

National Parks & Conservation Magazine

August 1980



The state of the parks

SYMBOL and substance of the environmental ideal, our national parks are an expression not only of the American land, but—in the fact of their preservation—of the character of the American people. For long years of our country's past, we were aggressors against the land. We laid claim to it, laid waste to it, and made it our own. Not until we took steps to preserve some of it, did the land lay claim to us and make us its own—Americans.

In our national parks, we have turned from our rapacity and indifference to become custodians and lovers of the land. In them, we have become a people striving to live as responsible and caring members of the earth community—in harmony with the forms and forces that have brought us and our world into being.

How effective we have been in this endeavor is revealed in a recent report by the National Park Service submitted to Congress entitled *The State of the Parks—1980*. It does not make for reassuring reading. On the basis of it, the prognosis for the years ahead is cause for alarm. It is also cause for action—strong, all-out, determined action. I urge you to consider the evaluation of it by Destry Jarvis presented in this issue.

It would be a grave mistake to take the parks for granted, simply because they have been set aside and are protected by the federal government. The parks do not exist in a vacuum, eternally fixed and immune to the powers of change. They are part of a dynamic, on-going process in the flow of human affairs. Economic, political, and social forces, in continuous flux, threaten them, impinge on them, undermine their purpose. Given present trends, the parks are seen as being caught, ever more precariously, in a cross-

fire between rising social expectations and cultural need on one side, and the physical limitations of the parks and economic demands on the other. The task of protection is a running battle to keep the adverse forces at bay.

Nor can Uncle Sam, through the agency of the National Park Service be expected to shoulder the task alone. The parks do not rest inviolably behind the bulwarks of the law. Laws are subject to change. Federal administrations come and go. The moods of Congress vary. It is people bulwarks that are called for—a concerned and active citizenry sensitive to the parks and their problems and aware of their importance.

Ultimately, the state of the parks depends on us—on our individual concern and efforts, multiplied and operating in close cooperation with the government and our associated organizations. The parks are ours. They contribute, crucially, toward the fulfillment of our lives. In their beauty and mystery is the key that may one day release us from the unhappy, technologized limbo into which we are locked, to find the true ground of living and the true nature of ourselves. The state of the parks is a measure of our humanity—a reflection of the state of our capacity to appreciate and understand this astounding planet we inhabit.

As the report to Congress makes clear, events inimical to our interests in the parks are gaining headway. They are moving fast. It is up to us to get them under control—before *they* control us. It is up to us to make certain that this country will possess, in the years to come, a state of the parks commensurate with nature's intent and the needs of the human spirit.

—Gilbert F. Stucker

MOST AMERICANS probably think that our country's cherished national parks are protected forever as strongholds of pristine wildness and as memorials to our nation's cultural and historical heritage. That's the way it's supposed to be, but NPCA members know that it doesn't always work out that way.

This month's special issue on *The State of the Parks* recounts just some of the many problems—increasing exploitation on nearby lands, decreasing budget—that affect our national parks. For example, Doug Chadwick describes the many pressures on all sides of Glacier National Park that are isolating the park from its contiguous ecosystems. Ruth Armstrong tells how the search for energy could destroy important evidence about one of the most sophisticated prehistoric Pueblo Indian cultures in North America.

Citing the findings of the recent "State of the Parks" study, new Park Service Director Russell E. Dickenson discusses some of the ways the Park Service may try to solve these problems. T. Destry Jarvis, of NPCA's staff, points out the fact that NPCA's "Adjacent Lands Survey" two years ago identified many of these same problems and, in fact, led to the present NPS study.

One thing is clear. NPCA will be playing an increasingly important role in fighting to prevent the sacrifice of national parks to energy development and other economic pressures.

You can begin helping right now by sending for *Citizen's Action Guide to the National Park System* (please enclose \$1.50) so you can find out how to get involved in the park planning process; by signing up for our CONTACT program to receive special alerts about action you can take; and by urging more of your friends to join NPCA in our fight on behalf of the national parks.—EHC

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COVER Garden Wall Peaks, Logan Pass view, by David Muench
In a stunning floral display, Indian paintbrush, daisies, and sunflowers spangle an alpine meadow in Glacier National Park, one of the most remote, rugged, and spectacular gems in the National Park System—but tragically one of the most endangered. (See page 12.)

National Parks & Conservation Association—established in 1919 by Robert Sterling Yard with the support of 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 other conservation and preservation programs concerning natural and historic resources. 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, please allow six weeks' advance notice and send the address label from your latest issue along with new address. Advertising rates are available on request from headquarters. *National Parks & Conservation Magazine* is published monthly. Contributed manuscripts and photographs are welcome. They should be addressed to the Editor at Association headquarters and should be accompanied by a stamped, self-addressed envelope. No responsibility can be assumed for unsolicited material. Articles are published for educational purposes and do not necessarily reflect the views of this Association. Title registered U.S. Patent Office, Copyright © 1980 by National Parks & Conservation Association. Printed in the United States. Second-class postage paid at Washington, D.C., and at other offices.

For more information on listed events, contact the individual parks or the Office of Public Affairs, National Park Service, Washington, D.C. 20240 (202-343-7394). Send info on upcoming events to "Parks Calendar," NPSA Editorial Department, 1701-18th Street, N.W., Washington, D.C. 20009, by mid-month the second month preceding event.

Boston National Historical Park, Mass., Sep. 16; 10 am to 6 pm: Open House at the Paul Revere House to celebrate the 300th (at least) birthday of the house; refreshments and entertainment in the courtyard. Check the NPS Visitor's Center, 15 State Street, for a daily listing of events.

C&O Canal National Historical Park, Potomac, Md., until Sep. 7, Wed.-Sun.; Sep. 12-Oct. 26, Fri.-Sun.: Barge trips with Park Service personnel performing tasks typical of those done on the canal 100 years ago. Trips start at Great Falls—9:30 am for educational/civic groups; 11 am, 1:30 pm, and 3:30 pm for general public; and 7 pm charter trip by reservation only. Senior citizens \$1.25, adults \$2.50, children \$1.25. Night charter \$400. For further information and reservations, write C&O Canal NHP, 11710 MacArthur Blvd., Potomac MD 20854, or call (301) 299-2026.

Cabrillo National Monument, Calif., Sep. 20-28: Cabrillo Festival, with enthusiastic participation by Portuguese community.

Cape Hatteras National Seashore, Manteo, N.C., Aug. 18: Virginia Dare's Birthday; "Gossip Feast," Elizabethan singing and dancing; bring picnic; at Fort Raleigh near Manteo.

Cape Lookout National Seashore, Beaufort, N.C., Aug. 2, 1-5 pm: Outer Banks Folk Music Festival.

Carl Sandburg Home National Historic Site, Flat Rock, N.C. Plays given throughout the summer: Jun. 23-Aug. 31, "The World of Carl Sandburg"; Jul. 6-Aug. 24, "An Afternoon with Mr. Lincoln"; and Jul. 7-Aug. 14, "Rootabaga Stories."

Castillo de San Marcos National Monument & Fort Matanzas National Monument, St. Augustine, Fla., Aug. 2, 16: Stargazing interpretation program. Members of St. Augustine's Ancient City Astronomy Club set up telescopes on the southern green and explain various aspects of astronomy and constellations.

Chickamauga and Chattanooga National Military Park, Fort Oglethorpe, Ga., Aug. 2, 30: Outdoor pops concerts by the Chattanooga Symphony. Starts at dusk; bring a picnic.

Coulee Dam National Recreation Area, Wash., Aug. 3-4: Coulee Sun Art and Craft Fair, "Back to the Earth"; displays and demonstrations of original Northwest art and crafts, with special exhibits and programs on energy and environmental issues. Free shuttle-bus service from Coulee Dam and Grand Coulee to the fairground at Spring Canyon Campground.

Cumberland Gap National Historical Park, Middlesboro, Ky., Aug. 3: Quilt festival; hand-crafted quilts will be exhibited at the park visitor center.

Curecanti National Recreation Area, Gunnison, Colo., daily until Sep. 1, weekends of Sep. 6-7, 13-14, 20-21: Round-trip boat tours of Morrow Point Lake. Starting point is the Pine Creek boat dock. Reservations up to 3 days in advance. Stand-by seating on first-come, first-served basis. For reservations and further information stop at Elk Creek Visitor Center or call (303) 641-0403.

Delaware Water Gap National Recreation Area, Bushkill, Pa.: August: Concerts held Saturdays at 7:30 pm at amphitheatre at Delaware Water Gap Recreational Site, located 10 miles north of Delaware Water Gap. Four- to six-hour canoe trips each day along the Delaware River (advance reservations 201-496-4458). Tours daily of Millbrook Village, a late 19th century cross-roads village. Demonstrations include spinning and weaving, cooking on wood-burning stoves, and blacksmithing. Guided nature walks are given on weekends. The Arrow Island walk is a 3-mile circuit that begins at 2 pm and lasts about 2 hours. The Dingmans Falls walk is a ½-mile circuit that lasts about 30 minutes and begins each hour on the hour from 10 am to 4 pm.

Everglades National Park, Homestead, Fla., summer season: Reserved tram trips for groups of 30 or more people; tram takes passengers on a 15-mile-long loop road into Shark Valley in the Everglades. Phone reservations only at least one day in advance between 8:30 am and 4 pm weekdays: (305) 221-8455. Adults \$2, children under 16 and U.S. residents 62 and older \$1, nonresident senior citizens \$2.

Fort Larned National Historic Site, Kans., Aug. 31: National Park Service Day; exhibits, films, and other interpretive programs commemorating establishment of the National Park Service and Fort Larned.

Fort McHenry National Monument and Historic Shrine, Baltimore, Md., Sep. 7; 7:00 pm: Defenders Day Celebration; 166th annual celebration of battle of Baltimore; marines, mock bombardment of fort and fireworks display.

Fort Pulaski National Monument, Tybee Island, Ga.: Self-guiding tours of mid-19th-century masonry fort and island trails; daily afternoon demonstrations of life in a Civil War-era fort include musket and cannon firing and garrison cooking; visitors welcome in various rooms in the fort; rooms and times vary.

Golden Gate National Recreation Area, San Francisco, Calif., Aug. 8-10; 10 am-6 pm each day: Pacific States Crafts Fair; the West Coast's largest crafts fair at which leading craftsmen sell quality works. Piers 2 and 3, Fort Mason. Call (415) 556-0560. Admission \$2.00. Aug. 30-Sep. 1; 11 am-6 pm: Festival of the Sea; music, dance, entertainment, and exhibits at the historic ships. Hyde Street Pier of the National Maritime Museum. Sep. 13-28; noon-9 pm, Saturdays to 10 pm: The 1980 Exhibition of the People's Republic of China; the first trade and cultural fair of mainland China in the U.S. Piers 2 and 3, Fort Mason. Call (415) 391-0650. Adult admission \$4; \$5 weekends.

Grand Portage National Monument, Grand Marais, Minn., Aug. 9-10: Rendezvous Days; celebration reminiscent of voyageurs' rendezvous during fur-trading days.

Herbert Hoover National Historic Site, West Branch, Iowa, Aug. 10: 106th anniversary of Hoover's birth; special program with guest speaker, graveside ceremonies.

Independence National Historical Park, Philadelphia, Pa., until Sep. 15: 250th Anniversary Jubilee of Josiah Wedgwood; international exhibition of Wedgwood China at the First Bank of the United States on Third Street between Chestnut and Walnut Streets.

Jefferson National Expansion Memorial National Historic Site, St. Louis, Mo., Aug. 22, 23, 24: Frontier Folklife Festival, featuring folk music, early American arts and crafts.

John Day Fossil Beds National Monument, John Day, Ore., Saturdays and Sundays during August; 12:30-3:00 pm: "Living History" program; a chat with 'Loye Miller,' a fossil hunter accompanying the University of California Expedition to the John Day Fossil Beds of Eastern Oregon in 1899. Groups who wish to participate at other times may contact the monument headquarters at (503) 575-0721 or write 420 West Main Street, John Day, OR 97845. The Cant Ranch Visitor Information Station is open 7 days a week from 8:00 am-5:00 pm.

Knife River Indian Villages National Historic Site, Stanton, N.D.: Individual and group tours anytime of Hidatsa-Mandan villages. Stop at NPS offices about 3 mi. north of Stanton, N.D., 8 am to 4:30 pm.

Minute Man National Historical Park, Concord, Mass., Fridays, Saturdays, and Sundays, 1:30 and 3:00 pm until August 17: An historical dramatization of *Cannon Fields* presented by Emerson College at North Bridge Visitor Center off Liberty Street, Concord. For more information call (617) 369-6993.

Natchez Trace Parkway, Tenn./Ala./Miss., Sep. 26-Oct. 26: Sorghum-making demonstrations, French Camp (milepost 180.7) Sat. 9:00 am-5:00 pm, Sun. 1:00 pm-5:00 pm; Tupelo Visitor Center (milepost 266) Fri. 8:00 am-4:00 pm, Sat. 9:00 am-5:00 pm, Sun. 1:00 pm-5:00 pm.

Redwood National Park, Orick, Calif., until Sep. 28: Daily shuttle bus tours to within 1½ miles of world's tallest trees.

Ranger/interpreter accompanies bus; another ranger gives tours of the grove and streamside. Wear good walking shoes, bring a picnic, allow 3-4 hours. Purchase tickets at Information Station in Orick: Adults \$1, senior citizens 50¢, children 25¢.

Richmond National Battlefield Park, Va.: "Civil War Soldiers" go about their daily routine at Fort Harrison, daily until Sep. 1; Sundays only Sep. 7-28; at Cold Harbor and Drewry's Bluff on Sunday afternoons through Aug. 31. Contact main visitor center at 3215 East Broad St., Richmond, for directions and information.

Roger Williams National Memorial, Providence, R.I., through Aug. 20: Two free alternating theater performances, Wednesdays, 7:00 pm: "One Cloth, Many Threads," about women in the textile mills in Rhode Island; "E. M. Bannister," about the difficulties of an award-winning black landscape artist during post-Civil War era.

Shenandoah National Park, Luray, Va., Aug. 9-10: Annual Hoover Days; visit Camp Hoover, President Herbert Hoover's retreat. Hike with your own party or on conducted hikes (4-mile round trip) leaving Byrd Visitor Center (milepost 51 on Skyline Drive); all day long, beginning at 8 am.

