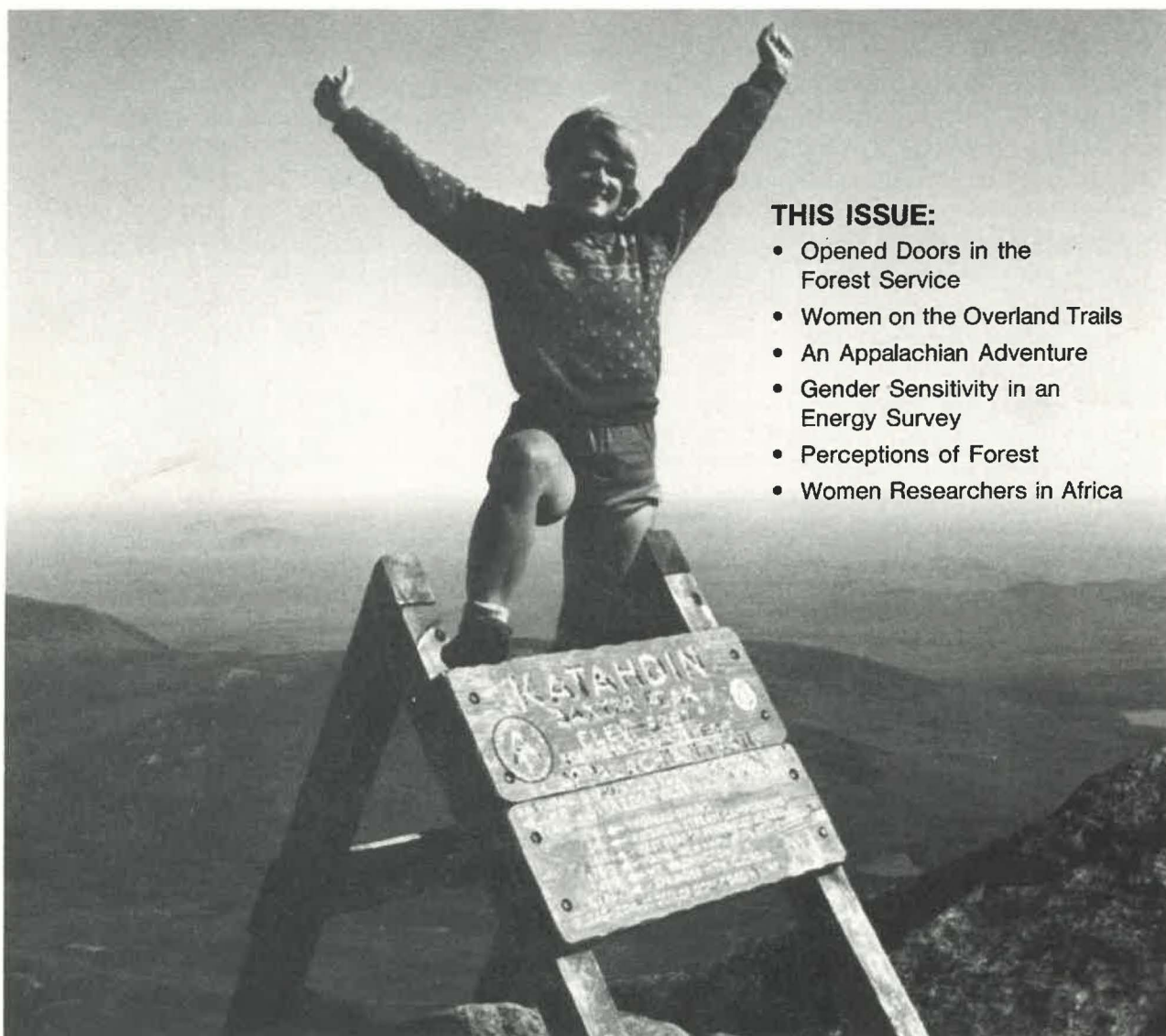


women in FORESTRY

a journal for professionals in the natural and related cultural resource fields

VOLUME 6, NUMBER 3

FALL 1984



THIS ISSUE:

- Opened Doors in the Forest Service
- Women on the Overland Trails
- An Appalachian Adventure
- Gender Sensitivity in an Energy Survey
- Perceptions of Forest
- Women Researchers in Africa

Diane Spott on Mt. Katahdin, the end of 2000+ miles on the Appalachian Trail

UPS AND DOWNS

We were talking—again—about the changing roles and perceptions of women within the natural resource professions. Although we sometimes feel that we are beating our heads against a wall—that we are perhaps too far from genuine equality to ever really get there—we also feel, at other times, that women have really begun to “make it.” Our progress is highlighted, in this issue, by a “news and notes” item about women in fisheries over the years, and by a reprinted 25-year-old article describing opportunities for women in the profession of forestry. To wit: “In the main, it’s a man’s job.” A woman could, however, do the “next best thing” and marry a forester. I think we all agree that we’ve made progress and we prefer to go about our work thinking the best about situations and people around us. But the darker side of “reality” often forces itself upon us one way or another. We have all, at one time or another, as women in a traditionally male-dominated work force, lost our innocence in such matters. We have come to realize that the way we’d like it to be and the way it actually is are not always the same thing. To much of the human race, it still does matter, more than is relevant to doing our job, whether an employee is a man or a woman. Among the people that we work with, we find attitudes and behaviors ranging from the archaic, condescending, and paternalistic, to true acceptance, equality, and respect for our attributes as professionals and human beings. It is this inconsistency, we think, that accounts for the fact that some women wonder what all the fuss is about, while others are ready and willing to devote their lives to women’s rights and women’s issues.

Our perceptions are affected even when reading the morning paper. Last week, the front page carried a photo of Geraldine Ferraro, and below that, another article headlined “Woman Walks in Space—Soviet Spends Three Hours Outside Space Station.” One begins to think that things are moving along rather nicely. Better not read further. On page two was an article headlined “Males Earn Twice as Much as Women, Report Confirms.” “Newly released government statistics” show that for all workers over age 18, men averaged \$16,929 during the past year while women earned \$8,238. With a postgraduate college degree, men averaged \$27,660 and women \$13,471.

So, depending on what you read and who you encounter, by choice or by necessity, during your working day, your commitment to women’s issues may wax one day and wane another. It is very much an individual matter. As the editors of *Women in Forestry*, we are committed to working, as best we can, to facilitate communication among women in the natural and related cultural resource professions. But much of the time we wear other hats—scientist hats, mother hats, professor hats, and so on. Neither we nor you, our readers, spend all our waking hours being one type of person. Much to our personal and professional satisfaction, this diversity in attitudes and perceptions about life and work as women professionals is revealed in the contributions we receive for *Women in Forestry*. Most of the time, there is a sense of optimism about the future, a sense of professional and personal excitement, in what we hear and read. We are increasingly encouraged to see the growth of this network as more and more women send us their ideas, opinions, news items, meeting notes, reports, and stories.

—Molly Stock and Dixie Ehrenreich

WOMEN IN FORESTRY

VOLUME 6 NUMBER 3

FALL 1984

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LETTERS AND OPINIONS

● Thanks for the excellent job you do in publishing Women in Forestry. The journal is widely read and appreciated by women and men in our Region.

Susan Super
Federal Women's Program Manager
Northern Region
Missoula, Montana

● I'm the timber management assistant on the San Jacinto Ranger District of the Sam Houston National Forest. Although Texas may sound western, this is definitely still the southern coastal plains down here. There is a conspicuous lack of coverage of the east and southeast in Women in Forestry, and I hope that our contribution describing the meeting of women foresters from Texas and Louisiana will alleviate that a little. I passed some copies of the magazine around at the meeting. No one else had been receiving it, but everyone was impressed, and several people took down the address in order to subscribe. Maybe an increased readership out this way will result in more contributions from this part of the country.

I agree with the summer 1983 editorial--a gender-oriented journal is justified. The magazine will disappear when it is no longer needed. Meanwhile, thanks to everyone involved for the fine job you are doing.

Sharon E. Mohney
Cleveland, Texas

● I commend your tremendous efforts along with those of all the women over the years who have made the journal possible through their subscriptions, written contributions, phone calls, or production and publication skills. I applaud, too, the generous, active support and contributions of men who see and understand the need for such a journal. None of us in the original 1979 network expected, beyond our wildest dreams, that the newsletter would become so successful. I particularly appreciate the way you've maintained the integrity of the original newsletter, preserving its intent while at the same time expanding and developing the journal to meet the needs of a fast-growing, heterogeneous, and demanding audience. Your publication gives me an immense feeling of pride and satisfaction, not only because of its format, content, and design, but also because of what it represents: intelligent, dedicated, highly capable women who can see beyond the pain and frustration in their careers to a brighter future. My congratulations to you and to other founding mothers, such as Susan Odell (featured in your last issue), Deborah Black, Sue Little, Andrea Warner, and Mary Albertson, who have made Women in Forestry an outstanding success.

Linda Donoghue
Research Forester
North Central Forest
Experiment Station
East Lansing, Michigan

It's Lonely Getting to the Top, and It's Confusing, Too.

Phyllis Rose
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Things have been going well for me recently. I've been on a roll. You'd think this would make me happy, but I'm superstitious. I believe someone up there keeps track and allows only a certain amount of good luck. At any moment I expect to be hit by a tidal wave of misfortune. Recently my son, playing at school, hurt his knee--painfully but not seriously, as it turned out. When he called to tell me I wasn't surprised; something like that was bound to happen. Teddy and I got off easily--this time.

Believing that we are entitled to only a certain amount of good fortune is enough to neutralize some of the pleasure of good fortune when it comes. But it's also true that good news doesn't stay with you minute to minute the way bad news does. Let's say you get a promotion. This makes you very happy for as much as a couple of days. You celebrate. You drink champagne. But you don't get up every succeeding morning elated, saying to yourself: "Whoopee! I've been promoted." You spend up to your emotional income; you come to depend on the degree of satisfaction that being promoted gives you. A colleague said of his promotion, "The most fleeting pleasure I've ever had." Compare it to the experience of being fired. You live with that misery day after day. It darkens every morning, makes you feel--like the loss of someone you love--that you've been socked in the stomach every time you think of it.

Success in work, like success in love, breeds disquieting questions that failure does not. Success leads you to ask yourself if you really want the thing you have pursued so hard and finally obtained. Twenty years from now will you still want to be in this job? This marriage? Failure often gives you energy to fight and leaves you with the comforting illusion that success is beautiful and worth pursuing. Success, on the other hand, tends to engender depression. What you've got doesn't seem as good as you thought it would be. All that energy--for this?

When I've been down, people have helped me; when I'm up, they assume I don't need kindness. A publisher rejected my first book at a particularly bad moment. My colleagues were uniformly sympathetic: One advised me to get drunk; several reassured me that the manuscript was good; two actually helped me to place it. When your work is regularly published, your friends don't bother anymore to tell you it's good; they assume it goes without saying. If anything, they might think that you need taking down a peg or that they have a responsibility to point out your flaws.

I'm sure the same is true in other professions. Competence is expected. At a certain point you can only stumble. Who praises the dentist for doing a good filling? Who congratulates the surgeon for performing a successful operation? Who thanks the

accountant for filling out the tax return with no mistakes? But if the filling falls out, the scalpel slips or the math falters, we notice and complain.

When I first started teaching at Wesleyan University, the president sent out letters at the end of the academic year thanking the faculty for having performed its duties responsibly. This lovely but superfluous and no doubt expensive gesture has, of course, disappeared.

Have you noticed that we discount praise but register criticism full strength? I, for example, am subjected to evaluations of my teaching that students turn in at the end of every course. If they're enthusiastic they don't seem enthusiastic enough. The words of praise evaporate, whereas barbs from 1971 stay in my mind with the power to wound. The nasty people seem to have X-ray vision into my soul. The kindly ones seem to be writing about someone else or not to be looking very hard.

You would think that people became more self-confident as they became more successful, but this isn't always true. Successful people (men as well as women) have confided to me that it gets harder, not easier, the more established they are. No one understands that they can still be apprehensive about failing and that they now have farther to fall. They're afraid they've had their last idea, written their last paragraph, made their last deal.

My friend Annie Dillard was washing lettuce when

LETTERS AND OPINIONS

she learned that she had won the Pulitzer Prize. The man telephoning her said, "What are you doing right this moment?" "Washing lettuce," she said. "Don't you realize this means you'll never have to wash lettuce again?" Nonsense. The lettuce always has to be washed.

In the inner life, as in the kitchen, little changes. Many people assume that everything has changed for you with success, so you can easily feel misunderstood. You may be tempted to start acting as people expect you to act, like a person who never has to wash lettuce. You develop a public persona.

If people like your public persona you may feel that they do not like "the real you" or that they do not like you for your "self." Whatever that elusive entity is--"self" or "real you"--it is deeply buried, not visible to the public. It is not how you look or how you lecture or how you write, and although it's hard to put your finger on what it is, it's what you want to be loved for. Usually it's exactly the thing that is not obvious about you. I asked a perky woman administrator what she wanted to be loved for, and she promptly said, "my dark side." She certainly didn't want to be loved for what she had accomplished. Work and love are the two satisfying things, but, just as few people want to gain professional success as a favor from a loved one, few people want to be loved for how well they do their work.

COMMUNICATIONS QUIZ*

- | | True | False | | |
|--|--------------------------|--------------------------|---|---|
| 1. Men talk more than women. | <input type="checkbox"/> | <input type="checkbox"/> | 12. Female speakers are more animated in their conversational style than are male speakers. | <input type="checkbox"/> <input type="checkbox"/> |
| 2. Men are more likely to interrupt women than they are to interrupt other men. | <input type="checkbox"/> | <input type="checkbox"/> | 13. Women use less personal space than men. | <input type="checkbox"/> <input type="checkbox"/> |
| 3. There are approximately ten times as many sexual terms for males as for females in the English language. | <input type="checkbox"/> | <input type="checkbox"/> | 14. When a male speaks, he is listened to more carefully than a female speaker, even when she makes the identical presentation. | <input type="checkbox"/> <input type="checkbox"/> |
| 4. During conversations, women spend more time gazing at their partner than men do. | <input type="checkbox"/> | <input type="checkbox"/> | 15. In general, women speak in a more tentative style than do men. | <input type="checkbox"/> <input type="checkbox"/> |
| 5. Nonverbal messages carry more weight than verbal messages. | <input type="checkbox"/> | <input type="checkbox"/> | 16. Women are more likely to answer questions that are not addressed to them. | <input type="checkbox"/> <input type="checkbox"/> |
| 6. Female managers communicate with more emotional openness and drama than male managers. | <input type="checkbox"/> | <input type="checkbox"/> | 17. There is widespread sex segregation in schools, and it hinders effective classroom communication. | <input type="checkbox"/> <input type="checkbox"/> |
| 7. Men not only control the content of conversations, they also work harder in keeping conversations going. | <input type="checkbox"/> | <input type="checkbox"/> | 18. Female managers are seen by both male and female subordinates as better communicators than male managers. | <input type="checkbox"/> <input type="checkbox"/> |
| 8. When people hear generic words such as "mankind" and "he," they respond inclusively, indicating that the terms apply to both sexes. | <input type="checkbox"/> | <input type="checkbox"/> | 19. In classroom communications, teachers are more likely to give verbal praise to females than to male students. | <input type="checkbox"/> <input type="checkbox"/> |
| 9. Women are more likely to touch others than men are. | <input type="checkbox"/> | <input type="checkbox"/> | 20. In general, men smile more often than women. | <input type="checkbox"/> <input type="checkbox"/> |
| 10. In classroom communications, male students receive more reprimands and criticism than female students. | <input type="checkbox"/> | <input type="checkbox"/> | | |
| 11. Women are more likely than men to disclose information on intimate personal concerns. | <input type="checkbox"/> | <input type="checkbox"/> | | |

*Excerpted from *The Communications Gender Gap* published by the Mid-Atlantic Center for Sex Equity, 5010 Wisconsin Avenue, NW, Suite 30, Washington, D.C. 20016 (202) 686-3511.

Answers on Page 22

OPENED DOORS: WOMEN FORESTERS AND THE U. S. FOREST SERVICE

Cynthia Miner
1875 Carroll Avenue
St. Paul, Minnesota 55104

Dusk was setting into the eastern Washington mountains. The ankle-high snow was dusted with gold needles from the western larch that loomed above. I followed the figures of my co-workers, bear-like in layers of wool. From my cruiser's vest came the rattle of empty paint cans.

We had spent the last eight hours marking timber for a shelterwood cut and felt the satisfaction of a hard day's work as we walked out of the woods. At one point our crew stopped. Five of the six men pulled out round tins of snuff, took their chews and began talking to one another about the upcoming deer hunting season. Knowing little about rifles and deer, I felt apart from the huddle of men. I stared down at our tracks and pondered one set--mine--much smaller than the others.

It was 1975 and I had been working the past three months as a forestry aide for the Newport Ranger District in the Colville National Forest. My co-workers and supervisors were all men. No professional women worked as foresters on the district. In the mid-70s, the few women working in forestry were almost always, like myself, aides or technicians. In 1976, of 4,786 professional foresters employed by the Forest Service, only 15 were women. Today on the Newport Ranger District, two of the eight professional foresters are women. In 1984, 501 women out of 5751 were professional foresters in the Forest Service. From 1976 to 1983 the percentage of women foresters rose from .3 to 11 percent.

While I worked in Washington doing forest inventories, marking timber and working on prescribed burns, I had no idea how male-dominated the field of forestry was. Nor had I read Opportunities in a Forestry Career by E.C. Demmon (1967). Demmon, who had a long and successful career in the Forest Service, viewed women in forestry as did most of his colleagues at the time. "By the very nature of the forestry profession," Demmon said, "there are very few opportunities in it for women. The physical demands on a forester are often heavy; his duties may take him to remote and out-of-the-way places where life is at times difficult. He must deal with many different kinds of people, from sheep-herders to bankers, loggers to lawyers. He is often subject to call for fighting fires and for other arduous duties."

Women have been receiving degrees in forestry since 1932. In 1966, there were 165 women enrolled in U.S. forestry schools. Demmon said of these women, "Some of the women trained in forestry have married foresters. The forester's wife could at times be more helpful if she had a knowledge of forestry. However, the profession of forestry is not recommended for women--it is a man's work."

Although I had not read Demmon in 1975, I had read the U.S. Forest Service publication, So You Want to be a Forester? In a section, "Can Women be Foresters?" it states, "But because of the nature of the work, forestry is largely a career for men. Many outdoor positions are necessarily restricted to men. Physical difficulties and other conditions in the field make the employment of women impractical from the standpoint both of the employee and the employing agency. And since experience in such field work is generally a requisite for promotion to higher administrative or technical positions women are unfortunately at a disadvantage."

FROM 1976 TO 1983, THE PERCENT- AGE OF WOMEN FORESTERS ROSE FROM .3 TO 11.

In 1976, the Forest Service was mandated by Congress to develop an affirmative action plan to represent women and minorities across the board. The Forest Service chose to incorporate women and minorities into nontraditional positions with a cooperative education program. Today, about 85 percent of the women foresters employed by the agency began working as coop students. They worked nine months in two- to six-month periods during their college years and were employed permanently after graduation.

