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LETTERS & OPINIONS

I have read several reports recently which show that women are under-represented in professional societies and activities. Obviously, women are under-represented in our own natural resource professions, but the percentage of women in professional societies is much lower than the percentage of women educated and employed in these professions. Also, women are more likely to drop out of the societies after a few years of membership. These may be some of the same women who complain that they are not taken seriously as scientists and professionals by their male peers.

Some of the reasons I have heard for this lack of involvement are that professional societies are dominated by men, they are too formal, they are unrespon-

sive to women, they are too expensive, and they take too much time. With a membership of 10-15 percent women in most societies, it is not surprising that women have not had much influence yet. The Society of American Foresters took a bold step a few years ago by sponsoring a conference for women in natural resources. While this conference was well received and opened up some important networks, it may not have had much influence on the male membership of the society.

The most effective way to change any organization is by working from within. But working within professional societies means that women are going to have to join, run for offices, present papers at conferences, and serve on

committees. Even a few active women members can serve as role models to inspire other women and men.

The place where I have been most disappointed in women is in the presentation of papers at conferences and submission of papers to journals. Women may be less confident about speaking before a large group of mainly male peers. I think also that many women are inexperienced at taking con-

structive criticism and feel that editors are too strict and critical. But if women are to be respected as equals in natural resource fields, they must earn it in professional arenas. I know there are capable women doing good research, resource management, and in education. They need, however, to share their expertise with the rest of us.

A good place to share is by submitting articles to *Women in Natural Resources*. The journal has become well known as a reputable voice speaking to men and women in the professional world. You can write about a wide range of topics and the editors won't attack you. The experience of seeing your article in print is very exciting, the addition to your resume is enhancing, and the feedback from your peers is very gratifying.

Elaine Zieroth, Tonasket, Washington

...

As usual, I enjoyed my issue of *WiNR* immensely. This time, Mai Nguyen's article on the increasing number of women in Peace Corps forestry caught my eye (Vol 9, No. 4). I have one clarification with regard to Liberia, West Africa. During the early and middle 1970s, there were some administrative/advisory positions for PCVs within Forestry Development Authority. The project job descriptions (known as TAC sheets), that were in place when I arrived in September 1985 had been reviewed but not revised in 1981. The entire thrust of the project had been changed from plantation development to enrichment plantings and basic research in a number of areas. The Associate Peace Corps Director responsible for the development of the program was unaware of this fact.

The bureaucratic side of forestry development (excluding the wildlife program) is dominated by the German Forestry Mission (GFM) to Liberia, a sub-organization of GTZ (German Technical Cooperation, also known as

WiNR

WOMEN IN NATURAL RESOURCES is a quarterly journal for those who care about the world's environment and the new workforce working in it. We cover forestry, wildlife, fisheries, range, and environmental concerns. We address issues of administration and personnel, educational resources, and support mechanisms.

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West Germany's USAID). The GFM oversees all professional PCV interaction with the Forestry Development staff and provides funding when philosophical mutuality has been achieved.

At the time of my arrival, the FDA was immobilized by the non-appropriation of \$900,000 of its \$2 million annual operating budget and the remainder was also "delayed." The GFM had recently undergone significant personnel/ideological changes, and I was supposed to be the first and last female volunteer. When I discovered that I had no successor, I went through the classic "volunteer cycle." I spent a part of the first 10 months pushing bureaucratic sand uphill in an effort to change the situation. At the one-year point, my efforts required the participation of my Liberian counterparts to produce a specific project design for the Peace Corps office in Monrovia.... In the end, politics negated the need for a project design, and I was replaced by two female foresters against my own recommendations. I observed their training as I was on my way out, and midway they "just wanted to know what their jobs were"....They were able to carve out their own existence as I had, but using radically different approaches. I am especially proud of the one who has chosen to live on her own in the bush and practice social forestry....

Mary G. Porter, Rockville, Maryland

• • •

I am a woman working as an Agroforestry Peace Corps Volunteer in a remote mountain village of the Philippines. I would very much appreciate receiving your journal as the support and inspiration would be so helpful to my work here.

Sandra E. Hill, Pasay City, Philippines.

• • •

LaRae Donnellan's article (Defining the Field Naturalist Vol. 10, No. 1) had some very important and basic observations about the difficulties universities are having in being even-handed with women. Another important point was that women students in the sciences and natural resources fields truly do find the student experience more important than the female experience, and they therefore are not outspoken allies for those who want to see changes in the way universi-

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ties treat women on their faculties and research staffs. Then they are unprepared for the reality when they go forth and find discrimination rampant. I was also struck by the response given by one of the students when asked where women field naturalists are likely to find work. The student replied that she thought universities would be a good place for women. WiNR's list of women natural resources professors in the preceding issue (Vol. 9, No. 4) showed the humor in that hope. It is a pitifully small group and the list of universities criminally short. Some very large programs have no women at all and were missing from the list.

Dale Williams, Boston, Massachusetts

• • •

Chris Paxson's interview of Nancy Foster (Vol. 9 No 4) was very good and the cover photo was beautiful. I wish she had asked how much money Foster makes, and how she spends it. I am not nosy, really. I just haven't been told very often how sensible, good-looking, and successful women spend their hard earned bucks and I think I could learn something from that.

Donna Brown Trieste, Portland, Oregon

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Your publication always has something worthwhile in it; the articles in the last issue (Vol 10, No. 1) by Lori Payne (on international work) and LaRae Donnellan (on field naturalists) were particularly interesting. The various departments of news, publications, and events are also useful and often of more interest than similar columns in other journals. I wish there was

more awareness of the existence of WiNR among students. Although I frequently lend my copies to them, many others never come in contact with the publication. Do you have an eye-catching poster or flyer advertising WiNR? If so, I would like to have several to post on campus.

Katherine Carter, Orono, Maine

Eds. Note: Thank you for the nice words and for asking about our poster. Yes, we do have an attractive poster (free) which is legal size and has tear-off tabs at the bottom for subscribers to fill out. It is suitable for agency, individual, or company bulletin boards as well as universities. The upper part of the poster tells a bit about us—and even if the tabs are gone—gives directions on how to subscribe. We are sending you some. If readers want copies, it would be helpful to us (but not mandatory, certainly) if you would send a self addressed, stamped, business-size envelope.

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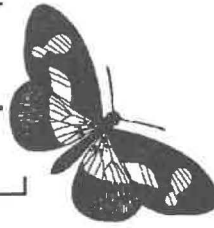
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QUERY



Women in Natural Resources is celebrating its tenth anniversary. To begin our anniversary celebration, we have initiated a new department which is named Query. In each issue we will ask the same question of several readers chosen from our subscription list. The question for this issue is, **What was/is the most important thing that you or your unit has done (or is doing) to benefit the environment?**

JOAN STANFIELD

The Laona Ranger District of the Nicolet National Forest dedicated the Bushaefer Ruffed Grouse and Woodcock Habitat Management Area in September 1988. This is a 505 acre area developed under a cost share partnership between the Ruffed Grouse Society and the U.S. Forest Service. The emphasis is to improve habitat for upland game birds. Some 60 percent of the area is covered by aspen in various age classes. We have, therefore, excellent potential for the production of the birds.

We completed development of six one-acre openings, recently, and the closure of existing motor vehicle access. Three of the openings have been seeded to a wildlife mixture of grass and clover. The other three will be planted to silky dogwood in Spring 1989. In the Fall of 1988, we sheared five acres of aspen/ alder for regeneration. Future plans are to regenerate additional small patches of alder and aspen to provide more age class diversity. These activities should result in improved grouse/woodcock habitat and improved hunting opportunities for the walk-in bird hunter.

Joan Stanfield Smith is a forester on the Laona Ranger District, Nicolet National Forest, in northern Wisconsin. She also serves as the Federal Women's Program Manager for the Forest. Prior to this assignment (1985), she worked on the Monongahela in West Virginia for five years. She is currently active in SAF and is enrolled in the National Forest Recreation Management Correspondence Study offered through Colorado State University.

KATHY KING

Managing the land for wildlife—35,000 acres called the Piedmont National Wildlife Refuge—is the most important thing my agency is doing to

benefit the environment. There is a demonstration area to show the public how to manage timber and wildlife at the same time. In this area, white tail deer and wild turkeys are hunted along with small game such as squirrel, quail, and rabbit. There are no waterfowl. My office takes care of speeches, nature trails, orientation, and publications.

Kathy King is the Assistant Manager in Public Use for the National Fish and Wildlife Service in Piedmont, Georgia. Before that, she taught in the public schools. Her Bachelor's and Master's Degrees are in Zoology and Wildlife from the University of Georgia.

JANET EGER

Probably the most important thing the Indiana (DNR) Division of Forestry has done is to reassess our management guidelines. In recent years, many of the foresters have questioned certain practices that were outdated or wrong. From many group discussions, and discussions with key individuals, a new management philosophy and policy was defined. We refined—and discarded—some of the invalid ideas. The result was a guideline that is used by field foresters in setting management priorities and practices which will benefit all aspects of sound forest management.

Janet Eger has been with the Indiana DNR for nine years. She works on the Martin State Forest in Shoals, and also on three other state forests as a timber specialist. She graduated from Purdue University in 1978 with a Bachelor's Degree in Forestry. Previously, Eger started with the YACC Program as crew supervisor, then worked as a timber technician.

MARY S. MUMFORD

I presume that a typical answer to this question would discuss a project,

plan, or prescription. It seemed that when I worked in the field, it was easier for people to see what I did for (or to) the environment. But for the last few years, I've worked in an office and with people who sometimes think that office foresters are not necessarily people whose work benefits the environment. My view is different.

I find a greater environmental influence in working with people, I am able to be a part of the changing Forest Service—an agency with vast influence on the environment. The longer I work here, the more I realize that the Forest Service has changed and continues to change. I think this change is good; for the environment it is beneficial.

It's not that I think the "old" Forest Service was bad or wrong. But it is different now. It is becoming more sensitive. I have been—and continue to be—a part of the change toward sensitivity. I have brought my love of the woods to work. People in the old Forest Service weren't insensitive; they loved the land, but they loved it in a different way than our evolving society loves it today. People of all levels and professions are becoming more sensitive to the resources. In becoming more sensitive to the land, we have become more sensitive to each other. We have learned respect. I consider the most important thing that I do for the environment is to share that and include respect for people and nature in my work.

Mary S. Mumford has been the Acting Public Information Officer for the Hiawatha National Forest (Michigan) since April 1988. She has worked for the Forest Service for 13 years: as a member of the Land Management Planning team (two years), as a field forester, and technician.

Lucky New York City. Benign neglect left some perfectly wonderful places vacant for park development. The city's Natural Resources Group tackles the big problems with improved data, citizen education, and a sense of history.

New York City Parks

Susan M. Sisinni

Many people think of New York City as one of the world's most cosmopolitan, glamorous, exciting, and oftentimes eccentric cities. Others see it as decadent, crime-infested, and squalid. Both views are correct. However, another aspect that few people know about, is that New York City is also home to wonderful natural places called parks—teeming with wildlife and vegetation. Urban and suburban areas, of course, are known the world over for their abundant squirrels, pigeons, starlings, sparrows, and rats. This city has its share of these “weedy” animals, but our inner city wildlife also includes muskrats, green herons, and American kestrels.

Every city and town has formal sitting parks nicely decorated with manicured lawns, pruned trees, and ornamental gardens; these parks serve as a communal backyard for many people. Our Central Park is probably the most famous example of these formal, landscaped parks. But New York City also has large, natural parks, too, ranging from 100 to 2,700 acres. Natural means exactly what you think it should: mature forests of oaks, hickories, and tulip trees; meadows of asters, golden-rods, Queen Anne's lace, and prairie grasses; and rich, productive fresh and saltwater wetlands teeming with waterfowl. A wide array of complex ecosystems exist amidst the pollution and other byproducts of urban life.

One reason that New York City has remnant natural areas is because of benign neglect—or put more simply, it was accidental. For a variety of social, economic, and political reasons, some parcels (later turned into parks) were not suitable for buildings; others were privately owned estates and farms held intact. Rampant urbanization during the earlier part of the century demonstrated the need for open space. Fortunately, these places remained green, and were gradually acquired by the city's Department of Parks and Recreation (DPR).

Unfortunately, property designated as parkland is not always exempt from development. The traditional focus of DPR has been to provide a variety of passive and active recreational facilities such as picnic areas, baseball diamonds, outdoor theaters, swimming pools, beaches, playgrounds, and tennis and basketball courts. During the Depression Era, Parks Commissioner Robert Moses built many of these facilities with Works Progress Administration people. World War II brought an abrupt end to Moses' grandiose plans, but he had already dramatically reduced the city's forests and wetlands—and fragmented the remaining natural parkland—by constructing

major roadways through several parks. The extreme alterations implemented by Robert Moses are best understood when contemplating the 45-acre parking-lot in Pelham Bay Park, Bronx. This parking field was built on top of the park's namesake, Pelham Bay, which was filled with three million cubic yards of rubble and topped with asphalt.

When Moses' other plans were shelved, areas that had been stripped in preparation for development and landscaping were forgotten. They soon revegetated on their own. Visitors must also try to remember the context of land-use history of New York agriculture, and of individual estate owners' preferences: then the patchwork of exotic and native vegetation—in several successional stages—is understandable as it is seen in the city today.

In the absence of cohesive management policies, the city's natural parklands began to deteriorate because vandalism, littering, and dumping compromised the function, quality, and aesthetics of these lands. This decline, along with a growing environmental awareness, spurred Parks Commissioner Henry J. Stern to create the Natural Resources Group (NRG) to ensure appropriate ecological maintenance and protection of the deteriorated natural parklands. NRG's purpose is to develop and help implement city-wide policy to preserve and protect these natural resources and to provide the agency with technical information on state-of-the-art techniques for natural areas management.

NRG's immediate objective was a city-wide natural resource inventory. The inventory was designed so that information could be collected and assessed at a variety of levels: 1) on the city-wide scale to broadly determine natural covertypes and adjacent land use; 2) ecological assessments of individual parks; and 3) the delineation of management zones within a park where use and management strategies meet a specific objective (e.g., wildlife sanctuaries, active recreation, preserves). The city-wide inventory utilized aerial photography and interpretation provided by the Cornell Laboratory for Environmental Applications of Remote Sensing.

With the data available and the natural areas in the city now clear, NRG's task became more streamlined. Thirty-six parks with ten or more acres of natural land were identified for more detailed ecological assessments. Each assessment included vegetation mapping (entitiation), wildlife habitat evaluation, soil sampling, and hydrology, as well as observations of historical and current uses, and existing environmental

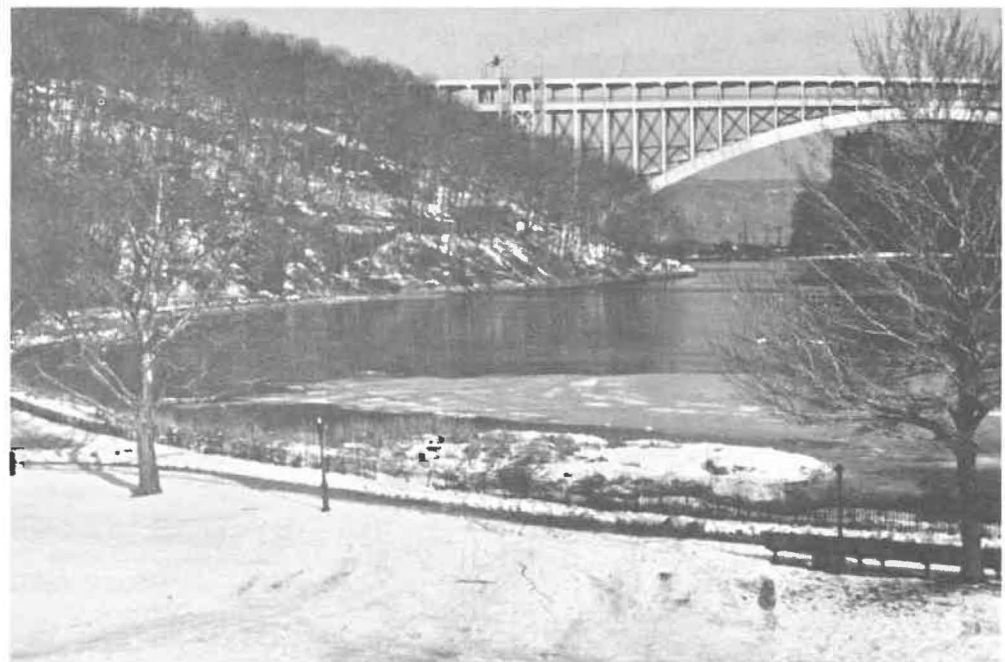


← Alley Creek and adjacent intertidal marsh. Alley Pond Park, Queens.

Egrets and great blue heron with the Manhattan skyline in the background. Jamaica Bay, Brooklyn.



View of Spuyten Duyvil Creek and the Henry Hudson Bridge. Inwood Hill Park, Manhattan.



disturbances. Entitation is a method of delineating, or mapping, vegetation communities on aerial photographs. Black locust forests with a jewelweed understory; a freshwater kettle pond surrounded by sweet pepper bush, ferns, and red maples are examples of different communities mapped.

The remaining assessment work was designed to be correlated with this form of mapping. The NRG conducted other studies after entitation was complete in order to modify methods based on the mapping results (e.g., soil samples to be taken in particular vegetation units identified by entitation). To date, assessments have been completed in ten of the city's largest natural parks totalling 6,000 acres.

What has been found in the studies has been both predictable and, at the same time, pleasantly surprising. As expected, there are many problems contributing to the degradation of natural parkland. And, the 26,000-acre park system is not much open space for eight million New Yorkers. This translates into a lot of people—using and abusing—comparatively few parks.

Controlling access and use is probably the most significant challenge for park managers. The land is crisscrossed with a maze of severely compacted footpaths, leading to trampled vegetation or severe erosion where vegetation has been killed. The hilly terrain of some parks (and in others, a wide expanse of open land) is very attractive to dirtbikers and four-wheel drive fanatics. These uses are destructive and necessitate the development of a clearly demarcated trail system.

City dwellers are not always aware of the vital role nature plays in their lives, due to a lack of education and regular contact with the environment. The city's landfills are either closed or near capacity and parks present an opportunity to discard unwanted debris, rubble, and trash. These same isolated parks are ideal locations for thieves to strip cars for parts; parks have abandoned and burned automobiles strewn throughout. To counter these behaviors, public outreach is an important service performed by NRG. Staff naturalists spend a field season (May-December) getting intimately acquainted with a particular park, then develop a detailed, thought-provoking natural areas guide. Education is a tool that will change the public view of these open spaces now perceived as wasteland, dumps, or potential development sites.

Coastal, or tidal, parks have a history of landfilling, because they were once wetlands. The rationale was: wetlands are useless, but when they've been filled, they can be developed. This was done with sanitary fill and sand: neither material lends itself to fertile soils. These locations are usually vegetated with highly competitive monocultures of exotic plants such as Japanese knotweed, mugwort, Phragmites, and Ailanthus. Once established, they are difficult or impossible to remove and can explode over a park. Exotics have already colonized sizable chunks of land that were once covered with native species. They continue to advance, creating dense shade so that other species cannot grow beneath them, leaving bare and erodible ground.

Despite these and other problems shared with parks the world over, it is important to remember that there are still wonderful reminders of what the New York metropolitan area may have looked like before European settlers arrived. Commonplace communities then and now might include remnant forests with dense, lush understories of flowering dogwoods, American hornbeams, ferns, skunk cabbage, and magnificent 3-4 foot diameter oaks and tulip trees comprising the canopies. There are also meadows of little bluestem grass that closely resemble those found in the midwest. Intertidal communities carpeted with vivid green *Spartina* grasses often have great blue herons, glossy ibises, and ospreys in or about them. Dozens of tranquil locations which inspire contemplation are sprinkled throughout the city, making it easy to leave the hustle and bustle behind and forget that you're in a huge metropolis. An added bonus is that the New York State Natural Heritage Program has identified as many as 25 plant species in the parks that are listed as state-endangered (or rare).

New York City is located along the Atlantic Flyway and is an excellent place to observe migrating birds: warblers, raptors, shorebirds, and waterfowl. Spring and fall migration time brings thousands of birders into the city parks. For birds that feed and breed in the city, Pelham Bay Park, Bronx, displays the zany courtship flight of the American woodcock, for example, or barn owls nesting in a 1930s vintage beach pavilion just a short distance from a boardwalk thronged with sunworshippers. Peregrine falcons, a federally endangered species, are nesting on the Throg's Neck and Verrazano Narrows bridges where commuter traffic backs up every day for hours.

Mammals in the city include the fairly common raccoon which doesn't object to being in the public eye. They occasionally wander from the parks, however, and take up residence in neighboring houses. Opossums and skunks are more modest, offering few sightings. They are more commonly seen as roadkills. White-tail deer were spotted in the city's third largest park, Van Cortlandt (1,200 acres), in 1987. They wandered south through Westchester into the Bronx where they resided from spring until fall. Some of the old-timers—regular visitors in the parks—tell stories about red fox, but there have been no recent sightings.

Those who are privy to the well-kept secrets about New York City's spectacular parks are offered a much needed escape valve and moments of tranquility from an otherwise harried lifestyle. It gives us, the residents, something else to be proud of, something to treasure besides the museums, shops, restaurants, and theaters. These parks are pockets of green-space and will remain a vital part of the city—because people can't live without them.

Susan M. Sisinni's degree is in Environmental Science from the State University of New York at Plattsburgh. Since 1985 she has worked for the New York City Department of Parks and Recreation's Natural Resources Group (NRG), mapping vegetation in Pelham Bay Park at first, then promoted to Field Supervisor. Today she is Coordinator of Field Operations, responsible for the development and organization of assessment work and subsequent management plans.



Why should humans have the right to use for themselves all of the other species in the world, changing whole ecosystems without thought to species diversity?

Global Interconnections

P. Dee Boersma

The oxygen molecules that Cleopatra used are still cycling through the lungs of some organism. The past is linked to the future by the present, but people rarely think how their actions form the bridges that connect to the future. The garbage we throw away today may change form, but, like the oxygen that Cleopatra inhaled, it will still be around.

