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BETSY GRAF, SCA

AT COLLEGE VOLUNTEER GIVES A NATURE TALK AT GLACIER



BETSY GRAF, SCA

AN ASSISTANT STAFFS THE INFORMATION DESK AT GLACIER



BETSY GRAF, SCA

AT ROCKY MOUNTAIN PARK A CREW REPAIRS A TRAIL

spirits, hard working, great to have them here.”

The students are equally enthusiastic about the unexpected rewards they experience from volunteer work. One boy who had been at Chaco Canyon wrote that “it was one of the most enjoyable and rewarding experiences so far in my life.” A boy who had been at Great Smokies reported, “It feels like I have been asleep my whole life. Now I feel strong and alive with more self-confidence than I have ever had.” Another at Rocky Mountain National Park wrote, “The experience was one I could never forget, and has made me truly appreciate the value of wilderness.”

Thousands of students are drawn to the SCP because they regard it as an opportunity to develop self-dependence and self-discovery in the challenge of the outdoors and the rugged jobs they are asked to do. They write of their love of being part of a work team promoting the conservation aims they believe in. They express awe at the grandeur and mystery of the wilderness and sometimes their awe at the skill and expert knowledge of the supervisors the SCA sends out with each high school student team to direct their work and to lead them on the closing week’s backpacking trip. They *must* be happy, because illnesses and homesickness are almost nonexistent, discipline problems either none at all or only one or two, and injuries a mere three or four in a whole summer.

All these young people, and

many others, can be thankful that Liz Titus, founder and still president of the SCA, had the dream of useful volunteer work in the national parks in 1955, and that the early enthusiastic support of the NPA helped to make it a reality.

**Long-time teacher at Bennington College and worker and writer on organic gardening and conservation, Catharine Osgood Foster is active in the Vermont chapter of The Nature Conservancy and the Vermont Natural Resources Council. She is a co-member in the Bennington Garden Club with Liz Titus, founder and president of the Student Conservation Association.**

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*Message to Members*

**VOLUNTEER NOW FOR SCA**

Applications for spring programs (beginning between January and May) are available now. Deadlines for receipt of applications are listed below.

**Park & Forest Assistants (age 18+)**

- Spring program: January 1
- Summer program: March 1
- Fall program: June 1
- Winter program: August 1

**High School Work Program (age 16-18)**

- Spring program: February 1
- Summer program: March 1
- Fall program: August 15

Write or call the SCA for application material, for more information, or to join.

Student Conservation Association  
 P.O. Box 550  
 Charlestown, NH 03603  
 (603) 826-5206

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# Haleakala's silversword has a chance

**H**ARSH ARIDITY, searing sun, and constant wind make the barren lava of Haleakala Crater at Haleakala National Park, Hawaii, a hostile, punishing environment for living things. Haleakala—literally “the house of the sun” in Hawaiian—is the larger and easternmost of the two long-dormant volcanic peaks forming the island of Maui in the Hawaiian chain. Near the mountain's ten-thousand-foot summit, slow erosion by water over the centuries has carved out a huge basin more than twenty miles in circumference. Subsequent volcanic activity left this crater so streaked with lava flows and studded with multicolored cinder cones that it now resembles a true volcanic crater.

Here in this lunar landscape, one of the world's most striking and unusual plants—the Haleakala silversword—once flourished so abundantly that early visitors described the crater where it grew as appearing to be bathed in moonlight, such was the glow of its silvery leaves. Nevertheless, by the beginning of this century, human vandalism and unchecked grazing by cattle and feral goats and pigs had brought the silversword to the verge of extinction.

**C**ALLED AHINAHINA or “gray-gray” in Hawaiian, the silversword derives its name from the scores of daggerlike, silvery leaves that cluster around its short, thick, central stem. At first glance it looks like an enormous terrestrial sea urchin. The silversword's fantastic appearance, however, re-

flects its masterful adaptation to an inhospitable habitat.

The narrow, curving shape and gelatinous inner structure of the plant's leaves are designed to retain as much moisture as possible in the arid climate of the crater. Each leaf is thickly covered with countless tiny hairs that collect moisture from clouds resting in the crater, an important source of water for the plant. These hairs also protect the plant from the intense ultraviolet sunlight of Haleakala's high altitude and help prevent the loss of water from sun and wind.

Silverswords may grow for from five to twenty years before flowering, which sometimes does not occur until the plant has reached about two feet in diameter. Then a flower stalk bearing as many as five hundred flower heads shoots up to a height of three to eight feet. Each flower head resembles a small sunflower about two inches in diameter, with a central disk composed of hundreds of bright yellow florets surrounded by some twenty reddish-purple ray florets. This massive inflorescence towers over the dying silvery sphere of leaves below in subtle harmony of maroon, silver, and gold.

Flowering lasts from June through October as the plants bloom at different times throughout the season in response to local conditions in different parts of the crater. Each plant flowers but once, dying slowly as the hundreds of seeds it has produced mature, until by autumn only a dry, decaying “skeleton” remains.



DAVID MUEENCH

**A**LTHOUGH the silversword in bloom seems like the fantastic creation of an unearthly jeweler, its flowers reveal it to be a member of the large composite—or sunflower—family of plants. Each silversword flower head is the characteristic composite bloom: many tiny flowers compressed into one flat-topped head resembling a single blossom. More specifically, silverswords are related to the coastal tarweeds of California, which are mostly annual herbaceous plants of dry open lowlands.

Like all other forms of plant life found on volcanically formed islands, the seeds of an ancestral tarweed must have been transported

over open ocean to the newly emerged Hawaiian islands millennia ago. The descendants of that tarweed colonist, in such varying forms as large branching shrubs, small creeping shrubs, and small trees, are now found in Hawaii's rain forests, subalpine gaps, dry alpine peaks, on bare lava, and in deep soil.

The silverswords are rosette-forming tarweeds of the genus *Argyroxiphium*. Several species of this genus are found at various altitudes on the islands of Maui and Hawaii, but the only one that has conquered the dry summit of Haleakala is *A. macrocephalum*, the Haleakala silversword.

Once on the verge of extinction, a rare Hawaiian plant is holding its own thanks to Park Service protective efforts

by JOHN J. DORIA

**A**T THE BEGINNING of this century, Haleakala's silverswords were so abundant that visitors to the crater thought nothing of gathering specimens to bring home as souvenirs of their trip to Hawaii. Others uprooted the globular plants just to watch them tumble down the hillsides. An open touring car covered to its wheelspokes with silverswords appeared in a Honolulu parade. Feral goats, introduced by Europeans, roamed the crater eating the growing heart of the plant, and cattle browsed on its foliage.

It was not until Haleakala's silversword population had dwindled to a few hundred specimens in the 1920s, and the remarkable plant appeared doomed to extinction, however, that concern to protect it began to grow.

**F**ORTUNATELY, in 1916 Haleakala Crater was included in Hawaii National Park—in 1961 it was redesignated Haleakala National Park—and its silverswords came under Park Service protection.

Since then the Service has been protecting the silverswords in its care as much from overenthusiastic visitors as from feral goats, both of which kill the plant by damaging its fragile root systems and crushing seedling plants.

At Kalahaku Overlook on the crater's west rim, for example, the remaining stand of silversword has been fenced in since the 1920s in an attempt to prevent human and animal depredation. But neither the fencing nor the stone wall that

replaced it in the 1960s have been able to protect the plants from eager amateur photographers. Ignoring regulations they climb the wall and, in trampling the loose soil around the plants, kill the silverswords by destroying their shallow roots.

The Park Service is now considering an expanded interpretive program to educate park visitors about the rarity and fragility of the silverswords in the hope that this will prove more effective than fencing. Another possibility is the installation of boardwalks in certain areas to allow visitors to approach the plants without damaging their root systems.

Unfortunately, feral goats still infest the area, although the Park Service is starting to fence them out of the crater as part of an exotic plant and animal control program designed to rid the park of introduced species that threaten its fragile ecological balance. Funds and personnel are so limited, however, that fencing is proceeding at the rate of only one mile per year.

In addition to these protective measures, the Park Service is trying to increase silversword propagation in the park both by gathering seeds and planting them in the vicinity of the parent plants and by growing plants from seed in the park's small greenhouse. Set out as seedlings, these cultivated plants have successfully flowered and seeded. However, in order to retain local gene pools, detailed records must be kept and great care taken to return seedlings to their area of origin.