As a forester progresses along the Forest Service career ladder, she typically goes from woods worker to mid-level forester to administrator. Training begins in the woods where the coop student and trainee learn to mark timber, build trails, maintain campgrounds and more. Today most women foresters have moved from woods workers to the mid-forestry positions. They prepare management plans for 1,000- to 2,000-acre tracts, administer timber sales and team plan with their co-workers in wildlife biology, recreation, hydrology, soil science, and range management. At least 12 women are now district rangers out of about 638 range positions.

After I worked as an aide on the Newport Ranger District, I returned to college and later was accepted as a coop student on the Green Mountain National Forest in Vermont. The Green Mountain hired me as a permanent employee. As are most women foresters, I was trained by men. Many of these men accepted me. Others treated me with apprehension. A few sexually harassed me. Hostility existed, as it does today, from men who felt women have unfair career advantages over them because of affirmative action.

"It can be difficult sometimes," says Ruth Muir, forester on the Newport Ranger District. "This has been a male-dominated field. A lot of people don't think we should be in the woods. I get a lot of 'the only reason you got the job was because you're a woman.' The younger ones are more accepting though." Muir works with fire management now, and will be working in recreation this winter.

"A major problem," says Susan Odell, District Ranger on the Big Bear District, San Bernardino National Forest, California, "is lack of support from other women who do not understand why we want to do what we do, and why we do not appreciate the wisecracks that come from men we work with."

While becoming less of an anomaly in the Forest Service, women are commonly found as lone women professionals on ranger districts. The Report on the Barriers Women Face on the Superior National Forest (1981) says, "Without available patterns (role models), women often do not know what is expected in terms of appearance, speech, dress and social behavior. A lone woman is therefore highly visible and overly scrutinized by herself, her peers and supervisor."

“THIS HAS BEEN A MALE-DOMINATED FIELD. A LOT OF PEOPLE STILL DON'T THINK WE SHOULD BE IN THE WOODS.”

Yet as more women enter the field of forestry, fewer are the first and only woman professional in their work places. "I hope that women are going in the directions that they really choose now, that they can set goals without feeling like they are pioneers," says Odell.

Odell began her career in 1973 working in recreation and interpretation on the Jefferson National Forest in Virginia. Before taking her ranger position in California, she went to eastern Oregon, first working with timber and then with land management planning and public information.*

"I feel since I started in the Forest Service that the organization has made some real progress in what women can attain," says Odell. "When I first started, I didn't think women would be accepted in line positions, but I am proof that they have been. Women have to be verbal about what they want. It's a challenge to walk a line between informing people of what you want and demanding it."

Odell and others, however, have expressed concern about the future for women in forestry. "I think a possible backlash against affirmative action could be heightened by the dearth of jobs right now," Odell says. With 2,000 openings in the Forest Service in 1980 cut to 100 in 1983, Curt Peterson, Civil Rights Director at the Intermountain Forest and Range Experiment Station in Ogden, Utah, says it is very hard to keep a steady flow of women into the agency. "Whereas a goal of 30 percent once meant 600 women into the agency, now it means 30. My greatest fear is to see a whole block of people that came in during the 1970s become a piece of antiquity," Peterson says.

Another problem is the vast decrease in mobility. "Mobility used to be a fact of life in the Forest Service," says Peterson. "Managers would say to get ahead you have to move. A sizable group of men

and women are at a level where they cannot further their careers without a move. Until the economy improves, people are staying put and no opportunity is arising for promotional transfers."

Nonetheless, "The Forest Service feels good about what affirmative action has done and the caliber of people it has brought in," Peterson says. "We have done pretty well. Now the major challenge is for the individuals working up. Proof of the pudding is the individual getting into a position of power, and I do not know if that will be easy."

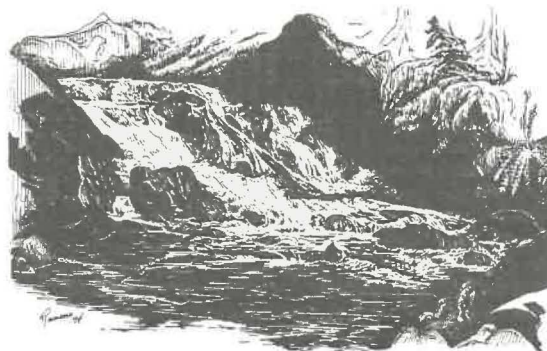
Women foresters, as many working women, also face problems of balancing personal needs, family, and career. Making changes in career directions is risky if it involves termination of employment for a time period. The U.S. Forest Service does not provide maternity leave, and stopping work for more than a few weeks may be financially difficult and hamper careers.** These and other problems weigh heavily.

Women foresters, however, have surmounted many obstacles and have forged the beginnings of a history in the Forest Service. Women have proven themselves competent in all aspects of a forestry career, from the physical skills necessary in the woods to the skills needed of a district ranger, administrator, or researcher. Although women foresters are still often trailblazers, more and more women no longer must overcome the difficulties of being the "first," "second," or "third" woman. Female mentors and role models are available where they once were not. Networks of women foresters and other natural resource professionals are being created with the Federal Women's Program, the publication Women in Forestry and other channels. Provided they are employed in sufficient numbers, women foresters will continue to find answers to problems that come with opening new doors.

* See English, J. 1984. The making of a district ranger. Women in Forestry 6(2):5-8.

** See Serafini, P. 1983. Pregnancy and the Forest Service. Women in Forestry 5(3):52.

CYNTHIA MINER is in graduate school at the University of Minnesota, studying mass communications. She will be doing her thesis research on technology transfer with the North Central Forest Experiment Station where she has been employed part-time for the past two years. Miner also has a short-term, part-time job with the Minnesota Department of Natural Resources editing a Forestry Cooperative Program manual.



EDITOR'S NOTE: Although we are far from truly equal opportunity for both sexes in the working world, it is sometimes helpful to be reminded that we have come a long way in the past 25 years. The following article was contributed by SUSAN SUPER, Northern Region Federal Women's Program Manager, Missoula, Montana. An update was provided by TOM AMBROSE, Director, External Communications, Weyerhaeuser Company.

"In checking, I find that Weyerhaeuser Company did not begin tracking employment numbers by gender until 1965, and since many employees until then were identified only by initials rather than given names, it is impossible to even come up with an estimate of how many were women. Although the company adopted an equal-opportunity policy in hiring in the early 1960s, tracking of results began, for salaried employees (managerial, professional, and sales) only, in 1965. At that time, there were 78 women, or 2.1 percent of the 'exempt salaried' workforce. As of the first quarter of 1984, there were 1,409 women, or 16 percent of the total, in that category. At the same time, the company had a total of 6,742 women employees in all categories--hourly wage, 'nonexempt' salaried (primarily technical and clerical jobs) and the exempt salaried category--or 17 percent of the total workforce. Although no comparison with 1965 is available, this percentage probably has not changed as dramatically as in the managerial and professional category, since by that time there were a number of women employees in the manufacturing and technical workforce, and since the majority of clerical workers were (and are) women."

Ambrose sent Women in Forestry a brief biography of F.K. Weyerhaeuser to emphasize that the "lending of his name to the now unfortunate last paragraph of the 1960 article was only one lapse in a long and humane career." Ambrose also sent us a copy of the May 1983 company newsletter featuring an article entitled "Women at Work: At Weyerhaeuser, the Right Man for the Job Could Well be a Woman."

SHOULD YOUR CHILD BE A FORESTER?

Frederick K. Weyerhaeuser

It takes bulldog courage to succeed as a forester. Plus deep abiding faith in the future. Every day a forester has to fight for the lives of his trees. No sooner does he put a fragile, little seedling into the ground than a rodent may gnaw off its budding branches. Before the tree attains young maturity, a bear may rip away its bark. Disease may strike the tree at any age, and destructive insects can prey on it. A windstorm can uproot it. A forest fire may make a blackened corpse of it.

The forester has all these enemies to contend with, and more. He has continually to pit his scientific knowledge and skill against what sometimes seem to be insuperable odds. Even if he wins, he may never see the end results of his struggles. It can be 100 years until the trees he plants have grown tall enough for logging.

But to the right sort of man there are great joys in the profession of forestry. Take Jeff Harris, a veteran forester in the Northwest. Harris was sent into a section of Oregon that had been swept by a hideous forest fire. For miles nothing could be seen but angry ashes and the gaunt skeletons of dead trees. He didn't despair. The moment entry into the area was safe, he organized teams of high school boys and with their help hand-planted over 14,000 acres with new trees. That was in 1940.

The other day, Harris flew over the same section. Not a scar left by the fire was visible. The entire vista was green with growing trees. "Boy,

it felt good to see that land lookin' green," Harris said. "Makes a fellow mighty happy to think he can help a dead forest come back to life."

Protector of Vital Resources

Foresters are the key men today in preserving this nation's proudest heritage--our 664,000,000 acres of forest land. Foresters are also the key men in one of the nation's largest, most important industries--timber products. For we should remember that forests exist to be used. We must have their products to live.

“TO THE RIGHT SORT OF MAN, THERE ARE GREAT JOYS IN THE PROFESSION OF FORESTRY.”

Today some 489,000,000 acres of forest area are in commercial use. The federal government, the states and local governments own and harvest commercially 27 percent, about 132,000,000 acres. The remaining 357,000,000 acres are owned and harvested privately. These forests support an industry with no less than 1,640,000 employees and a volume of \$25,000,000,000 a year! Out of the forests come the world's oldest and newest products: lumber for construction and furniture; paper for printing and 1,000 additional purposes; cellulose for ammunition, and photographic film; pharmaceuticals; sugar, ethyl alcohol, plastics, and countless more.

Many and Varied Duties

The forester's part in all this is to help the forests to grow and see that they are wisely used. His function has been well defined as "the scientific management of forests and forest lands." It's an enormous job. Each forester must be able to survey forest areas, build roads, determine the volume of trees in an area and estimate how fast they are growing--no easy assignment when millions of trees are involved. He must supervise the cutting of timber, and the reforestation that follows it.

He must know treatments for tree diseases, and ways to beat back rampaging insects. Right now, a tiny killer called the balsam woolly aphid is sucking the life out of hundreds of thousands of beautiful white fir trees in Washington and Oregon. It's a pathetic sight. But we have hope of a solution. Foresters have found a special fly in Czechoslovakia that feeds on these aphids. They've rushed them over and set them to work in our woods. Results have been most encouraging.

The forester must know repellents for defending forests against animal damage. He must know means of safeguarding forests against the hazards of wind and snow. Most of all, he must know methods for preventing forest fires, and for fighting them if those grim horrors get going.

“DOES THIS PROFESSION HAVE ROOM FOR WOMEN? A FEW, PERHAPS, IN THE LABORATORIES.”

The Need for Foresters

The demand for qualified foresters is something startling. They number 17,000 already, and it's not enough. The 40 colleges of forestry graduated 1,470 young men last year, and more jobs were available than were people to fill them. Approximately 5,000 foresters are employed by the U.S. Forest Service to work the national forests, manage forest ranges, and supervise recreational facilities. More foresters are hired by the National Park Service and other federal agencies.

About 2,000 foresters are employed by states, counties and municipalities to run public-owned forests, direct fire control operations, and assist small owners who cannot afford foresters of their own. Then there are the 9,000 or so foresters in private industry. They can be found in every part of the country, growing trees and profits. Because of the nature of their employment, their duties tend to be more varied than those of government men. Some 200 foresters have set up as private consultants, and most are doing very well. Eight hundred are engaged in college teaching.

Opportunities for promotion are excellent in all fields. In government service, one goes from timber cruiser to district forest ranger and on up to be chief of forestry for a state or the federal government. In industry, within 10 years one can be a branch forester and have personal charge of 500,000 acres. From there the next step is managing forester with responsibility for millions of acres. Forestry can also be a stepping stone to advancement in other lines, such as sales, public relations, administration, education.

The pay? It is not as high in the early years as it is in some other professions. However, it should be adequate, especially when it is recognized that

young foresters are usually stationed in small towns. In the U.S. Forest Service, the salaries go from \$4,400 to \$17,500. State salaries generally begin a little above the federal. A forester who goes into industry can anticipate \$4,200 to \$5,400 to commence. Research men with graduate degrees will do better; they'll begin at \$6,000 to \$7,500. Later on, if they're of outstanding calibre, industrial foresters may draw \$15,000 to \$20,000. Successful private consultants can earn more.

Special Rewards

But the attraction of forestry is not money. It is the beauty, physical and spiritual, of the outdoors. It is the pleasure of working with living things, and the thrill of growing majestic trees that may last for generations. It is the clean, vigorous healthy life. Look at any old-time forester. You'll be amazed at his youthful vigor.

It is the chance to travel. "I never dreamed I'd be seeing so much of the world," a young forester wrote me recently. He'd been working in India and now he was en route to Brazil. It is the superb sense of comradeship that comes from serving with other dedicated men.

There is the darker side to the coin, of course. The work can be hard, dirty, cold, wet, exhausting, and dangerous. The hours are long and irregular. A forester is frequently away from home for days on end. It can be very trying on his family. The wife of a forester I know gave birth to two children in the past seven years, and her husband could not be with her in either case. He was off fighting fires. "I didn't blame him," the poor woman said, "but I sure missed him." Living in a small town, miles from anywhere, with limited recreational facilities, can be very hard, too. So is the constant shifting from one post to another.

The question arises as to how you can tell if a boy has the makings of a future forester. He should have a deep love for nature and the outdoors. He should have a strong physique and enjoy roughing it. He should be the sort of a lad who keeps his head in emergencies. I'm thinking here of a forester who was ringed in by a raging forest fire. He didn't panic. He buried himself in the ground until the fire passed overhead, and escaped unscathed.

Certainly, each prospective forester must have a generous stock of patience and optimism. He should be able to get along with people, and express himself well on his feet. He'll be doing a lot of public speaking to conservation groups. He must be a keen student, especially in the sciences.

College Essential

At least a four year college course is now required to become a forester. A boy planning such a career would be wise to study as much mathematics and English in high school as possible. Not long ago, the University of Washington conducted a survey to see why some forestry students failed to graduate. In almost every instance, it was due to inadequate preparation in mathematics and English.

Does this profession have room for women? A few, perhaps, in the research laboratories. In the main, it's a man's job. Over the course of the past 50 years, many girls have enrolled in the University of Washington's College of Forestry. Only two ever succeeded in graduating. Neither is still practicing forestry. They have done the next best thing. They married foresters.



EVENTS



ANNUAL MEETING OF THE
EASTERN STATES
ARCHEOLOGICAL FEDERATION
2-4 November 1984
Annapolis, Maryland

Contact Local Arrangements
Chair, Louis E. Akerson, 6601
Bellview Drive, Columbia, Maryland
21046, or Program Chair, Ronald A.
Thomas, P.O. Box 676, Newark,
Delaware 19711.

AMERICAN ANTHROPOLOGICAL
ASSOCIATION (AAA)
ANNUAL MEETING
15-18 November 1984

Denver Hilton and Holiday Inn
Denver, Colorado

The 1984 annual meeting will
have as its theme Biocultural
Dimensions of Anthropology. Symposia
concern intra- and interdisciplinary
research in anthropology and biology.
Questions should be addressed to
Lynne Goldstein, 1984 Program Chair,
AAA, 1793 New Hampshire Avenue NW,
Washington, D.C. 20009.

19TH BIENNIAL MEETING
GREAT BASIN
ANTHROPOLOGICAL CONFERENCE
4-6 October 1984

Owyhee Plaza Hotel
Boise, Idaho

For information contact Max G.
Pavesic, GBAC Conference Chair,
Department of Sociology,
Anthropology, and Criminal Justice,
Boise State University, Boise, Idaho
83725.

42ND ANNUAL PLAINS CONFERENCE
17-20 October 1984

Lincoln Hilton
Lincoln, Nebraska

For information contact cohosts
Gail Carlson, Nebraska State
Historical Society, 131 Centennial
Mall North, Lincoln, Nebraska 68508;
or Peter Bleed, Department of
Anthropology, University of Nebraska,
Lincoln, Nebraska 68588.

HOLT-ATHERTON PACIFIC CENTER
FOR WESTERN STUDIES
CALIFORNIA HISTORY INSTITUTE
12-13 April 1985

Call For Papers: The theme of
the conference is The Life and
Heritage of John Muir. Biographical,
analytical, interpretive, or
comparative papers relating to Muir
and his contribution should be sent
to Ronald H. Limbaugh, Director, John
Muir Microform Project, University of
the Pacific, Stockton, California
95211.

Courses and training offered by
VIRGINIA POLYTECHNIC INSTITUTE AND
STATE UNIVERSITY.

SOUTHERN FOREST SOILS
WORKSHOP

21-23 October 1984
Blacksburg, Virginia

BEGINNING IN THE NURSERY
NURSERY BUSINESS
NURSERY MANAGEMENT WORKSHOP

23-24 October 1984
Fredrick, Virginia

NURSERY MANAGEMENT WORKSHOP:
DOGWOOD AND FLOWERING TREE
PRODUCTION

14-15 November 1984
Blacksburg, Virginia

TURF GRASS ECOLOGY
AND MANAGEMENT
Blacksburg, Virginia

For information on these and
other courses contact Walter
Saunders (703-961-5242).

THE AMERICAN SOCIETY FOR
ENVIRONMENTAL HISTORY AND
THE NATIONAL ASSOCIATION FOR
ENVIRONMENTAL EDUCATION
JOINT CONFERENCE

5-9 October 1984
Chateau Lake Louise
Banff, Alberta

Panels are being organized
around the topics of Issues and
Interpretations in Environmental
History; Environmental History and
the Environmental Educator; and
Environmental History in the Science
Curriculum. For more information
contact Alfred Runte, Department of
History DP-20, University of
Washington, Seattle, Washington
98195. To be included on the
conference mailing list, write Joan
Heidelberg, NAEF, P.O. Box 400, Troy
Ohio 45373.

THE 1984 CONVENTION OF THE
AMERICAN HISTORICAL
ASSOCIATION

27-30 December 1984
Chicago, Illinois

Suzann Buckley of the State
University of New York at Plattsburgh
will chair a joint session with the
Canadian Historical Association.
Papers will be The Last Frontier:
The Pacific Northwest in the
Twentieth Century, and Logging the
Hemlock-white Pine-northern Hardwood
Forest: Geographical Perspectives.
For more information contact
Buckley.

SOCIAL CHANGE OR
SMALL CHANGE
A CONFERENCE ON
CONTEMPORARY SCHOLARSHIP
AND RESEARCH ON WOMEN
THE UNIVERSITY OF UTAH

25-26 October 1984
Salt Lake City, Utah

The Women's Studies Program,
The Women's Resource Center, and the
Consortium for Utah Women in Higher
Education at the University of Utah
are sponsors. Scholarly papers that
address issues of women and subjects
from the traditional disciplines
(science, art, history, etc.) as well
as those that are interdisciplinary
will be presented. For more
information contact Dr. Margo
Sorgman, Director, Women's Studies
Program, 117 Milton Bennion Hall,
Salt Lake City, Utah 84112
(801-581-7158).