Quenching thirst, satisfying hunger, finding a place of comfort, are of immediate concern for all living organisms. What makes humans different is the extent to which we enlist (use) all of the rest of the world's species to meet our needs. Humans do it on a larger scale than other forms of life. Beavers build dams, flood a forest, for example, and alter a small area. In the United States, on the other hand, we have clearcut and paved areas larger than the state of Kentucky—a scale unparalleled in the natural world.

Never before in the history of the world have human numbers been so large and they continue to grow. In the 1930s, during the depression, there were only two billion people; in 1987, the world had more than five billion. Only one organism—a small shrimp-like creature living in Antarctica called krill—may have as much *biomass* as the teeming billions of people. No other form of life, whether it be krill, cockroaches, pandas, or penguins, can determine the fate of other forms of life like humans can, partly because there are so many of us. Indeed, human interconnections pack quite a wallop.

The extinction rate of species during the great die-off of the dinosaurs was possibly one per 1000 years (Simon and Wildavsky 1984) and humans didn't have anything to do with extinctions during that time. From 1600 to 1900 the extinction rate was estimated to be one species every four years (Myers 1979). This acceleration of species extinction can be directly attributed to humans (Ehrlich and Ehrlich 1981).

Predictions of further extinctions are dependent on the rate of tropical forest cutting where the majority of the world's species are found. Based on present cutting practices, the Global 2000 report estimates that one-fifth of the world's species would be lost by the year 2000. This is probably a very conservative estimate, because most land use changes reduce rare and threatened wildlife populations and make them more vulnerable to extinction.

There is considerable evidence that altering land-use patterns changes species abundance and diversity (Soule and

Wilcox 1980). Pheasant populations thrive in the edges around corn fields; pigeons and house sparrows take over city parks; urban raccoons do well feeding on garbage. Deer populations are thought to be higher than when virgin forest covered much of the United States. These changes were not planned, not evaluated. We have just accepted them as part of the natural scheme of things. But my point is that they are not natural. Natural changes are the result of meteorological, geological, or biological forces separate from human influences. Humans now often drive these changes by modifying land, damming rivers, or spilling oil. Even large parks like Yellowstone are regulated by human action—more than by nature—as Chase (1986) documents.

The effects on populations and individual animals caused by human activities are often hard to detect—and difficult to quantify. For the past five years, for example, I have been studying Magellanic penguins that breed on the remote coast of Argentina. I have been surprised to find that their remote location and an aquatic existence is now not enough to keep them insulated from human impact even while they are at sea. Band returns from dead penguins from the the coasts of Brazil, Uruguay, and Argentina, show that 10 percent of the birds found dead are oiled and another six percent are captured in fishing nets. At one breeding colony I studied, 10 percent of the birds standing on the beach were oiled after a small spill (Boersma 1987a). As oil development, oil transport, and fishing increases, these “unnatural” deaths are likely to become more important as regulators of the population.

The relationship between a bat and one of its foods is another illustration of how land use patterns can have negative impacts on species we truly wish to protect. In southeast Asia, the Durian fruit is considered a delicacy and the crop is worth some \$35 million annually (Myers 1986). In Kuala Lumpur, the Durian fruit tree is pollinated by a bat that drinks the nectar from the flower and transports pollen from flower to flower on its nightly visits. The bat, however, is also dependent on a flower found on a plant that grows in coastal mangrove swamps which are being drained. In addition, the bat roosts during the day in caves mined for limestone. Even though the blasting in the caves has been halted, the population continues to decline, presumably because their fate is closely tied to the drained and disappearing swamplands (Myers 1986). The loss of this bat is not a natural event, but a human event, directed and caused by changes in how humans use the land.

In the wet, cool, virgin coniferous forests on the Olympic Peninsula in Washington state, I have been studying the dynamics of tree seedlings that germinate on fallen logs. I offer some details of this study because it too, illustrates interconnections. Two large native ungulates, the Roosevelt elk and Black-tailed deer, occasionally munch on the foliage of Western hemlock and Sitka spruce, the two dominant tree species in the Hoh River valley. The trees are unimportant in the basic diet of these animals, making up less than one percent of the stomach content of elk during severe winter months (Schwartz 1936, 1939). These grazers rarely eat seedlings—but when they do, they prefer hemlock seedlings to spruce. These animals, however—now protected from hunting within the Olympic National Park—determine which tree species survive to dominate the canopy thus having a large effect on the structure of the plant community (Boersma 1987b).

Although it is limited, grazing pressure in the Hoh rain forest—coupled with competition for light in the understory—determines that tree seedlings survive on fallen logs, but die on the forest floor. In enclosure experiments, I have found that seedlings are likely to be clipped on the forest floor (and then overgrown by moss and herbs), while on nurse logs, the seedling—even after being clipped by a grazer—is less likely to be overgrown by other vegetation. On the logs, grazers prefer to eat the hemlock more than Sitka spruce: consequently this spruce now dominates the hemlock in the younger age categories. Hemlock trees between two meters and ten meters are virtually absent except where growing on tall tree stumps out of the reach of grazers. The canopy, in contrast, is dominated by hemlock, attesting to the fact that several hundred years ago, the pattern was reversed. Because of the grazing on hemlock, however, within a few hundred years the Sitka spruce will supplant the hemlock as the dominate canopy tree. My study in the Hoh shows that grazers can be the keystone species in forest dynamics, determining tree species abundances, composition, and canopy dominance.

The importance of these kinds of relationships in these ecosystems are just beginning to be understood. How much more difficult to understand the interconnections in a tropical rainforest where the diversity of species, number of interactions, and intensity of interactions vary by sometimes orders of magnitude compared to most temperate forests.

Agriculture and forestry are among the largest global experiments in land use in the world. Much more attention needs to be directed to how these activities affect species diversity, composition, and abundance. Research and management should address specific questions, such as: how do forestry practices affect wildlife? For example: In tropical areas, forests with 400 tree species per hectare are being replaced by one or two exotic species like Caribbean pine or Eucalyptus. Tree diversity is drastically reduced. Similarly, the animal community quickly becomes depauperate and gives forests in Africa and South America an eerie silence compared to virgin native forests. Can we afford to change species composition when it reduces native wildlife or adds toxins to the soil?

In another example, when a hectare of virgin land is cleared and cut in temperate regions, perhaps seven or eight species of native trees are felled and replaced by only one of

the native species. In the Pacific northwest at low elevations, Western hemlock, Douglas fir, Western red cedar, Sitka spruce (and other combinations of tree species) are cleared and replaced by planting or seeding just Douglas fir. The pattern of succession may be altered, but the native species are still the dominant component of the system supporting a variety of other plants and animals. Generally, temperate forestry sets succession back, but the forests are similar in composition to native habitats used in the area for thousands of years. Temperate forestry often uses native species of trees, while tropical forestry practices tend to introduce exotic species. This results in a radical simplification and alteration of the community's composition. Interconnects that occurred in the original tropical forestry may be ruptured for generations—perhaps millennia.

One of the considerations as we change forests from native forests to exotic forests, or from diverse plant communities to monocultures, is whether society can afford this rich species loss? Forests are often considered only in economic terms—so many board feet, rolls of paper, or BTUs—but their value is far greater. How do we calculate the value of wildlife and the interconnections between species that forests support? Pollinators like the Durian bat that depend on mangrove forests and contributes to a billion dollar industry have an economic value not represented in the calculation of board feet or the price of fruit. There are valuable genetic, touristic, medical, and other economic resources to be considered.

The intrinsic value of natural land should be calculated before the land use is changed. Private owners will object. Their freedom to do with the land as they please has been unlawfully curtailed, but on the other hand, the right of individuals and governments to damage, pillage, and destroy natural ecosystems cannot be tolerated by society. One way to begin might be to levy a tax based on the value of the forest or land before development. Any change that decreases species diversity or ecosystem functioning should be paid to the government or the community. Under such a system, wild land becomes valuable not only for what it can become but for what it is. The Durian bat is worth \$35 million and changes in bat numbers could be estimated before forests are cut or caves mined for limestone. The developer thus pays the true price for change.

Damaging of interconnections should be seen not as the price of progress but as a cost to be paid in advance. Ecological disasters are paid for by the polluter instead of by an erosion of environmental quality. Under such a system, converting wild land to a housing development would cost more than to eliminate old houses in existing towns and build new ones of wood.

Scientists and practitioners can be instrumental in weaving the rich diversity of life back into forestry management. It is important to make government and industry understand that there is more to forestry than board feet. The fundamental question that must be addressed is how much of the world's species, land, productivity, and resources can be used by humans and how much should be allocated to the millions of other species that inhabit earth? Does a wood boring beetle have any right to a Douglas fir log—or does a woodpecker

please turn to page 12

Some folks think traveling to Disneyland is the greatest while others plunge into jungles or rapids to refresh and renew themselves. Who is right?

Adventure Travel: The Psychology of Tourist Behavior

Ruth V. Russell

Ulysses is the hero of Homer's epic poem, *The Odyssey*, an adventure story about Ulysses' travels over a ten year-period between the fall of Troy and his homecoming in Ithaca, an island off the west coast of Greece. In the story, the sea god Poseidon, angry at Ulysses, sends a gale to wreck his ship and besets him with troubles on his journey home. Ulysses is befriended, however, by the goddess Athena, who in the end persuades Zeus, the most powerful of gods in the Greek pantheon, to permit Homer's hero a safe homecoming (translated by Butler 1952). The *Odyssey* is a story about adventure travel.

Webster's dictionary defines the word "adventure" as an exciting and sometimes dangerous undertaking. An adventure is a stirring experience, full of extraordinary events that have no apparent practical value. Most healthy human beings have a taste for adventure. Adventure sends children up trees. It sends college students to Ft. Lauderdale each spring. It makes adults want to change jobs. Without some sense of adventure, without some need to explore, we would not get much past our own backyards.

The need for exploration and adventure has been termed the Ulysses Factor (Anderson 1970). Such a need is a motivational force that prompts a person to do something, which for him or her contains some degree of risk. Persons highly motivated by the Ulysses Factor strive to satisfy their curiosity about the world and about themselves. Boundaries and limitations are not accepted as insurmountable. This need for adventure is both physical and intellectual. Yet while the Ulysses Factor is driving us to explore the unknown, there is an opposing and equally powerful force motivating us to seek security, predictability, and consistency.

Travel preferences can thus be represented as the opposing forces of adventure versus consistency. Whereas a tourist with a high need for adventure in travel would be more likely to choose a camping and hang-gliding trip to Thailand, a tourist with a higher need for consistency in travel would likely choose to take his or her motor home to Disneyworld. Most vacation travelers, however, represent a balance between these two forces. Their travels are made relatively risk-free by travel agents, tour guides, standardized lodging chains, and Americanized hotels in foreign countries. Nevertheless, they still feel the need to leave the warmth and safety of their homes and to travel.

In the late 1980s a new breed of vacation traveler emerged.

Increasing in numbers, bolstered by youth and high discretionary income, this traveler, propelled by a need for exploration and adventure, has been labeled the adventure traveler.

Examples of Adventure Travels

The opportunities for adventure travel seem unlimited. A single company, World Expeditions, lists 1,000 different adventure trips in its 1988 catalog. *Outside Magazine's* expedition services directory lists 136 different adventure travel companies worldwide. Following are some actual examples of trips available in 1988 through adventure travel brokers.

•Case 1: With an inn-keeping tradition as old as the Republic itself, Vermont long has been high on the charts for early autumn trips. The latest way to travel between inns is to canoe. The two frontrunners in inn-to-inn canoeing are Canoe Vermont and Vermont Canoe Trippers. Both offer fully guided two to five day trips for persons with a variety of skill levels.

•Case 2: For those looking for a perfect camping partner — one who's polite, friendly, trail-hardy, and willing to haul all the gear — how about a llama? Roughly 25 llama-packing outfitters are scattered across the country, though they tend to cluster in the Rocky Mountains and California. For example, The Great Northern Llama Company leads groups into Montana's glacier country near Canada, where snowfields linger until mid-August.

•Case 3: Earthwatch is a research/travel agency that offers working trips. Volunteers, paying their own expenses, can study hill tribes during a trip down Thailand's Chao Phya River, or endangered butterflies off the Oregon coast; they can dive in the kelp beds off the coast of Chili to collect fish specimens, or be dispatched to the Maya ruins at Copan in western Honduras, where a trove of jade antiquities was discovered this past spring.

•Case 4: Mushing a dog team in Alaska won't prepare a person for the Iditarod, but it's a start. Bob Crockett runs multiday mushing trips in the shadow of 20,320 foot Mt. McKinley. Adventure-seekers learn to run teams of four to eight dogs about 15 miles a day through snow-covered spruce and alder, past tracks of moose and wolverine. Crockett's five-day trip (\$995) includes a night in an igloo constructed by the tourists themselves. He advises against bringing small children and suggests mushers be in top-notch condition.

•Case 5: Canoeing in the Arctic or kayaking in China may not always have been for everyone, but now those and other adventure trips can be. One of the first adventure travel

companies to open their trips to the disabled, Wilderness Inquiry II, scheduled a trip for a group of able-bodied and disabled persons to New South Wales, Australia, this past spring to canoe and raft the Class II and III rapids of the Snowy River. In 1989 they'll kayak the Amazon.

The Psychology of Adventure Travel

Since adventure traveling often involves extended time and lots of money—as well as a strong dose of the Ulysses Factor—why, therefore, is this segment of the travel industry growing? What is the motivation for adventure travel?

A number of motivational explanations have been advanced in both the research and folklore literature to account for it. Aldous Huxley (1925:12) wryly observed that “We read and travel not that we may broaden our minds, but that we may pleasantly forget they exist.” In the research on travel motivation, however, numerous factors determining vacation preferences are studied. Such determinants as age, income, amount of discretionary time, professional occupation, level of education, childhood experiences, availability of opportunities, recreation behaviors—as well as social, physical and psychological needs—play a role in the type of travel people choose (Pearce 1982).

For example, Wahlers and Etzel's (1985) research explored the relationship between vacation preferences and individual stimulation needs. Results indicated that those respondents with lower levels of stimulation in daily life more often sought stimulation in vacations and, thus, were more likely to choose trips characterized as invigorating and innovative. On the other hand, those respondents with higher levels of stimulation in daily life tended to avoid stimulation in vacations, and thus, were more interested in vacations described as structured and enriching. Although research with adventure travelers has not as yet been designed to test Wahlers and Etzel's hypothesis, it appears to lack construct validity since adventure travelers are frequently persons with high stimulus occupations.

Personality is also a psychological factor in predicting travel behavior. Personality is most frequently described in terms of particular traits that form a consistent pattern of perceiving and organizing one's perception of the world. It represents a composite of learning, perceptions, motivations, emotions and roles (Mayo and Jarvis 1981).

One area of

inquiry on personality and travel divides people into either psychocentrics or allocentrics (Mayo and Jarvis 1981). Psychocentric people are concerned with little problems and with themselves, and they are generally anxious, somewhat inhibited, and nonadventurous. Allocentric persons are adventurous, self-confident, curious, outgoing, and eager to reach out and experiment with life. Clearly, there is a great deal of similarity between an introvert and a psychocentric person and between an extrovert and an allocentric person.

In a study designed to explain why vacation destination areas rise and fall in popularity, it was found that the travel behavior of psychocentrics and allocentrics differs significantly (Plog 1972). For the psychocentric personality, with a strong need for predictability in life, rest and relaxation are among the strongest travel motives. The ideal vacation for the psychocentric personality is one in which the destination itself and the activities, hotel, restaurants, and entertainment are consistent and dependable (Table 1). Strong psychocentric personalities will normally be attracted to vacations in Miami Beach, Monterey, Disneyworld, and Williamsburg (Plog 1972).

The allocentric personality, on the other hand, apparently has a strong need for unpredictability in life. He/she typically visits out-of-the-way destinations, prefers to fly, is physically active during the vacation, and enjoys traveling to foreign lands (Table 1). Much of the ideal vacation for the allocentric personality is unpredictable and complex (Plog 1972). Individuals with strong allocentric personalities will normally be attracted to such destinations as Central America, Africa, and the Orient (Plog 1972). Adventure travelers usually have strong allocentric personalities.

Most people, however, are neither strongly psychocentric nor strongly allocentric in personality, but are what researchers have labeled mid-centrics (Plog 1972). Mid-centrics reflect a

Table 1
Travel Preferences According to Personality Type

Psychocentrics	Allocentrics
Prefer the familiar destinations	Prefer non-tourist areas
Like commonplace activities	Enjoy sense of discovery in new experiences
Prefer sun 'n' fun locations for relaxation	Prefer new and unusual locations
Low activity level	High activity level
Prefer locations to which they drive	Prefer flying to locations
Prefer heavy development and tourist attractions	Prefer few tourist attractions
Prefer family atmosphere	Enjoy meeting people from foreign cultures
Complete tour packaging with heavy scheduling of activities	Tour arrangements should include basics and allow considerable flexibility

(Plog 1972)

personality type that is neither really adventurous nor fearful of travel and they are attracted to guided tours to destinations like Hawaii, the Caribbean, Europe, and Mexico — vacations that are foreign, yet familiar. Mid-centrics, therefore, are those who most frequently select major tourist spots, thus becoming the principal targets of the main market for travel.

Given that the adventure travel business appears to be experiencing tremendous growth, does this growth signal a change in peoples' personalities? Are Americans becoming more allocentric? Only research can tell us the answer, and such inquiry has yet to be done. To the contrary, it may be more plausible that a certain, small proportion of people has always been allocentric. It is more likely, then, that the travel industry has only recently discovered how to market this population segment. Or, perhaps, because of our generally more relaxed society, persons having greater time flexibility, fewer family responsibilities, and greater discretionary income opt for more adventure trips.

Regardless of the root of the phenomenon, adventure travel is now a significant component of the travel industry. The message seems clear and generalizable. People's needs for recreation are varied and wide. Those recreation service delivery systems, whether they be urban or natural resource based, that are able to know and understand these needs and directly meet them will thrive. That need which is being met in recreation services, such as adventure travel, is perhaps best expressed by quoting the 1988 trip catalog for Sobek's International Explorers Society:

"The universe is bigger as we look closer, smaller as we pull back. The tourist who signs for the round-the-world-in-8-days jetlag special is left bleary eyed and a memory-blank blur, and might have done better at home with a James Michener novel. Yet the journeyer who immerses himself [sic] in a rainforest, clutches the side of a mountain, punches the spray of a wild river, or even contemplates Walden Pond, will discover wells with unfathomed depths, windows overlooking infinity."

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Ruth V. Russell is Assistant Chair of the Department of Recreation and Park Administration, and Co-Director of the Leisure Research Institute at Indiana University. She has traveled widely and is an avid adventure traveler. Most recently she trekked in Nepal and is scheduled for a trans-African trip in 1990. During her career, Russell has taught recreation courses in the Pacific and in Europe.

Global Interconnections from page 9

have a right to both the beetle and the log? These interconnection decisions are now being made by humans instead of being left to chance or to nature. Now is the time for foresters to call for new strategies which will use native species and fewer exotics, and for land use patterns that foster wildlife and their interconnection needs to reduce the growing number of extinctions.

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Academics in Court: The Consequences of Faculty Discrimination Litigation

by G. R. LaNoue and B. A. Lee (University of Michigan Press 1987)

Academics in Court is required reading for anyone who is considering litigation involving discrimination. This comprehensive treatise explores "what happens to the particular people and institutions that get caught up in the litigation process." The focus is on the financial, emotional, and occupational costs to the plaintiffs, defendants, attorneys, and other individuals touched by legal action brought by faculty members against colleges and universities which they perceive as treating them unfairly in matters of employment.

More than 300 cases of discrimination charged against academic institutions have been subject to federal court decisions since 1972. Complaints have included inequitable salaries, promotion and tenure denials, and unfair hiring and termination practices. Most plaintiffs have been women, and most cases have been decided in favor of the defendant, i.e., the academic institution.

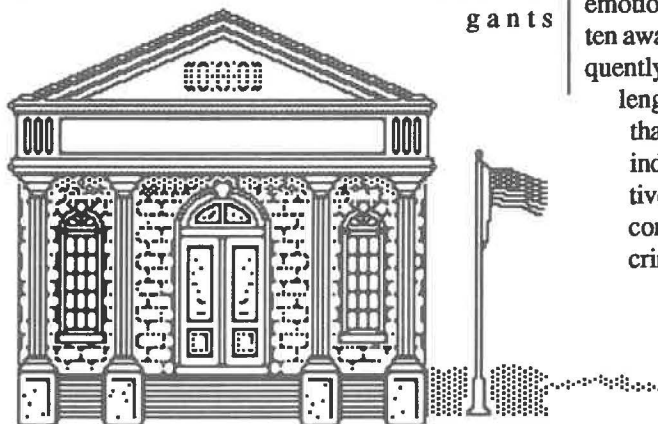
From these lawsuits, the authors of *Academics In Court* have selected five (four initiated by women) for extensive analysis, and have substantiated their findings through surveys of individuals involved in other allegations of discrimination. Each of the cases is presented in a separate, well-organized chapter which provides details of the triggering incident, the use of internal remedies (e.g., attempts to settle out of court), pretrial preparation, and events during and after the trial.

A theme frequently reiterated is the lack of support experienced by the litigants. They reported feeling alone, exposed, abandoned. One plaintiff warns prospective litigants, "You are all by yourself, out in the cold." During her trial, her attorney asked members of several local women's organizations to show support by their attendance in the courtroom.

Some promised to do so, but never appeared. Requests to women's and professional organizations for financial or moral support generally were unfulfilled. A black litigant, charging racial discrimination, received little support from the black community.

A second thread that runs throughout *Academics in Court* concerns the financial process. One plaintiff withdrew money from her retirement fund, sold stocks she had inherited, and eventually declared bankruptcy because of insurmountable costs. Another sold her gold jewelry to pay attorneys' fees.

Potential litigants



are repeatedly cautioned to obtain a realistic concept of the potential costs before instituting a lawsuit.

Compounding the financial burden is the fact that many litigants are unemployed. Having been terminated from their positions at the indicted institution, many are counseled by their attorneys against seeking other academic positions while their cases are under consideration. Other individuals experienced an inability to obtain academic or other professional positions. One litigant, whose suit was settled in her favor after seven years, had by that time moved to another state and undertaken a new career.