Turkey Run Park, McLean, Va., Aug. 14, Sep. 11, 6 pm: "An Evening in 18th Century Rural Virginia" presents the cultural aspects of colonial life through music, dancing, and other leisure activities. An authentically costumed volunteer "18th century" chamber orchestra plays popular music of the era on reproduction instruments.

Vicksburg National Military Park, Miss.: Costumed demonstrations of Civil War defense of Vicksburg, with artillery firing at 10 am and 2:30 pm on Fridays, Saturdays, and Sundays.

Virgin Islands National Park, St. Thomas, V.I., Tuesdays and Fridays, 10 am-1:30 pm: Local residents portray lifestyles common in earlier 20th century such as weaving, char-

coal making, gardening, and cookhouse operations. *Wednesdays, 9 am to noon:* Demonstration at Cinnamon Bay Campground allows participants to assist in heating an historic brick oven and baking cakes, yeast breads, or Johnny cakes. *Wednesdays, 1:30-4:30:* Demonstrations on native basket weaving at Hawksnest Bay.

Whitman Mission National Historic Site, Walla Walla, Wash., *Saturdays and Sundays until Labor Day weekend:* Slides, movies, and demonstrations help explain the story of the Shahaptian Indian culture and the Whitman Mission on the Oregon Trail.

Wilson's Creek National Battlefield, Republic, Mo., *Aug. 9-10:* Second Annual Living History Encampment; participants in Civil War garb will camp at Battlefield and reenact life of Civil War soldier. Union and Confederate units participate by special invitation. All visitors welcome! For invitations and further information, write to Superintendent, Att: Living History Encampment, Wilson's Creek National Battlefield, 521 North Highway 60, Republic, MO 65738.

Wolf Trap Farm Park, Vienna, Va.: Programs in the performing arts given in the *evenings until Sep., Aug. 30, 31, Sep. 1; 11 am-5 pm daily:* 10th anniversary of International Children's Day; 1200 performers, mime, dancers, jugglers, magicians, musicians, puppeteers. \$3 admission at gate, \$2 advance tickets. Call (703) 941-6066. For beautiful free color poster with schedule of performances, write to Wolf Trap, 1624 Trap Road, Vienna, VA 22180, or call (703) 938-3810.

Yellowstone National Park, Wyo.: The Yellowstone Institute invites you to join its program of week-long in-depth seminars in such topics as geothermal energy, fire ecology, wilderness horsepacking, and rocks and landscapes. One course on ranching history will be held at Grant-Kohrs ranch. Contact the Yellowstone Institute, Box 515, Yellowstone NP, WY 82190, (307) 733-6856. And write to Box 168, Yellowstone NP, WY 82190, for special activities folder describing things to do with the National Park Service in Yellowstone.

Yosemite National Park, Calif.: "Energy Fair"; *Aug. 4-10,* special programs, films, and displays focusing on energy conservation, with emphasis on solar energy. Yosemite Valley, *9 am-5 pm*/"Sixth Annual Folk Music and Dance Workshop," *Aug. 9, 10.* Interpretive presentations of traditional music that helped shape American cultural values. *Sat. 1-5 pm.* Old Fashioned Barn Dance, *7:30-10 pm.* *Sun. 12-3 pm.* Pioneer Yosemite History Center, Wawona/"Exhibits of Yosemite Artists," *Aug. 1-Sep. 28,* nature photographer Charles Cramer. Yosemite Valley Visitor Center/"Field Seminar Program," *thru August:* 3-day and 5-day college-level field classes (U.C. Davis extension credit optional) on variety of specialized park-related subjects. Catalog available from Yosemite Natural History Association, Box 545, Yosemite CA 95389.

Zion National Park, Springdale, Utah, *until Nov. 15:* Interpretive programs including hikes, guided walks, and seminars offered daily. *Jun. 9-Aug. 8:* Zion Nature School, *9 am-noon,* ages 6-12. *Sep. 5 and 6:* Folklife Festival with demonstrations on pioneer food preparation, crafts, story telling, quilts, and other aspects of pioneer life.



GUN CREW, WILSON'S CREEK, NATIONAL PARK SERVICE PHOTO

park previews:

civil war days

SUDDENLY THE STILLNESS of a hot summer morning is shattered by the crash of musketry. A command rings out: "Cannoneers to your post!" and young men dressed in butternut and gray spring out of their trenches to a cannon poised for battle.

The order to load is given. "Fire!" The lanyard is pulled, and gun and crew are engulfed in smoke. As it clears, the enemy can be seen reeling back to their lines. Vicksburg, Gibraltar of the Confederacy, holds firm.

Time, however, is against the gallant defenders as, cut off from all communication with the outside world, they withstand the siege. Slowly their food and water supplies dwindle, and disease spreads through their ranks. At last, after 47 days, with their ammunition nearly exhausted, they must yield, and the Union forces gain control of the mighty Mississippi River.

All summer until late August, we will recreate the siege of Vicksburg, from 9 am to 4 pm, with artillery firing at 10 am and 2:30 pm on Fridays, Saturdays, and Sundays. Leave the modern world behind—for at Vicksburg, Mississippi, it is still the summer of 1863.—*Terrence J. Winschel, Park Technician, Vicksburg National Military Park*

IN THE FAINT LIGHT of dawn, a drummer boy sounds the "long roll" and the Union soldiers straggle from their tents. Just out of sight across the stream, a Confederate camp is also coming to life in the early heat of the August day. Tomorrow they will meet in the first battle of the Civil War to be fought west of the Mississippi.

But it is 1980 not 1861, and these "soldiers" are observing the 119th anniversary of the battle of Wilson's Creek. Dressed in reproductions of Civil War uniforms and clothing, equipped with authentic weapons and gear, they execute nineteenth century infantry and artillery maneuvers and talk frankly about the hardships of a soldier's life as they carry out the day's routines. After supper on Saturday night, the troops will relax around their campfires, sing for a while, and perhaps do a little trading for tobacco and "vittles" with the camp across the creek.

Step into the past by visiting Wilson's Creek National Battlefield on August 9 and 10, to watch the maneuvers, visit the camps, and talk to the troops. The battlefield is 12 miles south of Springfield, Missouri, on State Highway ZZ.—*Richard W. Hatcher III, Wilson's Creek National Battlefield*



NATIONAL PARK SERVICE

park previews:

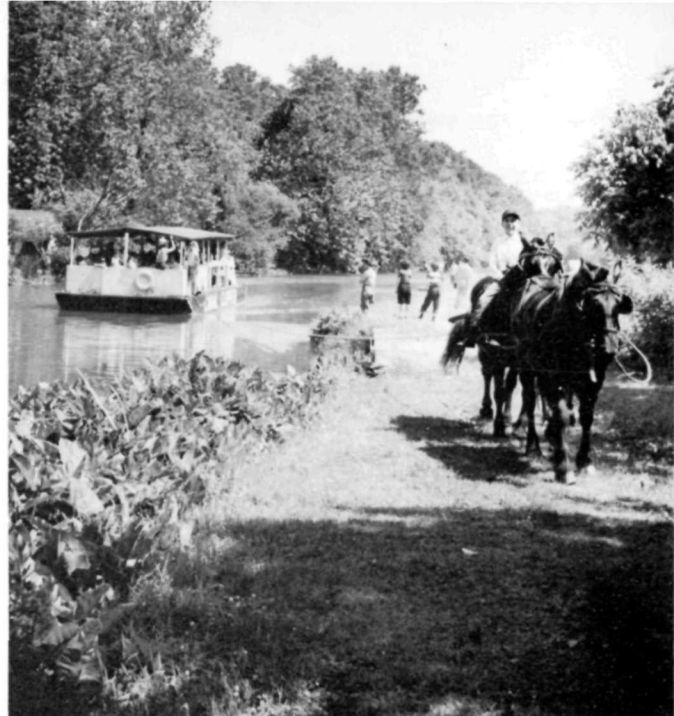
rendezvous days

EACH YEAR during the second weekend in August the Grand Portage Rendezvous Days celebrate the historic rendezvous of the fur trade, when once a year trappers, voyageurs, traders, and guides joined Ojibwe people from the surrounding area in bartering, feasting, and revelry.

Today the Grand Portage Rendezvous brings people together from all over the Midwest for a weekend of contests, games, and pow-wow on Minnesota's north shore of Lake Superior. Replicas of the 35-foot freight canoes evoke images from the past as costumed enthusiasts recreate the boisterous voyageurs in canoe races and other tests of strength and endurance. The Rendezvous also blends the cultures of Native Americans and new Americans with a three-day pow-wow.

The pow-wow begins with a grand entry and flag song in which all dancers—contestants and noncontestants, young and old—participate. Throughout the pow-wow visitors can enjoy seeing a wide variety of costumes and dancing styles. Several groups take turns singing and drumming for each dance. As the drums sound the heartbeat of the Indian people, the pow-wow becomes a time of reunion and renewal for the participants.

The combination of historic recreations and Indian traditions makes the Rendezvous a colorful, festive event. The 1980 Rendezvous Days—sponsored by the Grand Portage Band of the Minnesota Chippewa Tribe and the National Park Service—will be held August 15, 16, and 17. Grand Portage National Monument is located 150 miles northeast of Duluth, Minnesota, and can be reached via U.S. Highway 61.—*Nancy D. Korf and Margaret L. Plummer, Ranger-Interpreters, Grand Portage National Monument*



BY ABRIE ROWE, NATIONAL PARK SERVICE

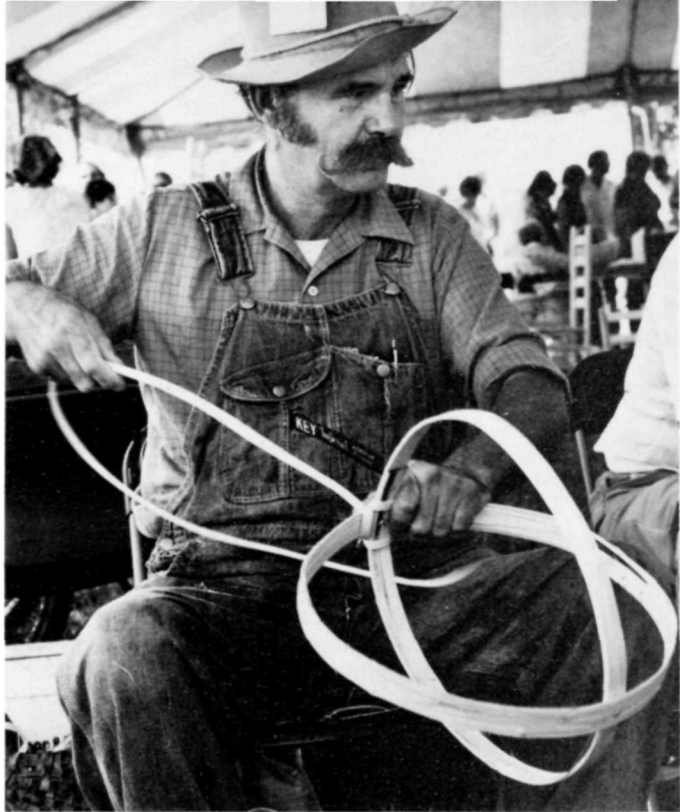
barging the c&o

A SURE BET for an unusual fun-filled family outing is the National Park Service's barge ride up the C&O Canal near Washington, D.C.

Step back into history as two mules pull the "Canal Clipper" up the placid canal waters from Great Falls Park, Maryland, to the vicinity of Swain's Lock. The entire trip takes about 90 minutes. Park Service interpreters, on board in period costume, carry you back to the 1800s through story-telling, songs, and occasional vignettes of canal life.

The Chesapeake and Ohio Canal was first begun as a waterway along the established Potomac River and trans-Allegheny trade route to the Ohio River. Today the canal and towpath are among the most heavily used parks in the country, with the barge trip one of its most popular attractions. In summer the barge operates Wednesday through Sunday at 11 am, 1:30 pm, and 3:30 pm. through September 7. Charter trips for school and civic groups can be arranged for 9:30 am on these days, and an evening charter for private groups is available at 7 pm.

Tickets go on sale two hours before each trip at \$2.50 for adults and \$1.25 for children and senior citizens. Great Falls is easy to reach from downtown Washington, D.C., and other points in the greater-Washington area. Drive west from northwest Washington to the end of MacArthur Boulevard; or take exit 15 from the Capital Beltway, U.S. 495. For additional information about the barge and to make reservations for one of the charter trips call the Park Service at (301) 299-2026.—*Larry Brown, Public Information Specialist, National Capital Region*



BASKET-MAKER DALE BLACK, BY DAVE ULLMER

frontier folklife

UNDER ST. LOUIS' TOWERING Gateway Arch, a jam session is in full swing. The music is a rich sampling of traditional American folk tunes—old-time fiddle and country melodies, blues, ballads, hymns, cowboy laments, and traditional folk dances—from the days when St. Louis was a bustling frontier crossroads on the way west. The music is performed by descendants of those early pioneers.

In one tent musicians are exchanging tunes and reminiscences in a country music workshop, while in another Missouri's finest fiddlers, square dancers, gospel and ballad singers are belting out music that has delighted folks for generations at community socials, barn raisings, and revival meetings.

In neighboring tents artisans demonstrate old-time skills. Here Theron Myers displays the art of fish netting he learned from a Louisiana Indian on the Gasconade River; over there Bob Patrick, of Bethel, a blacksmith since he was eighteen, bends over his anvil; and yonder members of the Grannemann family are pressing cider just the way their forefathers did.

This year's Frontier Folklife Festival will be held on the grounds of Gateway Arch, Jefferson National Expansion Memorial, St. Louis, Missouri, on August 22, 23, and 24. For information write Frontier Folklife Festival, Jefferson National Expansion Memorial, 11 N. 4th St., St. Louis, MO 63102, or call (314) 425-4465.—*Jane Crosby-Bergey, Curator of Folklife, Jefferson National Expansion Memorial*



"ROOTABAGA STORIES," NATIONAL PARK SERVICE PHOTO

sandburg potpourri

O PRAIRIE MOTHER, I am one of your boys! So sang Carl Sandburg—poet, author, lecturer, minstrel, biographer of Abraham Lincoln, and, like him, a son of the prairie. But in fact this poet of the people spent the last 22 years of his life at "Connemara," his farm near Flat Rock in the mountains of western North Carolina, which is today a national historic site.