EVENTS

1985 ANNUAL MEETING OF THE
SOCIETY FOR RANGE MANAGEMENT
10-15 February
Hotel Utah
Salt Lake City, Utah

For more information contact
Range Science Dept., UMC-52, Utah
State University, Logan, Utah 84322.

AMERICAN FORESTRY ASSOCIATION
109TH ANNUAL CONVENTION AND
EXPOSITION
30 September-2 October 1984
Portland, Oregon

To register, contact Walter E.
Offinger, Exhibit Manager, AFA Expo,
Offinger Management Company, 1100-H
Brandywine Blvd., Zanesville, Ohio
43701 (614-452-4541).

MANAGING RED PINE
1-3 October 1984
POPLAR COMMISSION
1-4 October
Ottawa, Canada

For more information, write to
Robert Gambles, Executive Secretary,
Poplar Council of Canada, Ontario
Ministry of Natural Resources, Maple,
Ontario LOJ 1E0.

Continuing Education Opportunities
Offered by Washington State
University:

GENE: GENETICS EDUCATION FOR
NORTHWESTERN ECOSYSTEMS
4-6 December 1984 and
16-18 April 1985
Pullman, Washington

FOREST GROWTH AND YIELD
7-12 January 1985
Pullman, Washington

For program and registration
materials for the above two meetings,
contact Conferences and Institutes,
223 Agricultural Sciences Building,
Washington State University, Pullman,
Washington 99164-6230 (509-335-2850).

FORTHCOMING EVENTS AT
THE UNIVERSITY OF IDAHO
Moscow, ID 83843

DRY KILN WORKSHOP
15-18 October 1984
Moscow, Idaho

Workshop designed to inform
lumber processors about how wood
dries, "defects," prevention,
equipment, drying economics, and
schedules. For more information
contact Peter Steinhagen, Forest
Products, College of Forestry,
Wildlife and Range Sciences,
University of Idaho, Moscow, Idaho
83843 (208-885-6126).

GOVERNOR'S CONFERENCE ON
RECREATION AND TOURISM
PLANNING
30 October-1 November 1984
Moscow, Idaho

A gathering of federal, state,
local, and private groups to discuss
recreation and tourism. Contact Bill
McLaughlin, Wildland Recreation
Department, College of Forestry,
Wildlife and Range Sciences,
University of Idaho, Moscow, Idaho
83843 (208-885-7911).

RANGELAND FIRE EFFECTS
SYMPOSIUM
27-29 November 1984
Red Lion Downtowner Inn
Boise, Idaho

Fire effects technology on
prescribed burn sites and fire
protection levels, especially on
sagebrush-grass range types will be
featured. Sponsored by Bureau of
Land Management and the University of
Idaho. Exhibits and displays are
invited. For more information call
Lois Edmunds (208-344-1998).

1985 MEETING OF THE AMERICAN
FORAGE AND GRASSLAND COUNCIL
3-6 March
Hershey, Pennsylvania

For information contact American
Forage and Grassland Council, 2021
Rebel Road, Lexington, Kentucky
40503.

CABLE TREE VEE

From our more-strange-uses-for-trees department comes word in Britain's *New Scientist* magazine that the old sycamore out front may someday be used to pull in reruns of "Leave It to Beaver." A scientist at the Indian Space Research Organization has been investigating the use of tall trees as TV antennas. Dr. S. P. Kosta uses a coaxial cable to link a television with a hole drilled beneath the bark. He says the signal is transmitted via the xylem and phloem, which carry the plant's food and water. In his recent experiments, date palm, coconut, and papaya trees produced a better quality picture than a conventional metal antenna.

....Organic Gardening





EVENTS

**FOREST HISTORY SOCIETY
38TH ANNUAL MEETING**
18-19 October 1984
Denver, Colorado

The 38th annual meeting will feature a symposium on the forest and conservation history of the Rocky Mountain region. For information contact Norman I. Wengert, Program Chairman, Forest History Society, 109 Coral Street, Santa Cruz, California 95060

**WOOD ENERGY:
TODAY'S TECHNOLOGY CONFERENCE**
30-31 October 1984
Raleigh, North Carolina

The technology conference will include a trade show. For more information contact Bruce Winston, North Carolina State University, Division for Lifelong Education, Box 7401, Raleigh, North Carolina 27695-7401 (919-737-2261)

**THIRD BIENNIAL SOUTHERN
SILVICULTURE RESEARCH
CONFERENCE**
7-8 November 1984
Atlanta, Georgia

For more information contact Eugene Shoulders, Southern Forest Experiment Station, Alexandria Forestry Center, 2500 Shreveport Hwy., Pineville, Louisiana 71360.



Ramona Hammerly

Seminars, Courses, and
Conferences
offered by
COLORADO STATE UNIVERSITY

WATER LAW WITNESS
17 November 1984
Fort Collins, Colorado
The purpose is to help individuals become better expert witnesses in water-related cases. Contact Lee Lamb (303-226-9321).

**GEOGRAPHIC INFORMATIONAL
SYSTEMS**
3-6 December 1984
Fort Collins, Colorado
Sponsored with the U.S. Fish and Wildlife. For information call Bill Webble (303-491-6222).

HABITAT EVALUATION PROCEDURES
15-19 October 1984
Fort Collins, Colorado
Sponsored with Fish and Wildlife Service. For information call Chuck Soloman (303-226-9421).

WATER LAW
14-16 November 1984
Fort Collins, Colorado
Review of legal terminology and riparian law. Contact Lee Lamb (303-226-9321).

**NATIONAL WILDERNESS
RESEARCH CONFERENCE:
AN INTERDISCIPLINARY MEETING**
23-26 July 1985
Fort Collins, Colorado
The conference aims to integrate and interpret wilderness resources and human uses. Topic areas included are air, water, vegetation and soils, fish and wildlife, use and user characteristics, wilderness benefits, visitor attitudes and behavior, and visitor management concepts and tools. For information contact National Wilderness Research Conference, College of Forestry and Natural Resources, Colorado State University, Fort Collins, Colorado 80523.

**WETLAND
CLASSIFICATION TRAINING**
22-26 October
St. Petersburg, Florida

Training in systems of classification of wetlands and deep water habitat. Coordinated with U.S. Fish and Wildlife Service. For information call Porter Reed (813-893-3624).

**AMERICAN FORESTRY ASSOCIATION
109TH ANNUAL CONVENTION
AND EXPOSITION**
30 September-2 October 1984
Portland, Oregon

For information contact Walter E. Offinger, Exhibit Manager, AFA Expo. Offinger Management Company, 1100-H Brandywine Blvd., Zanesville, Ohio 43701 (614-45-4541)

**CONFERENCE ON THE MANAGEMENT
OF BIOSPHERE RESERVES**
26-29 November 1984
Gatlinburg, Tennessee

For information contact John D. Peine, Director, Uplands Field Research Laboratory, P.O. Box 260, Gatlinburg, Tennessee 37738.

**SPATIAL DATA ANALYSIS FOR
RESOURCE ASSESSMENT**
3-7 December 1984
Sioux Falls, South Dakota

U.S. Geological Survey workshop for natural resource planners and managers. Contact the Training and Assistance Office, USGA/EROS Data Center, Sioux Falls, South Dakota 57198 (605-594-6114).

**AMERICAN SOCIETY OF LANDSCAPE
ARCHITECTS' 84TH ANNUAL MEETING
AND EDUCATIONAL EXHIBIT**
17-20 November 1984
Phoenix, Arizona

The conference theme is Legacy for the Future: Learning by Design. For information contact Linda Robertson, ASLA, 1733 Connecticut Ave., N.W. Washington D.C. 20009 (202-466-7730).

Name _____ Phone _____

Address _____

Position or title (if student, name major) _____

Organization (if student, name school) _____

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Return this form with payment to:

WOMEN IN FORESTRY
Laboratory of Anthropology
University of Idaho
Moscow, Idaho 83843

AN APPALACHIAN ADVENTURE

Diane M. Spott
Coordinator of Environmental Education Programs
Schuylkill Valley Nature Center
8480 Hagy's Mill Road
Philadelphia, Pennsylvania 19128

You're what?" Such was the reaction of family and friends when I told them of my plans to hike the entire Appalachian Trail. Perhaps you can hardly blame them for sounding so surprised and even a bit discouraging. After all, how often does someone leave their job to spend nearly six months backpacking?

I would then be asked, "What is the Appalachian Trail?" and "Why are you doing this?" The Appalachian Trail is a 2,138-mile (more or less; the mileage keeps changing depending on relocations), continuous trail running from Springer Mountain in northern Georgia to Mt. Katahdin in north-central Maine. It is a sky-lander route along the crest of the ranges generally referred to as Appalachian, traversing 14 states. The idea for the trail was conceived 60 years ago by Benton MacKay, who thought it would give city people a chance to "experience the primeval" and an opportunity for everyone to get away from the "scramble of everyday life." In 1948, a man named Earl Schaffer became the first person to hike the entire footpath without interruption. Since then nearly 2,000 hardy souls have made the trek.

For me, the seed was planted in the spring of 1976 when I backpacked a 40-mile section of the trail in northern Georgia. On that trip, I met several people who were starting out to hike the whole route. I envied those hikers' adventure, feeling that it was something I'd never have the time or money to do.

After obtaining my master's degree from the University of Idaho in 1978, I went on to become a working woman. The dream to hike the Appalachian Trail was tucked away as I pursued my career, working at environmental centers in Wisconsin and Iowa. But after nearly four years of living and working in the corn and soybean field environs of Iowa, I was ready for a change. My debts were paid off and I was free from my major commitments. I became restless and the time was ripe for a new adventure. I remembered my dream to hike the Appalachian Trail and decided to go for it.

I spent several months preparing for the hike, gathering information, reading other accounts of hiking the trail, talking to those who hiked it, and purchasing the necessary food and equipment. I was probably more thorough than most "thru-hikers" in my preparations, but I felt that it all paid off as my hike went exceptionally well with no major mishaps. The question always arose as to whether to hike alone or with a partner. Although it is safest to hike with others, I couldn't readily find a partner, so I started off alone. However, since at least 100 people hike the entire trail each year, I figured it shouldn't be a problem to find others to hike with.

It was a beautiful warm, sunny day when I took my first steps on the Appalachian Trail on April 14 on Springer Mountain in Georgia. That day proved to be deceptive: for the next two weeks, the area I hiked

through was beset by record-breaking cold for the season. I began to wonder if the days would ever be relieved of the bitter, cold winds which speared right through you and icy temperatures which frosted your sleeping bag and froze your water bottles.

I was impressed with the ruggedness and wildness of the southern Appalachian in Georgia, North Carolina and Tennessee, and developed a healthy respect for them after grueling climbs which took you straight up a mountain. Here the balds were found, treeless mountaintops which are below treeline and are most likely the result of past grazing activities. These unique areas became one of my favorite parts of the hike. Mountain laurel and flaming azaleas graced the mountains, contributing to the awesome beauty of this region. Many a time, after a steep climb, taking in the sweeping view, I felt I was the luckiest person alive.

THE APPALACHIAN TRAIL IS 2,138 MILES LONG, RUNNING FROM SPRINGER MOUNTAIN IN GEORGIA TO MT. KATAHDIN IN MAINE.

With 450 miles behind me, I entered the genteel state of Virginia, a true southern gentleman with wide, beautifully-graded paths, and the spectacular scenery of the Mt. Rogers National Recreation Area, Blue Ridge Parkway and Shenandoah National Park. Here the large purple rhododendron came into their glory, along with the start of the hot, humid weather typical of the East, and the gnats, blasted little aggravators which so persistently get into your eyes, nose and mouth.

I did enjoy Virginia immensely, which was a good thing, as Pennsylvania became a drudgery of picking your way between rocks of all sorts and sizes: smooth ones, sharp ones, large boulders and small pebbles, carelessly strewn about as if a crude attempt was made to cultivate them along the trail. The heat appeared to sizzle out from the mountains and valleys, and the hike at this point required a tremendous amount of perseverance to keep on going. It was truly a matter of concentrating on one step at a time.

Salvation did come halfway through this state upon reaching the domain of the fabled "Ice Cream Lady." I remember it well. I was halfway along a 12-mile roadwalk between two ankle-spraining piles of stones called mountains when a sign announcing "Shipe's Watering Hole, Stop In" beckoned me. Bonnie Shipe is a legend on the Trail and has been serving weary hikers ice cream cones and fruit drink since 1979. She relished her role, enjoying the opportunity to meet hikers of all kinds.

Northern New Jersey and southeastern New York were surprisingly beautiful. I had always imagined this area to suffer from an overdose of cold, unfriendly people, pollution and urban blight. However, cool, hemlock-shaded spots along quiet streams made you forget you were only 40 miles away from the "Big Apple." It was the land of "cold, unfriendly natives" where "Roger's Appalachia Cottage" can be found, owned by a Queens schoolteacher who generously offers the long-distance hiker meals, bed and a shower. It was here that the soul-saving Greymoor Monastery is located, which also offers the same amenities. It was here that a very hospitable family offered me a clean bed and shower, did my laundry and fixed a huge breakfast. Perhaps weary hikers strike a chord of compassion in these "cold" New Yorkers.

Cutting across the Yankee states of Connecticut and Massachusetts where birches mark the beginning of the great northern forests, the temperature slowly cooled down and the population eventually thinned out. The Green Mountains of Vermont were true to the name, being incredibly green and lush with the foliage of pines, spruces, firs, hemlock and an immense variety of ferns, mosses and lichens. After passing through the great ski areas of the East and taking a "preppie" stop at the Ivy League Dartmouth College in Hanover, New Hampshire, it was time to tackle the formidable White Mountains.

Although none of the Whites peak over 6,300 feet, they present an imposing challenge. The weather here is unpredictable. Treeline in these harsh environs occurs at 4,200 feet. Mt. Washington, at 6,228 feet, has felt the strongest winds ever recorded on earth, clocked at 231 mph. That knowledge, plus the vigilant yellow and black sign stating

STOP!!! THE AREA AHEAD HAS THE WORST WEATHER IN AMERICA. MANY HAVE DIED HERE FROM EXPOSURE, EVEN IN THE SUMMER. TURN BACK NOW IF THE WEATHER IS BAD.

left me with an uneasy feeling as I proceeded cautiously, ever mindful of the clouds drifting in.

After the Whites, a much-needed rest was taken in Gorham, New Hampshire, before hoisting up the 40-pound backpack (which you never seem to get used to doing) and making my grand entrance into Maine. Reaching Maine was indeed a milestone--the last state! Just into Maine, you have the infamous Mahoosic Notch to struggle through. Although only a mile long, it is reputed to be the toughest mile of the entire Appalachian Trail. This is a deep cleft which is wild with a moon-like appearance. Giant boulders from the Notch's sheer walls have clogged the floor, requiring an hour and a half climb over and under these huge obstructions.

My final stop of the hike, in Monson, Maine, was spent with a dozen other northbound hikers. Excitement and anticipation charged the air of the hostel we stayed at. We all indulged in a huge spaghetti dinner, offering each other encouragement through the final stretch, sharing stories of our travels as well as our philosophies of hiking the trail and our ambitions. Everyone was different in so many ways, from different parts of the country and involved in different careers, but yet we were all the

same--we were all in this together. Much of the success of our hike was due to the comradeship of fellow hikers.

Maine is truly an eastern wilderness, and the "100-mile wilderness" comprised the second half of the trail through this state. This section is void of any towns, stores or residences, so I had to be sure I was well-stocked upon leaving Monson. Most of the "wilderness" of Maine is owned by paper companies, so there are an abundance of logging roads. However, nights spent along drinkable, cold, clear ponds frequented by moose, with the haunting laughter of the loon and a darkness unpenetrated by manmade lights and sounds gave you the assurance that you were miles away from the "real world."

Mt. Katahdin beckoned ahead. Hearing the name and seeing the great monolith looming in the distance quickens the pulse of any north-bound thru-hiker. An awesome sight, especially after over 2,000 miles. The final ascent of my hike was a scramble up a nearly vertical mass of granite boulders. Before me now was the next to the last mile, up the steep and rocky Hunt Spur where iron rods had been driven into the rocks at some points for hand and footholds. After an hour of nothing but tip-tilted terrain, the climb is over and the trail suddenly leveled off. I easily move across the flatness to Baxter Peak, 5,267 feet, the highest point on Mt. Katahdin, and soon the brown, weathered wood sign which designates this spot as the northern terminus of the Appalachian Trail.

It is over. Feelings of exhilaration and accomplishment, mixed with those of weariness and emptiness, welled up within me. I gaze across the wilderness and look toward the south where I started 169 days ago. Was it only 169 days? Memories stretched before me, snaking across 2,138 miles of mountains. I watch these images flash by and feel and emptiness. My dream has been accomplished. I recall a favorite saying, "Happy are those who dream dreams and are willing to pay the price to make the come true." I have paid my price and I am happy.

DIANE SPOTT grew up in Milwaukee, Wisconsin. Her interest in the outdoors and hiking were developed early as her family went hiking every weekend and on several camping trips. Spott received her B.S. in 1976 from the University of Wisconsin-Stevens Point in Resource Management with a minor in Environmental Education/Interpretation. She received her M.S. in 1978 from the University of Idaho in Wildlife Recreation with an emphasis in Environmental Communications/Interpretation. She then worked for a year at the Central Wisconsin Environmental Station in Amherst Junction as a Curriculum Specialist, developing the environmental curriculum there. Spott then spent nearly four years working as a Conservation Program Coordinator at the Iowa Conservation Education Center in Guthrie Center, Iowa, developing conservation programs and workshops.

After completing the Appalachian Trail, Spott spent a while traveling along the East Coast, then settled down to a job at the Schuylkill Valley Nature Center in Philadelphia. The Center is a 360-acre private nature center--a major piece of open space located in the midst of a large metropolitan area. As an Environmental Educator there, she coordinates environmental programs for school groups and the public, develops teacher workshops in environmental education, and works with the Volunteer Association, trail development, exhibits and other events.

WOMEN RESEARCHERS IN AFRICA

Paula J. Williams
Forest and Society Fellow
Institute of Current World Affairs
4 West Wheelock Street
Hanover, New Hampshire 03755 USA

In October 1983, en route to Africa, I stopped in Europe to talk with some researchers about their work on development, women, and forestry. One of my stops was in Geneva, where I met with women from two organizations to discuss their research on women and development issues, as well as their knowledge of women researchers and women's organizations in Africa.

One of the organizations that I visited in Geneva was ISIS, a women's international information and communication service, named after the Egyptian goddess Isis. ISIS is a feminist collective, with a second office in Rome. Both offices have a documentation and resource center, with records on women's groups and contacts worldwide. They publish periodic bulletins in English and Spanish on different topics, such as "women, land, and food production," "tourism and prostitution," or "motherhood," and occasional books, such as their recent *WOMEN IN DEVELOPMENT: A RESOURCE GUIDE FOR ORGANIZATION AND ACTION*. They are also involved in training sessions and cross-cultural exchanges for Third World women.

The ISIS staff member with whom I spoke was very helpful in explaining how their organization and documentation centers work. I spent a few hours there, looking at materials, and going through their list of contacts for Africa. Africa is the region of the world for which ISIS has the fewest names. Whether this is because there are fewer formal women's groups, women researchers, and active feminists in Africa, or whether the African women and ISIS don't yet know about each other, is unclear. But I took down what names exist, in hopes that I could find some of these organizations and individuals in Africa.