On the positive side, some academic changes have come about as a result of discrimination lawsuits. At many institutions, faculty employment policies have

been clarified, and guidelines and procedures for faculty evaluation have a more definitive structure. Some campuses have become "better for women," and undoubtedly better for all faculty, as qualifications and expectations are more clearly enumerated and enforced. To this extent, some litigants have experienced vindication: they perceived that certain rights denied to them would be denied to others if they failed to protest in a formal manner.

The final chapter of *Academics In Court* sums up the conclusions and recommendations of the authors. Of particular importance are the various impacts of the judicial process on litigants, which were usually negative even in those cases favorably decided. Friendships were destroyed, families were torn apart, plaintiffs were bankrupted both financially and emotionally. Many changed careers, often away from academic endeavors. Frequently, the work environment at challenged institutions became so hostile

that it was no longer possible for the individual to be comfortable or effective there. Many attorneys have become unwilling to participate in discrimination lawsuits, perceiving a tremendous expenditure of time, money, and effort on cases that usually end in defeat for the plaintiff.

However, the publication is more than just a "handbook" for those who would litigate. The case studies are well presented in a style that will hold many readers' interest. Delightful presentations of "local color," as in brief historical descriptions that set the stage for the individual lawsuits, balance the narrative of the legal proceedings. *Academics in Court* is an entertaining yet sobering book, with a sad "take-home message"—that persons who are targets of discrimination often become victims of the judicial process as well.

Reviewer Margaret Reilly is Book Review Editor of AWIS Newsletter (*Association for Women in Science*). This review is reprinted from Volume XVII, Number 6 (November/December 1988).

PEOPLE

Linda Roose, computer programmer analyst in the Northern Regional Office (Missoula) of the Forest Service, initiated a Region-wide network for working parents after a GSA survey indicated a need for child care for traveling employees. Roose called the first meeting of interested parents at the Regional Office in the spring and found interest was high. The group has identified child care facilities—both public and private—with contact people in nearly all the Forests in Region One. Before traveling, the employee need only call or send a Data General message to a contact person at their destination who then makes arrangements for child care. Another byproduct of the network in the Missoula area is a compilation of summer youth activities available through the University of Montana, the

YWCA, YMCA, and other organizations. In Missoula, brown-bag lunch programs are held each month featuring a special program of interest to the parents group.

The New Alchemy Institute (237 Hatchville Road, East Falmouth, Maine 02536) is a small, non-profit organization that supports research and education which contribute to the ability of humans to live in more environmentally sound (gentler) ways. For several years, **Colleen Armstrong** has led the Institute's research on integrated pest management of greenhouse floral insects. She reports on some of the successes in *Annals of the Earth* (Vol. 1, No. 2).

Want to see something really wild?

Do you know where to look? Thanks to the Defenders of Wildlife and a coalition of private, state, and federal sponsors, you'll be able to locate wildlife in one state—the furry, feathery, and finny kind—by consulting the new *Oregon Wildlife Viewing Guide*. **Sara Vickerman**, Regional Program Director of the Defenders of Wildlife, said that this effort will be the beginning of a partnership to help protect Oregon's wildlife resources while providing the public with

abundant viewing opportunities. The BLM office for Oregon and Washington suggested the viewing guide as a cooperative project. The guide provides specific directions to—and information about—the wildlife values for 123 viewing areas in Oregon. The Department of Transportation designed a special binoculars logo for the viewing network.

Kathleen Ochs is preparing an annotated bibliography about Women and Technology. Books, journal articles, dissertations, bibliographies, special collections, and other items that have been published between January 1978 and June 1988 will be included if they document the involvement of women in technology. Contact her if you have offerings at the Humanities and Social Sciences Department, Colorado School of Mines, Golden, Colorado 80401 (303-273-3750).

Myra Dinnerstein, Chairperson of Women's Studies and Director of the Southwest Institute for Research on Women (SIROW) at the University of Arizona, has left that position—one she has held since 1975—to become Research Professor in Women's Studies at that university where she will teach and do research full-time. Dinnerstein was a pioneer and a successful one at that. Women's Studies has grown to over 30 courses, offering undergraduate majors and graduate degree minors in history and English. Some 1,300 students participate. Dinnerstein also oversaw the Women in Science and Engineering (WISE) program for girls and young women. A community support group, the Women's Studies Advisory Council (WOSAC) provides funds for student travel to conferences and for faculty summer research. SIROW is the research arm analyzing women's employment, aging, health, history, culture, and multicultural perspectives,

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What makes a recreation specialist? One researcher looks at expertise, social and site contexts, gender, age, and experience in this case study.

Rockclimbers

Steve Hollenhorst

Quality experiences for one set of outdoor recreationists may not be quality for others. A specialist would likely define quality differently than a novice, implying the need for variability in management's approach to satisfying the needs of users (Driver and Brown 1978; Haas et al 1980). To be effective, managers must be able to accurately classify recreationists based on their specialization level. These characteristics can then be matched with certain recreation setting attributes that managers can manipulate in order that high quality opportunities result for the user (Hollenhorst and Ewert 1987).

In this study, expertise (skill) was identified as the measure of specialization. While often referred to as an important dimension of specialization, expertise has been the focus of little research. This could be because of the difficulties associated with quantifying a recreationist's skill in a given activity.

The notion of a behavioral measure of specialization is well supported by the leisure literature. Dustin et al (1986) suggested that outdoor recreationists participate, in part, for a sense of competence. Another noted that perceptions of competence result through expressions of expertise (Atkinson and Feather 1966). Similarly, recreationist self-sufficiency has been proposed as a primary goal of recreation professionals (Dustin et al 1986; Gunn and Peterson 1978; Nash 1985; Sax 1980). Recreationists should be provided with opportunities to develop self-sufficiency through a system of increasingly challenging, complex, and novel recreation environments. It is through self-sufficiency that feelings of competence—and ultimately quality experiences—arise.

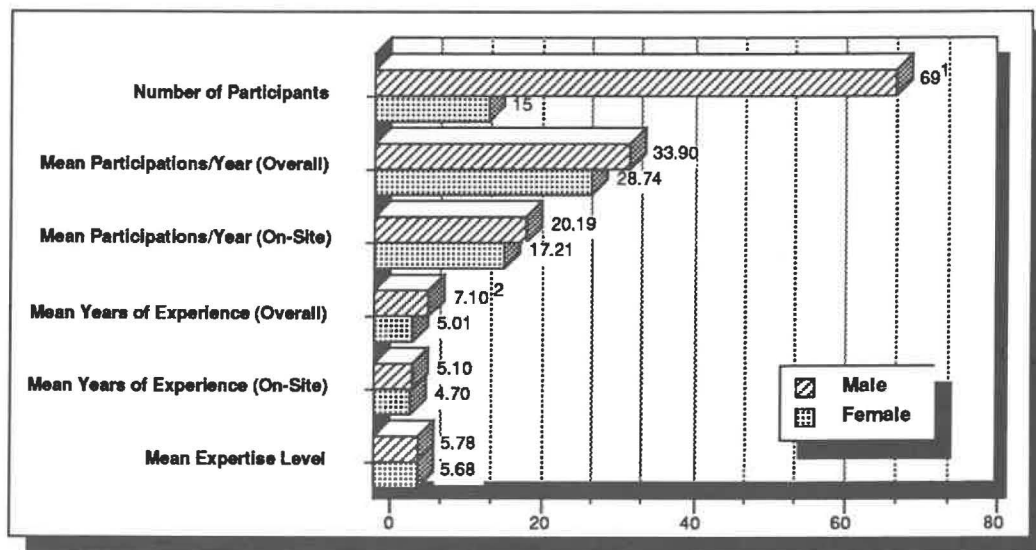
Specialization researchers have found that as specialization increases, setting attributes become more par-

ticular and dependency upon the natural qualities of the resource base increases (Bryan 1977; Shreyer and Beaulieu 1986). Specialists are more sensitive to crowding (Graefe et al 1985), disturbances (Lucas 1985), and management restraints (Wellman and Huffman 1982). As specialization increases, social contexts tend to shift from family to peers of similar skills and interests (Bryan 1977). Specialists are also more likely to be displaced (Roggenbuck et al 1980)—that is, make a decision to change recreation behavior because of a perceived adverse change in the recreation environment (Anderson and Brown 1984). One of the goals of this study was to determine whether these patterns can be generalized to one group of risk recreationists: rockclimbers.

Purpose of the Study

Researchers explored the idea that recreationists can be classified on a continuum of specialization, and that distinctly different participant characteristics, behaviors, and preferences are associated with each level. Identification of these types of patterns would have descriptive and predictive utility regarding the user's orientation to, and behavior in, a particular outdoor recreation activity. Such information would be useful in

Figure 1 Number of Participants, Mean Experience, and Mean Age of Female and Male Rockclimbers Studied at Various Sites in Minnesota and Ohio, 1987 (N = 84)



¹ Significantly more male climbers ($z = 5.89, p < .0001$)

² Groups not equal at $\alpha = .05$

management decisions intended to improve the quality of the recreation experience for these users.

Researchers were also interested in gender. This paper compares and contrasts female and male climbers in terms of skill level, experience, numbers of participants and social contexts of participation.

Methods

Rockclimbers were an attractive study population because of the difficulty rating system that is applied to virtually every climb in North America. This rating scale ranges from 5.0 (very easy) to 5.14 (most difficult). By unobtrusively recording the difficulty rating of the climb completed by the subject during observation, researchers obtained a consistent and behavioral measure of expertise.

Eighty-four rockclimbers from four types of climbing sites in Minnesota and Ohio were selected as study subjects. Data were collected during the summer of 1987. To control for the confounding effect of risk, only "top-rope" climbers served as potential study subjects. In a top-rope arrangement, protection is pre-set at the top of the climb using trees or other solid fixtures as anchors. Unlike lead climbing, where protection is placed as the leader ascends the route, the level of risk in top-rope climbing is constant from climb to climb, regardless of the difficulty. Since the rope is anchored from above, difficult climbs are as safe as novice climbs. By eliminating the effects of different levels of risk, the relationship between expertise and the indicator variables could be more clearly analyzed.

Specialization level was defined simply as the expertise demonstrated by study subjects. To control for testing effect, subjects were approached after the climb was completed. At that time, the researcher asked them to participate in the study. If they agreed, the difficulty rating and other behavioral observations were recorded, and they were asked to complete a short questionnaire.

Other data collected included information on:

- onsite and overall experience
- the social and ecological character of the setting engaged
- age

- gender
- use of technical equipment
- social group context
- participation in other risk recreation activities.

The researchers contrasted study sites and site managers in terms of the social construct of use density and the environmental construct of naturalness. Two sites were characterized by low use, and two by relatively high use. In each of these groups, one site was characterized by minimal evidence of human influence, modification, and development. The other site exhibited significant evidence of these activities.

Results and Discussion

Descriptive Statistics

Not surprisingly, the mean expertise level demonstrated by study subjects was 5.74 (Table 1). A 5.7 or 5.8 rating is of moderate difficulty, especially in a top-rope situation. The rather high frequency of rockclimbing participations per year, both on-site (16.7) and overall (28.1), is somewhat surprising. Given a seven month climbing season at these sites, these frequencies translate into one rockclimbing participation per week, suggesting that this population is comprised of dedicated and frequent participants. These frequencies also translate into one on-site rockclimbing participation every 1.5 weeks, suggesting that this population is comprised largely of climbers who live close enough to visit the site on a regular basis.

The mean years of both on-site and general rockclimbing experience is surprisingly low: 4.16 and 6.42 years, respectively. This may be a result of the recent growth in popularity of rockclimbing as an outdoor recreation activity. Considering the mean population age (28.5 years), participants apparently tended to begin rockclimbing in their early twenties.

Gender Differences

Sixty-nine (82 percent) of the study subjects were male and 15 (18 percent) were female (Figure 1). From a test of the proportions, there is strong evidence to believe that more men rockclimb at these sites than do women ($Z=5.89$, $p<.0001$). From 95 percent confidence intervals on the proportions, it can be concluded that between 13 percent and 23 percent of the climbers at these sites are women.

The low proportion is consistent with previous studies which have found that many outdoor recreation activities continue to be comprised primarily of male participants (Hammit et al 1985).

Reasons behind this disparity are likely steeped in cultural stereotypes and perceptions regarding gender appropriate leisure behavior. Rockclimbing may be perceived by both men and women as requiring a great deal of muscular strength if it is to be engaged in successfully. Apparently a significant barrier to participation, women are discouraged from trying the activity; men tend to climb with other men.

It is interesting to note, however, that while most climbers are male,

Table 1 Expertise level, Experience, and Age of Rockclimbers Studied at Various Sites in Minnesota and Ohio, 1987 (N = 84)

Variable	Mean	Standard Deviaton
Dependent		
Expertise Level	5.47	.3
Independant		
Years Experience (On-Site)	4.16	4.1
Participations/Year (On-Site)	16.70	16.0
Years Experience (Overall)	6.42	4.0
Participations/Year (Overall)	28.10	19.9
Age	28.48	7.9

only one significant difference was found between male and female climbers in terms of expertise and experience. While climbing and other adventure recreation activities may indeed be perceived as too difficult for women, it can be concluded that this perception is, at least in the case of rockclimbing, ungrounded. The expertise and experience women demonstrate in rockclimbing is equal to that of men.

One gender difference was significant: the mean years of overall experience in rockclimbing was 5.0 years for women, and 7.1 years for men. Until fairly recently, involvement of women in rockclimbing was almost unheard of. Only in the last few years has it become "acceptable" for a woman to be a climber. As a result, women have fewer years of experience in the activity.

Based on the data, it appears that the main barrier to participation is not skill and ability, but rather cultural stereotypes and misconceptions regarding the appropriateness of rockclimbing as a leisure activity for women.

Correlations

The results of the study are consistent in several respects with past research. Rockclimbers appear to move through a predictable syndrome of specialization related to years of experience and frequency of participation. However, expertise was more strongly correlated with frequency of participation, both on-site and overall, than with years of experience (Table 2). It appears that frequency of participation is more important in developing expertise than is years of experience.

An extremely high correlation was found between expertise and social context. Specialized climbers tend to join elite social worlds of other climbers and participate less often with family and friends. Participation in lead climbing and other risk recreation activities were also strongly associated with expertise, suggesting that they seek higher and more objective levels of risk in their leisure behavior.

Finally, the moderately strong association between expertise and the use density of the site suggests that specialists are also more sensitive to and likely to be displaced by crowding. While it appears the novice is willing to fight the crowds and wait in line to climb a route, these conditions are highly distasteful to the specialist.

Contrary to research on other user populations, specialization among rockclimbers was not found to be related to an increase in resource dependency. Bryan (1977:182) found that the more specialized the trout fisher, "the more *his* enjoyment and pursuit of the activity is inextricably linked to the nature and setting of the resource." It appears that this finding does not hold true with rockclimbers. When a climber makes a decision about where to climb, the important considerations are the specifics of the route and the rock at the site, lack of crowds, and opportunities for preferred social interactions. Naturalness appears to be largely inconsequential to the decision.

Specialization was not found to be related to a narrowed focus of interest and involvement. Rather, a broadening of interest and involvement in other risk recreation activities was found to occur as specialization increased.

No correlation was found between specialization and age. It was expected that as age increased, expertise would increase until the middle thirties when it would begin a slow decline.

Table 2 Correlations (R-square) Between Expertise Level and All Possible Indicator Variables in a Study Of 84 Rockclimbers at Various Sites in Minnesota and Ohio

Indicator Variable	Correlation with Expertise Level (R-Square)
Social Context	.67 *
Frequency of Experience	
Overall	.64 *
On-Site	.56 *
Participation in Lead Climbing	.49 *
Years Experience	
Overall	.37 *
On-Site	.31 *
Participation in Other Adventure Activities	.35 *
Density	.22 *
Natural Character	.06
Age	.04
Gender	.03
Use of Technical Equipment	.04

* P-value is less than .05 - conclude there is a significant correlation between expertise and each of these variables.

This was not supported by the data. One explanation is that the physically strenuous nature of the activity may favor younger climbers, allowing them to perform at expert levels without years of training. Conversely, years of training and skill development may allow the older climber to also perform at an expert level, in a sense using experience to compensate for lost physical abilities. Thus, for the age range of this population (15 to 47 years) the effects of age are largely ameliorated.

The literature also suggests that specialists are more likely to use technical equipment like perlon ropes, sewn harnesses, chalk, and climbing shoes. On the contrary, non-specialists were found to be just as likely to use this equipment. It is likely that the purchasable nature of this variable makes it a poor indicator of one's actual level of specialization.

Summary

These findings support the contention that adventure recreationists can be classified on a continuum of recreation specialization, and that distinctly different participant characteristics, behaviors, and preferences are associated with each level. This continuum relates to skill level, experience, social context, and type and level of risk. Moreover, expertise has proven to be a useful and informative measure of recreation specialization.

The approach used in the study has descriptive and predictive utility regarding the user's orientation to and behavior in, a particular leisure activity. The results can be used to type users so that groups seeking different attributes of the experience can be identified. For instance, managers who

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Thirty extension monitors work with 809 fishponds involving 4,000 families. Trials show harvests of up to 2,000 kg. of T. nilotica per hectare per year. An Auburn University researcher gives a progress report.

Rwanda Women in Aquaculture

Karen Veverica

An informal survey conducted among the project extension agents in Rwanda revealed that 300 women were directly reached by the fish culture project's extension service in 1985. This number includes two women who inherited ponds from their deceased husbands, hence are classified as "individual pond owners," 10 women's collective cooperatives with a total of 173 members, and 18 mixed women/men cooperatives including 113 female and 145 male members. There are also 15 women-oriented institutions possessing fish ponds. These include health centers, nutritional centers, schools, a prison, and community development groups. It is thought that women participating in group work at these institutions are indirectly reached by the extension service. The number of women benefitting from work experience and instruction at these institutions varies at any given time; it can be estimated that approximately 50-100 women per year per institution participate.

Without counting the institutions, it is estimated that women presently account for about 10 percent of the fish farmers reached by project extension agents. This is somewhat misleading because many women manage ponds that are classified as belonging to their husbands. However, it is not known how many of these women decide on the marketing of the fish and allocation of the resulting income.

In order to increase women's involvement in fish culture—thereby providing more women with a modest source of income—the following has been noted:

- Project extension agents (all male) were encouraged during their November 1985 review course to try to augment the number of women-owned fish ponds. The extension agents have noticed that women tend to follow their advice better than

many men. Because agents are evaluated on the basis of rural pond productivities in their area, the agent himself is at an advantage if he works with more receptive women farmers.

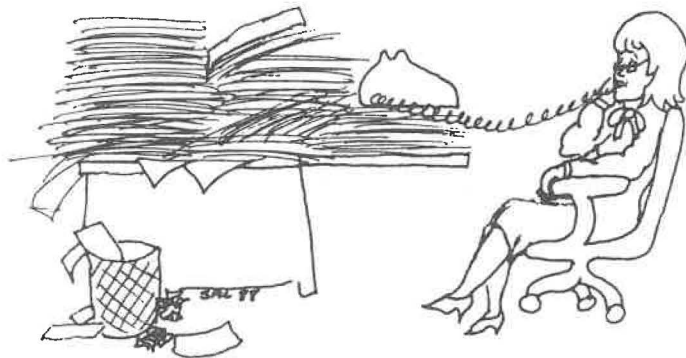
- The Rwandan government has designated days for community work to be done by all citizens. Tuesdays are for men and youth groups, Thursdays for women, and Saturdays for government workers. Thus, an extension agent (whose community workday is Saturday) cannot contact farmers on Tuesday unless they are female.

- During the planning phase of the progressive fish farmer training, it was realized that even if a separate session were held for women fish farmers, the turn-out would be low because most rural women cannot leave their families for a week at a time due to their substantial work load and responsibilities. This has been verified by other development workers in Rwanda and is the major obstacle to reaching women.

- The training staff has decided that instead of increasing the number of meetings to which women are called, the training should reach them where they presently gather: at health centers and nutritional centers. In September or October 1986, the project trained health and nutritional "monitrices" who work with fish ponds or in areas of high fish culture activity. Subjects included pond management as well as fish preparation and preservation.

Pond census numbers from June 1986 showed 525 women are directly reached by the extension service. However, they still only make up 10 percent of the total number. It was expected that, in the future, the number of women reached by the project will double.

Karen Veverica is a Project Leader for Auburn University's International Center for Aquaculture. This report appeared in Volume 9, No. 1-2 of their newsletter ICA Communique.



YES, I HAVE YOUR
LETTER ON MY DESK
RIGHT NOW!

Opportunities to relax, to know that life in other forms has meaning, are "feeling rules" outlined in social custom.

The Outdoors as a Setting for Spiritual Growth

Barbara L. McDonald

Outdoor recreation provides many benefits to participants. Most of these benefits are well documented, such as nature appreciation, relaxation, family and social togetherness, and achievement, among others (Driver and Brown 1986). A seldom-addressed but possible additional benefit of outdoor experiences is the opportunity for spiritual enrichment and growth. The dearth of academic and management attention probably springs from at least two paramount reasons. First, the idea of spiritual growth suggests a religious affiliation. Second, a concise operational definition of spiritual growth has not been advanced in recreation research or management. Therefore, outdoor recreation researchers and managers have tended to address more readily defined and understood benefits, and have left religious and spiritual topics for others.

This paper discusses some of the possible relationships between spiritual experiences and outdoor recreation in hopes of bringing this benefit to the attention of researchers, planners, and managers of natural resources. An attempt is made to demystify the concept of spiritual growth, in order to encourage its discussion apart from religious connotations or beliefs. Because spiritual experiences are often described within a social or cultural context, a social framework will be applied and outdoor recreation management opportunities will be advanced.

The Outdoor Recreation Environment

Outdoor recreation experiences may occur in any of a variety of outdoor settings, from city parks to wilderness preserves. The opportunity for meditative and spiritual experiences as a part of outdoor recreation activities may largely depend on the natural attributes of these environments. The quality and naturalness of the environment, including physical attributes, may have influence on the type and intensity of emotional, psychological, and mental experience of the individual. It is perhaps for this reason that early cathedrals seem to simulate the grandeur of spectacular or inspirational natural features, such as old growth forests, mountains, and deep gorges. Human-built environments often lack these

meditative-inspiring qualities. In addition to the scenic beauty of natural areas, natural sounds seem to contribute more toward an attitude of contemplation than human-made environments. The songs of birds and the sound of running water provoke a different emotional response than traffic or mechanical noise. City fountains and parks are often planned under the premise that they will provide visual and auditory buffers from urban sights and sounds. One may even purchase music for relaxation containing natural sounds recordings of birds, the ocean, or rainstorms.