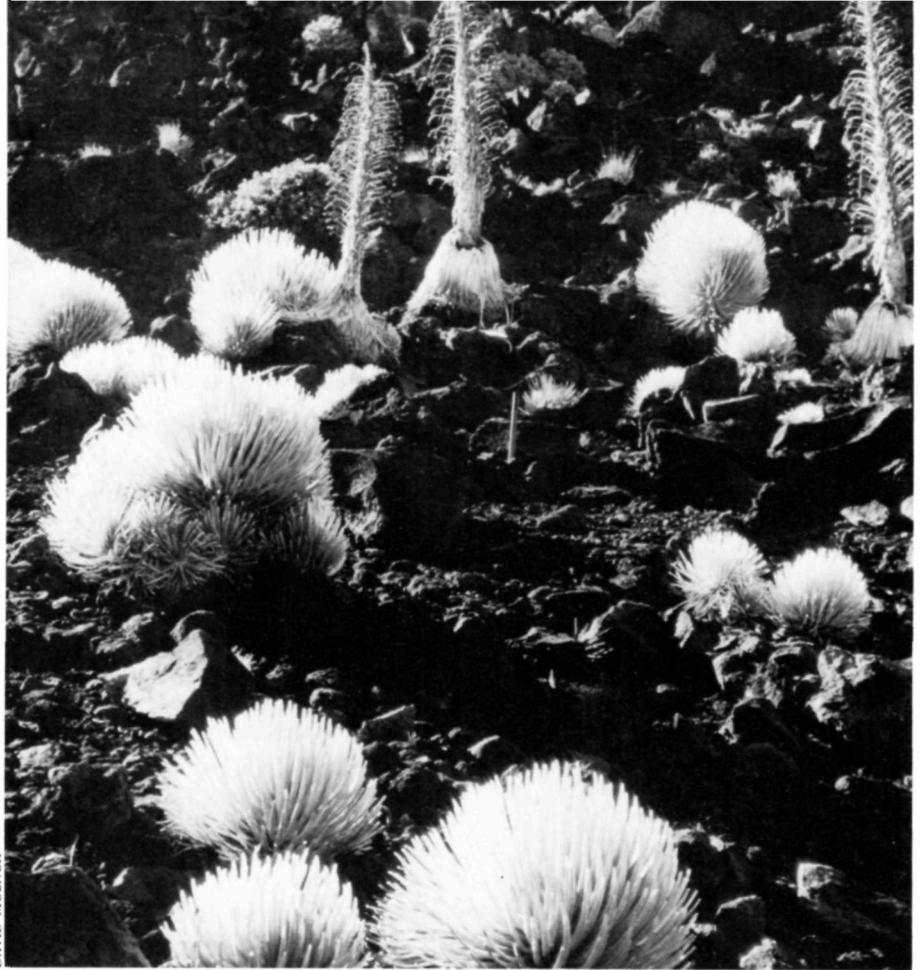


DAVID MUEENCH

Because of the silversword's slow rates of propagation and growth, we cannot expect to see a dramatic increase in the overall number of silverswords at Haleakala in the immediate future. Silversword expert Dr. Herbert K. Kobayashi of the University of Colorado estimates, however, that at least 50,000 plants—about the same number as were counted in a 1970 census—are now flourishing in Haleakala Crater, particularly on the slopes of its cindercones. Depending on the weather, as many as a hundred of these may flower in a good season like the summer of 1979. The plants do less well at heavily used areas like Kalahaku along the crater rims, where silversword populations are declining as visitor pressure grows.

**O**N BALANCE, therefore, we can say that Haleakala's silversword is not only no longer in danger of extinction, but can be considered as holding its own. Its success so far is a tribute to the efforts of those who have worked so hard for the silversword's preservation. Although, thanks to them, its future looks secure, the full recovery process is likely to be long and slow, in part because of chronic shortages of funds and personnel, in part because of the plant's own slow rate of growth.

Both increased public awareness of the need to protect this amazing plant and effective control of feral goats will be needed if we are again to see Haleakala's slopes covered with silversword "as if bathed in moonlight." ■



DAVID MUEENCH

*Perfectly adapted to survive in the barren, arid environment of Haleakala Crater (above), the silversword has many curving leaves covered with tiny hairs to collect and conserve water and ward off ultraviolet rays (left, above). After a single magnificent flowering (right), the plants die, leaving only a skeleton (rear, above).*

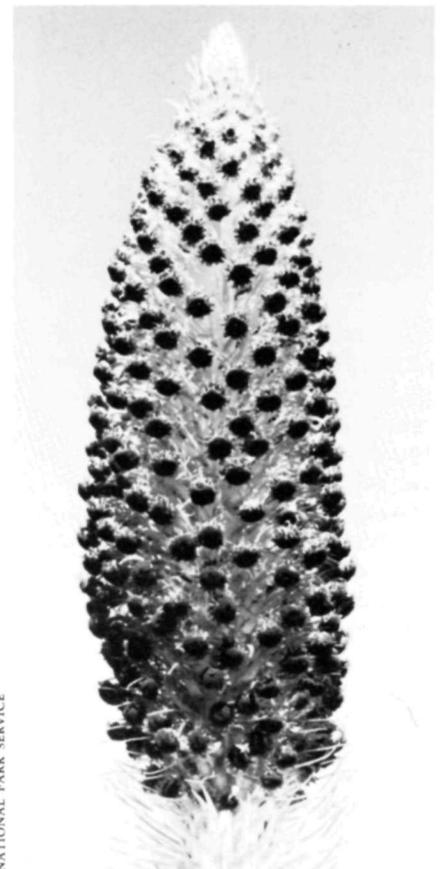
**Writer and environmental consultant John J. Doria has carried out research in plant pathology and entomology.**

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*Message to Members*

**Help the Haleakala Silversword**

Feral goats are a serious obstacle to the recovery of the Haleakala silversword. Concerned NPCA members should write to Hon. William J. Whalen, Director, National Park Service, Washington, D.C. 20240, urging the immediate completion of the fencing necessary to keep them out of Haleakala Crater. Urge also that adequate funds and personnel be budgeted to ensure effective protection for the silversword and Haleakala's other rare species of plants and animals.



NATIONAL PARK SERVICE

# NPCA at work

## MANASSAS

### Calling a truce in the Third Battle of Manassas

Just as Lee and Jackson took decisive action at Bull Run, Congress and local officials in Virginia are finally acting to expand Manassas National Battlefield and thus end a controversy so intense it has been widely dubbed the "Third Battle of Manassas." The House passed expansion legislation on October 15, but at press time it seemed the Senate would not act until 1980.

One of the new additions to the park would be Stone Bridge, where Confederate General Jackson earned his nickname "Stonewall" in the First Battle

of Bull Run as his troops held firm against Union forces at the bridge.

The next year, 1862, Stonewall Jackson and his men were resting in the shade of an orchard on the Brawner farm when they saw the advance units of the Union Army of Northern Virginia marching down the Warrenton Turnpike 200 yards away. Jackson ordered "charge" and thus began the Second Battle of Bull Run (Manassas), in which the Confederate victory opened the way for Robert E. Lee's invasion of the North.

The Third Battle has lasted longer than the other two. Three times between 1976 and 1979, the House passed bills by Rep. Herbert Harris (D-Va.) to expand Manassas by including this farm, Stone Bridge, and other sites, protecting the park from spreading commercialization.

But opposition from the majority of the Prince William County Board of Supervisors and some local residents induced Senators Harry Byrd, Jr. (I-Va.) and former Sen. William Scott (R-Va.)

*Continued on page 21*

## GATEWAY

### Saving Sandy Hook's beaches & historic Fort Hancock

Mammoth cannons and bunkers stand silent vigil among lush vegetation. Handsome three-story homes that housed Fort Hancock's Army officers when the fort was the most important harbor defense on the entire Atlantic coast face a magnificent view of New York Harbor. Nearby, the lamps of the oldest operating lighthouse in the nation still serve as a beacon to local fishing boats. Add to all this history a natural environment of spacious beaches, dunes, marshes, and an unsurpassed holly forest, and you have Sandy Hook—one of the four units of Gateway National Recreation Area. Sandy Hook consists of 1,600 acres of

barrier peninsula reaching northward from the New Jersey coast into New York Harbor.

But these unusual resources at Sandy Hook are threatened by the stream of autos that sometimes congests the area and the danger that as the area is developed for urban recreation, the very resources that draw urban visitors could be spoiled.

In the historic setting of Fort Hancock, NPCA and the Monmouth County Conservation Education Committee, an NPCA affiliate, recently sponsored a day-long seminar for more than a hundred citizens and decision-

*Continued on page 18*

## NPS APPROPRIATIONS

### Deeper cuts into NPS budget

The Park Service budget, which had already been reduced below Fiscal Year 1979 levels by the Carter Administration and House of Representatives, was further cut by the Senate this fall.

One of the worst cuts was taken from the general operating budget, which lost more than \$4 million from the amount voted by the House and approximately \$8.5 million from Fiscal Year 1979. This cut could seriously impair many aspects of park operations including staffing levels, maintenance, visitor protection, and interpretation.

But the Senate took a much bigger slice out of NPS funds for land acquisi-

*Continued on page 19*

## GRAND TETON

### Clamor for jets and snowmobiles deadens call of the wild in Tetons

Now that the Department of the Interior wants to move Jackson Hole Airport out of Grand Teton National Park in Wyoming, the Federal Aviation Agency is pushing for jet access to the facility, which is the only commercial airport in a national park.

Residents of the nearby community of Jackson Hole are lobbying against phasing out the airport. Meanwhile, the Park Service recently bowed to pressure from Jackson Hole businesses by reopening a snowmobile area in the park.

In line with long-standing NPCA recommendations, in late August Interior Department Secretary Cecil

Andrus recommended that the airport's special use permit not be renewed when it expires in 1995. "With this much advance notice, I am confident that the people of Jackson, working with local, state, and federal assistance, can locate and develop a new airport site or other means to satisfy the transportation needs of the area," Andrus said.

Just weeks later, in defiance of the Interior Department's intent to phase out the airport, the FAA issued an environmental impact statement in September supporting introduction of Boeing 737 jets at the airport.

NPCA and other conservation orga-

nizations are strongly opposed to introduction of jet service to this airport because it would further entrench the facility within the park, making the 1995 deadline difficult to implement. Moreover, although the FAA claims that there would be little increase in noise from jet traffic at the airport, previously EPA had said FAA reports may "greatly underestimate" environmental impacts on the park environment.

The only commercial airport within a national park, Jackson Hole Airport operates primarily for the benefit of local residents and ski resorts. Surveys taken in the early 1970s indicated that

fewer than 2 percent of the visitors to the national park arrive by airplane. However, all visitors are subjected to the noise and visual disturbances of the airport's operations.