ISIS had recently received an invitation to the upcoming meeting of the Association of African Women for Research and Development (AAWORD), to be held in Dakar, Senegal, 5-9 December 1983. The meeting of women researchers from all over Africa seemed like an important opportunity for me to meet some colleagues, so I decided that I would attend the conference.

The AAWORD conference was composed of a research seminar and a business meeting of the AAWORD members. The seminar was organized around the theme of "Research on African Women--What Types of Methodologies?" The conference was attended by over 45 AAWORD members, as well as at least 15 observers.

The conference gave African women researchers a chance to spend a week together, sharing their experiences, debating their differing perspectives, and deepening their ties with one another. The seminar brought together an interesting mixture of women--northern African and sub-Saharan African, francophone and anglophone, Marxist and non-Marxist.

Although women from northern Africa and Senegal were most numerous, there were women from most parts of Africa.

These women form an elite group, as most have done graduate work and many hold doctorates. All are fluent in either English or French, often both, as well as their native languages. Some hold government or teaching positions in their own countries, others struggle to do their research without any government support or funding, others have research grants from international organizations, and still others work or study in Europe and the United States. The group is composed primarily of social scientists--sociologists, anthropologists, demographers, historians, communication specialists--although some researchers from other disciplines, such as nutrition, are members.

Although AAWORD membership is only open to African women researchers, non-members were welcomed to attend the seminar sessions as observers. The observers were primarily researchers, development planners, or activists whose work focuses on women and development issues, and whom had been specifically invited to attend the conference. Most were from Europe, with a few from the United States, one from Trinidad, and one from Colombia. A few African researchers who are not AAWORD members also attended as observers. While not excluded as observers, few men attended the conference.

The Association of African Women in Research and Development was born in Lusaka, Zambia, in 1976 with 15 members. A year later, its first major research conference was held, in Dakar, on the subject of "The Decolonization of Research." At that conference, 47 AAWORD members strongly recommended that social science research in Africa be conducted by trained African researchers, familiar with the languages and cultures being studied. Such research should be based on African realities, rather than inappropriate Western theories, models, or research techniques. The research results should be used to help African development, rather than just exported to the West (as often happens with foreigners carrying out research to fulfill Ph.D. dissertation requirements). The women researchers also called for more research on women, all too often overlooked in conventional studies and development planning. Since 1977, AAWORD has held other workshops and seminars, and presented its perspectives at numerous international meetings.

The most recent seminar was a continuation of the earlier debate. Having accepted the premise that African women should be researching the situation of African women today, how to undertake the endeavor? As noted by many speakers, the creation of new approaches is more difficult than the critique of old ones. In examining "what types of methodologies"

could be employed to study African women, researchers discussed the adequacy of various social science concepts, quantitative, qualitative, and historical sources of data, problems of analysis and interpretation, and the use of results. They also debated whether there are unique "African feminist methodologies."

These issues were discussed by various researchers in formal paper presentations, and debated by the seminar participants in discussion sessions as well as two working group meetings. The participants and observers themselves decided whether to join the working group on "rural development" or that on "urban development." As interesting as the formal presentations were, the discussion and debate were far more provocative.

Three of the opening day's speakers were critical of the "integration of women into development" approach often adopted by Western planners. Zenebeworke Tadesse, the current AAWORD secretary, suggested that to engage social change, researchers must construct alternative structures of the world, rather than attempting to integrate women into existing patterns. Marie-Angélique Savané, the current AAWORD president, criticized the concept of "women in development" as just a "feminization of the theory of modernization theory" (which postulates that social processes of development follow universal patterns of modernization). The simplicity of modernization theory accounts for the failure of development projects regarding women. Filomena Steady suggested that much of the research on Africa and African women has been designed for their domination and exploitation, rather than for positive social change. The "integration of women into development" approach involves a Europeanization of African women with a consequent loss in their status.

These researchers suggested various alternative strategies. Tadesse proposed that data on women must be collected in such a way that it will also engage social change. Savané argued that researchers must also examine the exchange of resources and the performance of activities, such as the fetching of water and firewood, within households on the basis of age and sex. Steady suggested that for research to be committed to social change, it must look at past, present, and future, link analysis of small-scale ("micro") and large-scale ("macro") social structures, and focus on working with and analyzing social groups rather than individuals.

Participants also discussed how the use of other Western social science concepts and theoretical assumptions may be very problematic in African cultures. Certain concepts, such as "household head," "work," or "fertility," have assumptions of Western family structure, economics, and the division of labor built into them and thus, as conventionally defined, are inappropriate for African realities. (These terms have also come under heavy criticism from Western feminist researchers.) Even terms which seem relatively unproblematic in Western society, such as "age" or "woman," may be difficult to measure in Africa. Although many African societies have highly accurate traditional means of measuring time, some individuals may not know their own age. Furthermore, cultural factors modify the interpretation of age: although conventional census definitions consider those under the age of 16 to be children, a married African woman of 14 behaves as an adult, fulfilling adult roles, and thus cannot be considered as a "non-economically active child."

The definition of womanhood may vary greatly among different cultural groups, in even the same country. One Tanzanian researcher, Betty Mlingi, recounted how some Tanzanian groups consider that a girl becomes a woman when she marries, others when she has a child, and still others only upon the birth of her first male child. This definitional difference raises problems for the design of studies comparable across a national population.

The cultural preference in many areas for male children can lead to serious undercounting of the population. When an adult is interviewed about the number of children in the household and only responds about the number of boys, a researcher can come up with a figure of zero children for a household with eight girls.

Some researchers suggested that it may be important to analyze why misinformation on women's lives exists. The nonreporting of girl children occurs because of the social pressure on people to have boys. If a couple already has two or three boys, they may be advised not to have any more children; however, if a couple has eight girls, they may be encouraged to keep trying for a boy.

Similarly, the reluctance of governments to change definitions of "work" to more fully include women's activities may be due to political and economic considerations. For example, a country's Gross National Product (GNP) is calculated only from paid work. GNP measures are used to determine eligibility for international aid. Consequently, if the domestic and informal sector activities of women were to be included, a country's GNP would rise. Even if all countries were to agree to such definitional changes, the relative increases might vary from country to country, and thus change a country's relative standing in terms of need aid.

Several researchers noted that the inherent biases in censuses and other quantitative data bases make it difficult to design representative samples. It is difficult to decide how to sample women from different social classes or strata, when income measures for household heads (usually assumed to be men) are such poor indicators of women's standards of living or their potential social power.

The AAWORD seminar considered ways in which various qualitative research methodologies could be employed, particularly in defining research problems and questions, understanding how African women themselves may understand their lives and the contradictions with which they must live. This approach was particularly stressed for working with rural women, often "illiterate" (as conventionally defined) and thus unable to fill out researchers' written questionnaires. So researchers must seek other means to examine women's knowledge and women's lives, such as working with oral histories, analyzing the contents of women's songs, examining the meaning of women's use of magic, having groups of women act out their perceptions of situations in dramas, or living and working with rural women, observing their daily lives. The latter, although recognized as very important, is seldom done; African researchers, like intellectuals throughout the world, are typically city dwellers, lacking daily intimate contact with poor rural women.

Ayesha Iman, a researcher in Nigeria, gave an illustration of how she had used drama to evaluate the

effectiveness of a development project. She was evaluating a church training project and found it difficult to get women to express any criticisms of the project, due to their loyalty to the church. So then she asked the group to do a drama, which she filmed and analyzed, of how the project could be improved. In this way she was able to get the group to define what was important, what they thought should be in the film, and what they saw as the problem areas in the project.

Christine Obbo provoked a great deal of debate with her observations on agricultural work in Uganda. She argued that if one accepted the common observations that women perform agricultural work more slowly than men, could this be due to differences in the content of their work? Obbo presented qualitative information on the agricultural work of women and men in Uganda and noted that the women are much more meticulous and thorough in their hoeing to control weeds. Since the women are more thorough, they weed more slowly than the men, but consequently have to do repeat weedings less frequently than the men. Although weeds are a problem for both subsistence and cash crops, women must take particular care with weeds to grow certain food crops such as spinach.

I found Obbo's presentation particularly interesting, as I had never before considered that women might have to deal with "more noxious weed problems" (or other more difficult resource management problems) than those which confront the men. Many of the AAWORD participants were quite upset, however, with Obbo's acceptance--even for analytical consideration--of statements that women work more slowly than men or are less strong. Several insisted that countless studies have shown that women often do work requiring more strength and endurance than that done by men, and that women work harder and longer than men.

Questions were raised with the presentation of papers using various methods of historical research. When women are absent from conventional history, it can be quite challenging to find data on them. Sometimes data exists, but has been overlooked, as in historical archives. Other sources of data can be tapped, such as diaries.

An example of the use of diaries for historical analysis was presented by Soha Kader, who had examined the diary of a secluded, middle-class Egyptian woman written at the turn of the century. She suggested that such women could not be considered feminists, but seemed rather "content" and perhaps even "happy" with their lives. This presentation touched off a heated discussion as to whether such women could be considered content with their lives if they were unaware of alternatives, living almost entirely within the confines of their own homes, and whether it was possible to measure "happiness."

In the workshops and discussions, the participants debated how data could be analyzed to arrive at explanations, rather than merely descriptions, of women's lives, and how the results should be used. Several speakers stressed the need to conduct research with, rather than on, African women, and to go back to them to share and discuss the results. Meaningful "talks" with 10 women--in which the researcher would share her own life experiences with the women with whom she was working, as well as trying to understand their lives--was suggested to be of greater value than more superficial questionnaires to a larger sample of women.

Many of the African researchers argued that research should not be for its own sake, but for action--to improve the lives of women. Suggestions were made on how this action-oriented perspective should influence the selection of research problems, as well as steps taken once the research is concluded. For example, a researcher could design "intervention packages" of strategies that women could employ to better their situations, and suggest these to women along with discussing the research results.

The AAWORD members have varying opinions as to the degree to which their research approaches are uniquely African ones, and whether the work of African women researchers can be described as feminist. Some believe that their work constitutes a break from Western science, whereas others believe it is part of a larger, ongoing critique of dominant research paradigms. In terms of feminism, many participants feel that their research differs significantly from that of Western feminists. Many African women are, for example, not as preoccupied as some Western women with the problem of "who does the housework," although they are concerned that the value of such work be recognized. However, if feminism is believed to be the struggle of women against oppression, then it is a universal objective of both Western and Third World women researchers regardless of the situational differences in specific problems addressed. Another researcher reminded us that women researchers should not limit themselves to feminist approaches, as the causes of women's oppression are not limited to reasons of male dominance.

Some of these latter issues were also raised in the addresses by two Senegalese ministers which opened and closed the conference. The first, Moussa Balla Daffé, the Minister of Scientific and Technological Research, stated that research on African women constitutes a fundamental question at the juncture of the decolonialization of research. He also remarked that the search for new research methodologies is important for indigenous and self-confident African development. Maimouna Kane, the Minister of Social and Women's Affairs, suggested that AAWORD had been formed as an act of faith in the future of African women. She said that government policy makers are in need of research on women. But she also cautioned the researchers that too often research on women has been done in marginal areas, overlooking important factors which must be addressed in development planning. The challenge, thus, is to translate research models into reality.

Some of the most interesting issues at the conference were ones that were not formally raised. A very important factor is the political situation within which an African researcher works, and the type of support which she may have for her research. Many of these women have difficulty in obtaining research funding from their own governments. Some women talked privately about their problems in conducting research that was critical of government policy; some, in fact, cannot currently work in their own countries because of the political situation. Research may also be difficult if the government places a low priority on it. A researcher from Cape Verde gave an illustration of her own difficulties in conducting historical research. When independence was achieved in Cape Verde, all the old colonial archives were moved so that the building housing them could be put to another use. Consequently she was obliged to travel to Portugal, the former colonial power, to get access to copies of the records.

AAWORD seems to be a good forum for African researchers to interact, and for influencing research and policy decisions. The organization has been successful in obtaining international funding for its own activities: this conference, for example, received funding from the Swedish government, the Ford Foundation, and UNESCO. Furthermore, as a result of the activities of AAWORD and other groups of Third World researchers, many international organizations now look harder to find Third World researchers whom they can fund to work on development research than they did formerly.

Some of the Western observers noted that AAWORD is interacting more with Western researchers now than when the group was originally founded. There seems to be a mutual learning process at work; some Western researchers have become aware of how past research practices have been exploitative and have sought to undertake more ethical research, while African researchers have acknowledged that some Western researchers are sympathetic to their aims and have done useful and sensitive research, which has benefited their host countries.

The AAWORD conference was quite informative for me, in providing an overview of current research of African women. I was quite encouraged that several of these researchers were stressing the importance of researching the daily activities of women, such as their participation in agricultural tasks or their fetching of firewood and water. Although none of the AAWORD members are conducting research on women's involvement in firewood or other forest resource use, I did meet two other researchers in Dakar whose work touches on this topic. One was Jill Posner, whose study of street foods suggests some of the complexities of interactions between cuisine and firewood consumption. The other, Fatou Sou, has been researching women and energy issues in Senegal and the Gambia.

Jill Posner's study is one of a series of case studies on street foods being undertaken by the Equity Policy Center (EPOC). The Equity Policy Center is a Washington, D.C. based organization established by Irene Tinker to conduct policy-oriented research on development issues of particular interest to women. EPOC had chosen to study street foods, i.e., foods sold and often consumed on the streets in urban areas, because they constitute a significant and growing service sector in Third World cities, important both as a source of employment and a source of nutrition.

Posner is an American researcher who had previously worked in West Africa as a Peace Corps volunteer and conducted research on local markets. Her case study examined street foods in Ziguinchor, the regional capital of the Casamances in southwestern Senegal. She undertook surveys of those who cooked and sold a variety of street foods, as well as surveys of consumers. Posner found that two-thirds of the street food vendors were women, and that women and men vendors specialized in selling different food types. The men were more likely to sell foods such as meat brochettes (shish kebobs), which require more initial capital investment, but also yield higher profits than the foods, such as porridge or fruit, sold by the women.

While this was not explicitly studied, the rise of street foods with urban growth is probably altering the consumption patterns of forest products. First, the use of firewood to cook street foods may shift previous patterns. There may be some economies of scale in

large-quantity cooking as opposed to separate household cooking. The forms of fuel used may also represent changed patterns. For example, Posner found that the men selling brochettes in Ziguinchor make their own charcoal. Second, the use of other forest products as ingredients for street foods may be worth examining.

I had learned of Fatou Sou's research on women and energy when I was in Geneva, and had met with Elizabeth Cecelski. Cecelski is managing a project for the International Labour Office (ILO) of the United Nations on women's work, energy, and nutrition. She currently has researchers in four countries looking at how women's work activities and family nutrition are affected by their need to spend time searching for and transporting home firewood and other locally-available fuels. Two of the case studies are being conducted in Africa, in Ghana and Mozambique. The final reports for this project should be done within a year.

Cecelski had recommended that I should try to meet Fatou Sou when I got to Dakar, as she is working on a related women and energy study for ILO. After the AAWORD conference was over, I went to the Institut Fondamental de l'Afrique Noire (IFAN), where Sou works as a sociologist, to talk with her about her work. Sou has worked on a number of studies regarding women and energy. In 1982, for example, she did a survey of energy consumption in the Gambia. Since women are responsible for managing household energy consumption in the Gambia, her survey was only addressed to women. She told me, however, that the predominant involvement of women in this sector did not seem to be of great interest to Gambian policy makers.

Currently Sou is undertaking a study, funded by ILO, to assess how various energy projects in Senegal have affected women. She has examined not only reforestation projects designed to provide firewood, but also cookstove, windmill, and thermodynamic projects. One of the reforestation projects, an industrial plantation designed to grow firewood for charcoal, had focused on replacing the decimated natural forest with fast-growing exotic trees, i.e., trees not native to that area. The project had been detrimental to women's work opportunities in two ways. First, it had overlooked women's needs for indigenous tree species, such as baobab. In the past, local women had gathered numerous resources from these trees for food and medicine, either for their own use, or to cook and sell in the local markets as an important source of employment. Now women must go further in search of such resources. Second, the project had only employed young men as workers in the tree nurseries and for planting tree seedlings. No work had been offered to local women.

My recent trip to Dakar, as well as my earlier stop in Geneva, provided me with a good overview of how women researchers in Africa and their Western colleagues are working to uncover the reality of women's lives. These efforts benefit from the sharing of knowledge among researchers, policy makers, and urban and rural women. The existence of women's networks, whether formal or informal, the holding of conferences, the talks of a researcher with the women with whom she conducts research, are all important means of striving towards new visions of the world, new social alternatives which will improve the lives of women, children, and men, and constitute true social development. The challenges are great, but I believe that women researchers in Africa have a good start on the task.

PAULA J. WILLIAMS is a Forest and Society Fellow of the Institute of Current World Affairs, currently spending two years in sub-Saharan Africa studying human uses of forest resources. She has a particular research interest in how people--especially women--use forest resources in their daily lives, and how they are involved in, and affected by, natural resource development activities. Paula has spent the first year of her fellowship living in Burkina-Faso (formerly Upper Volta), looking at forest-people issues in the Sahel.

Paula's professional training is in social forestry. She has combined studies in forestry and natural resources with those in anthropology and sociology. She received B.S. in Environment and Natural Resources and Master of Forest Science degrees from Yale University, and a Ph.D. in Forestry from the University of Washington (Seattle). She has conducted research on recreational uses of forests in New Hampshire, California, and Washington. Her more recent research has focused on forestry development activities and use of forest resources in African societies.

The Institute of Current World Affairs is a private, non-profit fellowship-granting institution. ICWA sponsors fellows to examine a variety of substantive topics in different geographical regions of the world. Normally ICWA awards three or four two-year fellowships each year. Williams is the fourth in a series of fellows who have examined forest-people issues. As a condition of her fellowship, Paula is required to write a monthly newsletter or report to the Executive Director of the Institute. Copies of this newsletter are printed and circulated to interested readers. The accompanying article is a reprint of one of her reports.


NOTE: The Institute of Current World Affairs is currently looking for candidates for a fellowship to examine resource management issues in Kalimantan. For more information, interested persons can contact: Mr. Peter Bird Martin, Institute of Current World Affairs, 4 West Wheelock Street, Hanover, New Hampshire 03755. Telephone: 603/643-5548.

YESTERDAY



These women joined the Weyerhaeuser work force during World War II, filling the jobs of men who had gone off to war. They became known in the timber industry as the "Pauline Bunyans." Although most women quit--by necessity or choice--when the men came back, a few did not. VONETTA DORRELL, the last of Weyerhaeuser's Paulines, retired in 1979 from Klamath Falls, Oregon, after 34 years on the job. Weyerhaeuser Archives photo.


PEOPLE



BARBARA L. COOK, of Lexington, Kentucky, joined the Peace Corps expecting adventure in 1983 after earning her master's degree in forest science from Yale University's School of Forestry in New Haven, Connecticut.