The natural environment and certain types of recreation experiences together may provide favorable conditions for meditative thought. The words—outdoor recreation—even suggest a relationship between the natural environment and growth. Thoreau postulated that outdoor recreation experiences provide opportunities for individuals to "live deliberately." Outdoor recreation provides an opportunity to slow down, to simplify, and to observe the natural processes of this world.

Spiritual Growth and the Natural World

For scholars of theology, the word spiritual usually connotes an individual's relationship with God. From another perspective, the Merriam dictionary defines spirit as the "animating, fundamental, or vital principle held to give life to physical organisms." If an individual defines this

vital principle as God, then spiritual does indeed connote a relationship with God. It depends on how God and the life-properties of other living forms are perceived.

In order to be most useful to researchers and managers, spirituality is defined here as a perceptual process—rather than a relationship—that one possesses or does not possess. More specifically, spirituality is defined as a process of becoming aware of the life present in all forms. A helpful analogy to consider is the lifestyle and philosophy of early Native Americans. For most tribes, their day to day lifestyles reflect an awareness of respect for the natural forms around them. Certain places, objects, and animals were believed to possess powers and exert influences on the world. This type of



reverence for the natural world is called geopiety (Graber 1976).

In support of the notion that there is a relationship between natural resources and God, Norton (1987) suggests, "Medieval theologians who puzzled about how God could exist eternally and yet be creator of all things, concluded that He must have created Himself. So biology mimics theology. The force of nature is in this respect Godlike; the earth's community of life is a self-moved mover." Watkins (1987) writes, "We humans are related in life to all the life around us... The species that produced the typewriter reaches adulthood through the same process by which the spider grows, shares in the same mysterious spark and dance of creation. Biologist E.O. Wilson has dubbed this relatedness biophilia—the brotherhood of life."

Today's society has largely focused on human needs and concerns, effectively excluding the possible spirituality of other forms from discussion or consideration. If spirit is the life-giving principle and some non-human forms have life, then it is possible that they also have spirit, or are spiritual. Many individuals in past and current societies have been spiritually inspired by the natural world. Some of the world's greatest poets and artists received their inspiration from nature. Religious belief systems, such as China's Taoism, are grounded in examples from nature. Bratton (1985) concludes "that the [Christian] Gospel writers portrayed wild nature as the place of spiritual encounter, both divine and satanic." The relationship between spiritual thought and nature appears to be a strong one.

Outdoor Recreation and Spiritual Growth Opportunities

Contact with the natural world today, particularly within the context of recreation experiences, may enhance the process of becoming aware of the relationships and interdependencies of all life processes. On an academic level, we understand these relationships through ecology. At an emotional or even more internalized level, this process of growing awareness may be experienced. Certain outdoor recreational experiences may provide an optimal setting for spiritual growth by offering the following:

1. An opportunity to think, and to focus one's awareness on the surrounding environment.
2. A simpler existence, with clear experiential objectives.
3. An enhanced awareness of interdependence with natural resources somewhat apart from human-made conveniences.
4. A retreat from daily distractions.
5. Quiet, unobligated time.

In society today, the outdoors is perceived as "a place to go," not an environment on which we depend for existence. Outdoor recreation settings and experiences provide an opportunity for direct contact and interaction with the natural world that day to day living no longer provides. Outdoor recreation, in fact, may become the only such contact that many people have.

A Paradigm for Considering Value

The value of outdoor recreation as an opportunity for spiritual growth may be viewed within expanding spheres of social communities and environments (Figure 1).

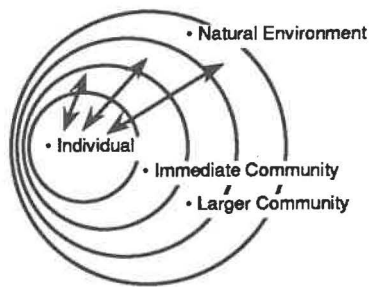


Figure 1. Expanding social communities and environments

The value of spiritual growth seems, on the surface, to be primarily a personal value, because all awareness radiates from the individual. But human awareness is often culturally patterned. Therefore, much of the opportunity for spiritual growth may be enhanced or discouraged by social and cultural custom. Arlie Hochschild (1979) described "feeling rules" or social guidelines telling us how we should feel. Examples of feeling rules are: a feeling of reverence in church, sadness at funerals, or sympathy at misfortune. We may actually feel these emotions based primarily on social mores. Outdoor recreation experiences, like these other events or rites, may culturally and socially prime individuals and groups to feel certain emotions, such as relaxation, adventure, or refreshment. Once the individual experiences these expected positive emotions, the opportunity for more internalized, meditative experiences may be enhanced.

One's awareness may extend beyond the individual level, beyond the closeness of family, friends, and community, and eventually may encompass non-human forms as well. The value of spiritual growth extends beyond the individual level if the individual's response to increased awareness includes acting as if the life in other forms has meaning. But without some kind of internal or external personal change, individual growth has not occurred. A personal awareness of the interdependencies of the natural world (humans included!) cannot be maintained for long without a corresponding change in outward behavior toward others (non-humans included!).

The same social structure that currently fosters human-centeredness can also foster a respect for and reverence toward non-human forms. The foundation for these attitudes and beliefs is already in place.

Management Opportunities

Certain environments may be more likely to enhance the emotions and thoughts necessary for spiritual growth. The attributes of these places may include natural beauty, natural sounds (such as wildlife, wind, and water), seclusion or expansiveness, natural colors, pleasant smells, and solitude.

As world population continues to grow and metropolitan areas expand along transportation corridors like the spokes of a wheel, fewer untouched natural areas will be easily available for the spiritual pilgrim seeking these attributes. For those who discover their spiritual growth accidentally, the natural setting provides important opportunities for unplanned discovery that are conducive to such growth and awareness.

A paradox emerges. If current trends continue, a growing population that might seek its spiritual growth in natural

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Vistas are vanishing from the national parks. Sometimes park visitors are warned to stay inside, trees turn brown, and mountains vanish as particles screen away views of our national treasures.

Lost Horizons

Mary E. Bean

I was excited by the prospect of living next door to Indiana Dunes National Lakeshore when I moved to Michigan City in the summer of 1980. Even before unpacking my shipping crates, I donned dune boots and joined a local cub scout troop for a ranger-led tramp across the park. Marching over hill and dune, I savored the diversity of plant life in the area where University of Chicago ecologist John Cowles first tested his theory of plant succession. It was a warm summer day, but the sun barely penetrated an overcast sky. Towering smokestacks, lining the park's western border, added pollutants into the sky which then settled over the area as a band of haze. The reality of all this knocked the air out of my expectations of living next to a pristine natural area. In my naivete, I had no idea that pollution was slipping insidiously into airsheds of national parks across the country.

Later that night, as I repeatedly blew black soot from my nose, the irony struck me. This place, which had been set aside to preserve its unique features, was slowly suffocating from air pollution generated by steel mills adjacent to the park. There are others: At Grand Canyon National Park in Arizona, visitors once were able to see 100 miles. Currently, on the most polluted days, visitors can barely discern the rim on the other side some 25 miles away. At Shenandoah National Park in Virginia, there are days when visibility is limited to less than five miles, yet when it was created 50 years ago, a visitor gazing eastward could see the Washington Monument, 70 miles distant. In Glacier National Park, the visibility ranges from 243 miles down to 34 miles, depending on Canada's and Montana's air quality.

Issues about air quality came to the fore as early as 1963 when the Four Corners Power Plant was constructed near Farmington, New Mexico. The plant emits plumes of smoke seen for miles, sullyng visibility in several southwestern parks. In the late 1960s, however, plans for a massive coal-fired power plant on Utah's Kaiparowits Plateau were stopped due in part to a potential threat to air quality at eight national parks, including Grand Canyon, Zion, and Bryce Canyon. Meanwhile, smog settled over Yosemite Valley. Long-term studies of air quality in the east at Acadia, Shenandoah, and Great Smoky Mountains National Parks showed that from the mid-1950s to the early 1970s, visibility decreased 10 to 40 percent in those rural areas (Malm 1987).

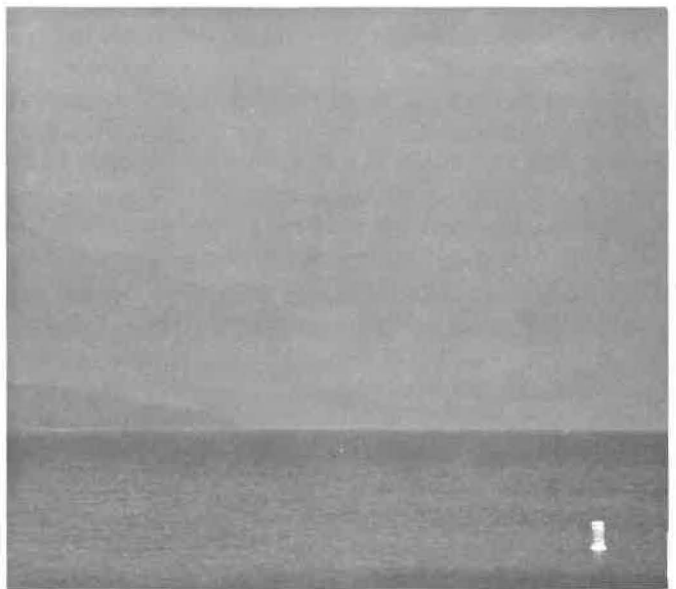
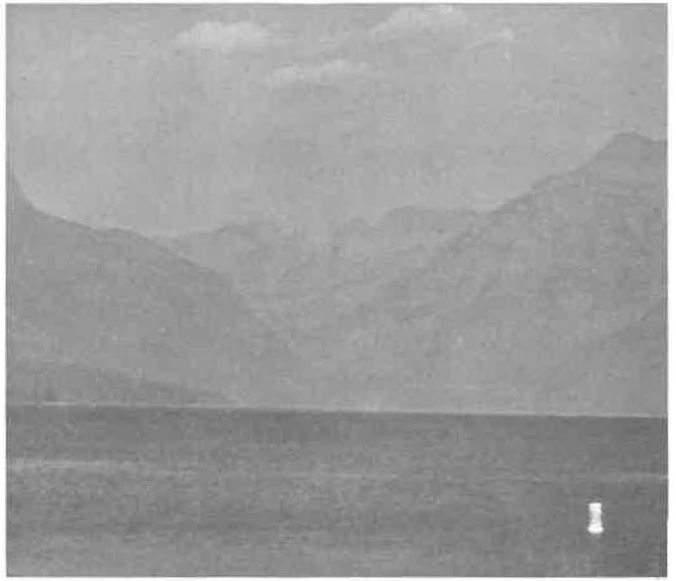
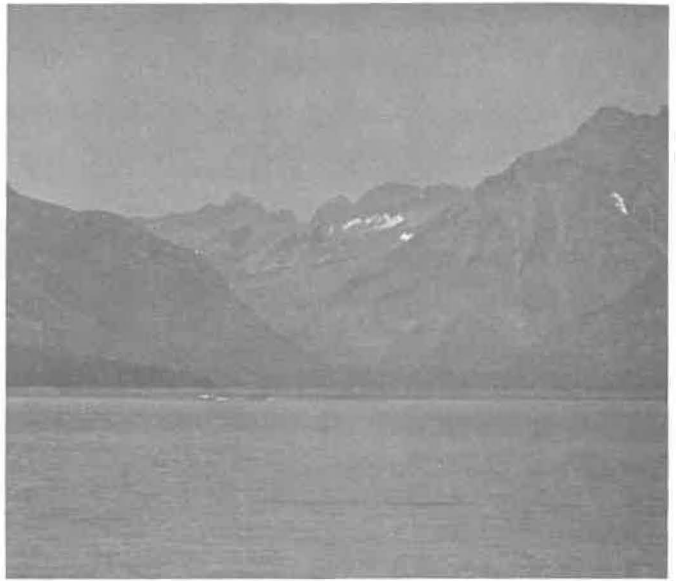
As the views grew dimmer, public concern over the loss of visual clarity in natural areas created political pressure for legislative action. It was not the first time that government leaders had been pressured to recognize the need for air quality

regulation: England's King Edward I banned the burning of coal in London more than 600 years ago. In similar fashion, Congress passed the Clean Air Act in 1955. By the 1970s, however, it was apparent that the existing act did not provide adequate protection for visual air quality in natural areas. In 1977, amendments (CAA/77, sections 160-169) specifically addressed "the prevention of any future, and the remedying of any existing impairment of visibility in mandatory Class I areas," which included many (not all) national parks larger than 6,000 acres and national wilderness areas of 5,000 acres or more.

By the late 1970s, the park service initiated air monitoring programs in 14 National Park Service areas. In response to the 1977 amendments, a Visibility Monitoring Program began collecting data in nearly all 48 park service Class I areas. Using programmed automatic cameras and sophisticated electronic equipment, these programs monitor visibility deterioration or improvement, measure the role of atmospheric conditions in visibility impairment, and determine sensitivity of scenic vistas to varying concentrations of air pollution.

National Park Service researchers cite sulfates as the single most important contributor to visibility impairment in NPS areas (except in the northwest, where fine carbon particles from burning fields, plowing and planting methods that contribute to soil erosion as airborne particles, and forest fires are the main pollutants [Malm 1983]). These tiny particles suspended in air scatter visible light, decreasing visibility. In the east, sulfates are responsible for 40-60 percent of the loss in visibility, but at Shenandoah National Park, the estimates rise to 70 percent. Industry in the Ohio River Valley appears to be the source of sulfates affecting the park, 150 miles away. In the west, sulfates are responsible for 30-40 percent of the loss of visibility, but the rate is higher for parks such as Grand Canyon and Bryce Canyon. One-third of the sulfates in Grand Canyon originate in urban southern California. Other major sources are copper smelters and power plants in Arizona, New Mexico, Nevada, and northern Mexico.

There's more at stake than just a pretty view. A recent EPA report ranked exposure to air pollutants the number one environmental problem facing us today. The American Lung Association estimates \$16 billion is spent each year on health-care costs associated with air pollution. When ozone levels at Acadia National Park exceeded the national health standard by 60 percent on six days in the summer of 1988, visitors were advised to avoid strenuous activities such as hiking and bicycling. John Cristiano, of the NPS Air Quality Division



Actual examples of air quality degradation in Yosemite and Glacier

(Denver) said that those with lung and heart ailments were advised to stay indoors—at a park!

In addition to the adverse impacts on health, pollution destroys many of the symbols of our cultural heritage. Each year, \$7 billion is spent attempting to restore historic buildings, statues, and irreplaceable monuments. The cost of rehabilitating one of our most famous—the Statue of Liberty—soared into the millions.

The effects on plants and wildlife are now evident. When 750 trees in Acadia National Park were checked for pollutant-related damage, 58 percent had yellow, dying leaves, indicative of exposure to polluting ozone. Although there is no long-term research results yet, preliminary data suggests that airborne toxins are entering food cycles, adversely affecting wildlife.

The results of these monitoring efforts prompted the NPS to express concern. In November 1985, Susan Recce, acting Assistant Secretary of the Interior wrote to the Environmental Protection Agency: "It is the position of the NPS that all NPS Class I areas in the lower 48 states are being affected by visibility-degrading uniform haze" (Borie 1988). The implications for federal land managers operating under CAA/77 are profound but problematic. They are mandated by law to remedy existing air quality degradation and prevent future deterioration—but how?

According to NPS Assistant Air Quality Chief Molly Ross, the evidence linking visibility impairment to pollution sources is solid enough to support stringent controls. The missing ingredient, as expressed by Rep. Bruce Vento of Minnesota, is the "political will to develop a more aggressive posture on visibility" (Borie 1988). The EPA has yet to issue regulations addressing regional haze, but several northeastern states and five environmental groups have decided to take it to the courts.

In 1874, John Muir wrote: *I know that our bodies were made to thrive only in pure air and the scenes in which clean air is found. If the death exhalations that brood in the broad towns in which we so fondly compact ourselves were made visible, we should flee as from a plague.* (Wolfe 1979).

The "death exhalations" Muir referred to have become visible, penetrating the very places where people escape in search of "pure air and the scenes in which clear air is found." Will city dwellers be able to visit parks without breathing the pollution they thought they had left behind? Will they be able to see the mountains, canyons, and horizons that drew them there?

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Spiritual Growth from page 20

settings will visit these increasingly impacted areas with unrealistic expectations. Some spiritual opportunities will likely be destroyed. In a spiritual sense, for some cultures and for some places, this has already happened. Probably most individuals and cultures will adapt and be content with finding their spiritual attunement with nature in more developed settings, such as metropolitan parks, zoos, and developed campsites. It seems inevitable that the population of the United States will continue to increase, bringing social and environmental change that will impact the experiences in, and uses and physical integrity of, natural areas.

A recent Supreme Court Case (October, 1987) examined the relationship between the Free Exercise (of religion) Clause of the First Amendment and the government's authority to manage public lands. Three Native American tribes claimed that Forest Service plans for logging in the Six Rivers National Forest would destroy the religious and spiritual quality of the area and infringe on their freedom of religion. The Forest Service management plan has (for now) been upheld, on the grounds that the Free Exercise Clause guarantees the right of the individual to shape their own religious conduct free from coercive government action. The Forest Service plan could not be considered coercive action.

What is important to note here, however, is the recognition that public land management actions may impair, prohibit, or destroy spiritual experiences. The corollary must also be considered: natural resource management may also enhance, promote, and preserve such experiences. This is the challenge to natural resource researchers and managers—to manage environments so that they promote not only the physical well-being of the resource, but in such a manner that might promote spiritual qualities as well.

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*The author thanks H. Ken Cordell and Lawrence A. Hartmann for their helpful reviews and comments.

Quick! When was "National Parks Year?" When was Everglades National Park dedicated? What does the National Park Service emblem represent (or look like)? For answers, read on.

National Parks and Topical Philately

Lei Lane Burrus Bammel

Americans are phenomenal collectors. People I know have collections of empty beer cans, pub coasters, chains of flip-top lids, old sneakers lined up under beds, album or matchbook covers, or stolen motel keys hanging from mantels. This gathering, packcratting, saving, activity includes a substantial number of hobbyists who have invested time, effort, risk, and some expense. One of the most enjoyable endeavors for me is to combine history as well as an appreciation for the items while collecting, and this can be done rather well, I think, through stamp collecting, or philately. When used as a teaching device (or in this case, an article on Park Service stamps) a collection takes on an enhanced meaning.

Stamp collecting is a hobby which was carried over by our British forebears. Recently, though, a modern philatelic phenomenon has occurred—that of topical collecting. Topical collectors select one or more specific subjects, such as sports, birds, or animals, and gather stamps on that theme, with secondary concern (if any) for country of origin, perforations, water marks, or other physical characteristics of the paper. The major advantage of this kind of collection is that no particular technical knowledge is necessary. It is possible to develop great expertise in one area with only a small collection. Otherwise, novices become discouraged when their book has many more blanks than stamps, when the process of completion requires finding, trading, buying, (or stealing) seven different colored versions of the same stamp for one set.

I have a complete collection, twenty in number, for example, of United States postal stamps that have dealt with

the subject of National Parks. The first stamp issued in this topical collection was on July 16, 1934 at the Yosemite National Park post office. (Already you are learning history—many of you didn't even know there was a post office there amongst the trees, did you?) That same year, nine others were issued in observance of National Parks Year. In the photo of these special

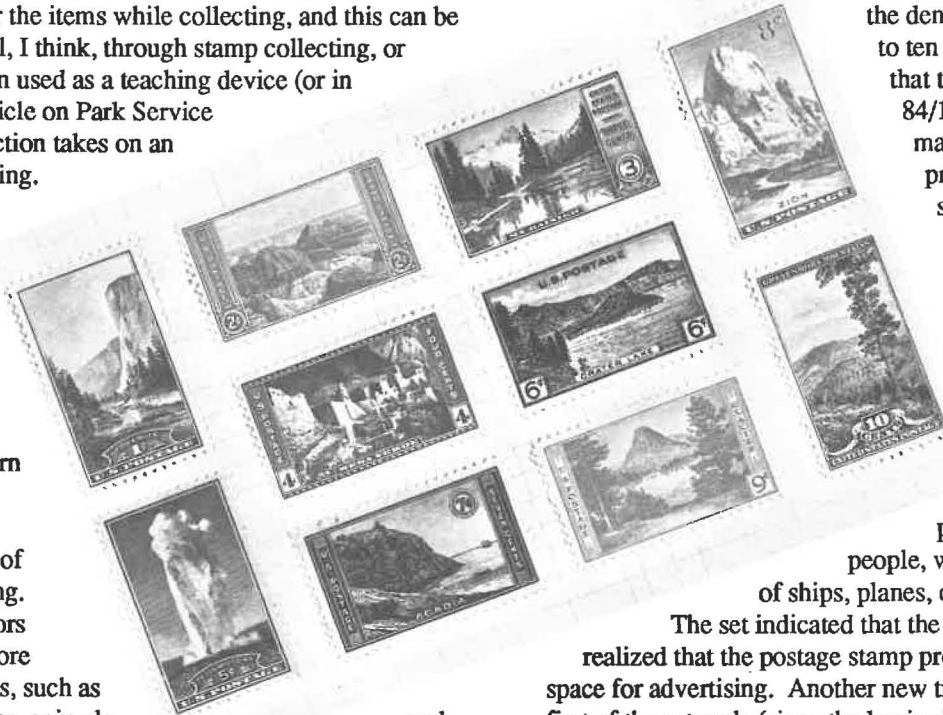
issues which were designed by V.S. McClosky Jr., you note that the denominations are from one to ten cents. It is interesting that the size of these stamps, 84/100 by 144/100 mm, was made larger than most of the previous stamps so that the subject matter could best be accommodated.

These ten National Park stamps were rather unique—not only by their size—but due to the fact that roughly 85 percent of the stamps issued

prior to 1934 were of people, with the other 15 percent of ships, planes, or non-specific scenery.