NPCA President A. W. Smith had emphasized to Andrus, "The large remote units of the National Park System provide visitors with a rare opportunity to experience natural sights, sounds and stillness."

The stillness at Grand Teton, however, is threatened not only by the roar of aircraft engines but also that of snowmobiles. The Park Service recently did an about-face on its earlier ban on snowmobiling in the park's 20,000-acre Potholes area, a sagebrush expanse that had been used by up to 5,000 snowmobiles a year in recent winters. In August NPS Director Whalen had announced that NPS policy for snowmobiles on land in the lower forty-eight states "prohibits any use of these machines away from road surfaces in all parks including the one park area where it had been permitted, Grand Teton. . . ."

Whalen had assured NPCA in September that he would take swift action to close the area. But Jackson Hole business people, residents, and Wyoming members of Congress reportedly protested that the public had not been given adequate advance notice of the closure and that it would cost the community \$800,000 this winter. Whalen reopened the area and said NPS would hold public hearings during the next year on whether to permanently ban snowmobiles there.

At press time, the FAA was still soliciting public comments on the proposal to allow jet service into Grand Teton. Please write immediately to:

Thomas S. Westhall  
FAA Flight Standards Div.  
10455 E. 25th Ave.  
Aurora, CO 80010

In addition, NPCA members can register opposition to snowmobile use in the Potholes area by writing Director Whalen. Ask for a list of hearings.

William Whalen, Director  
National Park Service  
U.S. Department of Interior  
Washington, DC 20240 ■

## *Sandy Hook—from page 17*

makers interested in preserving Sandy Hook. Mrs. William Heatley, leader of the new conservation education committee, explains that it was formed and affiliated with NPCA because "no one was speaking for local residents or the park itself."

The two-part seminar focused on historic preservation and transportation and related policies.

**Historic Preservation:** When the Park Service took over Fort Hancock as part of the Gateway National Recreation Area, the agency drew up plans for its use including a "Gateway Village" stressing intensive indoor and outdoor recreation involving facilities such as an amphitheater, pinball emporium, and playgrounds.

At the seminar, however, Helen Byrd, head of NPCA's Historic Park and Heritage Program, pointed out that "Sandy Hook is a special environment for people who like a quiet kind of recreation. For some, bird-watching is as important as water skiing. . . . And exploring history is a form of recreation for many Americans." NPCA urged that historical integrity be the top priority at Fort Hancock.

The region's military importance

spans the time from pre-Revolutionary days to the missile age. The present army post, built between 1898 and 1900, remained important throughout the Spanish American War, World War I, and World War II. Named for General Winfield Hancock of Civil War fame, it became a proving ground for all the heavy guns of the U.S. Army.

The old post with its stately quarters, mess halls, and parade field ringed by old shade trees has a campus-like atmosphere. In fact, NPCA said, the entire fort should be protected as a national historic landmark.

NPCA President A. W. Smith, who gave the keynote welcome at the workshops, noted that the Association is pleased with recent efforts by the Park Service to make adaptive use of the old brick buildings on Officer's Row by historic, scientific, conservation, and arts organizations. Such uses are much more appropriate to the historic setting than recreation requiring intensive development. NPCA also called for establishment of a Conservation and Cultural Education Center providing classrooms, laboratories, lecture halls, and dormitories for seasonal usage, and continued careful restoration of historic structures.

*The Sandy Hook unit of Gateway National Recreation Area attracts visitors with its spacious beaches, holly forest, and historic Fort Hancock. These yellow brick beachfront quarters on the Army post are of architectural note. Behind them is the nation's oldest operating lighthouse. A recent NPCA seminar publicized the need to protect this area.*



NPS PHOTO BY BROOKS VAUGHN

F. Ross Holland, Jr., NPS Assistant Director of Cultural Resources, who led the historic preservation panel, termed the fort "a very significant piece of property" that could "stand on its own as an historical park."

**Transportation and Natural Resources:** The natural resources of Sandy Hook—its beaches, holly forest, marsh area, and tern nesting sites—are also vulnerable along with the area's historic heritage. Kenneth O. Morgan, assistant superintendent of Sandy Hook, led the afternoon panel exploring transportation and related resource protection problems.

For one thing, NPCA representatives observed that reliance on the private auto for transportation must be reduced if the severe congestion is to be alleviated and that no new parking lots should be constructed. The park gained some experience with public transportation during the summer of 1979, when low-income and other groups from Newark and other areas received bus service to Sandy Hook.

The existing shuttle bus service in the park needs to be greatly extended and linked to satellite parking areas off Sandy Hook and ferry service. One of

*Continued on page 21*

### **Budget—from page 17**

tion (which come from the Land and Water Conservation Fund), leaving them an almost unbelievable \$24 million below the House figure.

The Land and Water Conservation Fund appropriations would have been much more scarce, however, if NPCA and other conservation organizations had not fought off attempts by certain senators to reduce them.

Most of the cuts can be traced to Sen. Ted Stevens (R-AK), ranking minority member on the Interior appropriations subcommittee. Sen. Stevens has been battling with Interior over the Alaska lands issue, questioning the President's authority to designate national monuments there in 1978 and stating that any appropriations decisions for staffing and operations of the lands in Alaska should follow upcoming congressional decisions (page 19) on Alaska areas. *Continued on page 20*

## Senate committee cripples Alaska bill

An Alaska lands bill that would allow mining in two of Alaska's most spectacular proposed national parks—Gates of the Arctic and Wrangells—St. Elias—and subject the sensitive calving grounds of the nation's largest caribou herd to mandatory oil exploration had just cleared a Senate committee at press time. It was uncertain whether the bill would be considered on the floor this year. The Senate Energy and Natural Resources Committee bill dismembers the carefully balanced bill that passed the House on May 16. Although the committee tacked the House bill number, HR 39, onto its bill, the Senate committee's HR 39 is totally unacceptable to NPCA and the rest of the Alaska Coalition.

Allowing special interests to eclipse the national interest, it would call for oil exploration in the Arctic National Wildlife Range, cut vital watersheds out of the proposed Yukon Flats National Wildlife Refuge—one of the most highly productive waterfowl nurseries in the world—and put them under Forest Service management to allow mining and agricultural development; open famed Admiralty Island and other wild forest areas in southeast Alaska to logging; slash wilderness acreage by almost half; and remove millions of acres of vital caribou, bear, and waterfowl habitat from refuges.

Although National Park System acreage does not differ greatly from the House bill, less than half the total NPS acreage is placed into national parks and monuments.

Much of it is placed into national recreation areas—where mining and hunting are allowed—and national preserves—where sport hunting is permitted. For instance, recreation areas and preserves were both carved out of parkland in Gates of the Arctic and Wrangells. Preserves were also created from land in Katmai and Denali (McKinley), which would be expanded.

Roughly 40 percent of the NPS acreage approved by the committee is ice and rock—not the lowlands important for wildlife and recreation.

As passed by the committee, the bill is even weaker than the bill the committee reported in 1978 in that it mandates *private* oil exploration in the Arctic range and further trophy hunting in the Wrangells. The bill does improve last year's Senate version by making Cape Krusenstern a national monument and Kobuk Valley a national park. But refuges and other areas have been systematically removed from protection and placed into weaker, multiple-use management under the BLM, state, or Forest Service.

The Alaska Coalition charged that the committee bill consistently violates ecosystem boundaries, places land under inappropriate management agencies, and establishes complex jurisdictional patterns that will lead to bureaucratic confusion.

The Coalition planned to oppose the Senate committee bill unless clear alternatives were available on the floor. Senators Paul Tsongas (D-Mass.) and John Durkin (D-N.H.) had offered the committee Coalition-supported legislation that, like the House-passed HR 39, would maintain the integrity of the parks and refuges. A substitute or amendments along those lines will be offered on the floor.

**You Can Help:** See page 25. ■



RED FOX IN ALASKA. STEVEN C. FAUFMAN



## Parks for Posterity

*Throughout the history of the National Parks Association (now NPCA), we have been fighting to preserve the national parks for future generations. We have won some of the skirmishes; some we have lost; some are continuing, seemingly endless struggles to protect parks from various threats. Although some of the following quotations from this magazine were written decades ago, NPCA is still struggling with the same problems.*

Americans cherish and enjoy these last remnants of our continent's primeval grandeur. . . . The majority believe that these areas belonging to them are safe forever, that their children and their children's children will always have them to enjoy.

They do not know that the National Park Service is fighting to hold the line in the face of reduced personnel and appropriations; that facilities are breaking down; that on account of unprecedented public use, it is no longer possible to give these superlative areas the protection they deserve. . . . We spend millions of dollars to protect and exhibit manmade works of art. We guard these treasures and would not presume to improve upon them. . . . No one would dream of retouching a Rembrandt or revising a score of Beethoven. Those things are sacred and toward them we have profound respect. We fail to see our parks as equally sacred and magnificent, that in them we have paintings on a continental scale, museums that cannot be approached by anything conceived by man, majestic symphonies that no one can ever record. These are our greatest masterpieces of all. . . .

—**Sigurd F. Olson, June 1954**  
President, NPA, 1954–59

The National Park System was born of the instinct to preserve for all time extraordinary beauty and majesty of the native landscape in original unmodified record; it was developed by the genius of the people, without conscious planning, through a generation and a half of park making; this product analyzed, its purpose and its standards

were formulated for the conscious upbuilding of the future. The system is thus revealed as a unique expression of the combined idealism and practicality which makes this nation great.

—**Robert Sterling Yard, April 1927**  
Exec. Secretary, NPA, 1919–31

There should be no temptation to regard the material resources of the national parks as potential sources of revenue, or to give any consideration to whatever economic potentiality they may possess. The first and only consideration must be to do that which is in the interest of the park itself and that will facilitate its protection.