Cook, who received her bachelor's degree in forestry in 1981 from the University of Kentucky in Lexington, serves on a USAID-sponsored village reforestation project in the Mopti region of Mali, West Africa. Mopti is in the Sahel, and the problem of deforestation is especially serious in such a sensitive ecosystem. Home of the legendary town of Timbuctu, Mali was once a great African empire. Now, plagued by droughts in recent years, it is one of the 10 poorest countries of the world.

One of 10 Peace Corps volunteers and trainee foresters assigned to Mali, Cook helps establish tree nurseries to provide trees to villagers at no cost.



"Most of my job centers on making visits to surrounding villages, holding meetings and talking about the problems of deforestation," she reports. "Although reforestation is important to the villagers, and they realize the effects of deforestation, it often is too hard to care for the trees in an area where there is little water. And often the task of watering the trees falls to the women, who already have too much work to do and are seldom involved in the decision-making process," she adds.

A secondary project in which Cook is involved is teaching villagers how to make improved wood cook stoves out of mud bricks designed to use less wood. Women often spend hours searching for firewood or have to spend a large part of their money on wood.

"The villagers are mostly farmers or herders," she notes. "They are Peulh, an ethnic group found throughout West Africa who were nomadic herdsmen. Although they are now farmers, the basis of their way of life is their animals--cattle, sheep, and goats."

**PEACE
CORPS**

NEWS

After graduating from Humboldt State University, Arcata, California, in 1981 with a bachelor's degree in wildlife management, SANDRA J. HAUX joined the Peace Corps and now serves in a fishculture program in Ecuador. The major focus of her fishculture program has been to help people at the subsistence level, providing them with additional income through small- and medium-scale commercial ventures. Working with an assigned Ecuadorian counterpart under the Ministry of Agriculture and Cattle-Raising, she helps farmers in Pastaza Province manage ponds, harvest their fish, and record their production.

She also manages two fish ponds on an experimental farm operated by the ministry and plans to develop four more demonstration ponds into a small fish station capable of reproducing two species of fish: tilapia and carp.

"As far as my work goes," notes Haux, "I have already accomplished my major goal: to help the families with whom I come in contact to enjoy a better quality of life, both in a dietary and monetary sense."

"We wanted to work with people more than trees," said MARY E. SINNOTT-OSWALD. When she and her husband, ROBERT C. OSWALD, joined the Peace Corps in 1982, they wanted to work in fields other than forestry, even though they both had received bachelor's degrees in natural resource management in 1981 from Colorado State University in Fort Collins.

The couple develops nurseries, teaches soil conservation, works in schools and communities, plants trees, works in agro-forestry, and teaches local people how to can and preserve foods to encourage them to plant fruit trees.

"No matter how poor a person is, he usually still has land," observes Sinnott-Oswald. "The problem is that the land usually is on about a 40 percent slope and is poor, since normally all that is planted is corn and beans. Even though they get about 30 inches of rain a year, the land is very dry because of the severe deforestation. All the rain just runs off. So we try to show people that they can make more money and save their soil for their children's use if they just practice some simple soil conservation methods and plant trees along with their crops."

There are more than 5,000 Peace Corps volunteers assigned to 62 developing countries around the world. Loret Miller Ruppe is the director. At this time, the Peace Corps urgently needs volunteers with backgrounds in crop and livestock production, agricultural marketing, beekeeping, forestry, fisheries, farm mechanics and agriculture-related skills. Persons interested in information on the Peace Corps may call 800 424-8580, Ext. 93, toll-free.



As a Peace Corps volunteer JANET STEIN, of Oradell, New Jersey, serves as a sociologist in a range management extension program in Morocco. She graduated from Yale College in New Haven, Connecticut, in 1981, with a bachelor's degree in anthropology.

"We're trying to improve the natural resources on rangelands through improved livestock production and, we hope, the result will be to increase the incomes of livestock producers in the region. I spend a lot of time talking to people," she reports. "This gives me an opportunity to learn about traditional ways of raising sheep, for example. We will use this information to plan extension programs which are appropriate to the people of Timahdite."



PEOPLE



Probably the first woman to be employed as a forester by the USDA Forest Service was MARGARET C. STOUGHTON ABELL, who was appointed to the Appalachian Forest Experiment Station 22 July 1930. In 1931 she married CHARLES A. ABELL, who was also a junior forester at the station. She worked in the office and in the field--this last, in silviculture and forest damage--before she retired in 1936. Abell was, in addition, the first woman forester to graduate from Iowa State College.

She says that JO DARLINGTON graduated in forestry from the University of Montana in 1929, and that JULIA LEE McDILL graduated in forestry from Yale in 1931 with a M.F. degree. The first woman employed by the Forest Service in a professional capacity was ELOISE GERRY, who worked at the Forest Products Laboratory, Madison, Wisconsin, from 1910 to 1955. She had a Ph.D. in botany (1921) from the University of Wisconsin. The first woman to receive a bachelor's degree in forestry in the country may have been ALICE CRAIG, class of 1928, University of California (see Women in Forestry 5(2):9).

Perhaps the first woman hired as a forest guard in the Forest Service was HALLIE M. DAGGETT, on 1 June 1913, on the Klamath National Forest in Northern California (see Women in Forestry 5(2):21-25). The first woman district ranger was WENDY HERRETT, Blanco Ranger District, White River National Forest, Region 2, August 1979 to October 1981. She is now in the Washington Office.

...History Line

In 1956, JOANN MCKNIGHT, a 20-year-old mother, went to work at the plywood mill near her home in Willow Creek, California. In 1971, she became the owner and operator of Bigfoot Lumber, the only lumberyard in the world entirely owned and operated by women.

McKnight worked at the plywood mill for nearly 15 years, tackling demanding tasks. After switching from morning shift to a swing shift in order to meet her family obligations, McKnight began to dream of a work environment where a woman could maintain a flexible schedule.

Bigfoot is like no other lumberyard; the buildings and many of the business's vehicles are painted various shades of purple. Aside from lumber, Bigfoot now sells building,

automotive, and garden supplies, housewares, clothing, gifts, toys, snacks and jewelry.

Employees tend to stay with Bigfoot for a long time. One attributes this loyalty to McKnight's understanding of family responsibilities. Children are a common sight at Bigfoot during the after-school hours, and informal trading of hours among employees is encouraged.

Recently, the Humboldt Bay Business and Professional Women's Club honored Bigfoot with an award for its use of flextime as a way of meeting the needs of employees' families.

...Pam Mendelsohn
Ms. Magazine

BARBARA HOLDER, who has been with the U.S. Forest Service Wildlife and Fisheries staff in Washington, D.C. the past three years, has been named director of wildlife and fisheries for the four-state northern region and responsible for wildlife and fisheries in 25 million acres in 15 national forests.

Holder, a native of northern California, attended California State Polytechnic College at San Luis Obispo and received a graduate degree in biology from San Diego State University. She taught high school biology in Redding, California, before accepting appointment with the Forest Service in 1971.

...Lewiston Tribune

The certificate of Continuing Forestry Education (CFE) recognizes the completion of at least 250 hours of forestry or forestry-related continuing education and professional development during a three-year period.

Foresters who participate in and meet the requirements of the CFE program establish a standard of excellence for themselves and the profession. The Society of American Foresters (SAF) recently recognized the accomplishments of three individuals. They are SUSAN E. BOGGS, Kingstree, South Carolina (Appalachian SAF); NANCY RUTH HOLMES, Gardiner, Maine (New England SAF); and KRISTINE A. WOOD, Harrisville, Michigan (Michigan SAF).

Readers in interior Alaska, and others responsible for managing natural resources in the northern

taiga forest ecosystems, will want a copy of a new publication from the USDA Forest Service Pacific Northwest Station--CLASSIFICATION, DESCRIPTION, AND DYNAMICS OF PLANT COMMUNITIES AFTER FIRE IN THE TAIGA OF INTERIOR ALASKA, General Technical Report PNW-307, by JOAN M. FOOTE.

Foote has done a monumental work in describing and classifying the plant communities in interior Alaska. 130 forest stands were sampled ranging in age from one month post-fire to 200 years. They are described by successional series and by development stage. Patterns of change in the two successional series are described as 12 mature forest communities.

The first phase of research was started in the area of the Wickersham fire (1971) near Fairbanks and then expanded to other areas of the interior, primarily along the roads south of the Yukon River. The work was funded by the U.S. Department of the Interior, Bureau of Land Management, the National Science Foundation, and the USDA Forest Service.

SUE A. JOERGER has been selected executive vice-president of the Southern Oregon Timber Industries Association. She was a forest planner for Associated Oregon Loggers. Before that, she worked as a policy analyst for the executive staff of the state Department of Forestry in Salem for two years. Joerger has a bachelor's degree in biology from Mills College and a master's in resource management and economics from the University of Washington.

...Journal of Forestry

Since 1965 approximately 113 women students have graduated from the faculty of Forestry, University of Toronto. The first woman to receive a B.Sc.F. degree (1965) and also the M.Sc.F. (1968) from the University of Toronto was ROSE MARIE RAUTER. Rauter is currently Supervisor, Tree Seed and Forest Genetics, Ministry of Natural Resources, Whitney Block, Queen's Park, Toronto. Although the Faculty of Forestry, University of Toronto, has not had a women academic staff member on an extended full-time basis, Rauter has been an Adjunct Professor since 1 July 1980.

The first woman to receive a Ph.D. in Forestry was Shirin K. Asin in spring 1978.

PERCEPTIONS OF A FOREST*

Gene and Lei Lane Bammel
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An increasing proportion of the American population is becoming urban (Bureau of Census 1980). Some individuals elect to move to cities while others are unintentionally consumed by urban sprawl. Hauser (1962) predicted that urbanism would profoundly affect our feelings about the out-of-doors, that it would cause us to perceive the outdoors in a much different way, and that "urban" vantage points might then limit the desire and need for outdoor recreation. Hauser affirmed that, as of 1962, people were in the process of adapting to the urban environment. They might develop diverse forms of leisure-time activity which would make the then present forms of outdoor activity seem relatively undesirable, as primitive, incompatible, wasteful, or even dangerous.

The antithetical, and more popular, point of view was expressed by Clawson (1959):

We Americans don't just want outdoor recreation, we need it. Moving from farms to cities and suburbs has not meant turning our backs on land and water and open space. As a people, we don't feel right unless we can get back from time to time to the out-of-doors.

On the basis of that belief and of extrapolation from recreation data, Clawson predicted that there would be 10 times as much demand for outdoor recreation in the year 2000 as there was in 1950. He further commented that the rise in resource-based areas like the National Parks and National Forests could increase as much as 40-fold, while intermediate areas like state parks might only increase 16-fold. Some of these estimations were extrapolations from the post-war years which sustained 8 to 10 percent increases in outdoor recreation participation as well as on the trends of a growing population, rising family incomes, and increases in leisure and travel.

Cordell and Hartman (1983) however, reported that the use of Federal lands for recreation averaged an annual growth rate of 4.24 percent between 1960 and 1981. A similar value, 4.46 percent, represents state park areas during those 20 years.

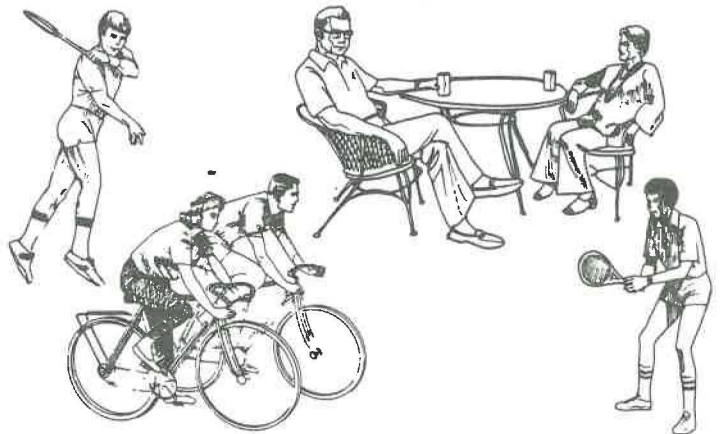
For planning purposes, managers need to know if people's perceptions of the forest are changing and if these alterations are affecting either recreation behaviors or desires. As reported in this article, a 1979 statewide random survey conducted in West Virginia yielded support for Hauser's contention that urbanism may alter perceptions and influence behavior patterns.

METHODS

Five hundred West Virginia residents (300 rural/200 urban) were randomly selected from telephone listings to receive mail questionnaires; non-respondents received a maximum of two follow-up mailings. Respond-

ents were classified as rural if they resided in a county that had a population less than 20,000 and urban if they lived in a city of more than 50,000. Response rates were 44.5 percent for the rural population, 56 percent for the urban sample, and 51 percent for the combined mailing.

A semantic differential, a technique for measuring the meaning of concepts (Isaac and Michael 1972), was used to determine the respondents' perceptions of a "forest." The semantic differential technique has come to play an important role in almost all of the behavioral sciences and many applied areas (Snider and Osgood 1969). This technique involves selecting polar word pairs (e.g., black/white) from a standardized list (Osgood et al. 1957) and arranging them at opposite ends of a series of seven-point scales. Previous attitude studies have reported that the most useful word pairs dealt with the areas of evaluation (e.g., good/bad), potency (e.g., hard/soft) and activity (e.g., active/passive) (Isaac and Michael 1972). One strategy for word pair selection is to include at least three pairs from those areas with extra items in evaluation and understandability (e.g., familiar/strange). Miscellaneous items (e.g., fun/work), those that might contribute in a given situation, can also be added. Standardized techniques have been used to establish reliability ($r = .91$) and validity ($r = .90$) measures for semantic differentials (Tannenbaum 1953).



Eighteen polar pairs--six evaluative (item numbers 1, 3, 5, 6, 10, 12), three potency (4, 8, 13), three activity (2, 17, 18), three understandability (7, 9, 14), and three miscellaneous (11, 15, 16)--were selected to measure the concept of "forest." Subjects responded by placing an "X" in one of the seven places separating each pair of words. Overall frequency distributions (items 1-18) and single item analysis were calculated by chi-square and the plotted arithmetic means (Fig. 1) were analyzed by a sign test based on a binomial probability table.

The second part of the questionnaire involved a list of 19 popular recreation activities. Respondents were asked to indicate participation frequency for the past year (0 = never, 1-5 = seldom, 6-12 = often, 13-24 = frequently, and more than 24 = a lot).

*Published with the approval of the Director of West Virginia Agricultural and Forestry Experiment Station as Scientific Article #1715.

RESULTS AND DISCUSSION

No significant chi-square differences between the two respondent groups were found for the variables of age, sex, race, income, marital status, or home ownership. Significant differences were found for occupation (p<.005) and religion (p<.05). Urban respondents reported higher occupational levels and were more likely to be Catholic. A group "t" test, however, indicated that the age difference was significant. Rural respondents averaged 53.5 years of age while the urban respondents averaged 47.6 years. All of the rural respondents had once lived on a "farm" and the group average was 35.3 years. Slightly over 47 percent of the urban group had once lived on a farm; those 30 averaged 31.6 years of farm life.

There was an overall significant (p<.05) difference between rural and urban responses on the perception of a "forest" and for activity frequency. Between-group overall (items 1-18 combined) difference on the semantic differential was significant at the 0.01 level with a chi-square value of 34.25. Three of the polar adjective pairs separately differentiated the two groups at a significant level (p<.05). Rural residents perceived the forest to be more active (item 2), predictable (item 9), and excitable (item 17) than did urban dwellers. The significant differences occurred on items which factor under Osgood's "activity" and "understandability" categories.

Responses to activity frequency questions (Table 1) in the same survey showed that recreation patterns are significantly different (p<.05) for the two groups (X² = 9.92, 4 d.f.). Rural residents were significantly more active in forest-related activities such as hunting and nature walks, while the urban dwellers were significantly more active in swimming, movie-going and TV-watching. Both groups, however, emphasized non-forest based experiences that were centered in or about the home (listening to music, reading, gardening).

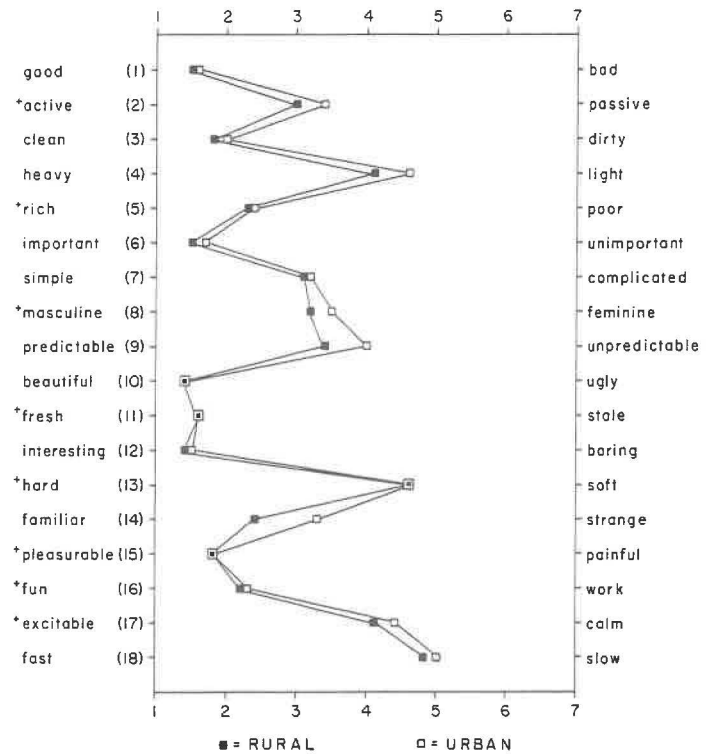


Figure 1.

We predict that the difference between urban and rural perceptions of the forest will increase as more Americans are influenced by urbanity. The amount of time devoted to forest recreation might decrease as a consequence of less favorable perceptions. Findings from other investigations lend support to this thesis. Charbonneau and Lyons (1980) reported that a decreasing

Table 1. Chi-Square analysis of rural and urban activity frequency.

Activity	N		Participation Rates (%) for Past Year										χ ²
			Never (0)		Seldom (1-5)		Often (6-12)		Frequently (13-24)		A Lot (25+)		
			R	U	R	U	R	U	R	U	R	U	
Watched TV	109	65	1	6	19	2	18	17	15	11	47	65	16.95 ^C
Hunted	102	64	37	72	23	22	17	2	13	2	11	3	23.37 ^C
Listened to music	105	61	3	0	24	13	17	21	20	21	36	44	5.00
Fished	104	61	45	66	22	21	16	5	10	5	7	3	9.10
Camped	104	61	59	72	28	23	9	3	2	2	3	0	4.90
Read for pleasure	107	59	12	8	22	20	21	15	10	19	35	37	3.21 ^C
Went swimming	101	61	51	34	28	23	17	16	1	11	3	15	18.41 ^C
Did craft projects (woodworking, sewing, etc.)	104	60	33	22	26	25	15	22	13	7	13	25	6.60
Hiked	106	60	41	50	31	25	10	12	7	10	11	3	4.80
Walked for fun	105	60	16	28	30	23	20	22	15	12	18	15	4.05
Had friends over	107	62	6	3	28	19	28	35	21	19	18	23	2.86 ^C
Went to the movies	102	61	56	28	31	57	10	3	1	11	2	0	24.85 ^C
Played games at home	105	60	31	23	30	33	17	20	11	10	10	13	1.57
Bicycled	103	59	72	64	19	19	5	12	0	5	4	0	10.33
Boated	104	60	70	72	21	17	2	5	1	5	6	2	5.63
Went backpacking	104	60	86	97	9	2	2	2	1	0	3	0	5.89
Gardened (flowers or vegetables) for fun	107	62	14	27	13	13	23	13	20	21	30	26	6.19
Took nature walks	104	63	32	62	32	21	15	10	13	6	8	2	14.61 ^C
Watched birds	107	63	22	38	31	19	21	24	13	11	14	8	7.60
All													9.92 ^C

^aR = Rural ^bU = Urban ^c significant at .05 level, 4 d.f.

percentage of the U.S. population hunt and fish. They also found that living in a metropolitan area increases the probability of discontinuing participation in either activity. Since 1973, the "fun" perception of camping has decreased and, by 1978, for the first time, the number of permanent dropouts and temporarily inactive campers exceeded the number of active campers (Cole and LaPage 1980). Growth projections (Cordell and Hartman 1983) for a more recent 50-year period (1980-2033) are more modest than Clawson's. Developed camping, for example, ranges from a low of 81 percent to a high of 269 percent.