The set indicated that the government had, by 1934, realized that the postage stamp provided, without cost, a space for advertising. Another new trend had occurred. The first of these trends (since the beginning of the postal service in Virginia in 1659) were the "commemorative" stamps. These were issued in honor of something—the first being the 1893 Columbian Exposition—and were usually printed in limited numbers then sold for a specified time at selected post offices.

The 1934 National Park issue was also commemorative, and that theme, National Parks, was not seen again until 1947 when the Everglades National Park Stamp, designed by Robert Miller, was printed to mark the park's dedication. (The second photo shows that stamp and the nine others that have been released since the 1934 set.) Nineteen more years elapsed between the appearance of the Everglades Commemorative until the 1966 National Park Service stamp, which commemorated the 50th anniversary of the National Park Service itself



with the emblem which symbolized the three categories of parks: Natural, historical, and recreational. Six years later, 1972, a very colorful eight stamp set was issued to celebrate the National Park Centennial. This block of four two-cent stamps featured a composite (of four separate scenes) showing the National shore of Cape Hatteras. Wolf Trap Farm in Virginia cost six cents, Old Faithful in Yellowstone cost eight, Mt. McKinley cost sixteen cents, and an eleven-cent air mail stamp of the City of Refuge, Hawaii completed the set.

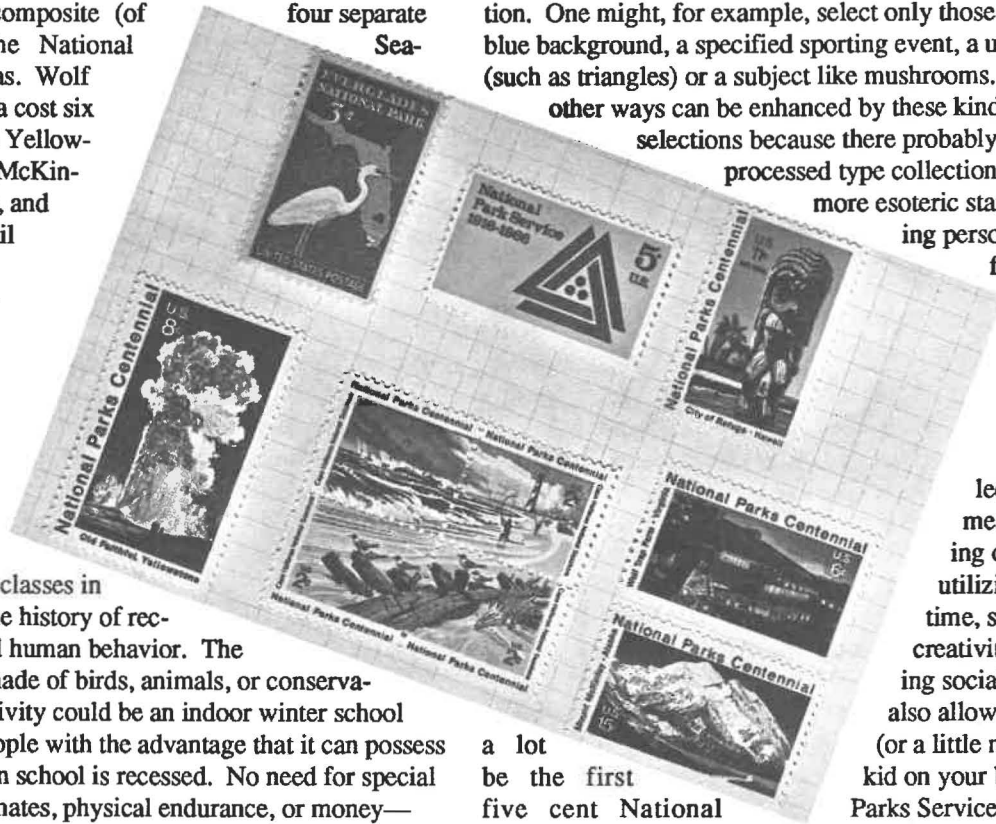
I think it is clear from the above, that these kinds of stamps (prepared perhaps as slides for the classroom) can be used as supporting media for classes in outdoor recreation, the history of recreation, or leisure and human behavior. The same uses could be made of birds, animals, or conservation stamps. This activity could be an indoor winter school activity for young people with the advantage that it can possess carry-over value when school is recessed. No need for special facilities, other classmates, physical endurance, or money—especially if one collects cancelled stamps limited to the United States. For the more gregarious collector, of course, there are stamp clubs and societies in many communities where people

meet to discuss, trade, and be sociable with others who have a common interest.

Creativity is also important because the character of the collection is limited only by personal preference and imagination. One might, for example, select only those stamps with a blue background, a specified sporting event, a unique shape (such as triangles) or a subject like mushrooms. Creativity in other ways can be enhanced by these kinds of topic selections because there probably will not be a processed type collection book for these more esoteric stamps, necessitating personal creations

for mounting, ordering, displaying, storing, and expanding the collection.

Stamp collecting can be a means of educating oneself, utilizing leisure time, stimulating creativity, and initiating social contacts. It also allows you to invest (or a little money) and to kid on your block to buy a Parks Service emblem.



a lot
be the first
five cent National

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1934 National Park Issue

Denomination	Color	Park	View	Date	Post Office*
1	Green	Yosemite	El Capitan	July 16	Yosemite, California
2	Red	Grand Canyon	Temples of Deva, Brahma Zoraster, and Bright Angel Canyon	July 24	Grand Canyon, Arizona
3	Purple	Mt. Rainier	Mirror Lake	Aug 3	Longmire, Washington
4	Brown	Mesa Verde	Cliff Palace prehistoric dwellings	Sept 25	Mesa Verde, Colorado
5	Blue	Yellowstone	Old Faithful Geyser	July 30	Yellowstone, Wyoming
6	Dark Blue	Crater Lake	Lake and Wizard Island	Sept 5	Crater Lake, Oregon
7	Black	Arcadia	Great head, a rocky promontory on the shore	Oct 2	Bar Harbor, Maine
8	Grey Green	Zion	Great White Throne Rock formation	Sept 18	Zion, Utah
9	Pink	Glacier	Mt. Rockwell and Medicine Lake	Aug 27	Glacier Park, Montana
10	Slate Grey	Smokey Mt.	Mount Le Conte	Oct 8	Gatlinburg, Tennessee

* In addition to Washington, D. C.

An integrated management system data base has made possible the saving of piping plovers, locating showy lady's slipper orchids, and uncovering the remains of saber-toothed tigers.

Preservation of North Dakota's Natural Heritage

Pamela J. Bergerson

Settlers making their way west through North Dakota in the late 1800s came upon a vast frontier ripe with resources, beauty, and potential. Endless seas of lush grass prairies burst with a myriad of colorful wildflowers, craggy buttes layered the horizon, and stands of pristine forest were latticed with rivers and streams. Some, inspired by the unlimited space, made this new-found area their home. It was soon discovered the underlying soil was rich—agriculture boomed. With the influx of homesteaders, natural lands disappeared along with native plants and once abundant wildlife.

A century later, the once small, humble homesteads have grown into sprawling, modern farms that account for 62.7 percent of North Dakota's income. Ninety-four percent of the state's total land acreage, or roughly 31.7 million acres, is devoted to agricultural use. Seventy-five percent of North Dakota's original prairie vegetation and 50 percent of the original wetlands and woodlands have been consumed by development. As a consequence, some 15 percent of the native flora is considered jeopardized on a statewide basis. The frontier has undergone a radical transformation in a very short time.

Concerned land managers, scientists, and citizens came slowly to realize the need to establish a bona fide, statewide method of protection. This was accomplished through the passage of the Nature Preserves Act in 1975, introduced to the



legislature by the North Dakota Natural Science Society, a professional organization comprised of individuals who wanted to protect the state's natural resources. The primary legislative backer was Stella Fritzell, a foresighted state senator and environmentalist from Grand Forks. Once passed, this Act required the North Dakota Parks and Recreation Depart-

ment (NDPRD) to enact a system by which natural areas and nature preserves—remnants of what the settlers saw—could be set aside. Some of the poetic language in the Act read:

It is essential to the people of the State of North Dakota to maintain close contact with living communities and environmental systems of the earth and to benefit from the scientific, aesthetic, cultural, and spiritual values they possess. It is thereby the public policy of the state of North Dakota that such areas be acquired and preserved by the State...

The adoption of this important Act had several repercussions upon the NDPRD. The Nature Preserves Program was immediately established although effective implementation through the program's early years proved to be difficult. No legislative appropriations accompanied the mandates of the act. Staff and budgets for the program were absorbed by the department. One part-time staff person worked to establish nature preserves and protect North Dakota's natural diversity—defined as *all* biological entities.

Despite this, three nature preserves were dedicated quickly. One was the Gunlogson Arboretum Nature Preserve, an 80-acre tract of undisturbed riverbottom forest, oak woodland, and wetland thicket. Another, named Head of the Mountain Nature Preserve, contained 100 acres of native prairie and wooded ravine. Sentinel Butte Nature Preserve was four acres of land harboring the fossils of four fish species found nowhere else in the world.

The initial success of dedicating these areas, however, was followed by realization that the most critical and threatened natural diversity features were not being targeted. Due to the minimal staff time available, an emphasis had been placed on readily available and attainable sites as opposed to those sites that critically warranted protection. A second problem was that the Department had no objective, comprehensive data on North Dakota's natural diversity features, making the setting of protection priorities extremely difficult. And last, the Department was compelled to request state appropriations for operations and additional personnel, but clearly needed data to convince the legislature.

To address these problems, the Department entered into a series of contracts with The Nature Conservancy to establish a North Dakota Natural Heritage Program (NDNHP). The initial contract was funded jointly by a \$75,000 contribution for seed money from the Amoco Foundation, \$60,000 of state funds, and \$135,000 of Federal Land and Water Conservation Fund

money. The new professionals hired were Pamela Dryer, Natural Resources Coordinator; Bonnie Heidel, Ecologist; Alexis Duxbury, Botanist; Patsy Croke, Data Manager; and Randy Kreil, Zoologist. They were successful in addressing and remedying many of the Nature Preserves Program's initial difficulties.

Today, through the NDNHP, a comprehensive inventory of the state's ecological resources provides data and a process for identifying valuable natural areas, exemplary natural communities, rare and endangered plant and animal species, unique geological features—and for setting land protection priorities. Information is stored in an integrated data management system, then indexed by several criteria: location, plant community type, species name, endangerment status, and land ownership.

This facilitates easy access and expedites responses to users' needs. Currently, the data bank of natural feature occurrences contains 3,365 separate records. These records can be networked with files on statewide public land holdings and volumes of information on the natural feature in other data banks nationwide. Use of these data has led to the identification of 90 sites proposed for inclusion in the Nature Preserves Program. It assists, as well, in land-use planning, environmental and project reviews, and is critical when protecting natural diversity features.

Although in a vast majority of reviews there are no significant conflicts between proposed developments and the protection of natural features, those conflicts which do arise are usually handled with minor alterations. Information from the data bank, for example, led to a utility line placement change near a habitat for piping plovers, a nationally threatened shorebird. Early in the planning phase, NDNHP recommended that the line be shifted to the opposite side of the road, outside the habitat area's buffer zone. This simple—yet critical—recommendation was adopted by the utility company, the piping plovers remained undisturbed, and the utility company saved themselves the costs of needless delays caused by investigation into development in an area deemed critical for the birds.

Another protection benefit for natural features also sprang from the information derived through the NDNHP: the Natural Areas Registry. This is a voluntary landowner conservation program coordinated through the scientific staff of the NDNHP and key volunteers. Through this integral component of the Nature Preserves Program, existing remnants of the state's natural heritage are being rediscovered and recorded. Of North Dakota's 53 counties, 22 contain Registry sites. Since its inception in 1983, 42 sites involving 71 landowners have been registered.

The Registry is designed to honor and recognize (for stewardship commitment) private landowners who own

exemplary occurrences of natural features. In addition, some of the state's rarer species live on these private tracts. They include animal species such as the piping plover (*Charadrius melodus*), Sprague's pipit (*Anthus spragueii*), and the golden eagle (*Aquila chrysaetos*). Plant species found include Visher's buckwheat (*Eriogonum visherii*), showy lady's slipper orchid (*Cypripedium reginae*), and narrow-leaved wirelettuce (*Stephanomeria tenuifolia*). Also registered are several intact natural communities of tall, mixed grass, and sand prairies; lowland woods; and fens, a unique, peat-filled wetland.

NDNHP was restructured in 1988 resulting in a shift in

emphasis for some of the Heritage staff members, primarily ecologist Bonnie Heidel. As an employee contracted through The Nature Conservancy, Heidel began her North Dakota heritage affiliation through the NDPRD, saw the program relocate to the North Dakota Game and Fish Department, then back to the NDPRD. On behalf of the Natural Areas Registry, Heidel—with the North Dakota Geological Survey—was instrumental in registering



the first paleontological sites.

Known as the Little Badlands, the paleontological area is composed of low-lying clay hills deposited by a dynamic river system during the Oligocene and Eocene ages. At that time, the expanse was characterized by a broad floodplain with small ponds and ephemeral swamps transected by sluggish, loosely meandering streams. A complex mosaic of habitats was occupied by vertebrates and other organisms, of which 23 have been recovered. The list of animals (consisting of zoological occurrences seldom associated with North Dakota—or North America, for that matter) includes rhinoceros (*Caenopus*), giant pig (*Archeaotherium*), saber-toothed tiger (*Hoplophonus*), and three-toed horses (*Mesohippus*). Study and preservation of these Little Badlands fossils is important, because the outcrops are the farthest northeastern exposures of Oligocene, fossil-bearing, sedimentary rocks in North America.

In an agreement between the NDPRD and the U.S. Forest Service, Heidel will be researching, reevaluating, and rewriting a 1974 establishment report on another proposed site, the Limber Pines Research Natural Area (RNA) within Custer National Forest, Slope County, North Dakota. The principle distinguishing feature there is the singular North Dakota occurrence of Limber pine (*Pinus flexilis*). These stands are rare on a regional basis as the nearest known stands are 160 miles south in the Black Hills of South Dakota, and 260 miles west in Montana. The stand occurs amidst a series of scoria-capped hills in extreme southwestern North Dakota, near the confluence of the Little Missouri River and Cannonball Creek. It is theorized the presence of this isolated cluster is cultural in

please turn to page 29

Is the idea of joining a movement that you can't control hateful to you? If you call yourself a feminist does it mean you have to do something, work with people you wouldn't choose as colleagues?

What Bothers You About the Word Feminist?

Judy Stitzel

Recently I was asked to talk informally with some undergraduate students about feminism. Much of what I have been reading lately about the retreat from feminism, even in quarters where I would not have expected it, alarms me, and I was glad for the opportunity to think through why I feel frightened and angered—as well as saddened—by that retreat.

When I was asked for a title to my talk, what immediately occurred to me was “I am a feminist, but...” Moments later, I came up with a title I was even happier with—“I am a feminist, and...” But I’d like to stay with the first one for a while because it echoes the more commonly heard, “I’m *not* a feminist, but...” and I think it gives us a good place to begin.

I have found that in this case, as in many others, it is very valuable for me to look at my “buts,” to observe how and when I use them as well as how they help and hinder me. Most of us are pretty good at sensing when a “but” is about to enter a conversation. Although it is not a complete negation, we can feel its downward pull. We feel it as a qualification, a setting up of conditions, a posting of boundaries. “Wait,” you may say, “such qualifications may be necessary and appropriate; they may reflect the reasonable and responsible approach.” And so they may, but they may reflect fear and hesitation, even self-denial as well.

Wanting to find out what some of those qualifications were, I devised an exercise to use with the students I was to address. That exercise, which you might like to try, follows:

Whether or not it is true, imagine that someone has referred to you as a feminist and that you have *good* feelings about being called a feminist; writing out of those good feelings, define the term, in a couple of phrases or sentences.

Whether or not it is true, imagine that someone has referred to you as a feminist and that you have *bad* feelings about being called a feminist; writing out of those bad feelings, define the term, in a couple of phrases or sentences.

I purposely framed the exercise so that it encouraged participants to imagine not only what they felt but how they were perceived by others.

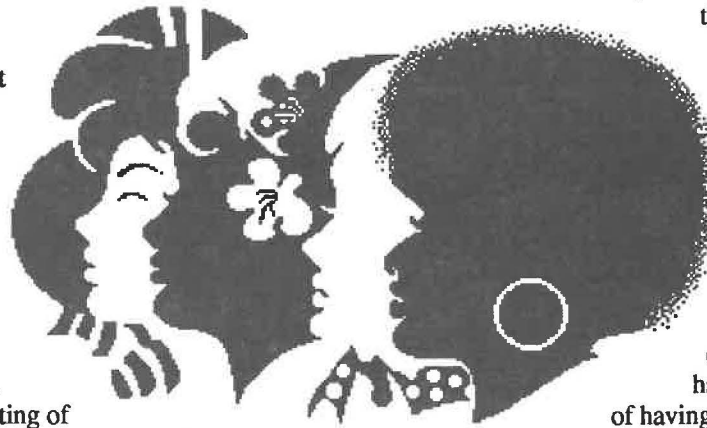
There was considerable agreement among members of the group, which included men and women. When they imagined themselves as having good feelings about the word, they focused on *personal* qualities. These were assertiveness and self-confidence—and political and moral attitudes, such as belief in the freedom to shape one’s life—and having equal access to opportunity. When they imagined themselves as having bad feelings about the word, they focused less on personal qualities than on their reluctance to be part of a movement, not all of whose tenets they might want to espouse. There were, of course, other categories of groups to which they felt they belonged despite lack of *total* agreement with their beliefs or actions. These included religious groups and

political parties. But “membership” in these groups seemed given; it had not been chosen nor did it necessarily impose any sense of responsibility.

What seemed distasteful about feminism, on the other hand, at least to some of the students, was less what it might stand for than what might be necessary to achieve its goals. There seemed genuine queasiness with the idea of having to work *for* it with others, of having to take action.

Talking with these students reminded me that unlike some of my friends who claim that they were born feminists, I did not always use that term about myself. In fact, even after I was teaching in what became the women’s studies program which I now direct, there was still a period of time when I did not call myself, or even think of myself, as a feminist. It was only when a colleague who was guest lecturing in my class used the term quite naturally to describe herself that I became aware that it was not yet a term I was using. There was, of course, nothing in what she was saying that I disagreed with, but I felt that I could agree with everything she was saying without using the term. In other words, I was saying, “I’m not a feminist, but...” But why? What was I accomplishing? What was I avoiding? What was I hoping to gain by not using the term?

I think I was doing the same thing the students were. The Random House *Dictionary* gives two definitions of the word “feminist”: 1) the doctrine advocating social and political



rights of women equal to those of men; and 2) an *organized* movement for the attainment of such rights for women. I think that for me then, as for many now, if there was a sticking point, it was around the second definition. What is an organized movement? What does it mean to be part of an organized movement? Can one be—or should one call oneself a feminist—without being part of an organized movement? Does it matter, someone might ask, what we call ourselves? If a person is not comfortable with the term “feminist,” but acts in harmony with others for women’s rights, does it matter what she or he calls themselves?

I suppose now I think it does. I believe there is a lot of power in claiming for oneself a name which has been misused—or even despised—by others, and making of that name a cloak of honor. For dissociating ourselves from feminism means, especially for women, dissociating ourselves from our history, a history from which many of us already have been dissociated by curricula and other cultural images which do not include and/or distort women’s experiences and achievements.

When we are reluctant to be part of a movement, we might fruitfully ask ourselves which is more unnerving? The thought of giving up one’s separateness (or the illusion of separateness) to work in solidarity with others? Or the thought of being ill thought of as an individual, lumped with others we do not choose, a kind of guilt by association? Who is it that we are conjuring up when we dissociate ourselves with the term *feminism*? How is she likely to embarrass us? What crude clichés are we allowing to control us? Isn’t it true that, far from giving up our freedom, if all of us who—in all our variety—work on behalf of women’s equality and empowerment call ourselves feminists, then we will be claiming for ourselves a range of freedom and power which we do not have when we are still frightened of what we may be called.

In my efforts on behalf of women’s education and women’s studies, I work with and respect the work of many women and men who do not call themselves feminists, but I must admit that I feel strengthened and emboldened by those who join me in that mutual affirmation.

I’m reminded of the question put to Congresswoman Pat Schroeder when she was deciding her political future recently. “Do you intend to run as a woman?” she was asked. “What choice do I have?” she answered. As Susan Jacoby put it in a HERS column in the *New York Times* (April 14, 1983), “Feminists should not be reluctant to identify themselves with an honorable tradition rooted in issues that every woman—regardless of how much she might prefer to be seen solely as an individual rather than as a member of her sex—must eventually face.”

The rejection of the term feminist does frighten those of us who have worked hard over the past years to improve women’s situation. It suggests to us a disbanding of the forces before the battle is over. I am not altogether happy about the military metaphor, and I think we can find other, better ones, but I leave it temporarily, as it seems to come to the mind of others as well. Feminist scholar Hester Eisenstein writing in the *Barnard Alumnae Magazine* (Winter, 1980) also uses the metaphor when she says she suspects that students who are wary of feminism were “responding to a message beamed at us from all sides by the media, saying: It’s OK, girls, you can go home; the fight for women’s rights has been won.”

But any examination of women’s current status makes it

clear that while we may have made some progress in revising sex-role stereotyping (often with as much benefit to men as to women), we are a far cry from the economic equity that must be at the core of any permanent redistribution of power. And as Eisenstein reminds us, “Personal transformation is a long, hard process, and so is effecting social change.” Some would say that without the first, the second is superficial, even dangerous. I would also say that without the second, the first is superficial, even dangerous. Feminists, who are not the extremists some would have us, pledge ourselves to the marriage of the two.

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origin. Recent research indicates the river corridors acted as natural transportation routes for prehistoric inhabitants of the region. Several cultural sites have been identified in the study area, such as campsites, tipi rings, and lithic scatters. It is known that Native Americans used the limber pine seeds for food and may have purposely (or unknowingly) seeded a campsite overlook in the area.