Here, under the trees that Sandburg loved, the players of the Vagabond Workshop Theatre of the Flat Rock Playhouse will recreate this summer, as they have for five seasons past, the spirit and the words of Carl Sandburg, singer of songs and teller of tales.

A potpourri of Sandburg's poetry, humor, folk music, and philosophy, "The World of Carl Sandburg," will be presented at 2:30 each afternoon except Wednesdays and Sundays, through August 31.

Children of all ages can enjoy the fast-paced silliness of "The Rootabaga Stories"—a zany takeoff of Sandburg's fantasies for children—at 11 am on Mondays and Thursdays, through August 14.

And at 4 o'clock on Sunday afternoons through August 24, the players will recreate "An Afternoon with Mr. Lincoln," drawn from Sandburg's Pulitzer-prize-winning biography, *Abraham Lincoln: The Prairie Years*.

To reach the park, take the US 64 West exit from I-26 to Hendersonville, N.C., turn south on U.S. 25, and continue about 4 miles to Flat Rock. Parking is available at the Flat Rock Playhouse at the junction of U.S. 25 and Little River Road, from which a short trail leads to the main house and outdoor amphitheatre at "Connemara."—*Benjamin Davis, Superintendent, Carl Sandburg Home National Historic Site*

the national parks today and tomorrow

by russell e. dickenson, director, national park service

WHEN VOLTAIRE wrote *Candide* in 1759, he was engaging in a piece of witty social criticism on the state of European society at that time. The four horsemen—war, famine, conquest, and death—were riding roughshod over the continent; yet through it all and to the moment of his death by hanging, Dr. Pangloss maintained that “this is the best of all possible worlds.”

It may have been; but *Candide* and his female companion, Cunegonde, re-treated at the book's end into the garden in hopes of living the idyllic, bucolic life removed from the cruel realities around them. Had Voltaire written a sequel, it may well have shown that the world followed them in.

This literary aside is not without meaning for the National Park System. Early parks were nature's garden spots, perfect in their beauty and wonder, and worthy of protection against the unwelcome horsemen of late nineteenth century America. The Yellowstone Act in 1872 and the National Park Service Act of 1916 writ large the purpose of the parks, but they left the garden gate purposely ajar so that the public might enjoy these public parks or “pleasuring grounds” as long as it did not in the process destroy the garden.

Well, the sequel is still being written. True, the dangers of logging and dam building are not as pressing as they once were. But who knows what the future might hold. Every age will pose its own threats.

Certainly, we seemed to have turned the corner in the past two decades in our understanding that all support service and facilities used by those who visit the parks need not be located in the parks. There is general acceptance, also, of the idea of limiting use should that be necessary to protect the park resources. For the immediate future—for many parks—the energy problem has made the need for such action seem less certain.



Russell E. Dickenson

But the parks, like *Candide's* garden, are in the world; the same winds that blow from Chicago, Illinois, to Gary, Indiana, blow across the Indiana Dunes National Lakeshore. The sulfurous and nitric fumes in the air from industrial America fall on the Great Smoky Mountains and other parks as acid rain affecting the quality and quantity of life in park waters. The search for energy sources and development of electric-generating plants are affecting ecological processes, air quality, and scenery around many parks—and the search extends inside a number of parks where Congress allowed it as a condition of authorization.

The “State of the Parks” report, featured and discussed in this issue of *National Parks & Conservation Magazine*, makes it clear that there is much we must do to deal with problems originating both within and without the units of the System. Some of these threats are

amenable to corrective action by park personnel without recourse to additional staff or funding. Some may be dealt with through policy changes or a firm position by management. Others, like control of exotic animals, raise sensitive issues that may occasionally require resolution in courts. However, if we fail to deal with these issues, we have no one to blame but ourselves.

But problems that require a new commitment are in many cases more difficult to deal with. First of all, the Service needs adequate trained personnel to document the nature of the threats, their source and impacts, and to provide a professional assessment of how they may be eliminated or mitigated. We need to develop practical monitoring techniques for key areas so that we can measure and document changes in the environment over time.

We must also strengthen our legal arm so that we know what recourse we have in the courts. Is there a class of threats whose adverse consequences can be dealt with through legislation? Are some threats more perceived than real? Answers to these and other questions come back eventually to well-documented facts and a good early-warning system.

We have taken the first step—surveying the universe of threats. Knowing the symptoms, we must now work toward the cure. Unlike Dr. Pangloss, we know this is not the best of all possible worlds. Unlike *Candide*, we know we can't keep the world out of the garden—entirely. It is possible though, I think, to enlist the tremendous prestige that parks have with the American people to fight off the malignant threats and to protect the basic integrity of the Park System. This is our commitment. And I think it's just possible to export some of the values of the garden to the outside world to make the words of Dr. Pangloss take on a more creditable ring. ■

NPS study confirms NPCA findings

DESPITE the fact that hundreds of millions of visitors each year still enjoy many experiences that are to be derived from the units of the National Park System and would undoubtedly agree with us that the U.S. National Park System is the greatest system of preserved natural and cultural areas in the world, the "State of the Parks" is not good.

The National Park Service recently concluded a first-ever systemwide study, in the form of a survey that identifies and characterizes the threats that endanger the natural and cultural resources of the parks. This official NPS survey is directly related to and reveals threats virtually identical to an earlier survey conducted by NPCA in late 1978 and published in this magazine in March 1979. At that time, when NPCA realized the extent and serious nature of the diversity of threats to the parks, we called attention to the problem both at the Department of the Interior and at the U.S. Congress. As a result of a direct request from the House Parks Subcommittee, the National Park Service initiated a survey to analyze the specific threats that endanger the resources of individual parks, the source of those threats located inside or outside park boundaries, and the park resources endangered by the threats.

Just a few examples will illustrate the extent and nature of the problem. At Big Bend and Organ Pipe, cactus collectors are poaching such large quantities of plants that the natural scene is being changed. At Glacier Bay, increased commercial boat operations have affected the habitat of the endangered hump-

back whale. At Cape Lookout, off-road vehicles have a major impact on the area's resources. At Glacier, cattle trespass, a major new highway under construction on the western border, a four-lane expressway leading up to the park's main entrance, an open-pit coal mine near the northwest corner, an aluminum plant six miles from the park, and adjacent logging operations are affecting the natural scene. At Great Smoky Mountains, exotic European boars continue to destroy that park's vegetation and wildlife. At Lassen, the largest hot-water lake in the world is threatened by adjacent geothermal test well drilling. At North Cascades, planned dam construction on Copper Creek will affect many park resources. At Harpers Ferry, the expanding urban scene is conflicting with the 1865 setting for which the park was established. At Olympic, lumber pulp and paper mills are impinging upon the park's Class I airshed, and the proposed Northern Tier pipeline will result in further degradation of air quality. At Chaco Canyon, oil, gas, and uranium developments are all threatening the significant cultural resources. At Bandelier, Yellowstone, and Grand Teton, scheduled geothermal development nearby could adversely affect these parks' resources. At Indiana Dunes, adjacent industrial plants and nuclear plant construction threatens the natural and cultural resources. At Acadia, a proposed power plant at Sears Point will degrade the park's Class I air standards.

These are but a few of the threats facing the National Park System,

for which at present there is no clear solution. Although it is possible that each threat can be mitigated with time and appropriate funding, in many cases the National Park Service lacks adequate authority, and the general public is unaware that their treasured parklands are so severely threatened.

NPCA intends to ensure that as development occurs, impacts are minimized, mitigated, or eliminated where park resources are involved. We do not intend to sit back and allow the very resources that this Association has worked for more than sixty years to save to be destroyed.

The "State of the Parks Report" itself provided a good summary of its scope, methodology, and findings:

The term "threats" as used in this report refers to those pollutants, visitor activities, exotic species, industrial development projects, etc., which have the potential to cause significant damage to park resources or to seriously degrade important park values or park experiences. Without qualification, it can be stated that the cultural and the natural resources of the parks are endangered both from without and from within by a broad range of such threats. In this regard, the most significant findings developed in this study may be summarized as follows:

- Park units representing all size and use categories, and all types of ecosystems, reported a wide range of threats affecting their resources. These threats, which emanate from both internal and external sources, are causing severe degradation of park resources.
- The 63 National Park natural areas greater than 30,000 acres in

size reported an average number of threats nearly double that of the Service-wide norm. Included in this category are units such as Yellowstone, Yosemite, Great Smoky Mountains, Everglades, and Glacier. Most of these great parks were at one time pristine areas surrounded and protected by vast wilderness regions. Today, with their surrounding buffer zones gradually disappearing, many of these parks are experiencing significant and widespread adverse effects associated with external encroachment.

- The 12 Biosphere Reserve Parks which are unique natural areas that range in size from 15,000 to more than two million acres and which are dedicated to long-term ecosystem monitoring under the UNESCO Man And the Biosphere program, surprisingly have reported threats numbering, on the average, nearly three times the Service-wide norm. This is particularly disturbing because these carefully selected parks are considered to be model ecological control areas. The high number of threats associated with these parks may reflect the greater emphasis directed to monitoring in these areas. If this is, in fact, the reason for the increased occurrence of reported threats in the Biosphere Reserve parks, it suggests that, perhaps, significant numbers of threats may have been overlooked in other parks which, to date, have received only limited monitoring and research attention.

- More than 50 percent of the reported threats were attributed to sources or activities located *external* to the parks. The most frequently identified external threats included: Industrial and commercial development projects on adjacent lands; air pollutant emissions, often associated with facilities located considerable distances from the affected parks; urban encroachment; and roads and railroads.

- Threats associated with activities or with sources located *within* park boundaries continue to cause

significant degradation of park resources, park values, and visitor park experiences. The most frequently reported internal threats are associated with: Heavy visitor use; park utility access corridors; vehicle noise; soil erosion; and exotic plant and animal species.

- *Scenic resources* were reported to be significantly threatened in more than 60 percent of the parks. *Air quality resources* were reported endangered in more than 45 percent of the parks. *Mammal, plant, and fresh water resources* all were reported threatened in more than 40 percent of the units. . . .

- A surprising 75 percent of the reported threats to park resources have been classified by onsite park observers as *inadequately documented* by either private or government research. Threats associated with *air pollution, water pollution, and visitor-related activities* most frequently were cited as needing additional monitoring, scientific measurements, or research documentation.

Conclusions

The units of the National Park Service represent all of the major categories of ecosystems within which we live. These parks, individually and collectively, constitute the best of our natural and cultural resources. The lessons that we learn and the progress that we make in our attempts to better manage and protect these resources are of benefit to us all.

The results of this study indicate clearly that no parks of the System are immune to external and internal threats, and that these threats are causing significant and demonstrable damage. There is no question but that these threats will continue to degrade and destroy irreplaceable park resources until such time as mitigation measures are implemented. In many cases, such degradation or loss of resources is irreversible. It represents a sacrifice by a public that is, for the most part, unaware that such a price is being paid.

UNFORTUNATELY—but perhaps not unexpectedly—the National Park Service's "State of the Parks Report" is the minimum response to the congressional request for this survey. NPCA had hoped that the NPS report would have addressed mitigation of these threats or other actions the Service would take or propose to be taken to ensure the integrity of the park resources for future generations. Even better, we had hoped that NPS would propose a major new thrust similar in scope to the infamous "Mission 66" of the National Park Service in the decade leading up to 1966, the 50th anniversary of the National Park Service.

A "Plan to Save the Parks" should have been developed to accompany the "State of the Parks" report. However, probably because of the time constraints in preparing the first report, the National Park Service has decided that proposals and decisions on what to do about the threats should await Congress' reac-

tion and acknowledgement of the threats themselves.

NPCA will be actively involved in urging the National Park Service to proceed immediately with such a mitigation or prevention plan, preferably a comprehensive one that views the threats systemwide. However, it will also have to be an individual action plan to address each specific threat at each park.

Currently, each park unit is supposed to have a resources management plan that among other things should outline the park's management intentions for preventing, alleviating, or mitigating threats. Unfortunately, most of the units of the System do not have a completed resources management plan, and those that do often lack trained personnel who specialize as natural or cultural resource managers to carry out the requirements of the plan. All too often in the past, National Park Service staffing priorities have gone to law enforcement and protection services for visitors at the ex-

pense of resources management, interpretation, and environmental education.

For some years now, NPCA has recognized the generally inadequate condition of the Park Service's scientific research program and has been striving to increase not only the level of funding from Congress for this program but the level of attention it receives within the Service itself.

Recent improvements have begun within the Service indicating that research and data collection identified as needed by the "State of the Parks" report will receive a higher level of attention than in the past, IF Congress provides the money.