—**Fred M. Packard, March 1957**  
Exec. Secretary, NPA, 1950–58

Technology has but one justification; to serve man's needs for food, shelter, and clothing so that he can be free to develop his unique assets—mind and spirit.

—**Clarence Cottam, November 1969**  
President, NPCA, 1960–63  
Chairman of the Board, 1963–1973

On the Sixtieth Anniversary of its founding, the NPCA reviews the long history of the National Parks movement in America and around the world. . . . From the Parks of Lincoln, Muir, Mather, and Yard, and the Forests of Pinchot, came Conservation, and in due course Environmentalism. Mountains and forests, wild animals and wild flowers, clean rivers, fresh air, soils guarded against wind and water, silence and darkness under the stars at night, space for living, the historic and prehistoric residences of men surviving the centuries, all these were given over to our care. . . .

—**Anthony Wayne Smith, May 1979**  
Exec. Secretary, NPA, 1958–63  
President, NPA/NPCA 1963–

*As NPCA ends its Diamond Jubilee year, now is the time to look back over what we have accomplished in the past sixty years, to reevaluate our goals, to learn by our mistakes, and to look toward our next sixty years with hope and determination.*

### Budget—from page 19

One bright spot in the Senate action was the addition of \$15 million to buy out the General Host concessions at Yellowstone National Park. The House had not included the \$15 million because the Park Service was still negotiating with the concessioner over the purchase price at that time.

The appropriations legislation was headed to a conference committee at press time to reconcile differences between House and Senate versions. Sen. Stevens was expected to continue his efforts to cut the Park Service's budget but would meet opposition from the House conferees.

NPCA contends that these budget cuts represent a false austerity that is not true to the wishes of the American people. A recent Gallup poll demonstrates that 70 percent of Americans say either "not enough" is being spent on parks (44 percent) or "about the right amount" is being spent (26 percent). (See September, p. 22.) ■

### GREAT SMOKY MOUNTAINS Wild Smokies

The Park Service has released a draft general management plan proposing that 89 percent of one of our most heavily used parks be designated as wilderness. This proposal for 466,071 acres of wilderness is the best ever produced for the Great Smokies, but no wilderness will pass Congress until a long-standing disagreement with Swain County, North Carolina, is resolved. Furthermore, the draft plan proposes construction of a road through the historic Cataloochee Valley. NPCA has long opposed the proposal to build a road into the valley, as its cultural resources are similar to those of Cades Cove.

The roadblock to wilderness designation is a 1943 agreement under which TVA agreed to give land to the Park Service if the NPS would build a road for Swain County residents along the north shore of Fontana Lake. The agreement is not legally binding. NPCA believes it nonetheless needs to be resolved through a cash settlement to the county rather than a land exchange or road construction. ■

**Sandy Hook—from page 19**

the most promising ways to improve access would be to institute ferry service from the New Jersey mainland and possibly from New York City as well.

Under the current NPS plan, more than three-fourths of Sandy Hook is zoned for either total protection or controlled access, whereas new development is planned for beach facilities. NPCA emphasized that this development should be restricted to minimal facilities providing water, restrooms, and in some cases changing rooms. Food and other services could be provided by mobile units. Moreover, use of the holly forest and nesting areas must be carefully controlled.

NPCA land use specialist Bill Lienesch warned that Sandy Hook's greatest natural resources—its beaches—are experiencing severe erosion problems caused by bulkheads that stop the natural drift of sand: "If measures are not taken to correct these problems, a real possibility exists that a breach will occur and an inlet will form," Lienesch explains. Immediate sand replenishment, and, over the long run, possibly other measures will be needed.

The Red Bank *Daily Register* had this comment about the seminar: "Concern of the NPCA—and of its recently formed local offshoot . . . the Monmouth County Conservation Education Committee—is that the fort's military heritage should not be sacrificed in an "overkill" of development of facilities. . . . We share that concern and heartily support the preservation plea." ■

**Manassas—from page 17**

to block passage of the bill. Sen. John Warner (R-Va.), the new senator who formerly administered the American Bicentennial Commission, broke the stalemate in September by coming up with a compromise proposal that led to a vote by the supervisors to end their refusal to support any expansion. Warner says he took the action because "this controversy has gone on long enough. The people in the area simply have to be allowed to plan their futures. The impasse had to end. And the bill incorporates all the historically significant land not presently in the park." With that opposition dropped, Sen. Byrd, whose father got the park established, decided to cosponsor Warner's bill, S 1857.

Although NPCA commends the senators for taking this stand, the Association recently testified in favor of the Harris bill as the preferable of the two proposals. HR 5048 would protect 1,700 acres, whereas S 1857 leaves out a thousand acres including 450 acres of tracts paralleling I-66 on either side of state Rd. 234, half the Brawner farm tract, and acreage in Fairfax County including land along Bull Run. The Stone Bridge is included in both bills. Harris wants to protect the entrance to the park along I-66 from industrial use, for which alternate properties are available.

In supporting the House-passed bill, NPCA testified that it has been well refined over the years to eliminate all significant problems raised by local opponents of park expansion. ■

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# Hubris at Cape Hatteras is courting disaster

Just as the tragic figures of ancient Greek drama brought tragedy upon themselves by exhibiting *hubris*—an arrogance that challenged the gods—the U.S. Army Corps of Engineers is inviting trouble by challenging nature at Cape Hatteras National Seashore in North Carolina.

The Corps plans to control the Atlantic Ocean by constructing two immense rock jetties extending more than a mile out to sea on either side of Oregon Inlet. Scientists say the jetties could ruin beaches and wreak havoc from Nags Head to the point at Cape Hatteras and might even threaten the town of Nags Head.

The Corps says the jetties and a sand bypass system are crucial to block the sand that is filling the inlet despite dredging efforts. In accord with the natural movement of sand, as the northern bank of Oregon Inlet builds up and the southern bank erodes, the inlet itself is moving southward at the rate of two to three inches a day—or 80 feet a year.

As a result, a good part of the Bonner Bridge, which crosses the inlet to connect Bodie Island and Pea Island, now spans marsh, sand, and shallow water. It had to be repaired more than a year ago when it dropped 11 inches and needs constant monitoring.

The Corps and the state want to arrest the inlet's migration, save the bridge, deepen the channel, and thus maintain convenient boat access to a state industrial park for processing seafood planned at Wanchese on nearby Roanoke Island.

But Stanley Riggs, a geologist at East Carolina University, says the stabilization project would be folly. He explains that North Carolina's barrier islands serve as safety valves whereby river water and storm tides within Pamlico and Albemarle sounds can be discharged into the Atlantic. Inlets are naturally formed wherever there is a need to relieve hydraulic pressure.

Stabilizing Oregon Inlet will disrupt the area's ability to serve as an energy sponge during storms. Hurricanes would present the most dangerous situations if high winds should force millions of tons of water back into the sounds, Riggs warns. Because the jetties would prevent Oregon Inlet from expanding, water might force its way out through an island elsewhere and form a new inlet, possibly at a heavily populated site like Nags Head.

The stabilization project would erode

popular beaches as the jetties impeded the general southward drift of sand. Dr. Orrin Pilkey of Duke University sums up the situation: "No geologist in the world would approve this project."

Moreover, biologists are concerned that fish larvae that normally drift southward along the shore and are swept through the inlet into the shallow marshes in back of the islands would be trapped behind the north jetty so that marine productivity would decline.

The project is now estimated at \$69 million for construction and \$200 million for maintenance over a fifty-year lifespan of the jetties. This year Congress authorized a \$2 million startup appropriation in Fiscal Year 1980. A fight is likely over construction funds when the FY 1981 budget comes up next year.

Before the National Park Service decided in 1973 to stop fighting nature in national seashores, the agency had spent in excess of \$20 million on artificial sand dunes at Cape Hatteras in an unsuccessful attempt to prevent storm overwash.

The Park Service and Fish and Wildlife Service, which administers the Pea Island National Wildlife Refuge, are also worried about an application by the Cape Hatteras Electric Membership Corporation (EMC) of Buxton to construct an aerial 115

kilovolt (kv) transmission line across Oregon Inlet and to upgrade its existing line on Hatteras Island from 34.5 to 115 kv.

In a recent environmental assessment, the agencies noted that the line crossing the channel would "alter wetland and estuarine ecosystems. . . . This could adversely affect important commercial and sport fisheries." Construction on Hatteras Island would disturb a maximum of 284 acres of land surface, damaging wildlife habitat.

Most seriously, the new power line would stimulate growth of all the residential communities on Hatteras Island. Such growth would increase demands for sewage, water lines, and dune stabilization, and would have multiple environmental impacts on the national seashore. In January NPS Director Whalen decided not to issue a special use permit to EMC pending the environmental assessment now under public review.

Although at press time the Park Service had not taken an official position yet on the jetties controversy either, Whalen says he expects the dispute to be fought out "at the department level" between Interior Secretary Cecil Andrus and Army Secretary Clifford Alexander, Jr. Before the Corps can start jetty construction on NPS and FWS lands, the agencies must grant permits. If the Interior Department decides to fight the project, "We can give them a hell of a run on it," Whalen says.