Preservation of fragile areas such as these is crucial, as the slightest degradation can eradicate North Dakota’s vital links to the past. The educational, scientific, and aesthetic merits of saving natural irregularities such as the Little Badlands and the Limber Pine Stand are boundless. For the NDPRD, recent efforts have been successful through an active involvement with other state, federal, and local agencies, both public and private. Cooperative ventures not only expand the resource, knowledge, and financial bases, they also offer the potential to inform and educate wider segments of the public who have begun to play an increasingly important role in the state’s resource preservation efforts. As North Dakota experiences continued economic development, it is increasingly important that we actively pursue and preserve the finest remaining areas of natural significance.

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In 1987, 250,000 White Mountain hikers relied on the Appalachian Mountain Club's backcountry huts for food, lodging, water, and septic. One of their managers outlines the complex issues facing such providers.

High Country Experience

Mike Torrey

I began my career in the Appalachian Mountain Club (AMC) in 1978, as a rookie crew person at Lakes of the Clouds Hut. My first hutmaster, Bill Blais, put an indelible stamp on my appreciation for these hut jobs, an appreciation that pervades my style today. "There's nothing but the work and the mountains," he used to say. The only thing I would change is to reverse the order: The mountains come first.

Today's hut system and programs require a sophisticated reservation system to process tens of thousands of phone calls and letters for lodging, workshops, hiker shuttles, and guided hike programs. Today's hut managers struggled with the delicate balance between recreation and conservation interests. Are we a part of the problem or the solution? Do we attract the multitudes? Or do we manage the impact of people who would be there anyway? I carry this intellectual struggle to my desk every day, never forgetting that each action tips the scale in one direction or the other. Balancing financial realities against employee, guest, former employee, volunteer, conservationist, day hiker, Forest Service, state agency, and personal opinion is one of the great thrills of sitting in my seat. When the phone rings, it's anyone's guess who's calling and what's on his or her mind.

These thoughts are prologue to what's next, with one caveat: This is but a simple snapshot on a continuum that is in constant flux. Like the accountant's balance sheet, assets and liabilities are artificially frozen in time to make an assessment. When one's purpose is to take the best possible action, one can only gain from more information. Assets minus liabilities equal owners' equity. Since these facilities belong to everyone, and AMC is entrusted with their care, our decisions are in the best interest of the owners. Whether members of the Club or not, all White Mountain users have the final say in determining our actions.

As Facilities Manager, I am responsible for the 11 North Country Facilities, which in addition to the eight huts include Tuckerman Ravine Shelter Area, Crawford Notch Hostel and Visitor Information Center, and Pinkham Notch Camp. While all 11 facilities are part of the hut system, here we will focus primarily on the backcountry huts.

The construction of Madison Hut in 1888, when the AMC was a decade young, ultimately gave birth to the trail, research, education, conservation, and facility programs of today. Therefore, I will strive to present the hut system as I see it—an

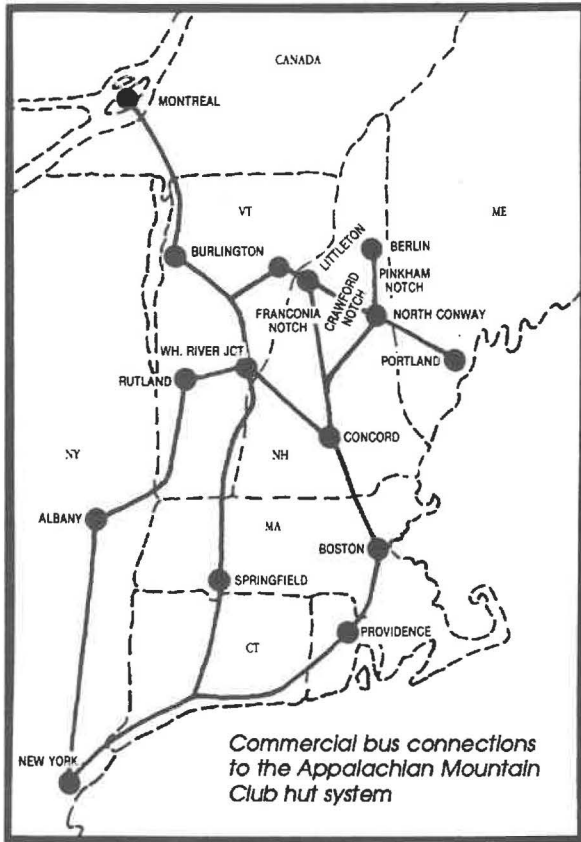
integral part of a public service organization.

Dodge's vision

Joe Dodge, the AMC's legendary hut manager from 1922-1959, dreamed of a series of huts a day's hike apart, and set out in the late '20's and early '30's to build the system. Within three years, Galehead, Greenleaf, and Zealand huts were constructed, filling the gap between Zealand Falls and Lonesome Lake. Similar in design layout, these three huts were built to handle the level of use at the time, and have effectively stood the test of five decades, the ravages of White Mountain weather, and a dramatic increase in usage. Since 1932, however, changes in several areas have made necessary significant improvements to the huts in this Western Division. Beginning with Zealand in the fall of 1988, major renovations will be undertaken to bring the three 1930's era huts up to our operational standards, and into compliance with modern regulations. Renovations of Greenleaf and Galehead will occur in 1989 and 1990, respectively. Changes in five major areas make these improvements necessary:

- First, modern public health and safety laws are now being applied, with some compromise, to backcountry facilities. Water supply authorities are demanding improved collection and chlorination systems. Public health authorities scrutinize our kitchens as if they were Pizza Huts, not rustic mountain lodges! Septic authorities require more tests and review our plans with the same attention they pay to condo developers in North Conway. As environmentalists and public servants, we welcome the increased quality this eventually will produce, but upgrades cost money to build and maintain. This is a system-wide concern, but septic, water, and kitchen improvements are major components, required specifically by state and federal regulatory pressures, in renovations to Zealand, Galehead, and Greenleaf.

Our septic and water systems are perhaps the hut system's most subtle public services, because fees paid by overnight visitors cover costs generated by the more populous day users: 75% of the 250,000 people estimated to pass through our facilities annually are day hikers, not obligated to pay for any of the services AMC provides. Up-front capital costs and ongoing replacement costs totalling \$1 million in the last 10 years are borne by overnight users. Other club resources and programs are indirectly affected because these funds are subsequently not available. Of these 250,000 visitors, only a fraction come expressly as a result of AMC's promotional efforts. Public



proving the aesthetic and structural condition of the facilities. For example, we are currently working with Worcester Polytechnic Institute staff and students on a study of appropriate uses of photovoltaic technology to power lights, radios, refrigerators, water pumps, water purification systems, and smoke detectors. Also, while it appears that volume solar composting will not work in the moist, above tree-line environment, advances in backcountry septic systems suggest that some components may be added to current systems for relatively few dollars, with significant annual savings. A fracture-trace analysis, done from aerial photographs, may allow us to locate a more reliable water source at Mizpah. Perhaps then we would be done,

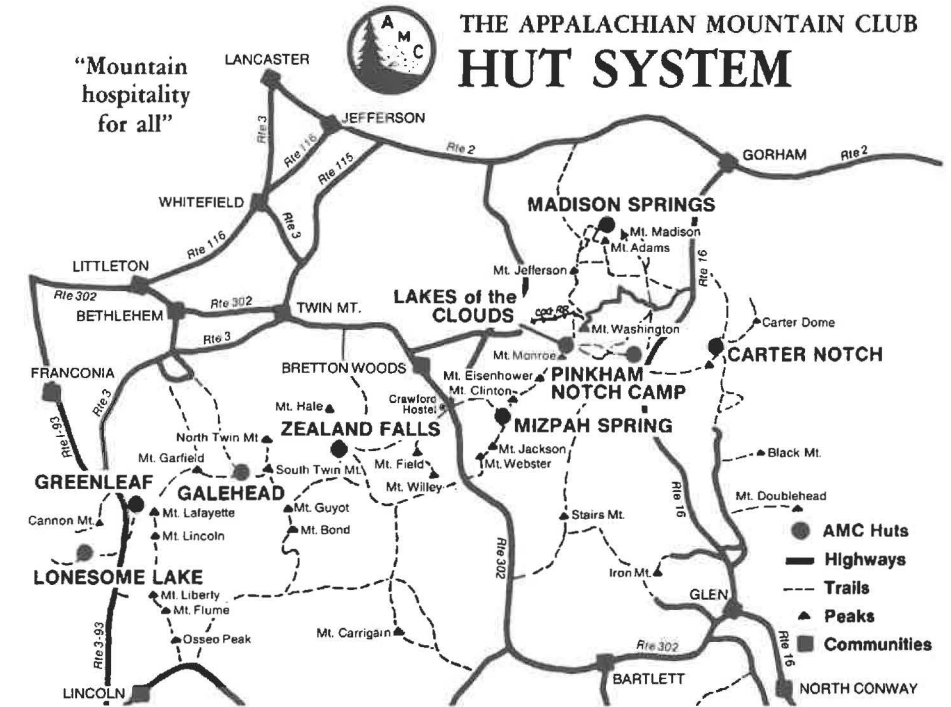
HALF THE POPULATION OF THE U.S. HAS ACCESS
 In the October 1988 issue of *American Forests*, Joseph M. Keyser looks at the history of the whole Appalachian Trail and notes that it began as a "dream" of Denton MacKaye, and was backed quite early by the Appalachian Mountain Club, the Green Mountain Club, and the Dartmouth Outing Club. As early as 1937, the Civilian Conservation Corps had been tapped as a resource and had finished a portion between Maine's Spaulding and Sugarloaf Mountains. Keyser reels off the astounding statistics about the current trail: It crosses "14 state boundaries, six units of the National Park System, eight units of the National Forest System, and further involves 60 units of state parks and forests, 200 local government agencies, 31 trail-maintenance clubs, and 30 supporting groups. Together they represent 90,000 to 100,000 individual members and 29 corporate members, not to mention the 21,000 members of the Appalachian Trail Conference." Problems which plague trail managers are the problems of modern society: Pollution, too many users (half the population of the U.S. lives within day-use of some portion of it), disease and defoliation, and urban encroachment. But the trail is a marvelous and successful model of cooperating agencies and volunteers, and as such, provides a standard for the rest of the country. —*Diane Ehrenreich*

agencies and private businesses draw the bulk of White Mountain visitors, yet AMC provides these visitors with waste management facilities and safe water resources in the most heavily used sections of the national forest, at its own expense. This is what being a public service organization is all about, and represents a large part of the service provided by the facilities. Other program areas, such as trails, research, education and conservation, also cost the club money, and have more tangible, easily justified results.

once and for all, with the water quality and shortage problems that nearly caused us to shut down the hut in late August of 1987. A skylight at Carter, installed during the renovation there last fall, has proven effective; and we plan to install eight at Zealand when we begin that project next fall.

• Second, facility use has increased more than 60% since 1970, and the huts show it structurally and aesthetically. In August 1987, more than 10,000 people spent the night in one of the eight huts; we expect the Centennial will generate even more use. This presents a problem: While our services are the best thing the AMC has to offer, with a proud, century-old tradition of hospitality, the condition of our facilities simply has not kept pace with this quality.

• Third, technological and material advances and improvement in construction methods, offer opportunities to reduce operating costs while im-



HUTS PROVIDE BACKDROP FOR AMC PROGRAMS

The huts historically have been the ideal sites for AMC's many programs, and more of the same is planned for the future.



Education: A resident naturalists program provides knowledgeable teachers for evening lectures at the huts on plant ecology, astronomy, weather, research activities, and many aspects of the natural sciences. The Mountain Leadership School trains leaders of camp and school excursions in safe and ethical mountain travel practices. Many workshops and programs are given at Pinkham Notch Camp and other facilities, ranging from outdoors skills training to humanities courses such as landscape painting and photography.



Research: Acid rain collection systems have been in operation for several years at Lakes of the Clouds, Greenleaf, and Mizpah. The protection of the rare endangered plant, *Potentilla Robbinsiana*, has been carried out in part directly from its close neighbor, Lakes of the Clouds. User surveys have been conducted to establish use trends and patterns.



Trails: Pinkham Notch Camp provides overhead support and housing, and the hut system pays for food and lodging for the professional trail crews that maintain over 1,000 miles of trail in the Whites. Huts sell fundraising items to help underwrite the costs of running these programs.

*from Appalachian Mountain Club
brochure*

• Fourth, crew size and the complexity of the job have increased. Although we have reduced the packing load by relying more on helicopters, we have placed more of an emphasis on the interaction between the crew and management, on the theory that a better run business yields more personal time for crew, better information for management, and a better experience for the guests.

The sheer volume of people is the greatest challenge, and standardization of systems has helped us maintain quality. The larger, busier crews still live in some very small spaces. Architect Bob May tells us our crews are given less space than inmates have in federal prisons. Zealand, Galehead, and Greenleaf opened in the early thirties with two person crews and the quarters have not been expanded at all since then. In the draft plans for all three huts, crew room renovations increase space allotments, provide emergency egress, and improve living conditions.

• Finally, nearly a decade of delayed and under-funded repair and maintenance has come to an end. Annually, \$250,000 is set aside (replacement cost depreciation) for capital improvements, equipment replacement or emergency needs, and nearly \$50,000 for materials is made available for repairs. In addition, the construction crew has a permanent staff of three, a year-around seasonal staff of four, and four to eight additional workers during heavy construction periods. The money generated by our operation stays right here, renewing the physical plant and improving conditions for guests and crew alike.

The Hut System is a critical part of the infrastructure of the White Mountain recreation management system. AMC's policies are designed to make safe and wise use of the national forest possible for everyone, but with the stewardship of these public lands as the highest priority. The next 100 years will bring the users of this forest more of the same.

Providing hospitality to everyone, and imparting a commitment to stewardship forever, are our goals.

Crawford hostel

Perhaps the most exciting possibility in the North Country Facility System's future is the proposal to construct a new hostel at Crawford Notch. The AMC purchased the property in 1979 to protect it from development, returning more than 400 acres, with the assistance of The Nature Conservancy, to the national forest, and retaining ownership on 27 acres surrounding the remaining buildings. After eight years of planning, direction is now clear: A self-service, super-insulated 56-bed hostel is proposed for the site, to operate primarily as an education center for outdoor skills. A second building, known by several names, but best known as the Shapleigh Studio (where White Mountain School of Art painter Frank Shapleigh lived and painted for several summers) will be renovated to house a meeting room and audio-visual center, and a natural history library and reading room. The other two buildings on the property, the Depot and the Carriage House, are on the National Register of Historic Places, as is the Shapleigh Studio. With septic and site work, which includes the demolition of the old motel currently run as a hostel, the total project cost is estimated to be \$1 million. The summer of 1988 will be decision time for this project.

Crawford's central location and terrain are ideal for an outdoor education center. This new facility will provide low-cost lodging in an historic and rugged mountain notch. It further links the Eastern Division to the West, maintains the AMC's purpose of providing a range of lodging options in the White Mountains, and remains true to the public service mission of the club.

Mike Torrey is North Country Facilities Manager for the Appalachian Mountain Club. This article is reprinted with permission from Forest Notes, #173, Society for the Protection of New Hampshire Forests.

Women and the Banking System

Women control 20% of all finance, insurance, and real estate firms, 16% of service companies, and 12% of wholesale/retail trade businesses. There are four million women who are sole proprietors, with total annual revenues of \$65 billion. Why is it then, that when women approach their local bank for a business loan, the role of the husband in the business seems to be of the utmost importance? The banking system does not perceive women as a major entrepreneurial force, nor as responsible recipients of the bank's money.

These figures are also revealing: In a recent survey of mid-Atlantic banks, women constituted 95% of the cashiers, 50% of the vice-presidents, 25% of the loan officers, 0% of the presidents. Women have labored for a long time at the lower echelons of the banking system, and have proved themselves on bank boards, but they are not elected chief financial officers. There would appear to be a deep-seated conviction that women make good workers but really should not be entrusted with major decisions about the money.

There are a number of situations in which borrowing from a bank makes a lot of sense. Seventy percent of American families have (or have had) home loans, and 75% of new automobiles are purchased with bank loans. Going into business represents a legitimate reason for approaching a bank for a loan. From the bank's point of view, the bank becomes the most important partner in the business, the partner whose monthly paycheck should come first. Because banks and bankers have extensive experience in a given geographic location, the screening of a prospective business will often bring to the surface concerns an enthusiastic entrepreneur might have overlooked.

Bankers look for a business plan, a prospective balance sheet, and some analysis of the potential profitability of a proposed business. Just as bankers appraise a home or a car to be bought with their money, so the details of a potential business and the track records of the proprietors become the fundamental information on which loan decisions are made. Loans are turned down for three principal reasons: (1) Lack of market analysis—that is, insufficient proof that the business really will provide goods or services that customers will support; (2) lack of financial detail—that is, reasonable data on how much the business will cost to estab-

lish, what fees may be charged, and how the business will meet its expenses; (3) lack of evidence that the owner will know how to run the business.

It would seem to be a simple matter for anyone intending to initiate a business to come up with sufficient information to satisfy an inquisitive banker. This brings us back to our initial question. If women do in fact have good track records as business proprietors, why do bankers frown and fret when a woman seeks a loan? And why are women bankers no more disposed than male bankers to provide support for women who want to go into business? The banking community tends to be conservative, and tends to engage in "group-think," that is, a tendency to tell other regional bankers what their policies are, and why others should act as they do. Attitudinal changes

come slowly within the banking industry, and women will have their patience sorely tried before banks really practice equal lending opportunities.

What's a woman to do? A decade ago, lawsuits convinced bankers that single women had just as much right to mortgage money as single males, and discrimination in home loan applications virtually disappeared. Since women are the purchasers of roughly half the automobiles in America, banks today would be foolish to show the slightest discrimination against female applicants for car loans. But a woman seeking a business loan will still be scrutinized severely.

There is a deep-seated conviction in the collective (male) subconscious that women just cannot handle big business money. While time will solve this problem somewhat, there are two important strategies to be practiced now. First, women must spend more time and energy in documenting the reasons for the loan and guaranteeing the safety of the bank's money. While there are a number of businesses—day care centers, craft shops—which don't seem mainstream and appear therefore safe, when women seek to go into traditional businesses, male bankers become anxious about a woman's ability to compete. To allay this, detailed statements as to potential clientele and profitability should be developed by the potential entrepreneur.

The second strategy is legal action. It is difficult to take banks to court over failed loan applications. Banks seldom lose court battles over loan refusals, unless discrimination can be clearly established. Because banks depend on good will, going to court

is not high on their lists of public-pleasing activities. The threat of legal action can act as a powerful persuader.

Depending on the business, banks may lend from 10% to 95% of the capital necessary to fund it. Bankers will prefer, at the same time, to deal with people to whom they previously have lent small amounts, and with whom they have established a relationship. If you think you may want to be in business for yourself, now is the time to create that relationship. Some businesses can be started with very little start-up capital. It is advantageous for a would-be entrepreneur to begin small, to act as a consultant, or to provide goods and services on a part-time basis, until there is some evidence that a business can be run profitably. Attending seminars sponsored by regional Small Business Administration offices provides helpful information and seems to carry great weight with bankers.

A critical mass of women applying will also speed up a positive "group-think" situation banks appear to need. If all the readers of this article suddenly appeared at the local bank seeking funds, CEOs would have to pay attention.

Women own more than half of the common stock in this country, make up 90% of the banking community, and have every right to control finances. Perhaps the hesitancy of bankers to lend women money is due to the fear of just how powerful this economic bloc will become in exercising more of their entrepreneurial skills. In fact, bankers should make themselves look good by unleashing the power of professional women. The results will no doubt be bottom lines of distinction for the banks' own balance sheets and a sense of wonderment as to why they ever hesitated to be lenders to the majority of the population.

Today, however, banks are still one of the last bastions of sexism. But that can't last much longer. Women who are well-organized, persistent, and willing to threaten law suits will make bankers much more willing to lend money.

Gene Bammel is a Professor in the Division of Forestry at West Virginia State University. In addition to this column, he conducts seminars in investing and personal finance. He welcomes suggestions for topics for future columns.

PEOPLE

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in addition to publishing a newsletter and other research series. Under her direction, SIROW has attracted \$4 million in research and visiting-scholar money from such prestigious places as the Ford Foundation and Rockefeller Foundations. The University of Arizona is conducting a nationwide search for Dinnerstein's successor. Lots of luck.



At the recent 102nd annual meeting of the Pennsylvania Forestry Association in Warren, Pennsylvania, Demetra "May" Grosseto was presented with the Northeastern Regional Outstanding Tree Farmer Award. She was selected from

Asst. Prof. of Water Resources Management

University of New Hampshire

Tenure track, 12 months, begins Fall 1989, 50% teaching and 50% independent research (to be developed). Teach watershed management, ecology of polluted waters, seminar in specialty. Require Ph.D., prefer experience in ecosystems studies, teaching/research experience in transport, fate, and biotic effects of aquatic pollutants. Submit letter, vitae, three reference names before April 28 to Dr. William B. Bowden, Forest Resources, 215 James Hall, University of New Hampshire, Durham, NH 03824.

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8,700 Tree Farmers owning 11 million acres from New England, New York, New Jersey, and Pennsylvania. The award recognizes Grosseto's exemplary singled-handed management of her 82-acre tree farm and her educational work devoted to tree farming and conservation. She has planted 1,500 trees, built a pond for wildlife and fire protection, built and maintained fire trails, harvested 75 tons of pulpwood and enough timber to build two houses. She opens her woodlands to the public for hiking, hunting, camping, and fishing.

Bill Luscher, State Bureau of Land Management Director for Oregon and Washington plans to look ahead and prepare for the new workforce. Writing in the *BLM News* for Washington and Oregon, he noted that "traditional American models of human behavior and management methods—the kind I've been exposed to over my career—are based on implicit assumptions of a homogenous white male work force. Some of those methods can be startlingly counterproductive when applied to women" and minorities. The predictions of most think-tanks are that white male percentages will shrink to 25 percent of the workforce by the 1990s. Luscher intends to welcome "new perspectives and methods brought by a diverse workforce. It is important that we view this diversity as a source of richness and strength."