Mass media promote understanding and interest in urbanism and its artifacts, which will make the city appear more "active" and "understandable." While forest recreation will no doubt continue to serve as compensation for some for the disadvantages of urban existence, for vast numbers of people the forest will be perceived as less positive, less active, and less comprehensible than the artificial urban environment. For forest managers, this may have more benefits than deficits. There may be a greater homogeneity among forest recreators, thereby decreasing the number and intensity of potential conflicts; however, if the numbers of recreation-oriented visitors to forested areas does decrease, public support for forestry concerns might also diminish. From the West Virginia sample, it could be generalized that many of those classed as "urban" had rural roots, and hence recollected the appeal of the forests. What will happen when West Virginia, like other, more urban states, has a generation of citizens who are city born and bred? We assume that Hauser's now classical contention--that people understand and appreciate the familiar environment and distrust the unfamiliar--will prove even more cogent.

Forest managers provide and maintain recreation opportunities. But people cannot "enjoy" natural resources without a certain amount of familiarity with or understanding of that environment (Driver and Green 1977). Strengthening the environmental education components of outdoor recreation programs would help overcome decreasing familiarity. Education as well as activities, need to be provided if the public is to continue benefiting from forest recreation experiences.

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Ramana Hammerly

Answers to Communications Quiz

- | | |
|----------|-----------|
| 1. True | 11. True |
| 2. True | 12. True |
| 3. False | 13. True |
| 4. True | 14. True |
| 5. True | 15. True |
| 6. False | 16. False |
| 7. False | 17. True |
| 8. False | 18. True |
| 9. False | 19. False |
| 10. True | 20. False |

Scoring

18 to 20 Correct: Professor Henry Higgins has nothing on you. You are very perceptive about human communication and subtle sex differences and similarities.

16 to 17 Correct: You're not ready to move into the professor's seat, but you can move to the head of the class. You know a good deal about communications and the gender gap.

13 to 15 Correct: Like most people, you've picked up some information about how people communicate--but you're missing a lot too.

Fewer than 13 Correct: You've missed more than your fair share of these questions. You also may be missing important verbal and nonverbal cues about your own behavior and how to communicate effectively.

PUBLICATIONS

The Labor Institute of Public Affairs of the AFL-CIO has produced a TV documentary, Pay Equity, for women. The 23-minute program includes information on the current position and history of women in the U.S. workforce, and features a debate between a leader of the National Committee on Pay Equity and a spokesperson of employer positions on the major issues of comparable worth. The program is part of the AMERICA WORKS series broadcast nationwide by over 80 public television stations. The Pay Equity videotape can be ordered from the Dept. of Education, AFL-CIO, 815 16th St. NW, Washington D.C. 20006, Attn: Dorothy Shields, for a rental fee of \$5.00 or a purchase fee of \$40.00. Tapes are available in 3/4" or 1/2" VHS or Beta formats.

Irene Tinker, founder and director of the Equity Policy Center, and 20 other long-time Washington women have put together a history of women's participation in policy-making. WOMEN IN WASHINGTON: ADVOCATES FOR PUBLIC POLICY is the story of women's growing political sophistication, told by women themselves. Chapters focus on the gradual expansion of women's issues over the last two decades and reveal the approaches and tactics utilized by women to influence policy-makers to improve the status of women in law, health, business, the military, science, and education. The softbound book is available from the Equity Policy Center, 2001 S St. NW, Suite 420, Washington D.C. 20009, for \$12.50.

SAFEGUARDING THE LAND by Gloria Skurynski (Harcourt, Brace Jovanich, Inc.) contains a wealth of information for students and career counselors interested in renewable resource management. The author describes career opportunities for over 15 professions in resource management, and includes career biographies of three young women working in the field for federal agencies. Areas of conflict among users of federal lands are discussed as well. Of particular value to younger students is the list of colleges and universities offering degrees in resource management. This 162-page paperback would clearly be a valuable addition to high school and college libraries and career counseling offices.

WOODS-WORKING WOMEN--SEXUAL INTEGRATION IN THE U.S. FOREST SERVICE by Elaine Enarson (University of Alabama Press, \$18.95) gives a vivid picture of the everyday working experience of women who are integrating workplaces once considered exclusively male. The story, largely told through firsthand interviews, makes gripping reading. Enarson deals at length with the issue of the sexualizing of the workplace, which is an undercurrent in any male-female work situation, but which surfaces dramatically in the woods, where women are often isolated among hostile male crews. The strategies devised to cope with hostility, and at the same time to afford themselves needed protection, are analyzed. The role of the true ally, the male co-worker or supervisor who encourages and enables women to do their best possible job is not overlooked either. WOODS-WORKING WOMEN is a book of great interest not only to women in forestry or in traditionally male occupations, but to anyone interested in the larger issues of sexual politics.

WOMEN IN DEVELOPMENT: AN ALTERNATIVE ANALYSIS by Patricia Maguire, published by the Center for International Education (Hills House South, University of Massachusetts, Amherst, Massachusetts 01003; \$4.75). Four main themes emerge: emergence of the women in development effort, competing theoretical foundations of women in development, i.e., different explanations of the problem, analysis of the failure of the women in development effort, and strategies for a feminist approach to women in development.

THE COLUMBIA RIVER AND PACIFIC NORTHWEST TIMBERPERSON is a quarterly publication "dedicated to the collection, preservation and dissemination of logging trivia and obscurata" and hence aimed at "historians, model builders, logging 'nuts,' and other assorted industrial archaeologists." Its issues feature historical articles, photographs, mechanical drawings, and other artwork--often drawn from early lumber trade journals of the Pacific Northwest. Contact Bill Roy, P.O. Box 3695, Eugene, Oregon 97403.

The RENEWABLE RESOURCES JOURNAL (RRJ) is the official publication of the Renewable Natural Resources Foundation (RNRFF), a consortium of 12 national and international, professional and scientific organizations. RRJ is directed to the needs of natural resource managers at all administrative levels and to others interested in natural resources management. Significant emphasis is given to general interest articles concerning differing perspectives on renewable natural resources public policy, technology and evaluation. Published quarterly, each issue will contain articles, news, and notices of significant meetings. Commentaries will also be presented. All manuscripts or questions regarding publication should be addressed to the Editor, RENEWABLE RESOURCES JOURNAL, RNRFF, 5410 Grosvenor Lane, Bethesda, Maryland, 20814.

PROCEEDINGS NOW AVAILABLE

The Renewable National Resources Foundation and the American Society of Photogrammetry announce that the proceedings of the May 1983 symposium in Seattle have now been published and are available under the title of RENEWABLE RESOURCE MANAGEMENT: APPLICATIONS OF REMOTE SENSING. For information write ASP Publications Department, 210 Little Falls St., Falls Church, Virginia 22046. (703 534-6617).

WHO WILL DO SCIENCE? is a special report to the Rockefeller Foundation on women and minorities in science and mathematics. Researcher Sue E. Berryman of the Rand Corporation found the increases in the number of science degrees earned by women are due entirely to higher numbers of women participating in higher education rather than a higher percentage choosing to study science. Additionally, the greatest attrition rate from science occurs for women at the Ph.D. level. Copies of the 124-page report are available without charge from the Rockefeller Foundation, 1133 Avenue of the Americas, New York, New York 10036.

PUBLICATIONS

AMERICA'S SOIL AND WATER: CONDITIONS AND TRENDS is a book about soil and water on two-thirds of our land--the rural nonfederal land of the United States where our crops are grown, where much of our livestock is pastured and grazed, and where our private forests are managed. Many of the facts were supplied by the National Resource Inventories, begun by USDA's Soil Conservation Service in 1977. Other significant findings came from the Water Resources Council, U.S. Geological Survey, and other responsible agencies. No charge for this book. Available at Soil Conservation offices.

The Society of American Foresters (SAF) lists members who offer consulting services to the public in **CONSULTING FORESTERS 1984**. Companies appear alphabetically with pertinent data on areas of specialization and availability, individuals in the firm, and professional affiliations. A geographic index locates consultants by state or province. The price is \$7.50 per 96-page directory. Write to SAF, 5400 Grosvenor Lane, Bethesda, Maryland 20814.

PRODUCTION, PRICES, EMPLOYMENT, AND TRADE IN NORTHWEST FOREST INDUSTRIES, THIRD QUARTER 1983. This quarterly report gives current information on the timber situation in Alaska, California, Idaho, Montana, Oregon, Washington, and British Columbia. Charts include data on lumber and plywood production and prices, timber harvest, employment in forest products industries, international trade in logs, pulpwood, chips, and log prices in the Pacific Northwest. For more information, contact Florence K. Ruderman, USDA Forest Service, Pacific Northwest Forest and Range Experiment Station, 809 N.E. Sixth Avenue, P.O. Box 3890, Portland, Oregon 97209

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HERBERT HOOVER AND CONSERVATION, 1921-33. (*The American Historical Review* 89:1), by Hendrick A. Clements, is a new appraisal of this president's impact on the conservation movement. Clements believes he had a beneficial impact. He notes, "By stressing that conservation was good business and enlightened self-interest, he reinforced the progressive era's utilitarian definition of conservation, but in his concern with parks and wildlife he also strengthened the esthetic aspects of the conservation movement. And in emphasizing the elimination of waste of resources he contributed significantly to the development of a feeling that conservation could fight economic depression by curbing overproduction."

COUPLING AND CAREERS: A WORKSHOP FOR DUAL CAREER COUPLES AT THE LAUNCHING STAGE describes a short-term workshop designed to assist undergraduate and pre-professional student couples develop effective individual and joint coping strategies. The workshop was offered to both married and unmarried student couples representing a "future dual-careerists' group" under the auspices of the counseling center of the UNIVERSITY OF FLORIDA, Gainesville, and focused on providing skills for joint problem solving, decision making and communicating. The article, by Ellen S. Amatea and E. Gail Cross, appeared in *The Personnel and Guidance Journal*, Vol. 62, No. 1, September 1983.

WOMEN IN FORESTRY would like to print position announcements for jobs in cultural and natural resources. There will be no charge for this service, but we ask that the announcements be limited to no more than 25 lines. Include the contact person's name and address, plus the closing date. Since we go to press almost a month before the journal reaches our readers, give us lead time and don't be disappointed if the deadlines don't mesh. Send to WIF, Laboratory of Anthropology, University of Idaho, Moscow, ID 83843

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GENDER SENSITIVITY IN AN ENERGY SURVEY IN SENEGAL

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Natural resource programs in developing areas frequently fail due to lack of adequate information about resource use, control, and the needs of local residents. In an effort to overcome this information gap, the Peace Corps in 1979 undertook a rural energy survey of 15 villages in Senegal, Africa (Peace Corps Energy Survey 1982). The main purpose of this survey was to determine local uses and needs of energy by providing (1) a description of the existing energy regime in a rural village, and (2) an evaluation of the potential for developing local renewable energy resources.

A further data problem that plagues program leaders is that even when information is available on what is happening at the village level, often information on who is involved is not. Some programs, then, become focused on the wrong group of residents. A very blatant example of gender insensitivity deals with stove programs, where male engineers design stoves and introduce them to male village leaders. This is often done without consulting the the people most directly involved in their adoption (or lack of adoption): the women who cook. However, much more subtle differences of time use and task responsibility dictate who might be interested in which innovation and who might have time. If women always carry water, they may be a key group to consult in designing a tree-planting program, even if the men plant the trees.

Several approaches have been suggested to encourage gender disaggregated information. The first uses questionnaires or other information instruments which require gender sensitive data collecting and reporting. A second approach employs more women for data collection and project design. It has frequently been assumed that women are inherently more aware of gender issues than are men.

Our review of this survey was prompted by an impression that, even though identical questionnaires were administered, some village descriptions included rich gender-specific information, while others did not. Knowing that six of the volunteers were women and nine were men, we were interested to discover if there was an identifiable reporting pattern related to the gender of the researcher. We therefore analyzed the information given on local activities and resources by:

1. Sensitivity to gender differences in the information as reported from the questionnaire results, and

2. What, if any, conclusions could be drawn from the results of this small sample about the relative sensitivity of male and female researchers to gender issues.

In order not to prejudice the findings, we evaluated the village descriptions for the first point before obtaining access to the document giving the gender identity of the volunteers working in the specific villages.

Summary and Review of the Activities

In all these villages, agriculture was the main occupation. Millet was grown as the subsistence crop and peanuts were raised as the cash crop. Some of the other crops cultivated on a fairly regular basis were rice, tomatoes, citrus fruits and mangoes. Other income-generating activities were livestock raising and skilled labor.

IT HAS FREQUENTLY BEEN ASSUMED THAT WOMEN ARE INHERENTLY MORE AWARE OF GENDER ISSUES THAN ARE MEN.

It is apparent, in the village descriptions, that where gender is specified, some tasks are mentioned as being in the domain of women; others are exclusively mentioned in relation to men. In some villages, these domains overlap. In a number of village descriptions, however, phrases such as "fuel was collected," obscured the gender of the collector. While some of the researchers made clear distinctions between the activities of men and women and have noted the overlaps when these occurred, many researchers did not. Moreover, we have noted striking differences on issues of gender sensitivity. By gender sensitivity, we mean that the tasks performed in each of the villages, the time consumed in the performance of these tasks, and some suggestions for the incorporation of energy-saving devices relevant to local resources were given, including mention of the gender of the group involved.

The following is a description and review of the activities performed by the men and women of these villages where this information was noted.

1. Fuel collection and fuel use. In six of eight villages, fuel collection is the main responsibility of women, who, on an average, spend approxi-

mately two to four hours a day collecting fuel. In Kagnobon, for example,

women . . . must walk between one and five kilometers . . . gathering fallen branches and carrying them home on their heads. In the spring, the women collect more wood than needed for the day and store the excess inside the compound to burn in the rainy season.*

In some villages, men are also engaged in this task. In Bakadadji, men collect fuel practically every day. If, for whatever reason, they are unable to do so, fuel collection becomes the woman's task.

Highly correlated with men's participation is the presence of animal-drawn carts. The usual practice is for the men who control carts to drive into the forests and haul back large cartloads of fuelwood.

In some villages where the task of fuelwood collection is performed by women, fuel is quite scarce and substitutes are used. In a village observed by a female researcher, there are no wooded areas up to 40-45 kilometers away. Thus,

While firewood is considered by the villagers to be the most important fuel for meeting their daily needs, it is obviously impossible for the women of the village to travel forty kilometers and back on foot each day to gather wood for their cooking fires. They scavenge the fields . . . for whatever brush or agricultural debris they can find.*

WHEREAS MOST OF THE RESEARCHERS OBSERVED FOOD-PROCESSING TO BE A WOMAN'S TASK, TWO FEMALE RESEARCHERS DID NOT OPENLY ASSIGN THIS TASK TO THE DOMAIN OF WOMEN.

2. Water supply. In all 15 villages, women have main responsibility for water supply, spending on the average about one to six hours daily drawing water. They use rubber bags or tin cans to draw water from the well. Most of this water was used for home consumption. In some cases, the water was used for livestock. In Ouarrack,

it is the responsibility of the women in each compound to draw water for the household's needs and to carry it to the compound. In one of the survey sample households, two adult women draw water between midnight and six a.m. transporting the water . . . in metal basins balanced on their heads.*

Some researchers observed the problems experienced by women while performing this task. In one village, 1,000 to 5,000 people are dependent on the two available wells. This situation creates obvious problems,

the most apparent of which is the time it takes for the women of each compound to collect the day's supply of water. In the households surveyed, an average of 4.4 hrs. is spent each day in supplying the compound with water. Three of eight families spent 16 hours or more . . . in addition to providing water for their families, the women draw water for their livestock as well . . . 20-50 percent of the water drawn for survey sample household is for watering the livestock.*

INTERNATIONAL

The researcher offered no further information as to what solutions could be provided. Instead of stressing the time requirement for women, the concluding observation was that the shortage of water affected the trees, and water should be made more plentiful so trees would not die.

According to the researcher, "The men of the village are building a water trough near a diesel-powered forage pump, to provide water for the livestock." Although this is advantageous to the men, the usefulness of this remedy as far as household water provisioning is concerned is questionable.

3. Food preparation. Thirteen of 15 villages mention food preparation as one of the major tasks performed by village women. Women normally spend three to four hours on various steps in food preparation. One of the major stages of this task is millet-grinding. In N'Diye Sefour,

Women must pound the millet for several hours in a large wooden mortar, first to dehull it and separate the chaff, and then to grind it fine enough for steaming.*

Grain-grinding, particularly millet, is clearly perceived as a tedious task by the local women. A number of villages own diesel-powered grain-grinding mills. Among those which did not own a mill, there were efforts to purchase one. A male village surveyor describes vividly the situation.

The village women, aware that many communities have diesel-powered millet grinders, expressed strong interest in obtaining one A local officer of Promotion Humaine formed a woman's group A millet grinder was purchased with money from the USA and women collected funds for a cement building for the grinder.*

A similar situation can be observed in another village. Another male researcher points to the considerable interest among the women in buying a millet grinder since the "task of threshing and pounding is both time-consuming (2-4 hrs.) and extremely tiring." The village women, who formed a cooperative group, obtained a grinder and contributed money for a building to house the machine.

Whereas most of the researchers observed food processing to be a woman's task, it is surprising to find that two female researchers did not openly assign this task to the domain of women. One of these researchers says,

Millet is prepared for the evening meal Rice is the preferred grain It is unclear whether rice is preferred as a matter of taste . . . or because its preparation is easier, requiring only one-half the time and effort to pound with a heavy mortar and pestle.*

Another researcher, also female, did not discuss food processing and preparation activities at all.

In some villages, women also built and used Lorena stoves, which were estimated by a Peace Corps volunteer in the survey team to reduce fuel consumption 30-40 percent.