**You Can Help:** Please register your opposition to the Cape Hatteras Electric Membership Corporation's proposed transmission lines by immediately writing NPS and asking the agency to deny a special use permit for the lines:

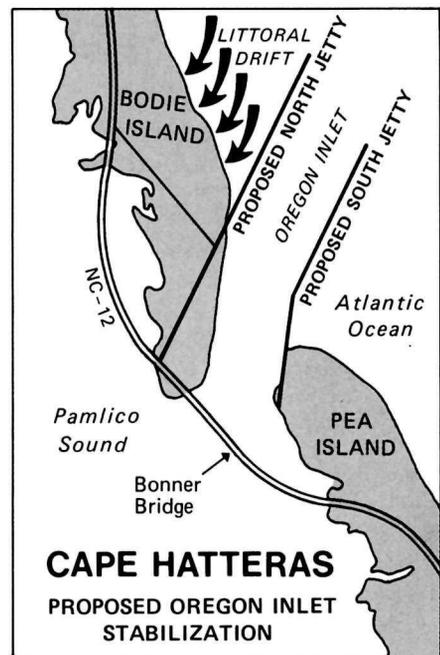
William Whalen, Director  
National Park Service  
Washington, D.C. 20240

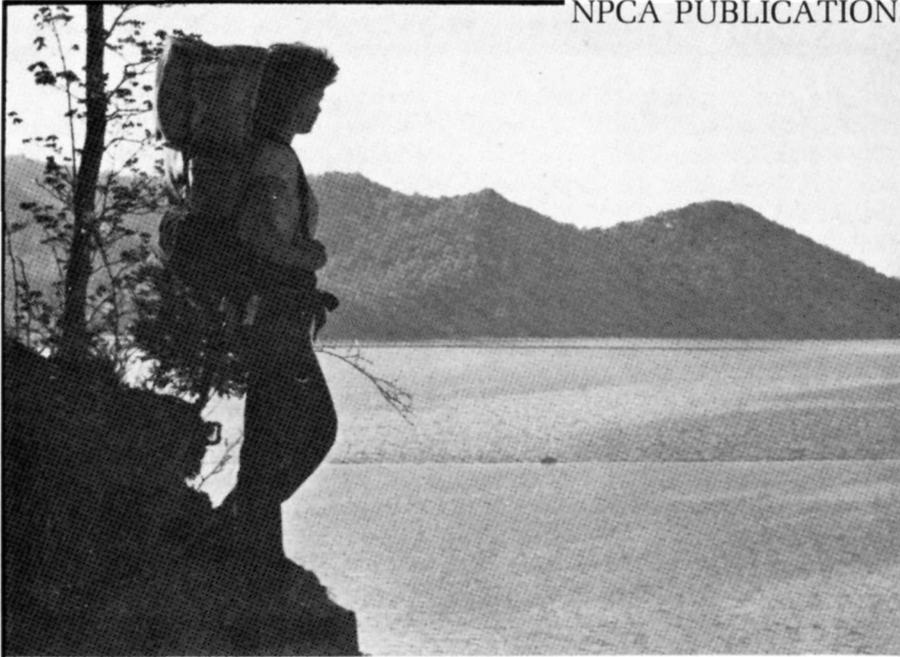
Put your comments about the Corps' plan to stabilize the inlet on the record by responding to the "Draft Supplement to the Final EIS, Manteo (Shallowbag) Bay Project—Oregon Inlet Stabilization":

Mr. Richard Jackson SAWEN-E  
U.S. Army Engineer District Office  
P.O. Box 1890  
Wilmington, NC 28402

Send a copy of this letter to Secretary of Interior Andrus and ask him to deny a permit for the Corps to build the Oregon Inlet Stabilization Project:

Hon. Cecil B. Andrus, Secretary  
U.S. Department of Interior  
Washington, D.C. 20240





**news notes**

*Jobs—from page 22*

should be available from most school guidance offices. Or write to the YCC Selection Office, P.O. Box 2975, Washington, D.C. 20013. Applications will be accepted from January through mid-March.

- **Student Conservation Association:** The SCA is a volunteer program for high school students and college-age and older people. See page 10.

- **Jobs With Private Concessions:** Hotels, lodges, restaurants, stores, and other visitor facilities in parks are operated by private companies and individuals who do their own hiring. These jobs are not available through Park Service channels, but the brochure described under "Regular NPS Seasonal Jobs" provides addresses.

- **Volunteers-in-the-Parks:** The Park Service VIP program needs persons of all ages and skill backgrounds. The main "requirement" is a desire to share your skills with other people and to help the environment. As a VIP, you serve without pay. But the program offers much job flexibility—you often can serve on a part-time or intermittent basis at various times of the year.

As a VIP, you may be working at one of the NPS interpretive facilities, presenting "living history" by working in costume as a "soldier" or "colonial lady," working with students, or helping a ranger survey wildlife.

Just apply to the park of your choice or write the Branch of Employee Evaluation and Staffing, National Park Service, Washington, D.C. 20240, for the brochure "Volunteers in Parks." ■

**MORE NOTES**

**P.S. on parks**

Throughout 1979, Edison National Historical Site, West Orange, New Jersey, has celebrated a "Centennial of Light" commemorating Thomas A. Edison's successful development of the first commercially practical incandescent lamp in October 1879. Edison went on to invent complete systems for the generation and distribution of electricity which—together with the electric light bulb—were to transform modern life by making electricity so

*Continued on page 26*

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# conservation docket

## Give a Christmas present to the parks—It doesn't cost a penny

With just one gift, and without adding anything to your holiday expenses, you can help to protect our country's last great wildlife populations up in Alaska, to preserve our last tallgrass prairie-lands, and to safeguard historic resources at Manassas.

NPCA members who are willing to give up a little time this holiday season can give a gift to future generations by helping the parks. As your congressional representative and senators return home for the Christmas recess, why not make a resolution to visit their offices and emphasize the importance of national park issues to you? If you have never visited a congressional office, you will find it relatively simple to make an appointment by calling the district or local office.

### Alaska

The long struggle to protect our last wilderness frontier in Alaska may finally reach the Senate floor soon. But a committee has approved a bill that is a giveaway to developers, even opening caribou calving grounds to oil exploration. (See page 19.) Urge your senators to oppose the version passed by the energy committee and instead to support alternatives offered by Senators Tsongas and Durkin. Ask your representative to remain firm in supporting HR 39, *as passed by the House*. But *first* call the Alaska Hotline for a recorded update on how to help (202-547-5550).

### Manassas

Join the charge to expand Manassas National Battlefield Park in Virginia to include important Civil War sites and thus protect this historic area from commercialization. Now that Sen. Warner has taken the initiative to end the "Third Battle of Manassas" (see page 17), ask your senators to support his efforts and also to support addition of House-passed acreage.

### Tallgrass Prairie

After obtaining permanent protection for the parks and wild areas in Alaska, the protection of the Tallgrass Prairie is the top priority for conservationists in the 96th Congress. On October 16, Rep. Larry Winn (R-Kans.) and Rep. Morris Udall (D-Ariz.) introduced HR 5592, a bill to create a Tallgrass Prairie National Reserve including natural areas in the Flint Hills of Kansas and the Osage Hills of Oklahoma. The national reserve would preserve present farming and ranching lifestyles and pioneer and Indian history while saving natural areas. The areas include prime tracts of the little remaining virgin tallgrass prairie. Here the buffalo once roamed in large herds and native grasses and flowers still support abundant wildlife such as prairie chickens.

The bill would stretch land acquisition over a period of time by focusing on purchases from willing sellers (except for cases in which the land use is substantially altered from present



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use and is detrimental to the purposes of the area). Land at three sites—Waubunsee and Chase in Kansas and Osage in Oklahoma—would be purchased as they come up for sale. In the future they would become units of the National Park System connected by a National Prairie Parkway administered by NPS. The parkway would make use of existing roadways and scenic easements. Urge your representative to support HR 5592 and to become a cosponsor of the bill. ■

**Field hearings slated on immigration & refugee policy**

Created in October 1978 by congressional decree, the Select Commission on Immigration and Refugee Policy is finally getting started. Its mandate is "to study and evaluate existing laws, policies, and procedures governing the admission of immigrants and refugees to the United States and to make Administrative recommendations to the President and the Congress."

The hearings are held "to enable individuals, interest groups, and experts

to present their views and recommendations on important issues." Although most of the hearing schedule will be taken up by invited witnesses, we have been assured that the public will have an opportunity to comment during "open mike" periods.

The field hearings are a good opportunity for concerned NPCA members to state their views before an influential decisionmaking body. Members wishing to testify and needing information or other assistance are urged to write or call Gerda Bikales, NPCA Administrative Assistant for Population/Immigration, as soon as possible.

The sites and dates of forthcoming hearings are as follows:

- Miami Dec. 4, 1979
- San Antonio Dec. 17, 1979
- New York Jan. 21, 1980
- Phoenix Feb. 4, 1980
- Los Angeles Feb. 5, 1980
- Denver Feb. 25, 1980
- New Orleans March 24, 1980
- Chicago April 21, 1980
- New York May 5, 1980
- San Francisco June 9, 1980 ■

**P.S.—from page 24**

cheap that, as Edison put it, "only the rich will be able to burn candles."—*Peyton Read, Washington, D.C.*

**The Santa Monica Mountains Public Workshop for Planning Process** held on September 18, 1979, was encouraging in that eighteen out of the twenty people in my workshop were in favor of preserving the purity of the mountains . . . the feedback showed strong feeling that any additional land acquired with the \$20 million appropriation should be kept inviolate. The nod was given to a nature center and nature study and some trails, but a moratorium was placed on any more building. Mind you, there is no guarantee the Park Service will follow all suggestions made by our group, but the group itself was giving favorable comment to ecological concerns . . . There was regret that the coastal commission has allowed developers to chip away so much of our mountains—*Elaine Stansfield, Los Angeles, Calif.*

**Have an idea for P.S. on parks?** Send it to P.S.—Editorial Dept., NPCA. ■

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**NEEDED: INFORMATION ABOUT WHERE PEOPLE PAY TO FISH, SWIM, BOAT AND CAMP.** Resources for the Future, a nonprofit research organization, needs information for study of benefits of water pollution control. Goal is to produce believable benefit estimates for use in national policymaking by finding out what people *actually pay* at fee fisheries, commercial beaches, canoe liveries, and private campgrounds on water. First need is to locate a large number of such places. If you know of or use one, please send its name and address or phone number to Clifford S. Russell, Resources for the Future, 1755 Massachusetts Avenue, N.W., Washington, DC 20036. Any additional material, such as brochures, will be welcome.