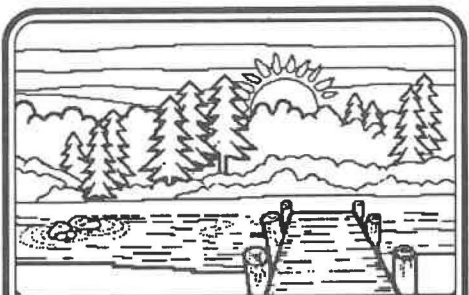
A Xi Sigma Pi Scholarship recently was awarded to Audrey R. Koltes of Kimball, Minnesota. Xi Sigma Pi is the national honor society for forestry. This award was for academic performance and participation while at the University of Minnesota. She has received a number of other awards over the years while earning her degree in forest resources.

Hanna J. Cortner is the new Associate Director for Information Transfer at the Water Resources Research Center, University of Arizona. She is also an Adjunct Associate Professor in the University's School of Renewable Natural Resources. Cortner is responsible for the Center's community outreach, the publications, conferences, information, and referral services.



Her research specialties are policy as it has to do with wildland/urban interfaces, fire management, climate change and water resources.

Members of the Society of American Foresters have elected new members of their Council, the policy making body. Among them, Jane Difley, from Bennington, Vermont, will represent New England and New York. She is currently the Manager for the American Forest Council. Another new member is Geraldine Bergen Larson, Forest Supervisor of the Tahoe National Forest, U.S. Forest Service, Nevada City, California. She will represent California and Hawaii. Difley and Larson will take office in January 1989.



Fisheries Scholarship

The American Fisheries Society (AFS) is offering the J. Frances Allen Scholarship for \$2,500 to a female doctoral student whose research emphasis is in fisheries science. The scholarship is in honor of Dr. Allen, a pioneer of women's involvement in AFS and in the field of fisheries. The grant for the scholarship comes from the Sport Fishery Research Foundation and proceeds from the 1988 AFS Raffle. Applications will be accepted until April 30, 1989. For application and eligibility requirements write: Dr. Brenda L. Norcross, 5410 Grosvenor Lane, Suite 110, Bethesda, Maryland 20814-2199.

NEWS & NOTES

Three Ways to Make Your Career Move Further, Faster

Read your journals. We know, we know—it's tough getting through the stacks of magazines and newspapers that land on your desk. But there's no better source of "initiatable" ideas. The purpose of the trade/professional press is to report what's new in your field. Who's trying what? What's working and what isn't? Trade magazines are gold mines of action stimulators for the initiator—often complete with the whys, wheres, and hows. Can you afford not to be tapped in?

Don't wait to be trained. Anytime you see a way, beyond your current duties, to make yourself more valuable to your organization, do it. Proact, by asking questions, reading everything you can get your hands on, and burning some "midnight premium unleaded." This process of grabbing opportunity is a key success skill. Although your boss is responsible for training you, remember, he or she is not a professional teacher. Unlike your college professor, your boss may not be ready to give you a new assignment every time you're ready for one. Training is a process you must ultimately take charge of yourself.

Pursue your passion. Otherwise, initiating is too much work. We're motivated by things that matter to us. Identify the areas you feel passionate about in your life and career, and head relentlessly in that direction. Eventually you'll reach a position where you "can't not do it," and that's when the ideas, the initiative and the results flow. In the final analysis it is inspiration, not hard work, that makes things happen.

Jimmy Calano and Jeff Salzman, *How to Take Initiative and Make Things Happen—Success Shortcuts # 6*, Career Track, Your Success Company

Rewards as Motivators Have Always Been Tricky: New Research Shows Bonuses After Performance Much Better

Author and sociologist Philip Slater put it starkly in his book, *Wealth Addiction*: "Getting people to chase money...produces nothing except people chasing money. Using money as a motivator leads to a progressive degradation in the quality of everything produced."

In one study, Teresa M. Amabile, associate professor of psychology at Brandeis University, asked 72 creative writers to write some poetry. She gave one group of subjects a list of extrinsic reasons for writing, such as impressing teachers and making money, and asked them to think about their own writing with respect to those reasons. She showed others a list of intrinsic reasons: the enjoyment of playing with words, for example, and satisfaction from self-expression. A third group was not given any list. All were then asked to do more writing. The results were clear. Those given the extrinsic reasons not only wrote less creatively than the others, as judged by 12 independent poets, but the quality of their work dropped significantly after this brief exposure to the extrinsic reasons.

This effect, according to other studies, is by no means limited to poets. When young tutors were promised free movie tickets for teaching well, they took longer to communicate ideas, got frustrated more easily, and did a poorer job in the end than those who got nothing. In another study, a group of subjects who contracted in advance for a reward made less creative collages and told less inventive stories. Students who were offered a reward for participating in still another experiment not only did

more poorly at a creative task, but also failed to memorize as well as the subjects who received no reward.

Practically speaking, this means that incentives announced in advance are more likely to undermine performance than are unexpected bonuses that recognize an outstanding job after the fact. Particularly deadly are incentive programs run as contests in which some teams (or individuals) will not receive bonuses no matter how well they perform. Managers need to consider the impact of any incentive payment on the workers who don't receive it—another hidden cost of rewards.

Alfie Kohn, *Inc.*, January 1988

Some Women's Sports Programs Have a Better Game Plan

Thanks to what one newspaper claims is one of the best women's athletic programs in the country, about 6,000 fans attend University of Texas women's basketball games—more than the number of fans who attend the men's basketball games. During 1987, seven of the university's eight women's teams were ranked among the top five in their sports; two are national champions. At the same time, the program is prospering off the playing field as well. It has built a solid financial base with a 1300 member booster group that annually contributes \$120,000 for scholarships; a full-time development manager; and an aggressive, highly professional marketing campaign. Its current budget is more than \$2.5 million compared to \$72,760 in 1975. Donna Lopiano, who has run the program at Texas since 1975, uses the following strategy: spend the first 10 years building an image centered on a commitment to education and sports by developing successful athletes who also get their degrees; then spend the next decade selling that success. The image has become a reality; her strategy is a winner.

On Campus with Women, Spring 1988

please turn to page 37

Rockclimbers from page 17

know the levels of specialization of users can infer how frequently they will participate in the activity, with whom they will participate, the type of site they prefer, the level of risk they prefer, and the likelihood with which they will pursue other risk recreation activities. By also developing an inventory of geological, biological, and social attributes of available resources, management decisions can be made in matching user preferences and behaviors with appropriate resource supplies.

Finally, while most climbers are male, women who do climb exhibited equally high levels of expertise. Thus,

the main barriers to participation appear not to be related to skill and ability, but rather to cultural stereotypes and misconceptions. Efforts by managers to modify user perceptions of women in rockclimbing may result in significantly higher proportions of women participating in the activity.

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I'm here to save the forests - No, it's the money; no, it's the experience; no, it's the money; no, it's to protect lives and property; no, it's those wonderful ham sandwiches...



PZ 4/88

The Firefighters

WiNR is planning a future special issue on fire—and another one on legislation as it pertains to women in natural resources and natural resources itself. If you have suitable manuscripts or work in progress for either of these issues, contact the Editor, WiNR, Bowers Laboratory, University of Idaho, Moscow, Idaho 83843.

Steve Hollenhorst is an Assistant Professor of Wildlands Recreation at West Virginia University, Morgantown. He presented a version of this paper at the Second Symposium on Social Sciences in Natural Resources, June 9, 1988.

**Chair: Dept. of Forest Resources
University of New Hampshire**

Administer and provide leadership for Forestry, Environmental Conservation, Soil Science, Water Resource Management, and Wildlife Management. Duties: personnel, budgets, teaching. Qualifications: Ph.D.; ability to work with faculty, staff, and off-campus constituencies; excellence in teaching, research, leadership. Appointment: 12 months, Assoc./Full Prof. level, beginning July 1, 1989. Submit letter, resume, three reference names before January 20 to Dr. Robert D. Harter, 215 James Hall, University of New Hampshire, Durham, NH 03824.

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Sex Differences in Letters of Recommendation

Letters of recommendation for candidates for graduate school are different in a variety of ways for men and women, according to a study of 80 letters conducted by researcher Carol Watson of Columbia University in New York. Watson finds that the length of the letter written depends on the gender of the candidate, not the gender of the writer. The longest letters were those written by women about women. The next longest were written by men about women, and the letters by men about men were the shortest. In letters about women, there were generally more adjectives and terms that were reserved exclusively for women; for example, *pert, lovely, a joy, and irrepressible*. This exclusivity rendered the words "somewhat condescending or belittling," according to Watson. Four times as many men as women were praised for having a sense of humor, which Watson theorizes is the result of the women candidates presenting themselves as more serious so as not to be taken lightly.

Women and Language, Vol. 10 No. 2 (University of Illinois at Urbana-Champaign)

Massachusetts Report

At the end of the 20th Century, Boston might look more like it did at the end of the 19th Century if the proposal of the Boston Redevelopment Authority (BRA) to replace the central traffic artery with a green corridor is successful. Others, such as the Boston Society of Architects, would replace the traffic route (which will disappear underground by 1998) with more buildings. In the 19th Century, Frederick Law Olmsted created what was known as the "Emerald Necklace" of parks in Boston. The BRA scheme would add 45 acres of green land to Boston. In the minds of some, this would be another giant "emerald." In the minds of others, however, it has potential to become a "wasteland." The wasteland image is, of course, not without political undertones.

The Boston Globe on June 19, 1988 reported that "Six months after Governor Michael S. Dukakis proclaimed 1988 the 'year of the environment' the state lacks the money to implement new measures adopted to address festering environmental problems....The initiatives put on hold include programs to control smog, establish regional trash-recycling centers, preserve open space and improve disposal of low-level radioactive waste."

Diane Calabrese, *Papillons*

A Prairie is a Song

A prairie is not any old piece of flatland or domestic pasture. No, a prairie is wine-colored grass waving in the wind. A prairie is a sun-splashed hillside bright with wildflowers that turn the land red, yellow, or purple. A prairie is the song of the meadowlark. It is wild land that never met the steel plow. Prairies, by definition, are open spaces dominated by native grasses and flowering broadleaf plants able to thrive under drought conditions. Botanically, a prairie has more than 50 percent of its vegetation composed of prairie grasses. A prairie is a diverse garden that may contain 100 to 200 different species of grasses and plants.

At sunrise on a fresh April morning this spring, I sat on a knoll and was surrounded by the soft sounds of awakening prairie. The distant hills across the Missouri River were shaded in purple and gray. The sunlight was liquid

NEWS & NOTES

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gold, pouring across a landscape of bronze and green. I shall always love the changeless reaches of my prairie sea.

John W. Schulz, *North Dakota
Outdoors*, June 1988

Marine Plastics, Ghost Fishing: Lots of Killers and Polluters Out There

A monofilament gill net packed with dozens of crab and other marine life, which authorities believe has been "ghost" fishing since the commercial salmon season last year, was recovered by NOAA Entanglement Research Program scuba divers at Port Ludlow, Washington in May. The fish bones and crab carapace trapped in the net indicated it had been in the water about six months. The Washington Department of Natural Resources (DNR) has appointed a task force to recommend methods to combat the enormously growing killing effects of plastic litter on marine life.

DNR News



Asst. Prof. of Natural Resource Management University of New Hampshire

Tenure track, begins Fall 1989, 50% teaching, 50% research. Teach two courses: natural resource administration and policy, managerial economics/marketing/or policy (undergraduate and graduate levels). Develop research supported by New Hampshire Agricultural Experiment Station. Require Ph.D., prefer significant non-academic experience in forest management. Submit letter, vitae, three reference names before February 15 to Dr. T. E. Howard, Dept. of Forest Resources, University of New Hampshire, Durham, NH 03824.

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Stumpage Prices Are Not the Only Indicator of What the Forest Service Gets Paid For Federal Timber

Roads help provide a misleading picture of the price the Forest Service gets for its timber. The cost of a road might equal \$60 to \$70 per 1,000 board feet of timber. Rather than the Forest Service paying the buyer of the timber to build the road, they just reduce the stumpage price \$60 to \$70 per 1,000. Then, when they reduce the size of clearcuts, require special techniques along streams, and make other environmental requirements that increase the logging costs—instead of paying the logger to provide these special services as would be done in the private sector—the Forest Service reduces the stumpage price.

"A lot of the money we pay to the Forest Service doesn't show up in stumpage prices," said George

Woodbury, Alaska Pulp's Vice President for Timber. "We're paying a lot more than \$2 per thousand for stumpage," he said. "We pay about \$60 to \$70 per thousand to the federal government to build roads into the timber we harvest, but the Forest Service doesn't get those dollars to show up as stumpage values—they do, however, get a road instead," said Woodbury. That road will be used on future timber sales, but the total cost is written off on the first sale, even though only 30 to 50 percent of the old-growth timber, for example, will be removed as part of the first sale. The road will also provide access for recreational uses, hunting, and forest management activities by the Forest Service.

Alaska, Alaska Loggers Association
Summer 1988

Supplying Recreation Gear is a Huge Co-operative Venture in Seattle

Recreational Equipment Inc (REI), the nation's largest consumer coopera-

tive with annual sales of \$157 million, started a half century ago in a Seattle living room with six climbers who wanted low-cost gear. Lloyd and Mary Anderson cared more about mountains than making money. They at first enlisted four fellow climbers, and the co-op's rapid and steady growth took off. Since the 1930s when the Andersons learned to import mountaineering gear directly from Europe, more than two million people have held REI membership cards. In the early years, the Andersons worked for the co-op without pay. They picked up orders, kept books, sent mailings listing the likes of ice axes, pitons, and Sno-Seal. They floated no-interest loans, even made their home a warehouse. Mary Anderson sewed tents, Lloyd Anderson and a blacksmith made hickory-handled ice axes during World War II when Nazi gunboats cut off supplies. REI branched out first to Berkeley, California in 1975 and now has 18 stores in 10 states plus mailorder sales.

In Seattle, REI was known as simply "the co-op." Outside Seattle, REI was known through its catalogs. In 1963 it shared a bit of the fame of its first full-time employee, Jim Whittaker, when Whittaker became the first American on the summit of Mount Everest. Whittaker took over from Anderson as president in 1971.

REI pays out at least 85 percent of its earnings as dividends and that means it has to be about twice as profitable as a regular store. REIs current 711,000 members, according to a survey, insist that REI should spend some of its profits to preserve nature. This year the co-op donated \$250,000 to conservation and wildlife programs.

Renee Schoof, Associated Press, in *Idahonian/Daily News*, July 6, 1988.

Women Own One Third of Businesses, But Earn Only 11 Percent of Gross Receipts

The number of women business owners has increased by 33% since 1976; there are now 3.3 million. Estimates are that half of all businesses

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EVENTS

January

Practical Approaches to Riparian Resource Management, 3 January 1989. Write Chris Hunter, program chair, OEA Research, Box 1209, Helena, Montana 59624.

Protecting the Health of Pacific Northwest Forests Through Integrated Pest Management: A Symposium for Forest Managers, 17-18 January 1989 Oregon State University. For information, contact Conference Assistant, College of Forestry, Oregon State University, Corvallis, Oregon 97331 (503-754-2004).

February

Symposium on the Issues and Technology in the Management of Impacted Wildlife, 6-8 February 1989 Glenwood Springs, Colorado. The sponsors are the Thorne Ecological Institute. For information contact Susan Q. Foster, Executive Director, Thorne Ecological Institute, 5370 Manhattan Circle, Boulder, Colorado 80303 (303-499-3647).

Maintenance Management System Seminar, 7-9 February 1989. Land Between the Lakes, Kentucky. Seminars will aid public agency supervisors. Focus on maintenance and management in environment education, recreation, interpretation. Conducted at Lake Barkley, the "flagship" State park in Kentucky. These and other seminars will be offered in New York, California, Washington, Oregon, Ontario. For costs and dates, write Jim Carpenter, TVA's Land Between the Lakes, Golden Pond, Kentucky 42071 (502-924-5602).

Southeastern Recreation Research Conference, 15-17 February 1989, Asheville, North Carolina. The theme is Research and the Recreation Marketplace. Refereed proceedings will be

published. Contact Dick Paterson, Land Between the Lakes, Golden Pond, Kentucky 42231 (502-924-5602).

Peacemaking and Conflict Resolution, February 28-5 March 1989, Montreal. The theme is Taking Stock and Moving Forward. For information, contact Therese Lajeunesse, Attorney General's Office, Manitoba, CANADA (204-945-6838).

March

Shade Tree Short Course, 8 March 1989, University of Minnesota, St. Paul. The midwest drought and its aftereffects will be the central theme. For information contact David French, 495 Borlaug Hall, 1991 Upper Buford Circle, St. Paul, Minnesota 55108.

New England Society of American Foresters, 15-17 March 1989, Portland, Maine. For information contact Thomas Whitworth, 1 School Street, Fort Kent, Maine 04743.

Landscape Ecology Symposium, 15-18 March 1989, Colorado State University. Landscape patterns may influence horizontal movement of water or nutrients, spread of disturbances, diffusion of organisms. Papers will address theory, methodology, empirical results. Contact Ingrid C. Burke, Natural Resources Ecology Laboratory, Colorado State University, Fort Collins, Colorado 80523 (303-491-1620).

Joint Atlantic Seminar in the History of Biology, 31 March - 1 April 1989, Yale University. Call for papers by 1 February 1989. Sponsored by the History of Science Society. Some funds may be made available for unaffiliated scholars to participate. For information contact F. L. Holmes, PO Box 3333 Yale Station, New Haven, Connecticut 06510.

April

Shrub Research Consortium, 5-7 April 1989, Las Vegas. Cheatgrass invasions, shrub die-off are among topics. A field trip to the Nevada Test Site offered. Intermountain Research Station will publish proceedings. Contact Keith McNeil, Division of Continuing Education, University of Nevada, 4505 University Parkway, Las Vegas, Nevada 89154 (702-739-3707).

Pine-Hardwood Mixtures: A Symposium on Management and Ecology of the Type, 18-19 April 1989, Atlanta. Sponsored by Clemson University, Forest Service, Georgia-Pacific Corporation, Cooperative Extension Foresters, and the National Association of State Foresters. Contact Jacqueline L. Haymond, Department of Forestry, 272 Lehotsky Hall, Clemson, South Carolina 29634-1003 (803-656-2478).

Planning for Agroforestry: An International Symposium, 24-27 April 1989, Washington State University, Pullman. Sponsored by several universities and agencies. The purpose is to provide a setting for substantive evaluation of planning methods, and to identify successful strategies for subsistence and commercial settings in developed and developing countries. A proceedings will be published. Contact Linda H. Hardesty, Chair, Department of Natural Resource Sciences, WSU, Pullman, Washington 99164-6410 (509-332-6166).

July

Wildfire, 23-26 July 1989, Boston. The theme is Meeting Global Wildland Fire Challenges, and international cooperation techniques will be discussed. Contact the National Fire Protection Association, Batterymarch Park, Quincy, Massachusetts 02269-9101, Telex 200250 (617-770-3000).

PUBLICATIONS

The Conservation Trees booklet of the National Arbor Day Foundation is available to soil conservation districts, extension agents, foresters and other professionals free of charge. The booklet (nicely illustrated) includes information on shade trees, windbreaks, woodlots, topsoil preservation, and other resources and references. For information on case lots or individual copies, write them at 100 Arbor Avenue, Nebraska City, Nebraska 68410.

Women in Entomology is a newsletter with an international scope and reader list. Published twice a year, the newsletter focusses on the activities of women in entomology through its five sections: Ideas, activities, notices, exchange, biographical, and autobiographical notes. A contribution of one dollar is recommended. For information, write Editor D. M. Calabrese, PAPILLONS: diversified endeavors, 22 Sumner Street, Dedham, Massachusetts 02026-1921.

Annals of the Earth is a publication of Ocean Arks International and the Lindisfarne Association. Both are non-profit organizations that work to promote ideas and practices of ecological sustainability throughout the world. Write them at 10 Shanks Pond Road, Falmouth, Massachusetts 02540.

The Futurist (4916 St. Elmo Avenue, Bethesda, Maryland 20814) is a bi-monthly journal of forecasts and trends. Forecasts have included: •Suicide among the elderly will become more acceptable as medical science extends the human life span. Licenses and death specialists will organize, legalize, and dispatch. •Most of Europe will continue their current well-defined shift away from marriage and parenthood. •U.S. society will be increasingly dominated by single people, already growing in proportion today. Consequences will be fewer children, more adult luxuries, increased mobility, weakening of communities. •Seventy-five percent of all workers currently employed will need retraining by

the year 2000. •International terrorism will increase. •Skyscrapers of up to 1,000 stories will be technically feasible. •Hypersonic aircraft and 1,000-passenger planes will double rate of air travel by 2002. •Super batteries will run household appliances for 30 years and also lead to high-performance electric cars.

The National Association of Environmental Professionals, is an interdisciplinary professional society of concerned individuals working professionally and ethically to protect the planet. They publish a newsletter and an official journal, *The Environmental Professional*. Queries and submissions should be addressed to them through F. M. Reed, Editorial Associate, 2066 Engineering One Building, University of California, Los Angeles, California 90024-1600 (213-825-8546).

Career Track is a company which produces a number of works (often on tapes as seminars) having to do with networking and building successful professional support groups. They also present seminars. Books they recommend include titles such as *Networking For You?* by Barbara B. Stern, and *Networking*, by Mary Scott Welch. Information on their programs can be found at 3085 Center Green Drive, Boulder, Colorado 80301 (303-447-2300).

The Wilderness and Special Areas Recreation Management Staff of the Forest Service have started an informal newsletter which includes data on the 25th anniversary of the Wilderness Act. The Forest Service now manages 32.6 million acres of wilderness—one-sixth of the total National Forest land base. Many public groups, private organizations, and individuals assist in managing this resource. The BLM, the Fish and Wildlife Society, National Park Service, the Wilderness Society and others are planning celebrations. To assist in this, a brochure, *An Enduring Resource of Wilderness* is available, along with other information on

the anniversary. Write Anne Fege or Paul Bradley at PO Box 96090, Washington DC 20090-6090 for the packet and to get on the mailing list.