4. Agriculture. Most of the men in the villages are described as being involved in farming, primarily in the cultivation of cash crops. The women described

as engaged in agriculture worked mainly with subsistence crops. Apart from these crop-related tasks, villagers also tend to the livestock, but it was difficult to assign specific tasks to men or women. For example, in Mbaye Faye Mamadi,

Thirty percent of the villagers are herders Many more of the villagers are involved in the dairy cattle business, through their practice of loaning cows . . . Villagers also raise other livestock, including more than 200 sheep and goats, 50 horses, 25 donkeys and several hundred chickens.*

It would be difficult, from this information, to know which planting or sheep-raising programs would be of interest to men, women or both.

Women's roles in agricultural production were often underplayed. Not much attention was given to the fact that women usually tend to the dairy products. In one village description, the researcher mentioned herding, milking and selling of milk products using the masculine pronoun. Since some of these tasks are typically those of women, we wonder if this description is perhaps of a situation with overlapping tasks, an unusual village, or if the researcher had inadvertently assigned the male role to all these livestock-related activities.

Male and Female Volunteers

Four village descriptions which rated especially high on our scale of gender sensitivity were written by three men and one woman. Of the six villages showing the least gender-related information, three were described by men and three by women. When factored for differences in descriptions of activities or detail about access to, control over, or need for resources, we found no pattern indicating differences dictated by the gender of the researcher.

CONCLUSIONS

Within the Peace Corps survey were vast differences in descriptions, some providing carefully disaggregated information, others not. Stereotypes were apparent in the descriptions. Tasks usually considered women's, such as food preparation, were more specifically described for women. Conversely, farming, commonly considered a male domain from the western perspective, was frequently assigned to males. Although females were very active in farming, their tasks in this area were much less adequately described.

Given the importance of designing technology to fit the needs of the users and of designing extension programs to reach people who need the information, developers are especially concerned to get adequate information on what is done and needed by whom.

We therefore conclude that people designing future survey instruments will find more satisfactory results if they take the following two steps:

1. Design questionnaires or other data collection instruments which require more sexually disaggregated information. Although the ambitious questionnaire used for this study offered a basis for gathering a broad range of information, it left the disaggregation of such data up to the researchers, which, in some cases, led to disappointing results.

2. Give gender sensitivity training to both male and female researchers and field workers.

There are specific reasons to ensure that women are included in research teams. They provide role models. They may be able to access information from women which may be unavailable to men researchers. Studies from Senegal, among other countries, emphasize that women professionals, such as extension workers, experience little difficulty working with male rural residents, while male professionals find themselves unable to have a similarly effective role with rural women residents. However, results of our analysis of this survey indicate that including more women in project work will not by itself solve the problem. Being a woman does not assure that a researcher is gender sensitive nor does being a man indicate an inability to become aware of these issues.

*from Riley (1981).

We thank Paul Jankura and Susan Scull of the Peace Corps, who supplied us with needed information and were most supportive of this analysis.

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LOURDES ALBARILLO is a graduate student in sociology at VPI. She has had extensive experience as a researcher and field worker in development projects in the Philippines, her home country. Albarillo's special interest is women's issues. She has written an article on the role of Philippine rural women on household-level industries, and is currently writing a master's thesis on the socio-cultural factors affecting compliance with treatment for anemia in pregnant Philippine women.

BHAVANI VENKATARAMAN obtained her bachelor's degree in sociology at the University of Delhi, India, and is now completing her master's degree in the same field at VPI. She is particularly interested in the economic and social problems of developing countries, and in the role of women in development.

MARILYN HOSKINS is an anthropologist on the faculty of the Department of Sociology at VPI. Her special interest is in helping communities solve local development problems, especially in relation to management of resources and technology. An interview with Hoskins appeared in the fall 1983 issue of *Women in Forestry*. Hoskins is currently working with the Forestry Department of the Food and Agricultural Organization (FAO) in Rome.

NEWS AND NOTES

EXPENSIVE ASSETS

No matter what you pay for space, people are both your most valuable and your most expensive asset.

Though studies of how the working environment affects office productivity are in their infancy, there is ample evidence that the psychological and physical well-being of workers in the workplace dramatically influences productivity. Skimping on space planning and interior design is a bit like hiring a chauffeur and equipping her with a bicycle.

...Marita Thomas
Inc.

CHANGES IN USFS WORKFORCE

How has the position of women in the Northern Region (of the U.S. Forest Service) changed in recent years? Here are a few statistics--

• 1. Percentage of women in the Northern Region permanent full-time workforce (PFT):

Percent of women in all PFT positions in 1976 was 15% and 30% in 1983.

Percent of women in professional PFT positions in 1976 was 3% and 10.4% in 1983.

Percent of women in administrative PFT positions in 1976 was 25% and 31% in 1983.

Percent of women in technical PFT positions in 1976 was 12% and 22% in 1983.

• 2. Although we have no women yet in line management, a number of women are in staff positions:

Regional office--Staff Director of Wildlife and Fisheries--Civil Rights Staff Assistant to the Regional Forester.

National Forests in Region 1: Administrative Officer, Personnel Officer, Planning Staff Officer.

• 3. More women have entered "nontraditional" positions. For example, our Region had women as smokejumpers for the first time in 1982. There were three women jumpers in 1982; four in 1983; and five this year.

In Region 1, only about 25 percent of the women are in positions at GS-7 and higher. Thus the pay disparity between the average salary of women and men in the Forest Service is roughly 60 percent, similar to the average earnings of women compared to men in the civilian labor force.

...Susan Super
Northern Region Federal Women's
Program Manager

PRAIRIE HABITATS NOT STABLE

A case underscoring wildlife management difficulties is one from the "prairie pothole" region in the Dakotas, northern Montana, Nebraska, Iowa, Minnesota, and southern Canada. This area, with its thousands of small ponds or "potholes" left by the retreating glaciers of the last ice age, is the breeding ground of 7 million ducks, which produce more than 50 percent of America's young waterfowl.

For years, managers of this habitat stressed preservation per se, Harold Duebbert of the Northern Prairie Research Center, U.S. Fish and Wildlife, says. "From studies over the past 15 years, we've learned that prairie habitats are not stable. They are dynamic systems--in their long history, they've been burned, trampled on, regrown." Prairie waterfowl seem to be biologically geared to these changes. "Our studies, for example, show that a tall, dense grass cover planted in a disturbed area attracts two to three times as many hens as native, undisturbed grassland."

...Madeline Jacobs
Smithsonian News Service

THE TAB FOR POLLUTION CONTROL

Government and industry will spend \$526 billion on air- and water-pollution controls between 1981 and 1990, the Environmental Protection Agency estimates in a report to Congress. The spending includes capital investment, annual maintenance, and administrative costs to comply with federal pollution regulations. Of the total, \$192 billion will be spent on sewage treatment plants, more than half of whose cost is paid by the U.S. Industries bearing the heaviest costs for complying with federal standards are electric utilities, petroleum refiners, and chemical makers.

...Business Week

POSITIVE CHANGE

Women held 14.9 percent of the jobs in forestry, farming, and fishing professions in 1980 compared with 9.1 percent in 1970, according to an analysis of census data by the Census Bureau and the Labor Department's Bureau of Labor Statistics

...Journal of Forestry

WATERFOWL PROTECTION OLD POLICY

The first federal wildlife refuge was established on 14 March 1903, when President Theodore

Roosevelt, an ardent conservationist, issued an executive order that set aside a 2½-acre tract in Florida for brown pelicans.

One by one, parcels of land and water were taken out of federal lands, donated or bought to protect waterfowl, waterbirds, and other wildlife. From such modest beginnings, the Interior Department's National Wildlife Refuge system was born.

There are now 418 National Wildlife Refuges, located in Puerto Rico, the Virgin Islands, and every state except West Virginia. Most provide a haven or nesting ground for North America's 43 native species of ducks, geese, and swans--some 80 million birds.

...Madeline Jacobs
Smithsonian News Service

ACID RAIN DEBATE GETS SMOKEY

One interesting theory raised in the acid rain controversy suggests that forest fire prevention might be more to blame than sulphur dioxide for the increasing acidity of lakes. A recent Fortune magazine article by a Hudson Institute scientist suggests that water percolating through acid-producing humus can raise the acidity in lakes. Forest fires destroy that humus and leave a layer of alkaline ash. Smokey Bear isn't going to like the inference.

In other acid rain news, the Alliance For Balanced Environmental Solutions claims that several recent studies show natural stresses and air pollution in general may be more responsible for forest die-back than is acid rain.

...Society of American
Foresters Journal

FUTURES

At present, one out of every three Canadians and one out of every seven U.S. residents depend on the Great Lakes for their water. Together they use up almost 140,000 liters of water a second. However, U.S. consumption is about four times greater than is Canada's. By 2035, this amount could grow to more than one million liters a second--simply because of growing demands by U.S. and Canadian citizens and industries in the Great Lakes region. And this water can only be replaced by nature.

With this level of demand, the levels of Lakes Michigan, Erie and Huron could drop up to 34 centimeters by the year 2035.

...Cathy Erdle
Landmarks

NEWS AND NOTES

ARCHEOLOGISTS UNEARTHING CUSTER BATTLE SECRETS

Volunteers and archeologists representing the National Park Service are conducting the first archeologic survey in the 108 years since the Battle of the Little Bighorn at Custer Battlefield National Monument in Southcentral Montana.

Jim Court, superintendent of the National Park Service area, says "The euphoria is contagious. No one wants to go home, and people who volunteered to work for a week or so are calling home and asking 'Is it all right if I stay another couple of weeks?'"

Each day, from sunrise to sundown, teams with metal detectors are sweeping portions of the rolling battlefield, slowly working their way in line abreast and placing red, yellow, green, and blue surveyor flags where their electronic equipment detects an object. Where there was heavy firing as indicated by cartridges from .45-.70 caliber Springfield carbines and .45 Colt revolvers, scores of the little flags festoon the landscape.

A concentration of flags along one ragged line hints of a skirmish line where the troopers sought to turn back pursuing Sioux and Cheyenne.

The survey was made possible last year when a grass fire swept over portions of the battlefield, burning away covering vegetation and exposing what appear to be burial mounds. These mounds will be examined later in the survey.

The battlefield was recorded in 100-meter-square grids in preparation for the survey, which is led by Dr. Doug Scott of the National Park Service's Midwest Archeologic Center at Lincoln, Nebraska, with assistance from Melissa Conner, also of the Lincoln Center, and from Rich Fox, Jr. of the University of Calgary (Alberta). Fox is a native of nearby Hardin, Mont.

"All of the materials will be transferred to the Midwest Archeologic Center at Lincoln, Court explained. "They will be examined at length there, and once our archeologists have learned all they can, the artifacts will be returned here."

...Headquarters Heliogram

POLICY PUZZLES

Planning and management concerning many natural resources are handicapped by exceedingly crude concepts and measures of output. For example, in the case of outdoor recreation, acres of land too frequently are confused with the supply of recreational opportunities; acres and access are not the same thing. Similarly, agricultural capacity often is expressed in terms of the amount of cropland available, but how hungry we would be if acres of land had been the determining factor in past agricultural production! Thus, the puzzle: how can we develop a more rational and acceptable concept of supply when we talk about the services of many natural resources?

...Emeray N. Castle
Renewable Resources Journal

BLM PROVIDES STATISTICS

The myriad of goods and services provided by Bureau of Land Management from the 16 million acres the agency manages in Oregon and Washington range from \$1 worth of fence stays through \$92 million of timber harvested from 212 million acres of commercial forest land, and nearly 4 million recreational visits.

Payments to the state and its counties in Oregon during the year were \$47.8 million from timber sale receipts, \$2.9 million for mineral leasing, \$36,975 for grazing leases, and \$2.6 million for payments in lieu of taxes for a total of \$53 million.

In Washington, the payments were \$21,153 for grazing leases, \$1.4 million for payments in lieu of taxes, and \$728,541 from mineral leasing for a total of \$2.5 million. BLM manages 14,716,465 acres in Oregon and 315,110 acres in Washington, employing 1,534 in the two states.

...BLM News



NEWS AND NOTES

NEWS FROM THE SOCIETY FOR THE PROTECTION OF NEW HAMPSHIRE FORESTS (SPNF)

The last year saw Society members focusing on two major legislative actions in Congress.

The New Hampshire Wilderness bill, based on the work done by the ad hoc White Mountain National Forest Advisory Committee, passed the Congress and was signed into law early this summer. Society President Paul Bofinger, who chaired the Advisory Committee, was in large part responsible for crafting a compromise among the various interests represented on the committee, paving the way for the designation of 77,000 acres of additional wilderness in the White Mountain National Forest.

Intensive efforts by Society staff and other members were required to counteract enormous pressure from two directions--in the House to add more wilderness and in the Senate to prevent consideration of wilderness in the future.

"Acid Rain '84: A Citizens' Conference to Stop Acid Rain" was another major effort launched by the New Hampshire Citizens Task Force on Acid Rain and Friends of the Earth Foundation to elevate acid rain to a national issue, to expand public awareness of the solutions to the problem, and to continue to generate public support for action to stop acid rain. The Conservation Center served as headquarters for the conference staff, and the Society for the Protection of New Hampshire Forests staff helped develop the conference program and coordinate conference activities. The conference attracted over 700 participants from 27 states and Canada, as well as six presidential candidates.

...Action 84

SELF-GENERATED ENERGY

The nation's paper industry continues its lead among all U.S. industries in self-generated energy, producing 54.5 percent of its own total energy requirements in 1983. Its increased use of spent pulping liquors, hogged wood, and bark, represented a fuel savings of approximately 187 million barrels of oil equivalent--or about 41 days of current U.S. oil imports.

...Forest Industry Newsline

LIVING FENCES

In 1975, Nebraska officials established demonstration studies to see just how feasible evergreen plantings could be in controlling drifting and blowing snow. Planting was done along selected stretches of county roads where snow is a common problem. During a severe blizzard in December 1981, highway personnel found that a seven-year-old living snow fence was more efficient than slat fences in providing protection. In an area where both types of fences existed, it was necessary to plow roads behind slat fencing, while the living fences kept the road clear.

Another major benefit is cost. In Nebraska, experience shows that slatted wooden snow fences cost about \$6,400 per mile to build and maintain. Nearly \$2,000 of this cost is repeated annually in labor and equipment to erect and dismantle slat fences, which have an average life of 5-7 years.

Cost per mile to install and maintain living fences is about \$2,700. A conservative estimate is that living snow fences last more than 50 years.

Living snow fences also enhance wildlife habitat by providing nesting, roosting, and feeding areas. In addition, snow fences can be designed for livestock protection, especially during calving time. Finally, most will agree that trees and shrubs are more aesthetically pleasing than rows of wood slat fences.

The cooperative approach to establishing snow barriers along prairie highways has spread from Nebraska to Colorado and Wyoming; officials of North Dakota, Montana, South Dakota, and Kansas have also requested information about the living snow fence program.

...Adra McPherson
Forestry Research West

YOUTH CAMP

The 111 Washington and Idaho teen-agers at Camp N-Sid-Sen on Lake Coeur d'Alene, Idaho, north of Harrison, took water samples, tested soil types, marked forest cuts, and learned how to put all together to come up with ecologically-sound land use plans.

The annual week-long Inland Empire Natural Resources Youth Camp, celebrating its 25th anniversary this year, is designed to teach young people how to see the "big picture" when it comes to natural resource use, explained program director Darren Lemons.

Volunteer professionals provide lessons in eight disciplines -- forestry, range management, soils, water resources, conservation planning, recreation, cultural resources, and wildlife. Most are from the camp's sponsors -- the Cooperative Extension Services of Washington State University and the University of Idaho, the Society of American Foresters, Soil Conservation Society of America, and the Society of Range Management.

"The bottom line," said Department of Energy volunteer Susan Lowman, "is that we don't want to stop farming or logging or mining or development, since we have to have those things, but we can minimize their impacts on natural resources."

...Madonna King
Spokesman-Review



NATIONAL FOREST PRODUCTS WEEK
October 21-27, 1984

NATIONAL FOREST PRODUCTS WEEK
October 21-27, 1984

The forest products industry once again will lead the nation in observing National Forest Products Week, October 21-27. The week offers an opportunity to draw attention to the benefits of wood and paper in people's lives, to underline the importance of a more productive forest and healthy industry to our nation's economy, and to build more support for public policies that favor expanded U.S. markets and increased exports of wood and paper products.

...American Forest Institute

NEWS AND NOTES

RESOURCE MANAGERS STUMPED BY TREES

A Culturally Modified Tree (CMT) is a heritage resource when it displays evidence of Aboriginal Forest Utilization (AFU). The tree might bear a visible scar where a slab of bark has been stripped off, or where the wood has been chopped. Logging activities are represented by stumps and the remaining portions of felled logs. On the coast, most of these "cultural trees" are western redcedars.

CMT's (or AFU's if you prefer) are not a new discovery by British Columbia archaeologists, nor, as some resource managers suspect, an invention designed to complicate their job. And yet they are new to most archaeologists in the province, and they are creating complications in Victoria.

Over the past few years archaeologists surveying in outlying forested areas of the province have been finding and recording numerous examples of aboriginal forest utilization. The Heritage Conservation Branch (HCB) has been hard pressed to deal with the volume of information, and researchers are requesting that recording guidelines be established so that data, within and between regions, will be comparable.

In December 1983, the Heritage Conservation Branch held a meeting in Vancouver to discuss the "CMT Problem." The nine invited participants included most of the archaeologists who had been recording modified trees. Following that discussion, the HCB decided to eliminate all modified tree sites from their site inventory. Existing data, as well as newly recorded information, will be kept in a paper file, but will not be entered into the computer data base.

At the same time the Branch contracted a \$14,000 research-oriented study of some 100 AFU tree features on the Queen Charlotte Islands. Preliminary results of the field work indicate that the features represent stages of dugout canoe manufacture during the early historic period.

Another CMT study is currently up for bids. MacMillan Bloedel, which is making plans for logging Meares Island, near Tofino, will be contracting a probabilistic sampling study of the distribution of aboriginal forest utilization features on the island. There are presently 73 recorded CMT sites on Meares, representing over 1,000 separate modifications. The majority of the sample are cedars with scars from the removal of strips or slabs of bark.

...Kathryn Bernick
The Midden

THE ROLE OF ANTHROPOLOGY IN THE NATIONAL PARK SERVICE

Today, establishment legislation and presidential proclamation charge the National Park Service with the management and interpretation of cultural resources within parks and monuments, specifically those with nationally significant heritage values associated with Native Americans. Moreover, the management of our cultural or natural parks is directly associated with what Native American tribes do with their lands (either adjacent to or in the parks) or with their legal rights to use lands administered by the Park Service. Examples abound in many units of the system where lands have been used traditionally for centuries, and where these uses continue to this day.

Because of this nexus of heritage values, physical resources left by ancient cultures, and current needs of Native peoples who now find their secret and traditional places on lands we administer, the Park Service seeks to manage these resources, and relies not only on the expertise of the archeologist but also on the cultural anthropologist. And it uses them at all levels of the management decision making process.

...Douglas H. Scoville
CRM Bulletin

ENFORCEMENT OF THE ARCHAEOLOGICAL RESOURCE PROTECTION ACT

Lynell Schalk, Special Agent for the Bureau of Land Management at the Portland office, spoke at Washington State University on 19 January 1984. Agent Schalk's talk concerned her involvement with archaeological resource protection. She raised several issues related to enforcement of the Archaeological Resource Protection Act (ARPA) of 1979 and the new regulations.