As noted, 75 percent of those threats reported in the "State of the Parks Report" were inadequately documented; thus more data need to be collected and research conducted before a clear and definite plan for resolution of the problem will emerge. However, the report also notes that 25 percent of the threats

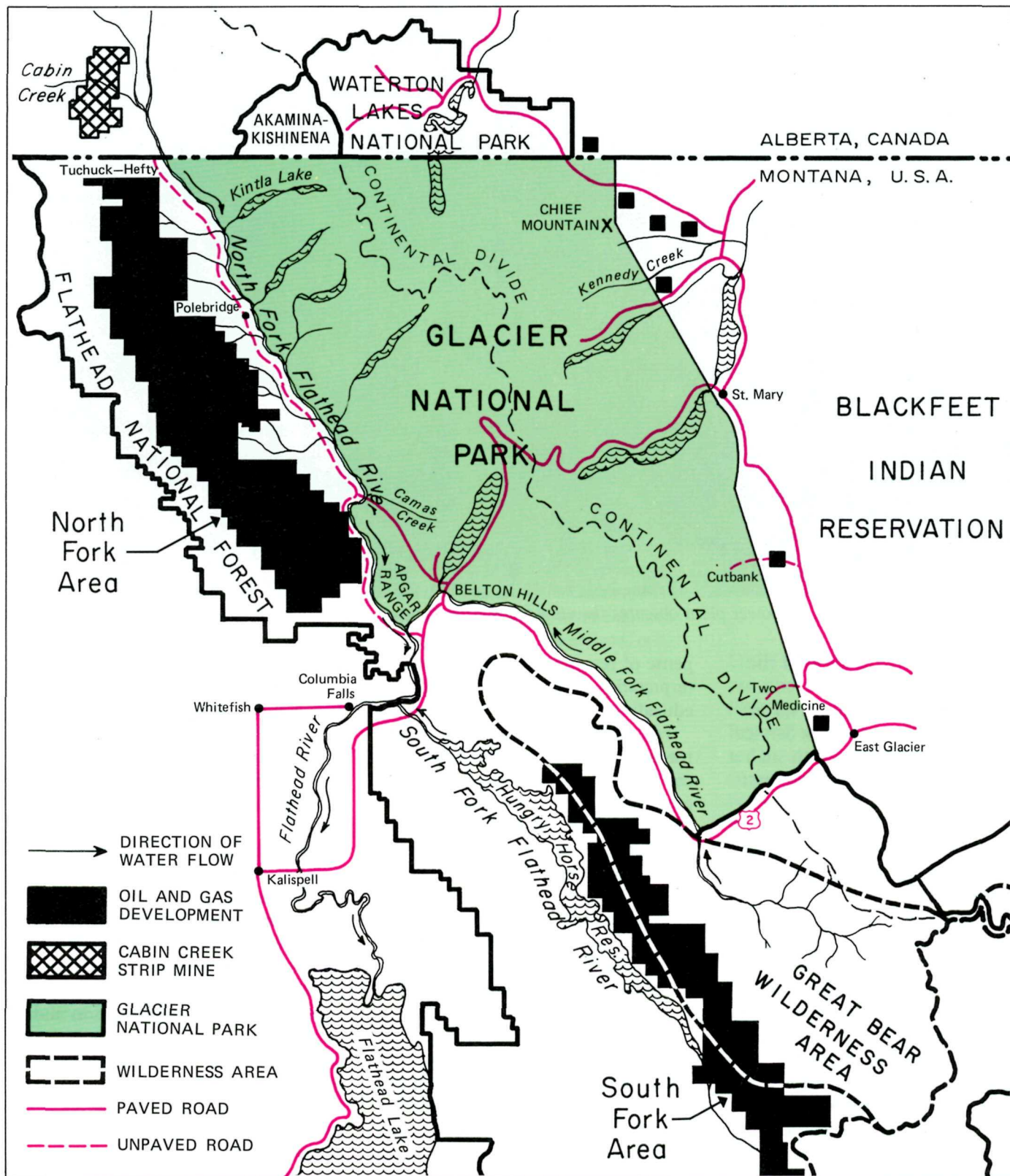
have adequate documentation. NPCA has recommended to the National Park Service that a plan be developed to comprehensively respond to threats in these 25 percent of cases, with actions to be undertaken or continued to resolve the problems.

Thus the Service must move quickly to expand and enhance its research and natural and cultural resources management program at the field level, and must immediately begin to devise a plan to resolve the threats for those units of the system where adequate documentation and an approved management plan exists.

NPCA will be working closely with park activists throughout the country and with the Park Service itself in continuing efforts to resolve these threats and to ensure that future generations will have a National Park System to enjoy, free from the threats to their resources that most of the units of the System now face.—T. Destry Jarvis, Director of Federal Activities, NPCA



Pollution from coal-fired power plant obscures the view from Bryce Canyon National Park of sacred Navajo Mountain.



GLACIER NATIONAL PARK: 1980

is glacier national park destined to become a “green island,”
surrounded by development and cut off from adjoining wild lands?

by douglas h. chadwick

cutting glacier to size

GLACIER NATIONAL PARK turned 70 this May. In birthday tribute, and because I am determined to begin this review of Glacier's current status on a positive note, let me say that I consider the place the very best work done by the last geologic epoch—the Ice Ages—and I hope it lives to see at least 7,000. I know my sentiments are shared by a host of other intelligent park-users—foremost among them, a couple of hundred grizzlies and well over a thousand mountain goats.

Glacier has already matured considerably. Forty-five years ago its managers allowed domestic livestock to graze their way across elk and big-horn sheep range while rangers were busy spreading poisoned bait for predators. Today, a hiker might come across most of the park headquarters staff, from chief ranger to secretary, away from their offices for the day and kneeling in a snow-striped alpine meadow to carefully collect flower seeds. Those seeds will then be germinated in greenhouses and afterwards transplanted to help restore a meadow eroded by past visitor use. It seems that with a certain age you begin to realize what your unique qualities are and how best to express them. Self-respect equals ecological awareness in Glacier Park, and signs of it are everywhere.

Nevertheless, the number of people annually traveling through Glacier has doubled since 1962 to about 1.6 million, and the park staff is trying to provide for their needs and those of the landscape with fewer permanent and seasonal employees than

it had then, eighteen years ago. And the park's operating budget is smaller, too. It now stands at 90 percent of what it was last year. Add the effects of inflation, and the situation is quite desperate. No sooner does Glacier's staff come up with some scheme to stretch their dollars into essential programs and services, than the budget is unexpectedly sliced anew at an upper level by passing on costs of activities they previously funded, and everyone has to start all over again.

Superintendent Phillip Iversen is now faced with the prospect of hiring even fewer seasonal naturalists to lead walks and present evening programs and, if further belt-tightening is required, of reducing hours of operation at interpretive centers. He has already had to close some campgrounds. This is not paring away flab. It is cutting at the heart of the process through which visitors experience and learn about their park.

There are some consolations. The same recessionary economic forces causing park funds to dry up are also dictating an end to the era when ever-greater numbers of people in ever-more obese versions of the automobile clogged Glacier's arteries. It's a wonder there were no heart attacks on the famous Going-to-the-Sun Road, the spectacular summer route over Logan Pass. This narrow, winding, sheersided affair was built in the early 1930s for cars a third the size of the camping trailers trying to squeeze past one another there lately. “We had 25 percent fewer recreational vehicles last year, though,” Iversen told me, “and with more people switching

to compact cars, we're getting back toward the kind of traffic that road was designed for.”

Travel to Glacier, even in compact cars, has leveled off over the past three years. And as visitation stabilizes, the quality of tourists' vacations seems to be increasing. People are staying longer, getting off the pavement and into the heart of the backcountry, where use was up several percentage points last year.

DURING MOST of its 70-year life, Glacier National Park has been not so much a land apart as simply the highest of a lot of high country, the crown of a vast stretch of relatively remote and primitive lands. Plant and animal communities belonged neither to the park nor to adjacent properties but to overlapping ecosystems. They still do, but human activities are making the distinction between park and nonpark sharper all the time.

“I'm beginning to think that in a few years you'll be able to fly over Glacier and see it just like it looks on the map,” park fisheries biologist Leo Marnell says, meaning: Yup, that's Glacier down there, all right. That green island, surrounded by development.

I put it off as long as I could, but here comes the inevitable list of disturbances, some of them closely related to one another, which are eating away at the park's historical buffer zones and threatening the integrity of its environment. They come from every direction, so I might as well start on the east, the direction from

which the same old sun rises over a continually changing landscape.

east

- **Fossil fuel development.** Glacier's lands lie next to those of the country's original inhabitants, the Blackfoot Indian Tribe. There is oil and gas here in what is known as the Overthrust Belt. Test holes have already been drilled within bowshot of the Cutbank Ranger Station and in the Two Medicine, Kennedy Creek, and Chief Mountain areas. Several new rigs are slated to begin exploratory drilling this year close to the park border town of East Glacier.

A young biologist working for a team that hopes to establish a plan for restoring the endangered timber wolf to some safe population level spent several months checking up on sightings along Glacier's eastern slopes. Rangers had identified a couple of proverbial lone wolves within park boundaries, and the critters occasionally prowled through nearby tribal lands as well. A wolf killed in a trap was hard evidence of that. Suddenly the biologist was told she had better keep off nonpark land; designation of certain habitats as critical to the wolf's continued existence could interfere with the "rights" of people to do what they damned well please with their property—like sell more oil and gas leases. Well, we always hoped the natives would adopt the white man's ways.

- **Unlimited hunting and trapping** on tribal lands next to the park. The Blackfoot Tribal Council is now pushing to set seasons on some game species and prohibit hunting by snowmobile. If carried out these measures could go a long way toward reestablishing the former abundance of wildlife on and around the eastern limits of Glacier.

- **Livestock trespass.** Just as wild creatures emigrate from the park eastward, livestock from nearby

ranches often wander in the other direction to tour through part of Glacier. Competition for food with native ungulates, transmission of diseases, and introduction of exotic species of plants (when, for example, a cow feeds in a timothy hay meadow in the morning and in the afternoon deposits a few undigested hay seeds in fertile manure piles over several park acres) are potential problems. How serious these problems are is hard to say. (I do know I could have done without the huge brown critter—which turned out to be a cow—crashing out of the brush next to me in grizzly country ten miles within the park.)

- **Logging.** The Tribe intends to begin logging lodgepole pine up to the park border near Boulder Creek and Chief Mountain. Other borderline clearcuts already exist in the St. Mary area.

south

- **Fluoride pollution** from the Anaconda Aluminum plant, the single largest employer in the town of Columbia Falls. Prevailing winds carry contaminated air to West Glacier and the Apgar and Belton ranges. This is an old problem and continues unsolved, but a law suit by Glacier Park and the U.S. Forest Service has recently stimulated Anaconda to install emission control equipment with which the company may finally be able to meet Montana air quality standards.

- **Expansion of U.S. Highway 2** along Glacier's southern edge. A section of road in the park is to be widened and straightened. A section just southwest of the park, according to Federal Highway Department plans, is to be eventually increased from two lanes to four. From the standpoint of the high-speed driver, such

changes would provide greater safety and convenience; but they would present a more significant barrier to wildlife ingress and egress in both cases. Continuity between animal populations in this end of the park and those in the newly established Great Bear Wilderness to the south (the brightest spot in Glacier's border picture) is important to wide-ranging species remaining in Montana's Rocky Mountain wildland corridor.

- **Establishment of a power line** route paralleling the highway and the Middle Fork of the Flathead River. Should towers and maintenance roads be constructed within this recently reserved right-of-way, they will create a further barrier to animal migration and an eyesore for human travelers.

- **A railroad line** makes up still another part of the transportation

route here. Poor maintenance, especially of track conditions, is considered the main cause of several recent derailments, one of which toppled 26 boxcars into the Middle Fork of the Flathead River. It seems a picky sort of border problem to bring up, until one considers that other kinds of railroad cars regularly carry industrial chemicals and other toxic cargo.

- **Poaching of park wildlife** from Highway 2 is a persistent, though (as far as park authorities can tell) low-level problem. Some of its practitioners are nothing more than passing knotheads who will blast one of the mountain goats that cross the highway to reach a salt lick because—well, lookie there; durned thing's just sittin' right by us. Others seem to be part of sophisticated meat- and trophy-procuring bands. Professional poachers have

been known to operate in less accessible parts of the park as well, silent crossbows being a favorite weapon. You've got to say this for their clients: at least they consider animals to be worth a lot of money. A full-curl bighorn sheep head goes for up to \$3,000 and a grizzly for almost as much. If the rest of us put an equivalent dollar value on *live* critters, wildlife would not have to lose every time development is justified as the best thing for the economy.

west

- **Oil and gas leases** have been applied for throughout the Flathead National Forest, which is contiguous to Glacier on the south and west. The Forest Service recommended granting leases to the west of the Park—just across the North Fork of the Flathead River from it, in fact. Public outcry, coupled with the fact that the agency's environmental impact statement was woefully inadequate in its evaluation of fisheries, wildlife, and scenic and recreational resources, caused the Forest Service to retreat from its position. It is now considering the matter again—waiting, it seems, to see which way the wind from the "energy crisis" blows. The latest move has been by the geological companies who have applied for permission to conduct seismic testing by setting off dynamite blasts in the North Fork area and in the Great Bear and Bob Marshall wildernesses south of the park.

- **Roads**, again. Two years ago the Forest Service turned over to Flathead County its responsibility for maintaining the dirt road that leads up the North Fork valley into Canada. Shortly thereafter, the gung-ho county commissioners announced what local chambers of commerce and the logging industry had hoped to hear for a long time: they want to pave the route. The Federal Highway Department has already

Concerned citizens both inside and outside government must fight to protect

beautiful and rugged Glacier National Park from myriad incompatible pressures.