In their research for *Success and Betrayal: The Crisis of Women in Corporate America*, (Simon and Schuster, Inc.) authors Sarah Hardesty and Nehama Jacobs interviewed hundreds of women to try to learn the reasons for their negative feelings. They conclude that "the origins of discontent lie in the carefully nurtured myths and extravagant expectations that women bring to life today in corporate America." Myths are: •Merit is the principal quality corporations reward. *In reality*, corporations reward success. •People are irreplaceable and an emotional investment is justified. *In fact*, corporations must be managed to prevent anyone from becoming indispensable. •Corporations offer unlimited potential for individual recognition. *In reality*, Corporations do not recognize individuals for a good job performance, but for extra overtime and extra hard work. Authors Jacobs and Hardesty offer advice on how women should realign their own expectations to succeed.

The American Forestry Association and the Society of American Foresters have joined hands to produce a 16-page booklet on forestry careers aimed at young people, their teachers and counselors. Bulk orders (10 or more) cost 40 cents per copy. Write the AFA at PO Box 2000, Washington DC 20013 or the SAF at 5400 Grosvenor Lane, Bethesda, Maryland 20814.

Under great pressure to boost industrialization and agricultural output, many countries are turning to river resources as inexpensive domestic tools for energy generation, irrigation, and waste disposal. Social and environmental impacts are often glossed over by planners and government officials as well as lending institutions. *World Rivers Review* is a bi-monthly newsletter published by the International Rivers Network, (300 Broadway, Suite 28,

San Francisco, California 94133) designed to shed light on river use ramifications.

Allowable use is the level of grazing utilization that can be permitted on an area when all influencing factors are considered. This method determines carrying capacity by adjusting stock numbers up or down to attain an allowable use for the range unit as a whole. A **guidebook** from Project Leader Earl Aldon, Forestry Sciences Laboratory, 2205 Columbia, SE, Albuquerque, New Mexico 87106 (505-766-2384) contains forms and tables, along with detailed instructions to assist users in arriving at an accurate estimate. Two computer diskettes are also included containing COSAM (for vegetation parameters) and GUDSAM (for forage production). Contact Aldon for a copy or for more information on the research.

The Forest Service's Forest Products Lab published a report that assembles drying schedules for more than 500 species of temperate and tropical woods. ***Dry Kiln Schedules for Commercial Woods: Temperate and Tropical***, consolidates (written out, not coded) drying schedules for each species from many sources. For information write the Lab at One Gifford Pinchot Drive, Madison, Wisconsin 53705-2398 (608-264-5600).

Increasingly, Californians are becoming interested in the conservation of hardwood trees, especially the oaks. Three agencies have banded together to create the Integrated Hardwood Range Management (IHRM) program looking to improve regeneration, wildlife habitat diversity, and management of these oak woodlands. They offer a **newsletter**, a **publications list**, **preliminary guidelines** for management, an **audio-visual selection**, and **addresses of specialists** who have regional information. For a brochure or for some of the above items write IHRM, University of California, Berkeley, California 94720.

JAPCA is the acronym for the international journal produced by the Association Dedicated to Air and Waste Management. It is published monthly, and features literature, book reviews, software and new product introductions, meetings, and people in the field. It provides a forum for research findings and in-depth articles on pollution control and waste management. Contact them at PO Box 2861, Pittsburgh, Pennsylvania 15230 (412-232-3444).

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will be owned by women by the year 2000, because women have been going into entrepreneurship three times faster than men have in the last decade. In 1983, women owned 28% of all businesses reported to the IRS, but accounted for only 11% of gross receipts. This discrepancy is related to the greater profitability of large, capital-intensive, full-time businesses over small, labor-intensive firms. Women-owned firms are typically small, with fewer than 20 employees, less than \$100,000 in capital equity, and less than \$500,000 in annual volume. Many are part-time and home-based, and most are in retail and service fields. Although women own almost a third of all small businesses, they receive less than 1% of all government contracts awarded to small businesses.

A Decade of Achievement 1977-1987: A Report on a Survey Based on the National Plan of Action for Women, The National Women's Conference Center

Planting and Growing

Americans set another all-time high record for tree planting last year, putting 2.3 billion seedlings—nearly 10 trees for every individual in the country—into the ground on three million acres. The area reforested is about the size of Connecticut. The forest industry and non-industrial tree farmers accounted for 87 percent of the planting effort. Tree-planting records have been broken in every successive year since 1981.

The ability of Forests in the Pacific Northwest to grow wood is astounding and virtually unique on the globe. The above-ground biomass for old Douglas fir and hemlock stands averages 345.7 tons per acre as compared to 96.8 tons per acre for mature temperate deciduous forests and 126.7 tons for mature tropical rainforests.

The U.S. has a greater volume of hardwood trees than at any time in the last 50 years and is growing twice as much as is being harvested annually, according to James L. Gundy, Executive Vice-President of the Appalachian Hardwood Manufacturers, Inc.

Forest Industry Newslines, May-June 1988

NEWS & NOTES

from page 38

Company Town Looks to the 21st Century

The term Company Town conjures up some of the worst aspects of the splintery history of logging. Bunkhouses and cook shacks for single men. Slabwood shanties for families. Streets that went to dust in the summer and gumbo mud in the winter. The company store and its charge system, ready to soak up a man's paycheck before it was earned. There is only one left in Oregon—Gilchrist, population 500, the last company town. It's been half a century since the Gilchrist family, a logging and lumbering clan out of Laurel, Mississippi, headed west and saddled their little village over U.S. Highway 97 in northern Klamath County. By the looks of things, the place is good for another 50 years of company ownership. "Operating the town and keeping it a nice place is a tradition in my family. It's our job to look after it. My dad used to drive around town and look to see how the houses were being kept up. Now I do it. If I see something that needs fixing, somebody's going to hear from me," said Frank Gilchrist, chairman of Gilchrist Timber Co.

The Gilchrists dammed the Little Deschutes River to create a mill pond, built a power-house to generate electricity for the town and mill, and nailed down a 10-mile rail spur to connect with the Southern Pacific mainline. The old mill was replaced with a computerized operation a few years back. The new setup doesn't make use of the log pond, which is now stocked with trout each year.

Mike Thoele, Associated Press, in *Lewiston Tribune* July 8, 1988

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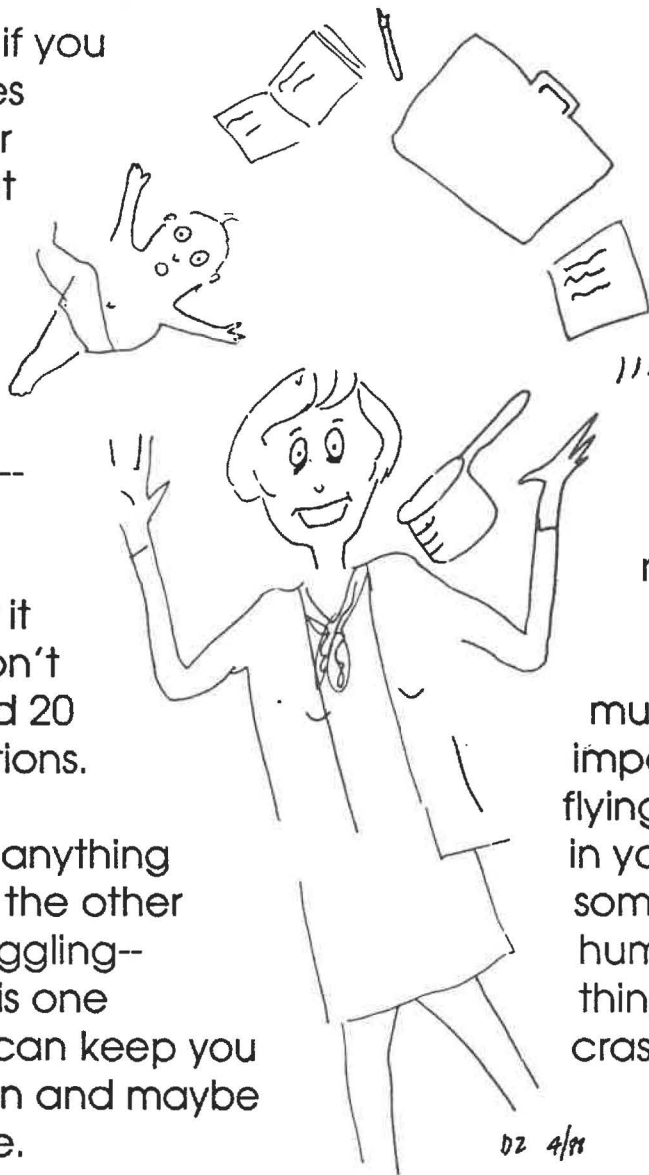


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World Forest Institute Builds a New Building in Portland

Construction is underway on an 11,000 square foot building that will become home of the World Forest Institute, a new program of the World Forestry Center in Portland, Oregon. Educational, informational, and research activities will emanate from the Institute beginning in 1989.

The purpose of the World Forest Institute is to embrace new programs resulting from the "Western" Forestry Center name change in 1986. With six nations now represented on the Center's Board of Directors, and with members from 50 states and 18 countries, impetus exists for a broad World Forest Institute focus. The first activity will be the premier showing of the Smithsonian's 6,000 square foot Tropical Rainforest exhibit, March 12-June 4, 1989. An International forestry information center will become operational in 1989. It will employ an information specialist to access international data bases and respond to requests for quick, accurate forestry-related information. A third focus will be the organization and sponsorship of symposia on global resources and economic development issues.

John L. Blackwell, *Forest World*, Summer 1988

Men Will Be Boys

You may have noticed that all the recent Peter Pan syndrome movies (*Like Father, Like Son; Vice Versa; 18 Again; Big*) have been about men who were really boys inside and/or boys who were really men inside—which just about covers the way we males spend most of our lives feeling. But *Big*, the only one of the above-mentioned films to be directed by a woman and the only one that embraces and understands both male and female points of view (it's also the only box-office smash in the batch), got me thinking: Don't women share this yearning to regress to prepubescence?

Apparently not. I asked a number of 30-ish women friends if they ever fantasized about being 13 again, and they all basically agreed: "No way—are you

kidding?" What accounts for this radical disparity in the way men and women view their formative years?

From an early age, boys form an almost fetishistic attachment to the *objects* of their desire. And this primal fixation lasts us the rest of our lives. It is not uncommon for grown men to spend Miller Time reminiscing in exhaustive detail about the everyday minutiae of our youth: baseball cards, secret glow-in-the-dark decoder rings, comic books, and jawbreakers. As far as I know—and my independent research bears this out—the *mysteries* of, say, Barbie and Ken's lack of genitalia or the miracle of light-bulb cookery as manifested in the Suzy Homemaker Oven simply do not hold the same kind of fascination for grown women.

Men, you see, also don't usually talk about music, as such. That's too abstract, too emotional. In male conversation, "music" becomes records, records become statistics. Indeed, for men, the quest for (and regurgitation of) marginally significant data becomes a lifelong bonding ritual and competitive sport. It's something that has been ingrained in us since we were knee-high to fire hydrants.

Our frantic rush to pseudo-adulthood was motivated by the need to figure out how the world really works before your friends do, so they won't ruin it for you. You had to shatter your friends' childish illusions (about Santa Claus and radiation and how TV worked and where babies came from) before they exposed and evaporated yours, leaving you feeling stupid, embarrassed and more than a little betrayed by their superior grip on reality. We were just hungry for facts and the security and power we thought they would bring us.

Later on, however, once the idea of appearing older has lost its urgency, it's nice to imagine going back to make up for lost time, lost innocence.

Jim Emerson, *Savvy* (October 1988)

A Home in the Woods Can Be a Dream or Firefighter's Nightmare

Imagine your perfect idea of a mountain vacation or retirement home. It's probably a nice big house, maybe

even a log house with a shake roof,

nestled away on a small parcel of land in a quiet and remote part of the woods. Around your home you might imagine a natural setting of trees, natural flowering plants and brush so you don't have a lot of maintenance to do. To add to the private and secluded feeling of your hard-earned retreat, you may even avoid installing a telephone and plan a long single-lane driveway to discourage visitors. This may sound like a dream of a lifetime to many people, but it actually has all the makings of a real-life nightmare.

The main problem in these areas, referred to as the urban-wildland interface, lies in the planning and maintenance of interface-area homes which do not provide for a margin of fire safety. This includes creating a primary fuel break of at least 10 feet around structures with fire resistant plants or other natural materials, removing dead fuels and debris (including keeping the lawn mowed), and thinning trees. Other important fire prevention steps include maintaining a good road to your home so fire trucks can easily and safely get in, having an escape route, creating an alternate source of water in case of a power outage, having a fire-retardant roof, and following all local burning regulations in your area.

Forest Log (Oregon State Department of Forestry), August-September 1988

Diamond International sells 90,000 acres

Diamond International's recent sale of 90,000 acres of timberland in Vermont and New Hampshire to a New Hampshire developer, serves as a reminder that as populations grow and prosperity continues in the Northeast, not even remote timberland is safe from the footprints and check books of a restless urban society.

Northern Logger, September 1988

KIOSK*

*postings

WiNR has received several **Early Job Alert notices for Women and Minorities in Natural Resources** from, for example, the USDA Forest Service's Southeastern Forest Experiment Station and the Pacific Southwest Region. **The deadlines come and go rather quickly**, so if you are thinking of a move into or around the Forest Service, check in with your region of choice—they may have a need for you. Mike Causey, in the *Federal Diary*, (and reprinted in several newspapers around the country), recently joked that to him it sounded like a science fiction movie from the 1950s: *Mars Needs Women*. He went on to note that if "if the Forest Serv-

ice doesn't hire 500 women fast, the Secretary of Agriculture could be held in contempt of court, fined, and (in theory) sent to the slammer." Check the last issue of WiNR's News and Notes section for the Civil Rights Committee's view (Pacific Southwest Region) of the situation. Next issue, WiNR will interview several key players for progress and problems on the piece of legal business which is causing all of the reverberating: the Consent Decree.

We need your help to learn more about the Forest Service china used in ranger stations throughout the country. Did you order china? Do you have an old, treasured cof-

fee cup at home with the familiar Forest Service shield? Any information you could share with us about chinaware companies, patterns, dates, or ordering procedures would be greatly appreciated. Contact Gary McLean, Forest Archaeologist, Flathead National Forest, 1935 Third Avenue East, Kalispell, Montana 59901.

The Garden in the Woods in Framingham, Massachusetts, covers 45 acres and represents the largest collection (1500 varieties) of native plants—some endangered—in the northeastern United States. It is owned and operated by the non-profit New England Wild Flower Society, which was established in 1922 to promote the appreciation, knowledge, and conservation of native plants. From 15 April to 31 October, visitors see woodland groves, lily ponds, a bog, pine barrens, and a meadow. They can view hepaticas, trailing arbutus (April), lady's-slippers and trilliums (May), prickly pear and pitcher plants (June), lilies and blazing stars (July), cardinal flowers and turtleheads (August), asters and gentians (September/October). For more information contact the Society at Garden in the Woods, Hemenway Road, Framingham, Massachusetts 01701.

The College of Forestry, University of Minnesota, has recently changed its name to the College of Natural Resources. The college is located on the St. Paul campus with a significant presence at the Cloquet Forestry center in north-

ern Minnesota. A newly formed Department of Fisheries and Wildlife joined the college in 1983. Forestry degree programs (originally housed in the College of Agriculture, Forestry, and Home Economics) started at the university in 1903.

When logging, preplanning heavy machinery use can lessen the distance a piece of equipment will travel and lessen the amount of soil compacted. **Doug Perrin of Woodland Management, Inc. advocates designating skid trails (DSTs) before allowing skidders into an area.** Generally, skid trails can be placed every 150-200 feet, instead of the 50-75 foot spacing. Contact Perrin for his information at Kruse Woods One Building, Suite 282, 5285 S. Meadows Rd., Lake Oswego, Oregon 97035 (503-684-4004).

The Alaska Regional Office of the US Fish and Wildlife Service is interested in signing up volunteers to work on various wildlife conservation projects. Often food and lodging is provided, but not transportation. Most projects take place during the summer. Contact Bill Knauer, US Fish and Wildlife Service, 1011 E. Tudor Road, Anchorage, Alaska 99503 (907-786-3399)

The Forestry Media Center at Oregon State University (OSU) is offering a snappy new catalog of 1989 offerings. For lists of video tapes, films, slide-tapes and other resources contact them at Peavy Hall 248, OSU, Corvallis, Oregon 97331-5702.

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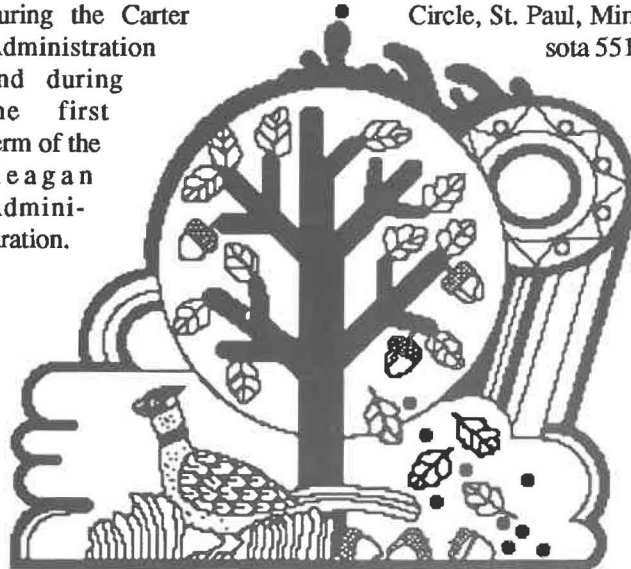
c/o centre for urban
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M5S 2G8

The goal of some wilderness therapy is to kindle, or rekindle, an assault victim's confidence in her body and spirit. Special exercises—like mountain climbing—are designed to help demonstrate how strong and ingenious victims can be in the face of physical challenges. Founded in 1982, one innovative program combines the technical expertise of the Colorado Outward Bound School (COBS), a wilderness adventure school, with a counseling service for victims of violent sexual assault called Ending Violence Effectively (EVE), started in 1981 by two rape victims. These nonprofit organizations are based in Denver, but other parts of the country have similar arrangements. Each course is conducted by two COBS instructors and two counselors from EVE. Besides offering courses for victims of sexual assault, Outward Bound also provides wilderness therapy for recovering alcoholics and for cancer patients, among others. For details, write Outward Bound, 384 Field Point Road, Greenwich, Connecticut 06830 (800-243-8520). For information about EVE write them at PO Box 18212, Denver, Colorado 80218 (303-322-7010).

In 1986, the Project Learning Tree (PLT) steering committee in Massachusetts applied to the Forest Service's Civil Rights Action Committee and were successful in receiving money for a new training program for teachers in urban areas, specifically teachers of minority students. The goal is to inform urban minority populations of the importance of natural resources to their lives, even if they live in areas where the only trees they may see are ones in a park. The Forest Service also hopes that minorities will be encouraged to seek careers in natural resource

management. To date, 60 teachers have been trained and 1,000 inner city children introduced to PLT. The steering committee is now looking for funding for a full-time coordinator.

WiNR has joined with more than 50 national organizations to help reactivate the Coalition for Women's Appointments. The Coalition will identify qualified women to fill key policy-making positions within the next Administration. A similar coalition was successful in 1976 in increasing the number of women appointed to such positions during the Carter Administration and during the first term of the Reagan Administration.



The focus of the Coalition and its task forces will be on those full-time jobs for which President Bush will nominate a person: the Senate must confirm. These are cabinet secretaries, undersecretaries, assistant secretaries, agency directors, commission heads, and the like. The typical nominee will therefore have to have exceptional professional qualifications as well as strong political ties. To nominate—or inquire about the process, contact the National Women's Political Caucus, 1275 K Street, NW # 750, Washington DC 20005 (202-898-1100).

David French is collecting information on tree performance under the extreme drought conditions in the midwest, summer of 1988. He needs records of tree injury or mortality—but he will take observations, too. Give him information on: species and variety, age, location, insect or disease damage, total number planted in relation to how many affected or lost, general comments. These reports will be incorporated in a study to be presented at the 1989 Shade Tree Short Course. Send reports to him at 495 Borlaug Hall, 1991 Upper Buford Circle, St. Paul, Minnesota 55108.

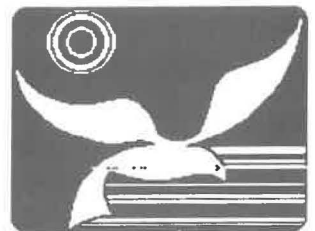
The BLM is setting up osprey nesting platforms in tall trees overlooking the Galesville Reservoir, 20 miles northeast of Glendale, Oregon. Wildlife Biologist Roger Schnoes asks anyone sighting ospreys in the area to call him at his Medford office 503-776-4314.

In 1988 Vermont and Massachusetts broadened their focus for National Forest Products Week by initiating a Forest Festival. Events usually focus on sawmills, logging, and tours through managed woodlots. The states changed the focus this year to include crafts made of wood, tours of urban street trees, na-

ture walks, tracking and mountaineering demonstrations, tree planting workshops for kids, basketmaking plants, labor (furniture) history museum tours. The emphasis has been on making the many people attending aware that we are dependent on forests for so much of our physical and mental well-being.

The journal *Women and Environments* (focusing on the issues of gender and the built environment) announces the formation of the Women and Environments Education and Development Foundation called by the acronym WEED. There are various levels of donations with various advantages to the giver. For information, contact WEED at the Centre for Urban and Community Studies, 455 Spadina Avenue, Toronto, Ontario CANADA M5S 2G8.

The American Forest Council initiated a new pilot program for small woodland owners (1 to 9.9 acres) called Backyard Tree Farmer in New Hampshire and Vermont. To become one, you pay a \$25 membership fee, keep a diary of activities and observations, complete five projects, map and note significant features, and work with a local state forester. Once the pilots are deemed workable, the AFC may move it to other states



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INFORMATION FOR CONTRIBUTORS

Women in Natural Resources provides information and ideas for, from, and about women. Topics covered in the journal are those of forestry, wildlife, range, fisheries, recreation, arboriculture, ecology, and the social sciences as they relate to natural resources. We address issues of administration and personnel, gender related topics, educational resources, and support mechanisms. Technical articles suitable for reading by professionals in varied natural resource fields are also featured. Our contributors effectively integrate the factual, the personal, and the philosophical aspects of the working professional.

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FOR MORE INFORMATION Call Dixie Ehrenreich at 208-885-6754 or 208-883-0726.

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