**COUGAR MOUNTAIN SANCTUARY—**Benefactors and donations needed to help otherwise "homeless" wild felines. For information: P.O. Box 99542, Tacoma, WA 98499.

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# National Parks & Conservation Magazine

The Environmental Journal

Vol. 53, 1979

NPCA · National Parks & Conservation Association · NPCA

## Abbreviations:

NBP: National Battlefield Park  
NHP: National Historical Park  
NHR: National Historical Reserve  
NHS: National Historic Site  
NL: National Lakeshore  
NM: National Monument  
NMP: National Military Park  
NP: National Park  
NRA: National Recreation Area  
NS: National Seashore

Month of issue, in boldface, is followed by the page citation.

## A

Absaroka-Beartooth Wilderness, legislation passed: **1,28**  
Acadia NP  
deletions opposed: **7,24**  
Jordan Pond House burns: **9,26**  
threatened by power plant: **11,21**  
acid rain  
in BWCA and Voyageurs NP: **4,24,25, 27,28**  
effect on national parks: **10,26**  
Adamson, Peter: **3,10-13**  
adjacent lands survey, NPCA  
NPCA recommendations: **4,5-7**  
NPS action: **4,4**  
problems: **3,4-9**  
update: **11,21-22**  
Admiralty Island NM proclaimed: **2,24**  
aerosol sprays, threat to ozone: **2,16-19**  
air pollution in national parks: **10,25-26**  
Alaska, national monuments proclaimed: **1,29; 2,2,23-25**  
Alaska national interest lands legislation action scheduled in 1979: **2,23,25**  
House committee weakens bill: **4,29**  
House passes good bill: **7,22-24**  
HR 39 reintroduced: **3,18,30**  
Huckaby substitute bill: **5,27**  
protective proclamations: **2,23-25**  
scheduled for Senate: **9,23**  
Senate committee cripples bill: **12,19,25**  
Alaska's wilderness parks, NPCA publication: **11,25**  
Albright, Horace M.: **5,19-21**  
pleased with anniversary issue: **8,29**  
Allen, Phillip M.: **9,27**  
American Memorial Park authorized: **1,26**  
American Wild and Scenic River  
authorized for study: **1,26**  
Aniakchak NM proclaimed: **2,24**  
Antarctic Preservation Act introduced by  
Burton: **10,28**  
Appalachian Trail  
inadequate funds: **7,24**  
protective legislation passed: **1,28**  
volunteer maintenance: **2,20-22**  
Appalachian Trail Advisory Committee,  
T. Destry Jarvis appointed: **9,24**

appropriations, NPS: *See* National Park Service.

Assateague NS  
temporary reprieve from sewage threat: **8,27**  
threatened by sewage: **6,21**  
Atikokan power plant: **4,24,25,27,28**  
awakening: **4,2,31**

## B

Badlands NP threatened by road construction: **7,27**  
bat, endangered: **10,12-15**  
Becharof NM proclaimed: **2,24**  
Bering Land Bridge NM proclaimed: **2,24**  
Big Cypress National Preserve threatened by drainage: **7,27**  
Biscayne NM threatened by air and water pollution: **11,21**  
Bishop, Sarah G.: **7,4-9**  
Bishop, William P.: **7,4-9**  
Bob Marshall Wilderness expanded: **1,28**  
Boulding, J. Russell: **6,15-20**  
Boundary Waters Canoe Area  
acid rain in: **4,24,25,27,28**  
expanded wilderness: **1,28**  
Bower, Janet Newlan: **4,19-23**  
Braun, Annette F., bequest to NPCA: **11,20**  
Brewer, Michael F., new NPCA trustee: **8,26**  
Brodeur, Paul: **2,16-19**  
Brown, Lester R.: **10,16-20**  
Brown, Mrs. W. L. Lyons, presents NPCA award: **10,30**  
Bruehl, Rev. A. W.: **9,27**  
Bryce Canyon NP threatened by strip mining: **11,22**  
budget, NPS: *See* National Park Service.  
Burton, Phillip: **1,24**  
interview with: **5,22-26**  
Butcher, Devereux, battler for parks: **8,28,29**  
Butcher, Russ  
Great Basin NP proposal: **11,25**  
wants father recognized: **8,29**  
BWCA wilderness  
acid rain in: **4,24,25,27,28**  
expanded: **1,28**

## C

Campbell, Faith Thompson: **1,14-20**  
cancer, environmental: **3,10-13**  
Cantera, Lawrence E., Jr.: **12,4-9**  
Canyon of Lodore, exploration of: **2,4-7**  
Cape Canaveral, NS ownership problems: **11,17,23**  
Cape Cod NS  
modifications of dwellings in: **6,29**  
parking lots vs. buses: **3,28**  
Cape Hatteras NS  
threatened by ORVs and electric transmission line: **7,27**  
threatened by proposed power line and stabilization of Oregon Inlet: **12,23**  
Cape Krusenstern NM proclaimed: **2,24**  
Capitol Reef NP affected by air pollution from power plants: **11,22**  
Cataloochee Valley, Great Smokies, proposed road in: **12,20**  
Cauble, Christopher: **8,22-25**  
Channel Islands NM  
attempts to weaken legislation: **8,30**  
House passes expansion legislation: **6,24**  
proposed national park: **9,29**  
Chasis, Sarah: **8,16-21**  
Chattahoochee River NRA authorized: **1,25,28**  
chemicals, toxic, in environment: **7,16-21**  
chestnut, American  
NPCA restoration program: **9,24**  
seeds needed: **9,24**  
chlorofluoromethanes, threat to ozone: **2,16-19**  
Civil War battlefield parks, intrusive adjacent development: **10,9-11**  
Civilian Conservation Corps, search for ex-members: **9,27**  
Clark, Earl: **1,4-9**  
coal development  
adverse effect on national parks: **10,25-26**  
environmental dangers of: **6,15-20**  
reader comment: **9,27**  
coastal resources threatened by offshore drilling: **8,16-21**

concessions in parks  
policy needs reforming: 6,21,23  
reader comment: 9,27  
summer jobs with: 12,24  
congressional committee lineups: 4,29  
conservation goals: 5,2,31  
Convention on International Trade in  
Endangered Species of Wild Fauna and  
Flora, deficiencies of: 1,14-20  
Cruys, George: 12,4-9  
cultural resources  
in national parks: 8,10-15  
NPCA conference on: 5,29

## D

Day, Nancy R.: 11,14-16  
Death Valley NM threatened by Army  
training center: 11,22  
Delaporte, Chris Therral: 6,29  
Denali NM proclaimed: 2,24  
Diamond Jubilee for NPCA  
looking ahead: 5,2,31  
NPCA history: 1,2,31; 5,6-12  
NPCA programs in 1979: 12,2,31  
tribute from NPS Director: 5,4-5  
Dinerstein, Robert: 6,29  
Dinosaur NM  
Canyon of Lodore, description of: 2,4-9  
river management plan: 2,7-9  
Doria, John J.: 12,14-16  
Douglas, William O., honored in  
legislation: 1,28  
Drury, Newton B., death of: 6,26

## E

Earnst, John, pleased with Burton  
interview: 8,29  
Ebey's Landing NHR authorized: 1,25  
Edgar Allan Poe NHS authorized: 1,25  
Edison, Thomas A., centennial of light  
bulb: 12,24,26  
Eleanor Roosevelt NHS authorized: 1,26  
Endangered American Wilderness Act  
passed in 1978: 1,28  
Endangered Species Act  
amendments to: 1,28  
reauthorized: 1,28  
snail darter exemption attempted: 7,25  
snail darter exempted: 10,28  
energy  
alternative sources: 1,10-13; 6,31  
conservation of: 4,14-18  
nuclear, dangers of: 6,2,31; 9,27  
energy program, proposed, compromises  
environment: 11,27,28,29  
entrance fees, proposed, opposed in  
Congress: 9,29  
Euler, Robert C.: 6,4-9  
Everglades NP threatened by air and  
water pollution: 11,21

## F

Fire Island Natural Area Committee, new  
NPCA Associate: 8,26  
Fire Island NS management plan  
completed: 7,27  
Floyd, Tom: 2,20-22  
forestry, rational management needed:  
9,16-19  
forests, virgin, help needed to locate: 7,28  
Fort Clatsop National Memorial,  
historical cairn added: 11,26  
Fort Scott NHS authorized: 1,26  
Foster, Catharine Osgood: 12,10-13  
Fox, Ida: 9,27  
Frederick Law Olmsted, proposed national  
historic site: 9,29  
Friends of Pictured Rocks, preservation  
group formed: 11,26  
Friendship Hill NHS authorized: 1,25