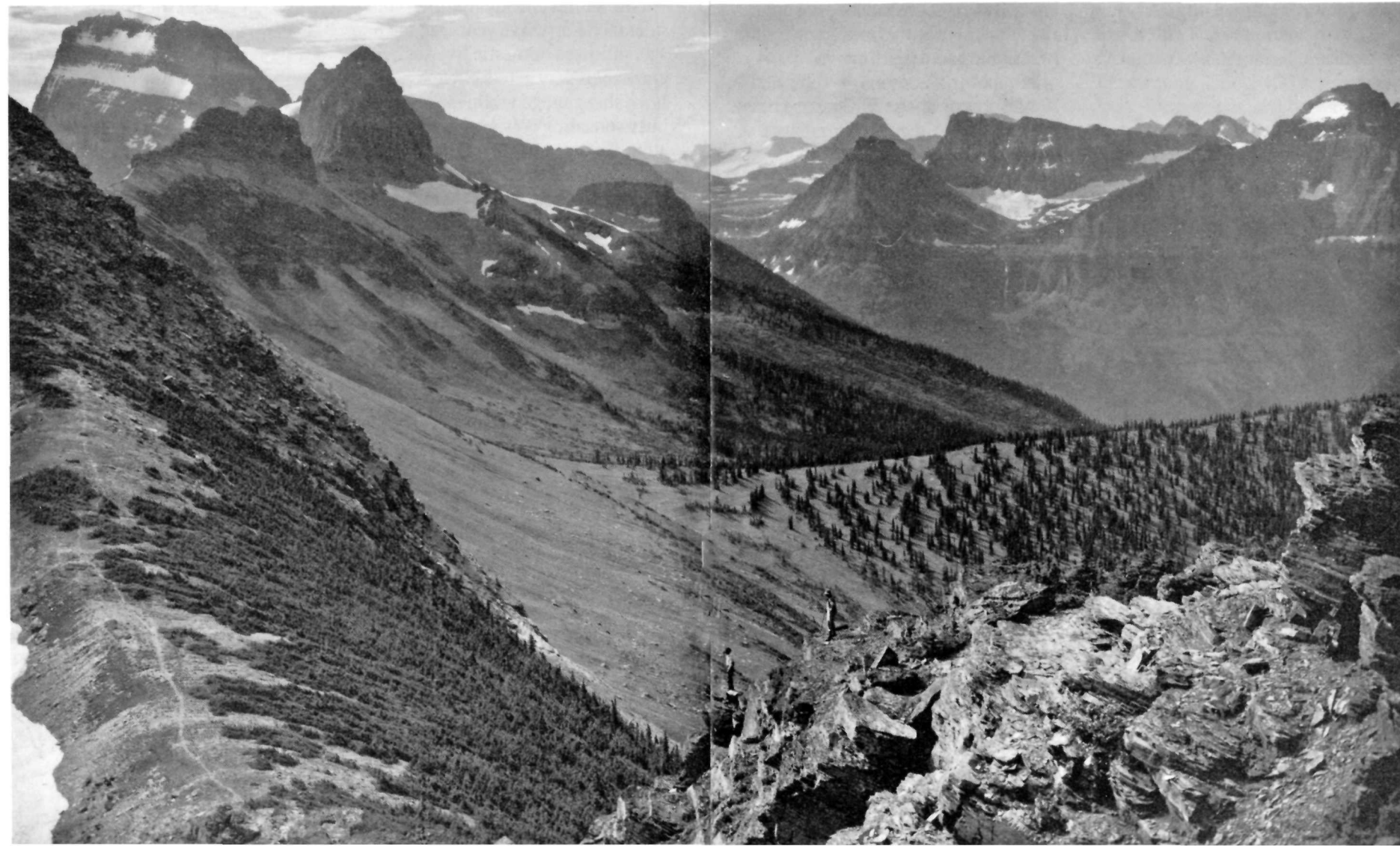


PHOTO COURTESY NATIONAL PARK SERVICE, © FRED H. KISER

offered funds to pave the North Fork as far north as Camas Creek. Plans to continue north to Pole-bridge are now in the works.

It is mainly the area's remoteness that has thus far discouraged intensive subdivision and commercial development on privately owned lands in the valley. In their present condition, valley bottomlands continue to serve as key components of wildlife range, particularly during winter and spring. Park biologist Francis Singer has documented the extent to which animal populations move back and forth across the river. Moose, elk, mule deer, white-tailed deer, beaver, otter, mink, bald eagles, and ospreys are among the commonly seen species that fail to realize one bank is Glacier Park and the other bank something quite different in human eyes. The consequences of a paved road—intensified hunting and poaching, suburbanization, commercial exploitation—would doubtless make it much

clearer to them. What is now one of the most primitive parts of the park would also be subject to much heavier use, especially because a paved road seems to be on its way down through Canada to meet the North Fork road.

• **Logging**, again. Every major drainage on the Flathead Forest side of the North Fork has already experienced some roadbuilding and logging. On the northernmost end, next to the Canadian border, however, a substantial acreage known as Tuchuck-Hefty remains relatively intact. Its ruggedly scenic terrain contains a diversity of habitats that sustain notably rich wildlife communities. According to Dr. Charles Jonkel of the University of Montana, Tuchuck-Hefty's grizzly population is one of the densest around. He ought to know, having radio-collared nine grizzlies in the immediate vicinity. There is abundant sign of others. Moreover, Jonkel's data suggest continuity of grizzly

range between Tuchuck-Hefty, North Fork bottomlands, and Glacier Park. Unroaded Tuchuck-Hefty, he says, may be a crucial corridor linking Glacier's bear population with those of the Kootenai Forest west of the valley.

A short time ago the Forest Service came out against a proposal to establish a part of the National Trail System known as the Pacific Northwest Trail through Tuchuck-Hefty. Why? One of their primary reasons was that it would lead to bear-man conflicts and ultimately would prove detrimental to the grizzly, which is of course classified as a threatened species. Then, incredibly, they revealed plans to build a new road and log 22 million board feet of timber on 7,000 acres, mainly by clearcutting, in precisely the area the trail would have passed through.

The same research team that investigated wolves on Blackfoot tribal lands is now focusing its efforts in the North Fork, the source of more occasional wolf sightings than any other spot in Montana. Led by Dr. Robert Ream of the University of Montana, that team has managed to radio-collar a female wolf in the Canadian headwaters of the North Fork. To date, signals have allowed biologists to track her to within two miles of Tuchuck-Hefty. Accordingly, the wolf recovery team views the Tuchuck-Hefty/Glacier Park wildland complex as the best hope for the future of the species in this state.

To my mind, the Forest Service timber sale here constitutes a clear threat to a threatened species—the grizzly—and negates efforts to return an endangered species—the northern Rocky Mountain timber wolf—to its former role in this Rocky Mountain environment, or to any role at all. Thus the logging would seem to violate the intent of the Endangered Species Act and to indirectly subvert the park's mission to promote the welfare of such crea-

Oil and gas exploration and leasing like that at Cutbank, below, subjects Glacier National Park's wildlife to adverse pressures.



DOUGLAS H. CHADWICK

tures. Nevertheless, the U.S. Fish & Wildlife Service, having reviewed the Forest Service proposal for compliance with the Endangered Species Act, just recently gave the green light to log Tuchuck-Hefty.

I already feel at this point like what Spiro Agnew used to like to call a nattering nabob of negativism. And I still have one border to go.

north

• **Coal mining.** Development of an open-pit coal mine at Cabin Creek, eight miles northwest of Glacier, is underway. The original plans called for a town of several thousand people, a large coal-fired power plant, construction of a railroad line to the area, and the leveling of two mountains in which the coal seams lie. The threat of open-pit mining in this North Fork tributary provided the main impetus for Congress to declare all three forks of the Flathead part of the National Wild and Scenic River System. That action, the concerted efforts of local citizens, the work of National Parks & Conservation Association, and the leadership of Montana Senator Max Baucus brought the U.S. State Department knocking on Canada's door with a message: The entire Flathead watershed (about two-thirds of Glacier is within it) could be damaged by acid wastes, siltation, and other forms of pollution, and we will be very unhappy if such a thing comes to pass.

Rio Algom, the London-based conglomerate that owns the Cabin Creek operation, responded by scaling down the size of the mine, instituting better environmental safeguards, and electing to bus in miners from nearby Fernie, British Columbia, rather than building a town. (It has helped that the market for such coal—Japanese steel industries—has been slack.) The possibility of serious degradation of the Flathead watershed remains. Fisheries would naturally be the first important resource to be affected, and

more than 700 bald eagles now join Glacier's resident eagles each fall to feast on spawning salmon in two Flathead tributaries—the Middle Fork and McDonald Creek, which flows through the park's Apgar area.

• **Oil and gas,** once more. Most of the Canadian headwaters of the North Fork are open to oil and gas exploration and development. Specifically, the Crown lands are under permit to Shell Oil. New wells are planned between Cabin Creek and Tuchuck-Hefty. As a matter of fact, oil crews will be housed at the coal company camp. One disturbance merges into the next, which brings up:

• **Still more logging,** in the same area between Tuchuck-Hefty and Cabin Creek. An infestation of pine bark beetles in the lodgepole forests of the North Fork is the impetus for massive cutting on both sides of the border. Tuchuck-Hefty is far from the only timber sale along the lower North Fork, and the British Columbia Forest Service may cut more than 200,000 acres in the headwaters. The 2,400 acres to be logged just north of Tuchuck-Hefty happen to be where the radio-collared wolf has been spending most of her time lately.

Moving eastward puts us directly above the Akamina-Kishinena and Kintla drainages of Glacier and in an ongoing timber sale encompassing several thousand acres. Only two years ago this area was one of the park's very best buffer zones—a natural extension of wildlands, being simply the upper portions of park valleys. Because of its remoteness, exceptional wildlife habitat, and strategic location in the wedge between Glacier and its sister Canadian Waterton Lakes National Park, the Akamina-Kishinena area was long considered likely to become a provincial park. (Pre-logging controversies were reported in the June 1978 issue of *National Parks & Conservation Magazine*.) Now it is another mosaic of roads and stumps.

Glacier did indeed lose badly here. Ranger Jerry DeSanto observed cutting so close to the boundary that trees fell with their saw-severed ends in Canada and their tips in Glacier. The park stands to lose still more if the Akamina-Kishinena road is eventually pushed across the Continental Divide to Waterton. The long-discussed loop road surrounding Glacier would then be a reality. The links—paving of the North Fork up from Columbia Falls, paving from Fernie down to Cabin Creek, the road toward Waterton—are coming together, forging a chain of heavier human impact of all kinds, from tourism to an unprecedented rate of resource development.

ENOUGH! I hope I have emphasized that Glacier National Park, the island itself, is in good, even enlightened, hands. But there are ill winds blowing around the island and dangerous waves lapping at its shores. In fact, the recent Park Service *State of the Parks Report, 1980* ranked Glacier National Park as the country's most threatened national park and the most threatened of any unit in the West.

Are American citizens willing to let Glacier National Park be strangled by exploitive activities surrounding it?

No! We citizens must carry the fight far into the territories of other agencies. At the very least, we must all do more negotiating around a common table with the common goal of keeping Glacier Park from becoming old and brittle long before its time. ■

Wildlife biologist Douglas Chadwick has studied mountain goats in Glacier Park and elsewhere in the Flathead region. Presently he is working as freelance writer and photographer—when he isn't out enjoying the wildlife that shares the bottomlands near his home in the North Fork Valley across the river from Glacier Park.



the grand canyon of the yellowstone is a dramatic introduction
to the scenic wonders of yellowstone national park

by rogayle franklin

kaleidoscope canyon

YELLOWSTONE NATIONAL PARK, Wyoming, is world-famous as nature's spectacular of endlessly changing scenes—unusual, fascinating, awe-inspiring. But nowhere in the park is this kaleidoscope of beauty as brilliantly displayed as in the Grand Canyon of the Yellowstone River.

Geologically speaking, the canyon is a youngster, scarcely 100,000 years old. The powerful Yellowstone River is still at work carving its gorge out of the underlying volcanic rock. Where layers of basalt resist, the river leaps over them in magnificent falls. The canyon's rim offers panoramic views mingling scenes of violent creation and ice-age antiquity.

CANYON CAMPGROUND on the North Rim is an excellent central location from which to explore the canyon. We chose a campsite in the shade of some lodgepole pines and headed for nearby Canyon Visitor Center. Here we found maps and detailed information about the canyon, along with exhibits explaining the geology of the area, a colorful slide program, and a list of activities open to campers.

Armed with a *Guide to the Canyon Area*, we drove out North Rim Drive for our first view of the canyon from Inspiration Point. Nothing had prepared us for the breathtaking sight—the narrow, twisting, can-

yon walls glowing with every imaginable shade of red and yellow, the surging blue rapids of the Yellowstone River a thousand feet below us, and the magnificent Lower Falls cascading 300 feet to the bottom of the gorge.

Strategically placed overlooks on the canyon's rim allow you to see the canyon and the falls from a variety of perspectives. Grandview and Inspiration points on North Rim Drive afford fantastic panoramas of the canyon; Lookout Point offers a closer view of the Lower Falls. From Uncle Tom's Trail off South Rim Drive you can see the 100-foot drop of the smaller, but nevertheless splendid Upper Falls. Perhaps the best overall view of the entire canyon is from Artist Point on the South Rim.

Miles of trails lead into the canyon, several to vantage points below the Upper and Lower falls. Some are paved, others are well-marked. The *Guide* rates the trails as short walks or longer hikes. Inexperienced hikers should be warned, however, that because of the altitude (about 8,000 feet at the Canyon's rim) and the steepness of the trails, even the shorter walks can turn out to be strenuous treks if you undertake too much.

But hiking in the canyon need not become an endurance test. Take it easy, relax, enjoy the magnificent vistas opening all around you. Sit for awhile to watch the ospreys

soaring from their nests high on the canyon walls. If you want a closer look at the nests and young of these impressive birds of prey, you will find that park rangers have set up powerful telescopes at intervals on the trail.

For those who prefer to let horses do their walking, there are regularly scheduled guided horseback trips along some of the canyon trails. Full- or half-day trips can be arranged in season at the saddle horse concession located 1½ miles south of Canyon Junction.

But however you choose to go, you are sure to find the canyon's kaleidoscopic beauties a memorable introduction to the wonders of Yellowstone National Park. ■

Free-lancer Rogayle Franklin's articles have appeared in a variety of camping and outdoor magazines.

Editor's note:

NPCA learned at press time that unfortunately Canyon Campground will be closed for the balance of the 1980 season. You can still visit the canyon from other accommodations in the park, however, and we hope you will plan to do so. To find out which campgrounds are open this summer and what plans are for 1981, or for other assistance in planning your visit, write to Superintendent, Yellowstone National Park, WY 82190.

massive energy development in the san juan basin
could destroy forever important clues to . . .

the mystery of chaco canyon

TODAY the canyon is deeply silent, the blue dome of sky above it etched with chalk lines from jets so far away they too are soundless. Sheer sandstone buttes punctuate the empty landscape. Swaths of red, saffron, and lavender on the cliffs catch the sunlight. Like the canyon, the crumbling pueblos that once echoed with the shouts of children, the murmur of women grinding corn, the gobble of foraging turkeys, are empty and silent under the brilliant sun.

But the vital essence of this mysterious and mystical place still lingers. Chaco Canyon is imbued with the spirit of the unknown people who lived here centuries ago and then departed for reasons as yet unexplained. This illusion is particularly strong on moonlight nights when the perceptive visitor can imagine the Anasazi—"the ancient ones," as the Navajo call them—gathered around their fires within these stout stone walls or striding across the canyon to the kiva on the cliff top.

SITUATED in a remote corner of northwestern New Mexico's San Juan Basin, reached only by washboard roads that are dusty when dry and slick as butter when wet, Chaco Canyon National Monument is one of the least known and least visited units of the National Park System.

The only canyon in an arid region of mesas, steppes, and badlands, of harshly hot summers and severely cold winters, Chaco attracted nomadic hunters and gatherers from as early

as 5000 B.C. Because of its arroyo—or dry river bed in which water flows after heavy rains—the canyon offered soil and water enough for the cultivation of squash and corn. As a result simple farming communities were established here by the beginning of the Christian era. Thus far archeologists have identified seventy sites predating 500 B.C.