## G

Garcia, David, Jr.: 4,8-12  
Gates of the Arctic NM proclaimed:  
2,24  
Gateway NRA, NPCA sponsors Sandy  
Hook conference: 11,17,26;  
12,17,18,19,21  
Gettysburg NMP  
Gettysburg Address on display: 9,26  
threatened by wastewater treatment  
plant: 6,21  
Glacier Bay NM enlarged: 2,24  
Glacier NP  
grizzly bear management: 8,22-25  
superintendent curbs movie director:  
9,26  
Gonzalez, Antonio J.: 11,25  
Graf, William L.: 2,4-9  
Grand Canyon  
cultural resources of: 6,4-9  
magazine cover: 9,27  
motor ban on river: 10,21,30  
Grand Teton NP  
airport and snowmobiles in: 12,17,18  
EPA opposes airport: 6,26  
gray bat, endangered: 10,12-15  
Great Basin, proposed national park:  
9,4-9; 11,25  
Great Bear Wilderness legislation passed:  
1,28  
Great Smoky Mountains NP, proposed  
wilderness: 12,20  
grizzly bear management at Glacier NP:  
8,22-25; 11,25

## H

Haleakala NP, silversword protection  
program in: 12,14-16  
Hassel Island added to Virgin Islands NP:  
1,26

Hawaii Volcanoes NP, native flora  
improving: 11,26  
Hawkins, Amos, receives NPCA award:  
10,30  
historians, underdogs in Park Service: 7,29  
Historic Gettysburg-Adams County, Inc.,  
new NPCA Associate: 8,26  
Holland, F. Ross, Jr.: 8,10-15  
Huser, Verne: 8,4-9

## I

immigration, illegal  
and democracy: 7,2,31  
enforcement inadequate: 6,23,26  
NPCA forum on: 5,30  
NPCA opposes legal aid: 10,24,29  
proposed legislation: 2,26  
Immigration and Refugee Policy  
Commission field hearings scheduled:  
12,26  
Indian Peaks Wilderness designated: 1,28  
Indiana Dunes NL, proposed expansion:  
10,21,24

## J

Jackson, Mrs. Robert D.: 11,25  
Jean Lafitte NHP and Preserve authorized:  
1,25  
jobs in national parks: 12,22,24

## K

Kaloko-Honokohau NHP authorized: 1,25  
Katmai NM enlarged: 2,24  
Kenai Fjords NM proclaimed: 2,24  
Kobuk Valley NM proclaimed: 2,24

## L

La Berge, N. Jeffrey: 7,28  
Lake Clark NM proclaimed: 2,24  
Lambert, Eileen: 9,4-9; 11,25  
Land and Water Conservation Fund  
increased: 1,27  
proposed reduction: 4,24-25  
Lassen NP: 10,4-8  
geothermal development at: 10,5-7  
geothermal site developed more:  
11,17,26  
ski development at: 10,5-8  
Law of the Sea, new hope for: 8,2,31  
legislation, conservation priorities at  
beginning of year: 2,28  
Lohr, Mary, bequest to NPCA: 11,20  
Lowell NHP authorized: 1,26

## M

McKaye, Kenneth R.: 3,28  
Mackey, Daniel James: 3,14-17  
McPherson, Stephen Mather, new NPCA  
trustee: 8,26  
Maggie L. Walker NHS authorized: 1,25

Mammoth Cave NP  
 delay in relocating Job Corps: 9,24  
 failure to implement master plan: 7,4–9  
 Job Corps Center in: 7,6–9  
 NPCA sues over Job Corps: 8,27  
 threatened by sewage: 7,6–9  
 Manassas NBP, proposed expansion:  
 12,17,21,25  
 manatee threatened by powerboats:  
 3,14–17  
 Mather, Stephen T.  
 first NPS director: 5,19–21  
 gave financial support for NPA: 5,6,7  
 Matteson, Stephen Halsey: 10,4–8  
 Meinhard, Robert W.: 10,9–11  
 Mesa Verde NP impaired by air pollution  
 from Four Corners power plant: 11,22  
 methane, alternate energy source: 1,10–13  
 Middle Delaware Wild and Scenic River  
 authorized for study: 1,26  
 Minckler, Leon: 9,16–19  
 Mineral King Valley made part of Sequoia  
 NP: 1,25  
 Missouri Wild and Scenic River  
 authorized for study: 1,26  
 Misty Fjords NM proclaimed: 2,24  
 Murrow, Edward R., commemorated by  
 park: 9,26  
 Myers, Norman: 9,10–15; 11,9–13

## N

National Heritage Policy Act proposed:  
 11,27,29,30  
 National Heritage Program proposed by  
 administration: 6,24  
 National Landmarks Program, NPS  
 priority: 6,29  
 national landmarks threatened: 3,20–28  
 National Park Service  
 establishment of: 5,19–21  
 House cuts budget: 9,22,24  
 inadequate budget request: 4,24–25  
 inadequate funding, FY 1979: 1,23; 2,27  
 low priority on historians: 7,29  
 management plans, FY 1979: 1,23  
 proposed snowmobile policy: 4,26,27,30;  
 11,17,24  
 Senate cuts budget: 12,17,19,20  
 National Park System  
 Alaskan national monuments  
 proclaimed: 1,29; 2,2,23–25  
 churches in: 4,13  
 study areas: 1,27  
 wilderness areas authorized: 1,27  
 wilderness protection in: 3,31  
 national parks  
 adjacent lands problems: 3,4–9; 4,4–7;  
 11,21–22  
 air pollution in: 10,25–26

national parks—*Continued*  
 cultural resources in: 8,10–15  
 how to plan: 7,26  
 protecting from outside threats: 7,28  
 river running in: 8,4–9  
 snowmobiling in: 4,26,27,30; 11,17,24  
 threatened by deterioration of  
 environment: 9,2,31  
 threats from southern Utah  
 development: 2,27,28,30  
 transportation program established: 1,28  
 travel information: 6,27,28  
 uranium exploration in: 6,30  
 National Parks and Conservation  
 Association  
 anniversary tribute from NPS Director:  
 5,4–5  
 history: 1,2,22,31; 2,29; 3,29; 4,25;  
 5,6–12; 6,26; 7,27; 8,28; 9,28; 10,24;  
 11,20; 12,20  
 new Associate members: 8,26  
 new trustees elected: 8,26  
 programs in 1979: 12,2,31  
 recommendations to President Carter:  
 5,27  
 National Parks and Recreation Act of  
 1978: 1,24–27  
 Burton's strategy: 5,22–26  
 proposed amendments: 9,29  
 National Parks Association (now NPCA)  
 activities of: 4,25  
 Articles of Incorporation, May 1919:  
 1,22  
 comments on redwoods: 11,20  
 fights commercial exploitation: 8,28  
 fought dams in parks: 7,27  
 founding of: 1,2; 5,6  
 goals: 12,20  
 opposes Potomac dams: 10,24  
 opposes Tioga Road in Yosemite: 9,28  
 preservation of public lands: 6,26  
 sponsored Student Conservation  
 Association: 12,10–13  
 War on the Parks: 2,29  
 national reserves, NPCA sponsors  
 conference: 7,24  
 national trails authorized in omnibus  
 parks act: 1,26  
 New River Gorge National River  
 authorized: 1,25  
 Noatak NM proclaimed: 2,24  
 nuclear energy  
 dangers of: 6,2,31  
 reader comment: 9,27

## O

OCS leasing threatens coasts: 8,16–21  
 Odum, William E., new NPCA trustee:  
 8,26  
 oil, offshore, threatens coasts: 8,16–21

Olmsted, Frederick Law, home proposed  
 as historic site: 9,29  
 Olympic NP  
 deletion opposed: 6,24  
 description of: 1,4–9  
 threatened by air and water pollution:  
 11,22  
 omnibus parks act, 1978: 1,24–27  
 Burton's strategy: 5,22–26  
 proposed amendments: 9,29  
 Owens, Patricia Ann: 7,29

## P

Palo Alto Battlefield NHS authorized:  
 1,25  
 parks, historical: 10,2,31  
 Paul, Jan S.: 1,10–13  
 Pennsylvania Avenue Development  
 Corporation authorized: 1,28  
 Père David's deer, captive breeding  
 programs: 4,19–23  
 Père Marquette Wild and Scenic River  
 authorized for study: 1,26  
 peregrine falcon, endangered  
 reintroduced in Rocky Mountain NP:  
 7,11–15  
 restored to Washington, DC: 9,25  
 Phibbs, Henry C., II, new NPCA trustee:  
 8,26  
 Pictured Rocks NL, Friends of Pictured  
 Rocks formed: 11,26  
 pigs, feral, on Cumberland Island:  
 11,14–16  
 Pinelands National Reserve  
 authorized: 1,27  
 threatened by herbicides: 5,29,30  
 planning parks, how to participate: 7,26  
 plants, endangered  
 Haleakala silversword: 12,14–16  
 trade in: 1,14–20  
 population and scarce natural resources:  
 10,16–20  
 Potomac River dams defeated: 11,2,31  
 Pough, Richard H.: 7,28,29  
 power plants, adverse effect on national  
 parks: 10,25–26

## Q

Quetico-Superior, acid rain:  
 4,24,25,27,28

## R

Read, Charlotte J.: 7,28  
 Read, Peyton: 12,24,26  
 Redwood NP  
 budget for: 1,21  
 enlargement authorized: 1,27  
 management plan started: 7,27

Redwood NP—*Continued*  
planning for expansion: 1,21; 11,4–8  
President requested 1964 study: 11,20  
rehabilitation program: 1,21  
Reed, Nathaniel P.: 11,25  
Reeves, Randall R.: 2,10–15; 6,10–14  
right whale, endangered: 2,10–15  
Rio Grande Wild and Scenic River  
authorized for study: 1,26  
river running in western parks: 8,4–9  
Rocky Mountain NP, reintroduction of  
peregrine falcon: 7,11–15  
Rushing, Kathryn Karsten: 5,6–12