Gradually, over the centuries, crude pithouses replaced the early campsites and pottery making and basket weaving developed. Eventually, the pithouses were partially supplanted by rough structures of wood and stone built above ground. By the tenth century A.D., multistoried masonry pueblos—communal houses composed of many dwelling rooms and kivas, or circular chambers for worship, grouped around a central plaza—had been added to this architectural array.

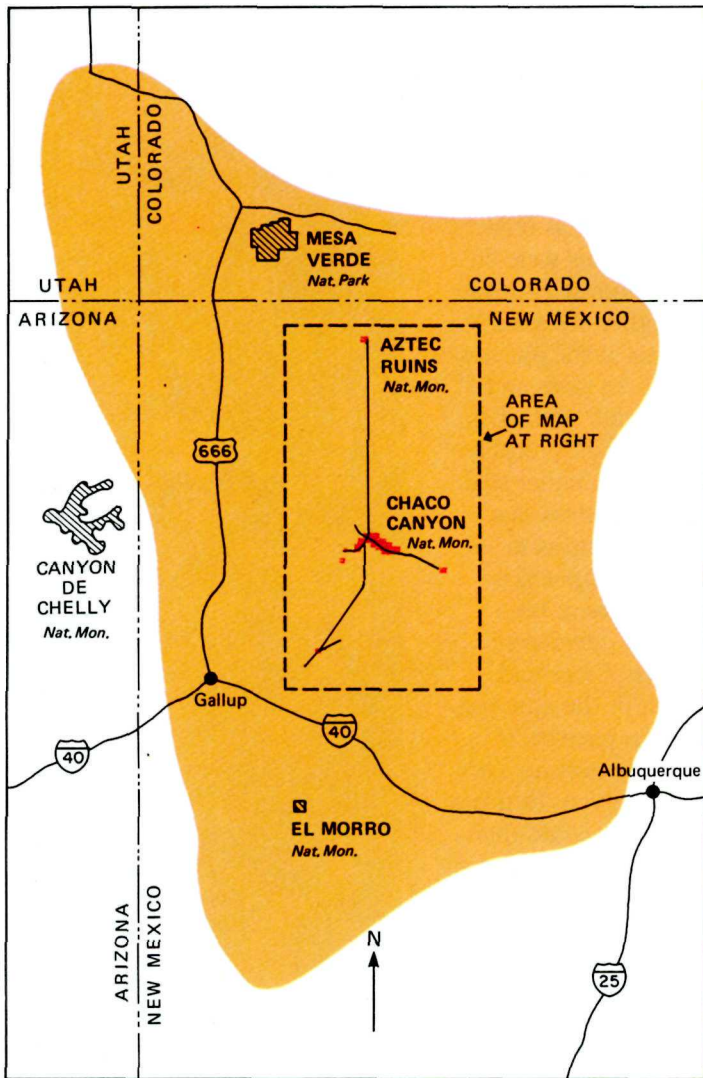
Chacoan civilization reached its zenith by the beginning of the twelfth century A.D.—a classic period of complex social organization and sophisticated architecture serving a population that may have numbered as many as 5,000. The Chacoans of this period cultivated and irrigated corn, beans, and squash; carved and painted the canyon walls with petroglyphs and pictographs; performed elaborate religious ceremonies; fashioned handsome black and white pottery; wove blankets of feathers and fur; adorned themselves with turquoise, shell, and stone jewelry; and excelled at dressing sandstone with stone tools to build pueblos and kivas.

The fact that objects and materials not indigenous to the area, such as shells, small copper bells, parrot feathers, and remnants of cotton cloth, have been found in the ruins indicates that twelfth century Chaco was not only a center of trade for the San Juan Basin, but that it also received goods from as far away as southern Arizona and Mexico.

At least a dozen large pueblos built of red sandstone blocks as precisely cut and fitted together as mosaic tile occupied the central canyon. The grandest of these was Pueblo Bonito, which covered three acres and contained an estimated 800 rooms and 36 kivas—although not all of these were in use simultaneously. Built on the D-shaped plan characteristic of this period, Bonito is believed to have been four or five stories high and to have housed perhaps 1,000 people. So-called "great" kivas like that at Casa Rinconada, the interior of which is 64 feet across, were the centers of Chacoan religious life at this time.

Then, abruptly, Chaco Canyon was abandoned. By 1300 A.D. the pueblos were empty and were gradually covered by the rubble from collapsed walls and huge mounds of wind-blown sand.

ARCHEOLOGICAL research at Chaco was begun in the 1890s, after a local homesteader and explorer, Richard Wetherill, had aroused interest in the ruins. By 1899, excavations carried out by George Pepper and the Hyde Expedition had uncovered about half of Pueblo Bonito. Pepper's findings led to the



APPROXIMATE DISTRIBUTION OF CHACOAN ARCHITECTURE AND POTTERY

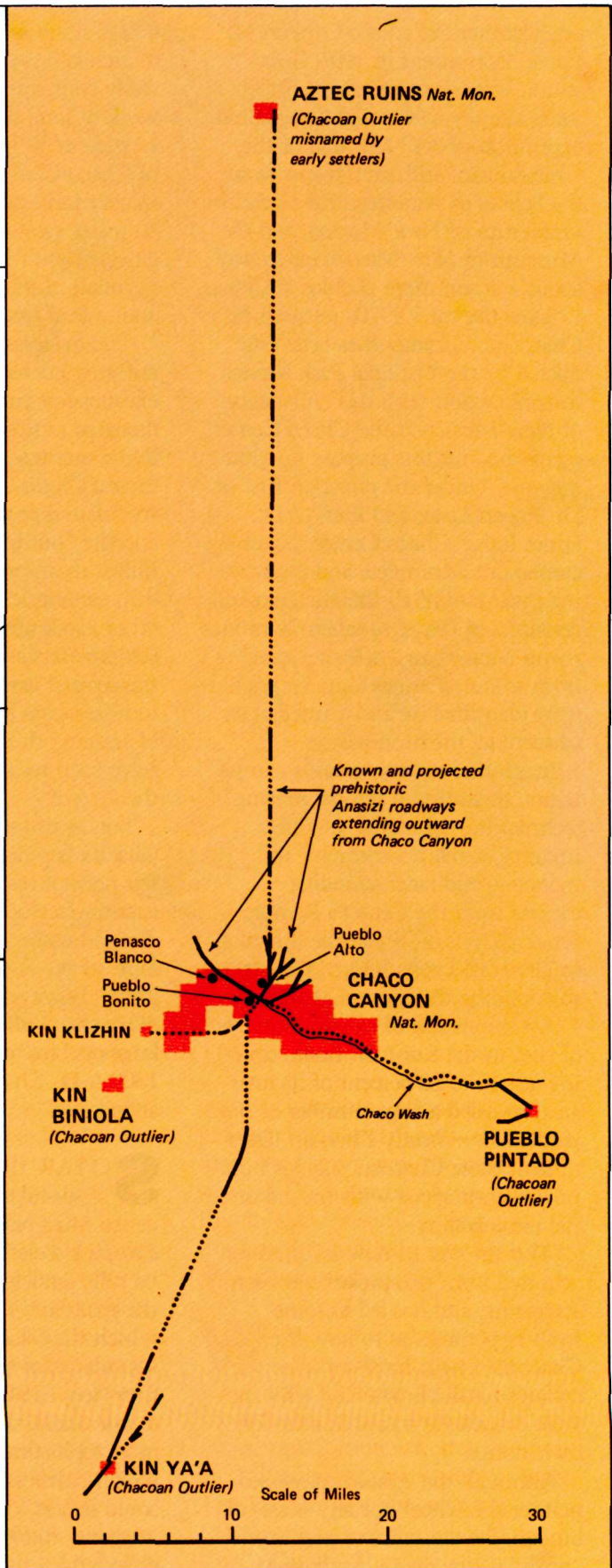
CHACO CANYON NATIONAL MONUMENT AND RELATED OUTLYING SITES

NON-CHACOAN PUEBLO CULTURES OF THE SAME ERA

KNOWN SEGMENTS OF CHACOAN ROADWAYS

PROJECTED SEGMENTS OF CHACOAN ROADWAYS

CHACOAN CULTURE IN THE SAN JUAN BASIN 1100 A.D.-1300 A.D.



MAP BY JAMES F. O'BRIEN, © NPCHA

establishment of Chaco Canyon National Monument in 1907. Excavation was continued about fifteen years later by a National Geographic expedition under Neil Judd of the Smithsonian. Still later, teams from the School of American Research, the University of New Mexico, and the Museum of New Mexico excavated about a dozen more pueblos at Chaco.

Since the early 1970s research into Chacoan civilization has been conducted by the National Park Service in conjunction with the University of New Mexico at the Chaco Center established for this purpose in Albuquerque. Under the direction first of Dr. Robert Lister and then of Dr. James Judge, Chaco Center scientists carried out a complete and painstaking inventory of all the archeological resources of the 32-square-mile monument. More than 2,400 sites ranging from scattered stones to major pueblos were identified in, and immediately adjacent to, the monument.

In another survey, using a combination of advanced remote sensing techniques—including satellite imagery, aerial photography and mapping, and radar sounding—experts from the Center's Remote Sensing Division under the direction of Dr. Tom Lyons studied the region surrounding the canyon as well.

A compilation of existing surveys of sites in the San Juan Basin, covering just 15 to 20 percent of its total area, revealed a large number of major pueblos—mostly Chacoan. Fifty-nine of these Chacoan pueblos have now been mapped with the aid of aerial photography.

The amount of new information acquired from this project has been staggering, and has led to some fresh hypotheses as to how the Chacoans might have survived the region's harsh climate and why they were eventually forced to abandon their home.

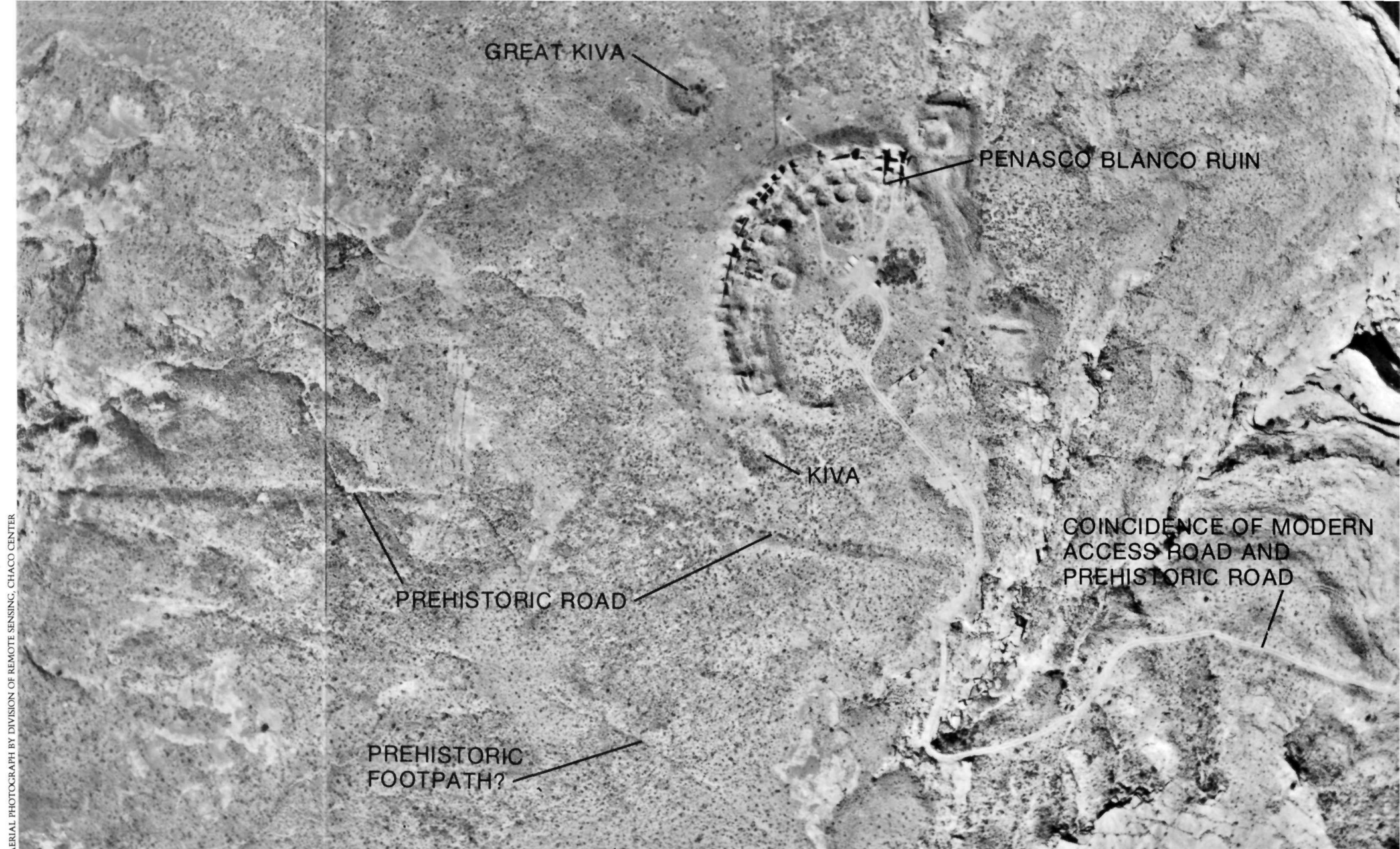
Although the Anasazi possessed neither the wheel nor any beasts of burden, the existence of prehistoric "roads" in the area surrounding

Chaco Canyon had long been known to archeologists. The remote sensing study confirmed that a complex network of long straight roadways, some as wide as 30 feet, linked the pueblos of Chaco Canyon with approximately forty outlying sites, as far as 50 miles away. These roads were engineered with ramps and stairways to negotiate cliffs and other obstacles and to lead into plazas at the pueblos.

The evidence of these roads and outlying pueblos, together with the existence of large chambers probably designed as storage rooms rather than living quarters, in the pueblos, has caused Chaco Center scientists to speculate that the canyon pueblos and the "outliers" may have been linked in an organized interdependent economic system. Crops and other goods produced in the outlying settlements could thus have been transported over the connecting roads to storerooms in the canyon. In times of scarcity, these reserves could then have been redistributed throughout the system.