## S

St. Joe Wild and Scenic River  
authorized for study: 1,26  
St. Paul's Church preservation,  
authorized: 1,25  
San Antonio Missions NHP  
authorized: 1,25,28  
controversy: 4,13  
description: 4,8–12  
Sandy Hook, NPCA sponsors conference:  
11,17,26; 12,17,18,19,21  
Santa Monica Mountains  
national recreation area authorized: 1,25  
planning workshop encouraging: 12,26  
Scenic Hudson Preservation Conference,  
new NPCA Associate: 8,26  
Schwartz, Douglas W., new NPCA  
trustee: 8,26  
seasonal jobs in parks: 12,22  
sequoias and fire management: 7,28–29  
Serat, William: 8,29  
Shenandoah NP threatened by proposed  
brewery: 11,21  
silversword, Haleakala, rescued from  
extinction: 12,14–16  
Skagit Wild and Scenic River authorized  
for study: 1,26  
Smith, A. W.: 1,2,31; 2,2,31; 3,2,31;  
4,2,31; 5,2,31; 6,2,31; 7,2,31; 8,2,31;  
9,2,28,31; 10,2,31; 11,2,31; 12,2,31  
Smith, Marvin M., new NPCA trustee:  
8,26  
snail darter, endangered  
exempted from protection: 10,28  
threatened with exemption from  
Endangered Species Act: 7,25  
snowmobile policy  
improved: 11,17,24  
permissive proposal: 4,26,27,30

Southwest parks threatened by mining  
and power plants: 2,27,28,30; 11,22  
springtime: 4,2,31  
Stansfield, Elaine: 12,26  
Student Conservation Association  
volunteer work program: 12,10–13  
study rivers authorized by omnibus parks  
act: 1,26  
Stumpf, Wm. Alan: 7,28

## T

Tallgrass Prairie National Reserve  
bill introduced in House: 12,25,26  
NPCA sponsors meetings: 5,27–28  
Tellico Dam, Congress orders completion:  
10,28  
Tessendorf, K. C.: 5,13–18  
Theodore Roosevelt NP threatened by oil  
development: 11,22  
Thomas Stone NHS authorized: 1,25  
Tilden, Paul Mason, comment on  
redwoods: 11,20  
Tioga Road: 9,28  
Titus, Elizabeth Cushman, founded  
Student Conservation Association:  
12,10–13  
Tolba, Mostafa Kamal: 4,14–18; 7,16–21  
travel information, park: 6,27,28  
tropical forests, deforestation: 11,9–13  
Tuttle, Merlin D.: 10,12–15

## U

Upper Delaware Wild and Scenic River  
authorized for study: 1,26  
uranium exploration in national parks:  
6,30  
U.S. Geological Survey centennial: 7,29  
Utah, southern, industrialization of:  
2,27,28,30

## V

Valley Forge NHP, cyanide leak at: 11,21  
VanderWerf, Klasina: 7,11–15  
Vincent, Jack: 9,27  
Volunteers-in-the-Parks, jobs with: 12,24  
Voyageurs NP  
acid rain in: 4,24,25,27,28  
Indian oral histories to be obtained:  
11,26  
proposed deletion of Black Bay for  
hunting: 1,29  
proposed seaplane landings in: 1,29  
snowmobile decision postponed:  
11,24,26  
snowmobiling in: 1,21,22,23,29

## W

walrus, continuing protection needed in  
Atlantic: 6,10–14  
Waltrip, Randy: 11,4–8  
War in the Pacific NHP authorized: 1,26  
Watkins, Mary, bequest to NPCA: 2,26  
Whalen, William J.: 5,4–5  
wild and scenic rivers  
authorized: 1,26  
authorized for study: 1,26  
wilderness areas authorized in omnibus  
parks act: 1,27  
wilderness preservation: 3,2,31  
wildlife  
in China: 9,10–15  
endangered  
gray bat: 10,12–15  
grizzly bear: 8,22–25; 11,25  
manatee, Florida: 3,14–17  
Père David's deer: 4,19–23  
peregrine falcon: 7,11–15; 9,25  
right whale: 2,10–15  
snail darter: 7,25; 10,28  
trade in: 1,14–20  
walrus, Atlantic: 6,10–14  
extinct, effect of direct killing: 7,28  
feral pigs on Cumberland Island:  
11,14–16  
Wind Cave NP, history and description:  
12,4–9  
Wrangell–St. Elias NM proclaimed: 2,24

## Y

Yard, Robert Sterling, first executive  
secretary and editor of NPA: 5,6,7  
Yellowstone NP  
early years at: 5,13–18  
threatened by geothermal leasing  
nearby: 9,20,22; 11,22  
Yellowstone Park Company, termination  
of concession contract: 2,31  
Yosemite NP, NPCA testimony on  
management plans: 2,2,31  
Youth Conservation Corps, summer jobs  
with: 12,22,24  
Yukon–Charley NM proclaimed: 2,24  
Yukon Flats NM proclaimed: 2,24

## Z

Zion NP, adjacent lands problems: 7,30

*Continued from page 2*

public meetings involving Sandy Hook at Gateway, in an effort to mobilize local sentiment for the protection of natural conditions and historical resources on the Hook.

Closely related have been our efforts in respect to the so-called National Reserve System. The Pinelands National Reserve in New Jersey is the best example of these areas, but there are at least a dozen other major locations in the United States where the combination of federal, state, and local action and authority which these proposals represent is desirable and feasible. We have brought representatives from these regions together in the boardroom of NPCA to discuss our common concerns, and practical action will be emerging soon in most of them.

Related are our concerns for urban open space and recreation and rural open space protection, including the protection of farmlands against urban sprawl. We see great opportunities here for cooperation between farm and conservation organizations, which we hope to further.

**WE LAUNCHED** our program for the National Historical Parks and for historical preservation in January 1978 and we continued it throughout 1979. I was the keynote speaker at the National Park Service Conference on Cultural Resources at Pensacola, Florida in April. The NPCA was represented as to both the historical and the natural units of the System at the North Atlantic Regional Conference of Superintendents in May.

We have participated in a long series of staff discussions on historical and cultural resources with Service representatives and spokesmen of other conservation and historical preservation organizations in Washington, laying a substantial foundation for constructive cooperation in the future. These activities mean a significant advance over the neglect shown to the historical parks by conservationists, historic preservationists, and the National Park Service itself until just recently.

Significant has been the fact that it was the historical resources at Sandy Hook in Gateway NRA at New York,

together with nature preservation issues, that led to the successful meeting at the Hook in September, mentioned above, resulting in grass roots efforts by NPCA members to protect Sandy Hook.

The Magazine continues to publish extensively on the historical and cultural resources protected in the National Park System and elsewhere. Notable during the year have been articles on San Antonio's Mission Trail, the cultural resources of the Grand Canyon and the System generally, and the dangers involving the national historic battlefields. The editorial in the October issue on The Parks and History dealt with the issue as a whole.

**I**N WILDLIFE we have participated in inter-organizational working groups to defend the Endangered Species Act and in the work of the International Union for Conservation of Nature in its survival services. In forestry we have continued to testify and publish in the Magazine on silvicultural management methods. We maintain our American Chestnut nursery in Maryland and our plantation at Aberdeen Proving Grounds; at long last our recommendation that natural selection methods be used in developing immunity against the blight is getting recognition. In river basins we have emerged victorious from our 20 year battle to protect the Potomac against the Army Engineers as reported editorially in November.

We look forward to the development of a field structure of NPCA members, modeled partly on the Sandy Hook experience, including our Conservation Education Committees, our Associated Organizations, our Contact Group, and our regional and area representatives around the country, with a view to mobilizing the talents of our members and friends and better communication between the national office and the field.

**T**HE ISSUE of illegal immigration continues to be of deep concern. Almost all well-informed environmentalists now agree that population pressures underlie most of our environmental and resource problems.

For the United States, foreseeable birthrates being what they are, our population growth at home should level off by the end of the century, with great benefit to the ecological, social, and economic systems.

But massive illegal immigration threatens to destroy all the advantages of domestic stabilization. The key to this problem is the special privilege some employers have enjoyed by law, in hiring illegal immigrants. The solution lies in imposing penalties on employers in such cases while providing practical methods for proving legal residence. Working with major labor organizations, the NPCA developed legislation which was introduced in Congress this year.

**WE HAVE CONTINUED** our work with the United Nations Conference on the Law of the Sea. I have been a member of the Advisory Committee to the Secretary of State on this subject since 1972, and of the U.S. Delegation since 1973. We have been concerned with the entire issue of advancing the cause of world order under law, but we have focused on the oceanic fisheries, the marine mammals, oceanic pollution, and the enforcement of international standards in such matters. Clauses of the kind we have recommended will be included at long last in the drafts of the forthcoming treaty which will emerge next spring at New York or next summer at Geneva; the semifinal or final version may emerge at Geneva.

We depend very heavily in all these efforts on the dues and contributions of our members. Precisely because we can do so, we enjoy an independence unmatched by most conservation organizations, particularly those dependent on government grants. We take this occasion to thank our members for their great generosity this year in responding to our appeals for financial assistance over and above dues. We thank our non-member contributors also, and have reminded them in our fourth quarter appeal that reprints of the present Diamond Jubilee report are available and will be sent to them on request.

—Anthony Wayne Smith

sixty years NPCA has dedicated itself to preserving and  
ng for the land that our forefathers cherished. We are grateful  
our members' support. By giving freely to the NPCA, you  
helping preserve America's natural and historical heritage  
future generations to cherish.