But, as this support system allowed Chaco's population to expand beyond the normal resources of the area, a catastrophe such as a prolonged drought could have caused the collapse of the entire system. All we know, however, is that by the middle of the twelfth century, no more large pueblos were being built and by 1300 A.D., Chaco was virtually abandoned.

SO FAR, these theories are only speculation. Much more evidence must be gathered before the complex society of the Chacoans can be fully understood. Unfortunately, the roads and the outlying sites to which they lead are outside the boundaries of the monument. Unless they, too, can be preserved, vital clues to our understanding of one of the most sophisticated prehistoric Pueblo Indian cultures in North America could be lost forever because of the intensive energy development now projected for the San Juan Basin.



Remote sensing techniques like this aerial photograph have revealed prehistoric roads linking Chacoan sites.

The basin contains one-sixth of the world's known uranium reserves and one-quarter of the nation's near-surface coal deposits, as well as rich deposits of petroleum and natural gas—all of which underlie the region surrounding Chaco Canyon. By the year 2000, the number of uranium mines in the basin is expected to double from 38 to a possible 72; the number of uranium mills could triple from 5 to 15; coal strip mining on a vast scale should be well underway, with an estimated 250 million tons of coal projected for removal by 1990; and six large-scale power plants will be in place. New roads as well as a

railroad will probably traverse the basin and as the population soars, people may be living in towns and trailer-towns from one end of it to the other.

Every major oil and energy-producing company in the United States has geologists in the field now. Inevitably, damage to outlying sites has already occurred. Last summer, for example, archeologists found that one company had bulldozed across three portions of prehistoric roads.

As deep mines proliferate, it is anticipated that as much as 40,000 gallons of water per hour will be pumped out of mine shafts into normally dry arroyos. By accelerating

erosion of arroyo banks, such pumping will aggravate damage to sites on or near the edges of arroyos.

Blasting for roadbeds and mine shafts and the vibrations caused by heavy trucks and earthmoving equipment can also be expected to cause the collapse of ancient masonry walls.

Ultimately, however, the greatest threat to the archeological remains in the monument and basin will come from the huge influx of people that development will bring. Already vandalism and pot-hunting are on the increase, together with inadvertent damage caused by ignorance and carelessness. Despite state and federal laws

against disturbing antiquities, the problem of enforcement is enormous in an area larger than the combined states of Connecticut, Massachusetts, Rhode Island, and New Jersey and the situation can only worsen as the population mushrooms.

WHAT CAN be done to preserve the irreplaceable treasures of the Chacoan culture and still meet the constantly growing demand for energy? Solutions to this dilemma are being sought in a variety of ways. The Park Service has recommended to the Secretary of the Interior that Chaco Canyon be made a national

historical park and that a greater degree of protection be provided for at least thirty-three of the major outlying sites by including them in the new park.

Because the outlying sites occur on land belonging to so many owners and jurisdictions—among them the federal Bureau of Land Management, the state of New Mexico, the Navajo Nation, and individual ranchers—the Park Service hopes, if the expanded park legislation passes Congress, to work out cooperative agreements with the landowners involved, instead of attempting outright acquisition to preserve these sites.

In the meantime, the Park Service, Chaco Center, and concerned conservation organizations like NPCA are making every effort to educate both the public and the industries involved in developing the basin about the outstanding archeological resources of the Chaco Canyon area and to publicize the urgent need for their protection.

Walter Herriman, superintendent of Chaco Canyon, for example, believes that in many cases if the energy companies are made aware of the historic and archeological re-

sources of the area, they will want to help protect them. He therefore spends a great deal of time talking to company officials. "We aren't threatening to lie down in front of the bulldozer," he said. "We want to work with them for a total organized development of the cultural and mineral resources of Northwest New Mexico."

The response to all these efforts has been encouraging, perhaps because they have coincided with a growing national awareness of the need to protect our cultural heritage—an awareness that is more and more being reflected in public policy.

As a result, some of the firms at work in the basin have added archeologists to their staffs; some have helped underwrite the costs of archeological surveys; some have indicated a willingness to "work around" and stabilize major sites.

Finally, the "Omnibus 80" parks bill that passed the House of Representatives on May 20, provides for increased, although not fully adequate protection, for the Chacoan remains. The bill, now pending in the Senate, calls for the establishment of Chaco

Culture National Historical Park, to include expanded Chaco Canyon and related Aztec Ruins national monuments as well as thirty-one major outlying sites. The proposed park will not protect the roadways, however, or all the outlying sites.

Furthermore, even this imperfect bill is threatened by opposition from the Bureau of Land Management, which has succeeded in enlisting the support of the Interior Department in an effort to gain control of the outlying sites. Thus, BLM and Interior are opposing the expanded national park in favor of legislation that would make BLM responsible for "protecting" the outliers—but only so long as such protection is compatible with the needs of energy development.

So, unless continued education, persuasion, and publicity can succeed in saving them, important clues to Chaco's past may well be lost and the silence of the Anasazi remain unbroken forever. ■

A native of New Mexico and a member of the Society of American Travel Writers, Ruth Armstrong often writes about the Southwest. Her article about Carlsbad Caverns appeared in our May issue.

STONework AT PUEBLO BONITO, BY KINNEAR



Virginia rubberstamps Coors brewery on Shenandoah doorstep

In June the Virginia State Air Pollution Control Board hurriedly cleared state air quality permits sought by the Adolph Coors Company for a nineteen-story brewery to be located within a half mile of the west boundary of Shenandoah National Park. The 100 million-barrel-a-year brewery and aluminum can manufacturing complex would feature three large coal-fired boilers and a main stack almost as tall as the Washington Monument.

The permit approvals came over the protests of Assistant Interior Secretary Robert Herbst, the Park Service, and NPCA and other conservation organizations. The permits were rushed through with the governor's blessing before Coors had even completed its application for the project—or demonstrated that the plant would not violate national Prevention of Significant Deterioration (PSD) pollution increment levels for "Class I" areas such as Shenandoah. Moreover, NPCA pointed out in testimony to the board, even if the

plant can meet the Class I standard, the increased levels of sulfates and nitrates could impair visibility. Even when the PSD increments are not exceeded, the Park Service has a responsibility to protect the "air quality-related values" of the park—including visibility and the fish and wildlife that could be damaged by acid rain. Park superintendent Robert Jacobsen says, "We're not nosy neighbors, we have a trust responsibility here, and we must speak out." Coors has said it no longer wants to be involved in direct discussions with the Park Service about the brewery. The company says it is confident it can meet the PSD requirements. It may in fact be possible for the company to meet the PSD requirements by burning low-sulfur coal and improving pollution controls, but NPCA has pointed out that under the Clean Air Act Amendments, the burden of proof is on Coors, not on those trying to protect the park.

"To be sure, Coors will find that the

environmental image on which it so prides itself will be quite tarnished if it advertises itself as a producer of fine beer from pure mountain streams even while it is dirtying the environment of one of the most popular national parks in the United States in order to produce its 'pure' product," NPCA comments said. At an NPCA-sponsored meeting in Harrisonburg, Virginia, local and national conservation organizations vowed to escalate a national campaign to protect the park from air pollution. More recently, following the state action, EPA, which is in charge of deciding on whether to grant a PSD permit for the plant, told Coors its application had multiple deficiencies that must be addressed before a decision can be reached. In June, the EPA called for another six months of monitoring. The state has also approved water permits despite warnings from scientists that the South Fork of the Shenandoah River could not withstand increased loadings. ■

Clean air regulations for parks and wilderness under attack

Amid growing indications that air pollution may well be the chief threat to the parks during the 1980s, on May 25 EPA proposed regulations to protect 29 million acres of national parks and national wilderness areas from air pollutants that degrade visibility and the environment. According to Park Service studies, these pollutants have already impaired visibility at scores of the nation's most famous scenic vistas—even obscuring the view of the opposite rim of the Grand Canyon at times.

But the deck is stacked against the regulations because of expected court challenges from utilities and other industries and controversy within the Administration concerning any controls on energy development near parks.

In its recent "State of the Parks" report to Congress (see page 9), the Park Service notes that air quality is endangered in almost half the National Park System units. The significance of the proposed regulations extends well beyond curbing scenic visibility threats because these regulations would help prevent broader ecological damage from

the same pollutants. For instance, under certain conditions fine particles—particularly sulfates—that scatter and absorb light, thus impairing visibility, can lead to acid precipitation. "We look at visibility damage as a harbinger of more serious threats," says NPS Air Quality Program Manager Barbara Brown.

In November 1979 EPA published a list of 156 "Class I" national parks and wildernesses in which visibility should be protected under Section 169A of the Clean Air Act Amendments.

The new proposed regulations require the thirty-six states containing such areas to develop visibility programs that require power plants and



LARRY DECKER

other stationary sources impairing visibility to retrofit with the best available technology, devise long-term strategies to preserve visibility, and prevent impairment from new sources.

In providing protection for Class I areas, the state must work with the federal land manager of the area—for instance, in the case of a national park, with the Secretary of Interior and his designated officials in the National Park Service.

Although some states and industries are portraying the proposed regulations as a Draconian measure, a recent EPA study has identified only twelve facilities—all coal-fired power plants—that would *potentially* be required to retrofit under the regulations in the near future. Most notorious is the Four Corners plant in New Mexico—"the Angel of Death" which has no controls specifically designed to remove sulfur dioxide and customarily spews out 75,000 to 80,000 tons of it per year into the region of the "Golden Circle" of parklands. The major impact of the EPA proposal, however, would be on new sources, of which the Park Service estimates more than ninety

will apply for permits to locate near NPS areas within the next two years.

You can help: NPCA members are urged to support the EPA proposal while calling for giving it some more teeth. For instance, tell EPA you heartily support their taking the initiative to propose protecting "integral vistas," areas outside park boundaries that are viewed from within the park and are important to the visitor's experience of the park or the purposes for which the park was created. EPA has been under intense fire from the Department of Energy and other interests who oppose this proposal. Ask that the proposed regulations be expanded to include essential vistas viewed from the outside of the park—such as the approach to Grand Teton or the view of Acadia from the Maine coast. Emphasize that you believe the agency in charge of the Class I area should make the determination of which areas are "integral vistas" and that the final judgment must be made on the basis of preserving the resources rather than on energy or economic considerations.

Specify in your comments that you would prefer a better defined and ag-

gressive role for the National Park Service and other federal land managing agencies in implementing visibility protection for their own Class I areas for both new and existing sources.

The regulations rely in their first phase on visual observation of plumes and other simple monitoring techniques and fail to acknowledge techniques widely recognized by EPA's own scientists for predicting emissions from new sources or tracing emissions from existing sources. Urge EPA to issue detailed, specific guidelines on monitoring and new source modeling this summer, to utilize some of the more sophisticated techniques in its regulatory program now, and to specify when the more comprehensive second phase of the regulations will begin.

Send your comments immediately to Hon. Douglas Costle, U. S. Environmental Protection Agency, 401 M Street, S.W., Washington, D.C. 20460. It also is crucial that you send a copy of your comments to the Hon. Cecil Andrus, Secretary, U.S. Department of Interior, Washington, D.C. 20240, because the proposed regulations are under attack within the department. ■

Above & beyond...

NPCA Board Chairman Gil Stucker honors Virgie Martin of our Membership Department for her fine work on the occasion of her twentieth anniversary with NPCA.



Familiar dangers at Indiana Dunes

The Park Service could be facing one of the most difficult decades in its history because of adverse adjacent land uses, budget cuts, and problems with private inholdings, NPCA staff associate William Lienesch recently warned citizens working to protect Indiana Dunes National Lakeshore.

Speaking at the Save the Dunes Council's 28th annual spring dinner, Lienesch noted that the lakeshore's problems are strikingly similar to those impairing NPS units around the nation. The lakeshore is threatened by subdivisions, power plants, and multiple sources of air and water pollution.

In 1979 the House passed NPCA-supported legislation to expand Indiana Dunes National Lakeshore to include areas needed to help protect the existing NPS unit from development. For instance, Beverly Shores—an area that consists of high dunes, wooded ravines, and wetlands and is completely sur-

rounded by the national lakeshore—must be incorporated into the park unit to ensure access to, and protection of, the longest stretch of beach in the lakeshore. Foot-dragging over the expansion is holding up the legislation in the Senate, however.

"The longer we wait, the more it will cost," Lienesch told reporters at a press conference following the Save the Dunes Council event. Nationally, he explained, federal agencies are paying an average increase of 15 percent or more per year for land and as much as 40 percent in areas threatened by development.

Given the many threats facing the parks, Lienesch emphasized that local action is imperative. In many respects, the future of Park System units will be greatly affected by support or lack of it from dedicated groups such as the Save the Dunes Council, which is working closely with NPCA. ■

Snowmobile controversy in Tetons rekindled

Snowmobilers and the Park Service are squaring off again over the issue of crosscountry snowmobiling in the pristine Potholes-Baseline Flats backcountry of Grand Teton. In compliance with the newly established National Park System snowmobile policy, the Park Service has proposed to limit snowmobile access in the Wyoming national park to 70 miles of unplowed roadways and 26,700 acres of frozen waterways.

But local snowmobilers, angered by the possibility that they will no longer be permitted to ramrod over the quiet backcountry of the park, have mounted a strenuous campaign to force the Park Service to back down on its proposed closure of the backcountry. Last winter snowmobilers successfully pressured the National Park Service to drop a similar proposal.

The Park Service proposal was released this spring as "Alternative B" of an environmental assessment on oversnow vehicle use in Grand Teton National Park. In comments on the environmental assessment, NPCA endorsed Alternative B, stressing that "it is imperative that this area be off-limits to snowmobiles since they intrude on the quiet of the winter park setting enjoyed by other park visitors in the area and may adversely affect wildlife populations and plant life."

NPCA also believes that permitting backcountry crosscountry snowmobiling in this park would establish a precedent that would undoubtedly lead to crosscountry snowmobiling in other National Park System units. In addition, policing crosscountry snowmobiling in backcountry areas will further strain the resources of the understaffed and underfunded National Park Service.

You can help: Although the deadline for comments was June 30, letters to the Park Service supporting closure of the Potholes area of Grand Teton would help the Park Service withstand strong local opposition. Comments may be sent to Superintendent, Grand Teton National Park, Moose, Wyoming 83012. ■

bookshelf

* **How you can influence Congress**, by George Alderson and Everett Sentman, E. P. Dutton, New York, 1979. 360 pp., \$15.95 hardcover, \$9.95 softcover. The complete handbook for the citizen lobbyist, already hailed as the probable standard for years to come. Author Alderson, former public interest lobbyist for Friends of the Earth and the Wilderness Society, says, "Many Washington lobbyists wish they had the power you have with your own legislators in Congress." Starting with how your representative works and how to compose a letter to him or her, the book progresses to many points of value even for professional lobbyists.

* **Rough Road to the North: Travels along the Alaska Highway**, by Jim Christy, Doubleday and Company, Garden City, New York, 1980. 197 pp., B&W photos, \$9.95, hardcover. Must reading for those traveling along the Alaska Highway or those who wish they could do so. Describes the history, legends, folklore, and points of interest along the way.

* **Your National Parks**, edited by George Hornby, Crown Publishers, Inc., New York, 1980. 320 pp., over 400 photographs, \$19.95, hardcover. An exceptionally well-organized book on the units of the National Park System. Contains a state-by-state descriptive account of each unit as well as a section that gives specific data about each unit—facilities, addresses, access for the handicapped, directions, and other pertinent information.

* **Central Park Workbook**, by Robert J. Finklestein and the staff of the Central Park Task Force Park as School Program, 830 5th Ave., Rm 104, Arsenal Bldg, New York, NY 10021. \$3.95 plus \$1.00 postage and tax. An excellent resource for teaching children and adults the value of urban parks everywhere.

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Supreme Court victory for land use & open space preservation

On June 10 the Supreme Court issued a far-reaching ruling that land use laws to preserve open space do not violate the constitutional rights of private property owners. NPCA and several other national environmental organizations had joined the Conservation Foundation in a brief presented to the Supreme Court defending land use laws as necessary for the public good. The ruling is a far reaching victory for conservation across the nation.

The suit filed by landowners Donald and Bonnie Agins against the City of Tiburon, California, had drawn an avalanche of competing briefs from fifteen states, many municipalities, the U.S. government, and the National Association of Manufacturers, in addition to the environmental organizations.

The Agins bought a five-acre scenic parcel overlooking San Francisco Bay in 1968. The property was zoned to allow one house per acre or a maximum

of five single family residences. Subsequently the state of California passed legislation requiring cities to enact open space zoning. In 1973, the city of Tiburon modified its zoning so that a maximum of five and a minimum of one residential unit would be permitted on the Agins' property. It was not clear that the rezoning would make any change in the use of the property, but the Agins would have needed to prepare an environmental impact statement before building. Instead, they never bothered to request construction permits but filed a lawsuit claiming they had been deprived of using their property and seeking damages of \$2 million. Thus, although they had neither applied for nor been denied use of their land, the Agins were trying to obtain forty times what they had paid for their property ten years earlier. The case was thrown out by the California courts; but when the Supreme Court accepted it, NPCA and

other conservation organizations believed that a victory for the Agins would have undermined rational land use planning and regulation nationwide.

NPCA participated in the brief in part because our adjacent lands survey had found that approximately two-thirds of the National Park System's units are adversely affected by incompatible land uses and activities outside their borders. In the long run one of the most promising solutions to these problems is the application of local land use laws, especially zoning, to prevent adverse uses and activities.

The Supreme Court ruled that open space laws "advance legitimate governmental goals" and that Tiburon's zoning regulations "are exercises of the city's police power to protect residents from the ill effects of urbanization . . . assuring careful and orderly development of residential property with provision for open spaces." ■

Budget cuts would impoverish parks

In initial action on the Fiscal Year 1981 budget in June, the House Appropriations Subcommittee on Interior cut deeper into the already impoverished National Park Service budget proposal announced by President Carter in March.

One of the worst cuts was a reduction of more than \$8 million in appropriations to protect the new national

monuments in Alaska established by President Carter. Several committee members argued that the appropriations are unnecessary because the areas are sufficiently protected by the President's action—without realizing that at least minimal staff are needed in Alaska to stop illegal mining, construction, and hunting and to provide visitor services and protection. At press time the Administration and conservationists were working to restore these cuts in the full appropriations committee.

The subcommittee also cut \$27.8 million from an already disastrously low construction budget. The cuts included \$4.2 million for a sewage system at Yosemite and \$9.8 million for several projects at Yellowstone. If the subcommittee action is not changed, the Park Service will have only \$34.2 million for construction in FY 1981.

The new area studies program was also cut drastically from \$1.1 million to \$100,000. A cut of this magnitude will make it impossible for the Park Service to give Congress necessary information on areas being considered for inclusion in the Park System.

On the positive side, the subcommittee added nearly \$160 million to the Administration request of \$233 million for the Land and Water Conservation Fund (LWCF). Even with this large restoration, however, the fund will still be well below the FY 1980 appropriation of \$509 million. In addition, little of the increase would go into projects with large acquisition needs such as the Appalachian Trail, Cuyahoga Valley National Recreation Area, and the Santa Monica Mountains National Recreation Area.

The subcommittee also provided an additional \$7.5 million for the Historic Preservation Fund and \$45 million for the Urban Park and Recreation Recovery Program. Both of these increases will help these programs to recover partially from the disastrous cuts proposed by the Administration in March.

At press time the budget was expected to be through the House and before the Senate Interior appropriations subcommittee by August. Meanwhile, another appropriations subcommittee was supporting massive funding for water projects. The Corps of Engineers

GRACE ALBRIGHT

Grace Albright, wife of second NPS Director Horace M. Albright, died on June 15, 1980, after an illness of some months. NPCA members may recall that in our May 1979 Magazine, in describing the birth of the Park Service and his career with the agency, Mr. Albright gave special credit to his "understanding, cooperative, and generous" wife of sixty-five years. A memorial service for her was held in Glendale, California, on June 18.

NPCA wishes to extend our deepest condolences to Horace Albright. Readers may write him in care of Roswell Schenk, 12045 View Crest Road, Studio City, CA 91602.

would receive more for a single boondoggle water project—the Tennessee-Tombigbee—than the Park Service would receive for land acquisition around the country. This scheme to build an unneeded canal from Tennessee to the Gulf of Mexico may require the government to buy a million acres to compensate owners for unnecessary destruction of more than 100,000 acres of forest and farmland. Meanwhile, sufficient funds may not be available

to acquire parklands that are threatened by development.

You can help: NPCA members are urged to write their senators to call for increased funds in the FY 1981 NPS and LWCF budgets. Ask them to work for restoration of cuts made by the House in the Park Service budget and for additional maintenance funds and to support the \$580 million level for the Land and Water Conservation Fund. ■



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Feedback

National Parks & Conservation Magazine:
August 1980 issue

Reader Interest Survey

So we can be sure we are meeting your needs, we want to know how interesting you found each item in this month's issue of the magazine. Please circle the number in the column to the right of each title that best describes your reaction. You may enclose comments or suggestions if you wish. Please mail the form to **Editor, National Parks & Conservation Magazine, 1701 18th Street, NW, Washington, DC 20009.**

	Very Interesting	Somewhat Interesting	Not Interesting
COMMENTARY (inside front)	1	2	3
EDITOR'S NOTE (inside front)	1	2	3
PARKS CALENDAR (p. 4)	1	2	3
CIVIL WAR (p. 5)	1	2	3
RENDEZVOUS (p. 6)	1	2	3
C & O CANAL (p. 6)	1	2	3
FRONTIER FOLKLIFE (p. 7)	1	2	3
SANDBURG (p. 7)	1	2	3
PARKS TODAY & TOMORROW (p. 8)	1	2	3
NPS STUDY CON- FIRMS NPCA (p. 9)	1	2	3
GLACIER (p. 12)	1	2	3
KALEIDOSCOPE (p. 18)	1	2	3
CHACO CANYON (p. 20)	1	2	3
NPCA AT WORK (pp. 25-30)			
Shenandoah,	1	2	3
Clean Air,	1	2	3
Indiana Dunes,	1	2	3
Snowmobile,	1	2	3
Supreme Court,	1	2	3
Budget	1	2	3
BOOKSHELF (p. 27)	1	2	3
READER COMMENT (p. 30)	1	2	3
THE LATEST WORD (inside back)	1	2	3

How would you rate
the cover? 1 2 3 4

Would you care to make any additional com-
ments? _____

Your name and address (optional): _____

reader comment

Well worth it

Your magazine is *well worth* every bit of the subscription fee, and I enjoy it very, very, very much! Keep up the excellent work and high standards.

Anthony Campisano
North Brunswick, New Jersey

This is just a brief note of thanks. I am so happy that there are organizations like National Parks and Conservation Association. We need more like you. Keep up the good work.

Natalie Vasilieu
Belmont, California

As usual I love your monthly news of all my loves and interests. Thanks so much. Here are some news items from one of our papers.

Mrs. Mary Whitney
San Diego, California

Threats to Hatteras

I have been a subscriber to *National Parks & Conservation Magazine* for only one year, and it has truly opened my eyes to the problems facing our parks and resources today.

On a recent trip to Cape Hatteras National Seashore I was impressed by the spacious beauty of the Banks, but I was also disturbed by the amount of commercial and residential development in the towns up and down the seashore. It



CHARLES H. STOCK

seems to me that if this development is not stopped, it will have an adverse effect on the ecology and visual beauty of this great natural resource.

I have enclosed some photos that I feel capture some of the beauty of the Outer Banks, which I feel should not be altered or threatened in any way by this development.

Charles H. Stock
Pottsville, Pennsylvania

Thanks! We hope our readers have learned more about the magnitude of threats to the parks from this "state of the parks" issue and our July barrier island issue.

Responsibility in Business

Dear Fellow Members: When I entered my family's business almost four years ago, I had to deal with a moral conflict of interest. While carrying out my regular responsibilities, I have tried to make my fellow executives more environmentally conscious.

We are leading the movement to implement a program of recycled oil throughout the Chicago area at all Chevy dealers and at Sears, etc. I thought this would be of interest to you. If you want more information, feel free to contact me.

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The text of an enclosed brochure says that in Illinois alone, private vehicle owners annually throw away more than 12 million gallons of crankcase oil that could be recycled over and over again.

CAMPING BULLETIN

Yellowstone National Park has closed the Canyon Campground and Mammoth Campground for the 1980 season, contrary to previous reports.

MAY COVER CONTEST

Our May cover featured a map of the United States and its scenic and recreational attractions, including 102 park system units. The winners and runners-up in our contest to identify as many NPS units on the map as possible are Bruce D. McKeeman of Yosemite National Park (78 units), Steve Durall of New Carlisle, Ohio (75 units), and Ken Russell of Columbus, Ohio (72 units).

An autographed copy of the map has been sent to Mr. McKeeman, but our congratulations go to runners-up as well. It was really a close contest!

the latest word

CALL ALASKA COALITION HOTLINE TODAY

At press time it was expected that the long-awaited

Senate floor debate on legislation to create new parks and conservation areas in Alaska would begin on July 21. Because the legislation may still be in the House or in conference at this time, NPCA members are urged to call the Alaska Hotline at 202-547-5550 for a recorded update on how to help. A lobby blitz (see July) has posed the threat of a severely weakened, unacceptable bill--rather than the balanced approach proposed by the Alaska Coalition. Therefore, it is critical that you let your representative and senators know where you stand. Meanwhile, if legislation does not pass, political factors may hold up appropriations for maintenance and protection of the new monuments again. A June 27 district court ruling in Anchorage, however, confirmed that the 1978 Presidential proclamations creating the monuments were legal and appropriate ways of providing permanent protection for these areas. The court ruled against Anaconda Copper Company, which had filed suit against the President. A similar state suit is pending.

CONGRESS CALLS FOR STATE OF THE PARKS ACTION PLAN

On July 1 House park subcommittee chairman Phillip Burton and ranking minority

member Keith Sebelius acknowledged the Park Service's "fine effort" in preparing the State of the Parks report but called for a followup action plan to deal with threats to the parks. For starters, they requested a report by January 1, 1981, further expanding and refining data on conditions threatening each park unit. In the meantime, Burton and Sebelius called for an interim prevention/mitigation plan by October 1. They told NPS Director Dickenson that "there should be a major reassessment of the Service's orientation and priorities as to programs, personnel, budget, and so forth. While visitor use and enjoyment must always remain a major emphasis of the Service, this report cries out for a very greatly strengthened emphasis on natural and cultural resources protection."

PINELANDS PLAN ATTACKED BY DEVELOPERS

The Pinelands Commission recently released

a controversial draft comprehensive management plan for the Pinelands National Reserve in New Jersey. The plan immediately drew fire from development interests, even though it allows for extensive new growth--possibly too much. Speaking at Stockton State College, Bill Lienesch of NPCA commended the commission for completing its "gargantuan" task under tight deadlines. But he noted that the plan needs strengthening before it can meet the requirements set out by Congress.

SLEEPER BILL ON TAR SAND LEASING THREATENS PARKS

HR 7242, a bill reported by the House Interior

Committee on July 2, would amend the Mineral Leasing Act to facilitate recovery and production of oil from tar sand deposits. Many of the resulting leasing operations would endanger NPS units. Such operations in Utah would be within the boundaries of Glen Canyon National Recreation Area, right on the borders of Canyonlands and Capitol Reef national parks, only a few miles from Grand Canyon, and fifteen miles from Dinosaur National Monument. Such operations could assault these and other parks with a heavy layer of air pollution. In fact, relatively small operations involving similar methods in Kern County, California, have violated national ambient and state air quality standards, producing three times as much sulfur dioxide and almost twice as much particulate matter as the infamous Four Corners power plant. If tar sand operations were expedited as "fast track" projects by the Energy Mobilization Board, pollution controls could be weakened severely. HR 7242 was amended in committee to exclude areas within NPS units where the leasing is already illegal. But it allows leasing in Glen Canyon--where most possible leases are found--and fails to give the Interior Secretary enough discretion to deny leases impairing parks. The burden of proof should be on industry. At press time HR 7242 was scheduled for floor action on July 21. A Senate bill identical to the original unamended HR 7242 (S 2717) had not been considered.



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