Agent Schalk presented background information on 29 cases nationwide that have stemmed from violations of the Act since its passage. In the majority of these cases the defendants have been found guilty. She also reviewed two recent trial cases in U.S. District Court in Oregon, one of which led to a conviction of destruction of government property. (note: This defendant recently was sentenced to 30 days in jail, given three years probation, and ordered to stay off the Malheur National Wildlife Refuge for three years.) A second defendant in this case had earlier pled guilty to one count under the ARPA.

Another area of discussion concerned the involvement of professional archaeologists when cases of "pothunting" come up for trial. Archaeologists are especially important in promptly reporting archaeological violations to law enforcement authorities, responding immediately when requested to assess damage at disturbed sites, and as expert witnesses at trial.

While Agent Schalk's primary responsibility lies with enforcement of the criminal laws, her major point is that there is a great need for archaeologists and law enforcement to work together in providing public education.

...Washington Archaeological
Research Center
The Thunderbird



NEWS AND NOTES

TRENDS IN THE ROLE OF WOMEN IN THE AMERICAN FISHERIES SOCIETY

Five of the first women to join the American Fisheries Society (AFS) between 1905 and 1912 were wives of members. Two women employed by the U.S. Bureau of Fisheries, and a third probably employed, joined between 1908 and 1910 but remained members for only 1 to 4 years. Dr. Emmeline Moore, the next to join in 1918, published 10 papers in the *TRANSACTIONS OF THE AMERICAN FISHERIES SOCIETY* from 1922 to 1934 and held many positions in the Society. She was the President of AFS in 1927 and 1928 and remained a member until her death in 1963. She was a pioneer in the development of lake and stream surveys and trained many fishery biologists. Several women joined the Society from 1925 to 1935, but none joined between 1935 and 1950, and, during most of this period, Emmeline Moore and Luella Cable were the only women members. From 1926 to 1935 more women published in the *TRANSACTIONS* than in any other period.

In 1950 J. Frances Allen of the Department of Zoology, University of Maryland, Helen I. Battle of the Department of Zoology, University of Western Ontario, and M. Beatrice Gibson of the Ontario Department of Lands and Forests joined AFS.

There were 12 women members, about 1.6% of the total membership, in 1934; 2 or 0.2% in 1949; and by 1964 there were 13, or about 0.58%. Summerfelt (1982) estimated that there was a 25-fold increase in women members in AFS from 1966 to 1981. Moffitt (1982) surveyed 488 Society members with feminine-sounding names: 55% of those surveyed responded, yielding 232 women members. If the other 45% included similar proportions of females and males with possibly feminine names, there were 422 women members, or about 5% of the total membership in 1982.

The increase in numbers of women in the American Fisheries Society is part of a more general phenomenon. Using figures from the National Center for Educational Statistics, Summerfelt (1982), showed that the number of women receiving degrees in Fish and Wildlife Management increased between the years 1964-65 and 1977-78 from 5 to 313 at the bachelor's level, 1 to 57 at the master's level, and 0 to 2 at the doctoral level, and the percentage of such degrees that were earned by women increased from 0.6 to 20.0, 1.4 to 15.7, and 0 to 3.0.

...Kenneth D. Carlander
Fisheries

ASSISTANCE TO SRI LANKA

The Forest Products Laboratory (FP), in Madison, Wisconsin has recently finalized an agreement to offer technical assistance in design, construction, and start-up of a commercial size solar dry kiln in Sri Lanka. The agreement is with the Borwood Ltd., a subsidiary of the Industrial Development Board of Ceylon, of Colombo, Sri Lanka. The United National Industrial Development Organization is funding the project.

"In 1981, we designed and built a small experimental prototype at Borwood in a U.S. Agency for International Development project," explains William Simpson, project leader. "We can now proceed to the 6,000 board foot capacity needed to meet Borwood's full production needs and couple a wood residue burner to supplement the solar energy to provide for 24-hour-a-day drying regardless of weather."

Borwood, Ltd. is a nationalized company that produces furniture from rubber wood and coconut wood and will manufacture trussed rafters and glued-laminated beams from these woods. Both furniture and the structural products require kiln drying to perform satisfactorily. The solar/wood energy kiln will be used for kiln drying from green moisture content and, on some occasions, as a final drying step after preliminary air drying.

...Jane Charlton Suleski

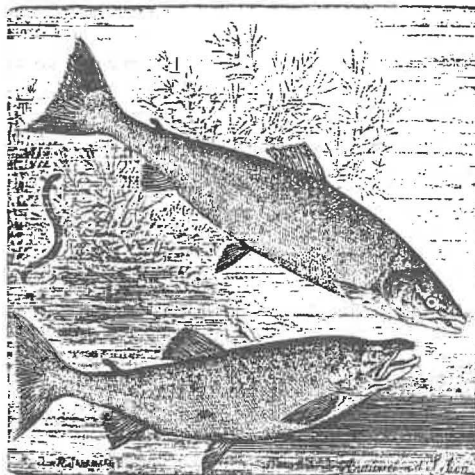
IS SMOKEY BEAR AT FAULT?

Proposed changes in regulations would authorize forest rangers to set deliberate fires in federally protected wilderness areas to eliminate unnatural accumulations of fuel.

"Our aggressive fire-suppression policy has interrupted nature's own fire-prevention plans," said Robert Mutch, an ecologist at the Forest Service's Fire Laboratory in Missoula, Montana. As an example, ponderosa pine bark tends to peel away like tile as fire sweeps by, so that the tree "sheds" the heat and flame without suffering damage.

"Now for the past half-century or so we've had the Smokey Bear ethic, and it may be we've succeeded in raising the overall flammability of the forest to the point where not even the ponderosa can survive when we do have a fire."

...T. R. Reid
Washington Post



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WOMEN IN SCIENCE

The Philippines does not leap to mind as the nation with the highest proportion of female scientists. But according to Ruth Useem, a sociologist at Michigan State University, 40 percent of the Philippines' research scientists are women.

Useem, who spent seven years in the Philippines studying the status of women, reported her findings at the recent meeting of the American Association for the Advancement of Science. The situation is quite different in the United States, where only 13 percent of Ph.D. scientists and engineers are women.

...Psychology Today

NEWS AND NOTES

SAGEBRUSH-GRASS RANGE: A MULTIPLE USE RESOURCE

Sagebrush - grass vegetation occupies a substantial part of the western range, extending over much of Utah, Nevada, southern Idaho, and eastern Oregon. Estimates of acreage vary from some 95 million acres to 270 million acres. Even if the lower estimate is accepted as reasonably accurate, sagebrush-grass vegetation is one of the largest range ecosystems in the western United States.

Because of their size, accessibility, and potential productivity, sagebrush-grass ranges are an important resource for production of livestock and wildlife, watershed values, and many recreational activities. Unfortunately, much of this valuable land was depleted during the early years of western settlement by abusive grazing, unregulated and recurrent fires, and cultivation and abandonment of marginal lands. Sagebrush ecosystem is still far below its potential in livestock forage, wildlife habitat, and environmental quality.

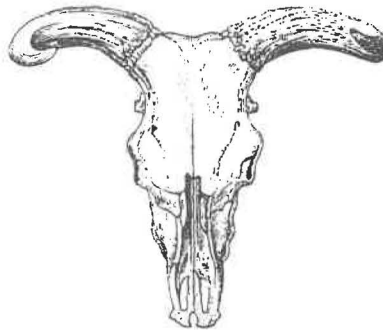
Recent research has shown that the ecology of sagebrush ecosystems is more varied and complex than once thought. The habitat type concept enables researchers and range managers to identify areas that have the greatest potential for productivity.

According to the scientists, four conditions can be readily recognized: (1) sagebrush with a good understory of perennial grasses and forbs; (2) sagebrush with a sparse understory of perennial grasses; (3) sagebrush with an understory of annual grasses and weeds; and (4) ranges with sagebrush replaced by cheatgrass or other annuals. For each of these four categories, there are indicators that managers should monitor over a series of years for definite confirmation.

Management objectives for sagebrush-grass ranges may be described in a number of ways; wise multiple use, maintenance or improvement of vegetation and soil, or perhaps optimum sustained-yield of livestock and wildlife consistent with other uses and values. Although stable soil is always a prerequisite to satisfactory condition, vegetation is more easily observed and measured. Despite great diversity in the various habitat types of sagebrush-grass range, the situation today is too much sagebrush and other low-value shrubs, too many annuals, and not enough perennial grasses and forbs.

Although the primary use of sagebrush-grass range has been grazing by domestic livestock, more recognition has been given in recent years to its use as wildlife habitat, as watershed for the production of quality water, as wildland with many recreation opportunities, and as a resource available for supplying unforeseeable needs.

...Delpha Noble
Forestry Research West



VESTED INTERESTS

Ranchers, once ardent Sagebrush Rebels, have grown concerned that competitive sales of grazing lands might place them in competition with better-funded oil companies and urban cowboys. By contrast, their below-market federal grazing fees and routinely renewable permits to use the land look attractive. Miners like their free access to hardrock minerals and the comparatively open-handed approach to leasing of other minerals. They are content to hang onto that while badgering the government to limit wilderness and other withdrawals of land. Some forest industry firms would welcome a chance to buy timberlands, but others depend on the right to bid for federal stumpage--a standoff. Most recreational use is free, or at nominal charge, and users are not anxious to see changes. State and local governments already receive most of the revenues generated on federal lands while providing only minimal services to them. In the absence of any clamor from their citizens, they are in no rush to claim responsibility, except on a selective basis.

Those who lose under the present arrangement are the nonusers--mainly eastern taxpayers who subsidize western commodity producers and recreationists. However, most easterners are neither vitally interested nor widely informed.

Meanwhile, serious-minded complaints about federal management abound. Both the forest and grazing lands operate at large deficits, even though no capital charge is made for the land. Most national forests outside the Pacific Northwest are not commercially viable for sustained timber production. Analysts have figured that managing the surface estate of grazing lands costs about four to five times the revenues generated by that use. Are these discrepancies matched by the value of nonmarketed goods produced on the land? No one ever has established that to be the case. In fact, it seems implausible for much of the land, which is without any special distinction.

Some who are committed to federal ownership plead that management deficiencies can be corrected. One suggestion has been to inject more economic analysis into the planning process and to seek to produce a result similar to that which would be attained were markets able to operate. But the cost of planning, in the case of Bureau of Land Management (BLM) land, has become grossly disproportionate to the value of the resource and USDA Forest Service planning also has been severely criticized as unwieldy, even by its one-time supporters. Although nearly all economists agree that a nondeclining, even flow of timber from national forests makes no economic sense, the USDA Forest Service persists in its adherence to the concept. And lightly timbered forests in the Rockies that have low potential for sustained output nonetheless are managed as if they were productive for wood. Thus, many serious analysts are not sanguine that managerial improvements can succeed. Indeed, they find the problems endemic in the very nature of public bureaucracies.

...Sterling Brubaker
Renewable Resources Journal

NEWS AND NOTES

CURING FEMININITY

Several hypotheses have been put forth to explain why women are more frequently diagnosed as mentally ill. It has been suggested that women are more willing than men to express symptoms, so that they are more often diagnosed. Alternatively, it has been suggested that there is indeed more mental illness among women--that because of their underprivileged position in society women are at greater risk for emotional disturbance. But the most convincing hypothesis, according to Rutgers University psychologist Marcie Kaplan, is that women are diagnosed as mentally ill both for overconforming and for underconforming to female stereotypes.

According to several studies of therapists' attitudes, Kaplan noted that most therapists have the same criteria for healthy men and for healthy adults, but they tend to use different criteria in defining healthy women; the typical psychologically healthy woman is more submissive, less aggressive, more emotional and more emotionally expressive, and more excitable and more concerned about appearance. If a woman rejects this stereotype, she is an unhealthy woman; if she conforms to it, she is an unhealthy adult, as defined in several parts of the Diagnostic and Statistical Manual. But the manual ignores the dependency of people--usually men, Kaplan argues--who rely on others to maintain their houses and raise their children, or of those people--again usually men--who remarry only to replace the original caretaker. "In short," Kaplan concludes, "men's dependency, like women's dependency, exists and is supported and sanctioned by society; but men's dependency is not labeled as such, and men's dependency is not considered sick, whereas women's dependency is."

....Wray Herbert
Science News

NEW EDITOR AT FOREST HISTORY SOCIETY

Alice Ingerson has been appointed managing editor of the Journal of Forest History, which has been edited by Ronald J. Fahl since 1976. The appointment will be effective 1 September 1984 at the Forest History Society now relocated to Durham, North Carolina, where it is affiliated with Duke University.

Ingerson received a Ph.D. in Anthropology from Johns Hopkins University. She has a broad background in editing and publication.

CAREER DEVELOPMENT STUDY COMPLETED

Jim Kennedy and Joseph Mincolla (Natural Resources Utah State Univ.) have completed a career development study on foresters, range conservationists, and wildlife biologists; half the sample were women. While little difference was noted between men and women by their supervisors in half the categories surveyed, in other categories about half the supervisors saw the women as having less career dedication than their male counterparts.

....SIROW Newsletter



UNFAIR, IRRELEVANT, ILLEGAL, AND CRUEL

Maureen Shaw, an M.D. and biophysicist, sits on the admission committee of the medical school where she teaches. The men on this committee always asked of a woman applicant, "Why should we give you this precious space when everyone knows you are going to take ten years off to raise children?" Shaw says: "I told them, just two years ago, they had to stop asking this question. That it was unfair, irrelevant, illegal, and cruel. But they would not stop. Finally, I told them if they did not stop asking this question of women applicants, I was going to start asking male applicants why they should be considered when everyone knows they are going to die ten years earlier."

...Women in Science
by Vivian Gornick

LET'S HEAR IT FOR TEXAS AND LOUISIANA

The Louisiana Office of Forestry's Conifer Lodge in Woodworth, Louisiana, was the setting of an assembly of women foresters from Texas and Louisiana on 21 and 22 July 1984. This was the first known organized gathering of its kind in the area. The agenda was purposely left unstructured to give attendees a chance to get to know each other prior to group discussions. Topics ranged from humorous to serious, including how to answer that age-old question - How did you get into forestry?, and the difficulties of handling a two-career marriage.

Of the 16 women who came, 15 were employed and eight were married (all to foresters!). Seven forest products companies, two state forestry agencies, the Louisiana Forestry Association, and the U.S. Forest Service were represented.

The meeting was a success and we hope it will be repeated in 1985. Students and women from other neighboring states are welcome to attend. To get on the mailing list, contact Melanie Blanchard, P.O. Box 5624, Alexandria, Louisiana 71301.

....Sharon E. Mohney
U.S. Forest Service



Left to right, top: Tammy Crafton, Sue Dructor, Carla Brignat, Joann Meyer, Melanie Blanchard; middle row, Diane Cotter, Tina Meiners McCay, Dorothy Miller, Nancy Young, Holly Riner, Pam Casey; bottom row Patricia Bounds, Neslihan Bilir, Elizabeth Van Tilbourg, Roberta Boitnott, and Sharon Mohney.

WOMEN ON THE OVERLAND TRAILS

--A HISTORICAL PERSPECTIVE--

Sharon A. Brown
Denver Service Center-Northeast Team
National Park Service
755 Parfet Street
Lakewood, Colorado 80225

Historian Frederick Jackson Turner's western frontier was filled with men, and men only. He concluded that the conquest of open land left Americans with a legacy of activism, individualism, progressivism, and democracy. But his conclusions were incomplete because he did not consider the traits of half the American people. Recent historical scholarship has discovered that the western experience was different for women than it was for men. The Overland Trail passage, which remains an enduring symbol of western expansion, can thus be examined for both its effect on women and women's responses to its challenges, hardships, and rewards.

Instead of a historical analysis, what we have inherited are literary stereotypical views of western women. The "prairie madonna," "gentle tamer," and "brave pioneer mother" are strong images, but what is their relationship to historical fact? The women characters in historical fiction strove for nineteenth century ideals of female behavior. Historians are discovering that historical women did too.

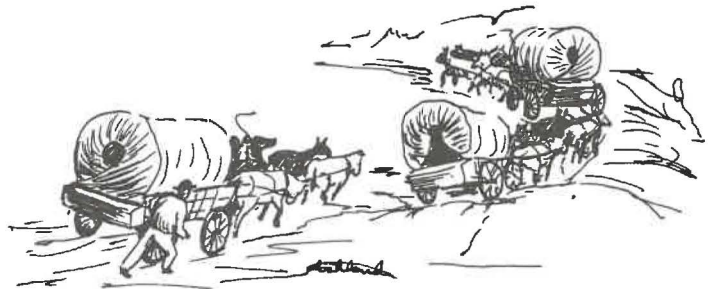
Four historians have recently used women's primary source writings to shed light on the consistencies and inconsistencies between literary myth and factual history.** Julie Roy Jeffrey's *FRONTIER WOMEN: THE TRANS-MISSISSIPPI WEST 1840-1880*, John Mack Faragher's *WOMEN AND MEN ON THE OVERLAND TRAIL*, both published in 1979, Lillian Schlissel's *WOMEN'S DIARIES OF THE WESTWARD JOURNEY*, and Sandra L. Myres' *WESTERING WOMEN AND THE FRONTIER EXPERIENCE 1800-1915*, both published in 1982, all use nineteenth-century women's diaries, journals, reminiscences and letters as source material. They analyze women's impact on the West and vice versa.

The Overland Trail passage was, for many, the first step taken in the western experience, and it was made for economic reasons. Historians disagree on how the decision to go was initially made. John Mack Faragher's study, based on 169 narratives, revealed that "Not one wife initiated the idea; it was always the husband. Less than a quarter of the women writers recorded agreeing with their husbands; most of them accepted it as a husband-made decision to which they could only acquiesce." Faragher added, "Denied the chance to participate in the decision to move, essentially because of the patriarchal bias of marital decision making, failing to accept as their own their husbands' reasons for undertaking the move, women went not because they wanted to but because social expectations left them no choice."

Historian Carl Degler, in his introduction to the Schlissel text, stated that we do not know how many wives absolutely refused to go and thereby prevented their husbands from going also, but few of the women who went did so with enthusiasm. "For, in the end, the sharpest difference between men and women on the trail was that the great majority of the women did not want

to make the trip in the first place. No clearer measure of the power of nineteenth-century patriarchy need be sought."

Julie Roy Jeffrey disagreed with these interpretations. Her examination of 200 sources revealed that men were expected to make decisions, and that the decision to move west did take some wives by surprise. Yet, Jeffrey argued, "this did not mean that women were passive spectators. Their style was to respond, to influence, even to argue." Some women acquiesced, surely, but not all were reluctant emigrants. Few of Jeffrey's women writers discuss the pre-trip arrangements but those that do show a range of responses. In Jeffrey's view, this "suggests the need to avoid characterizing all women as reluctant emigrants." Some women embraced the romance and adventure of it all while others' love for their husbands dictated that they follow. "What evidence there is on women's motivation and involvement in planning the trip west . . . warns against describing women as passive victims of men's choices rather than as active participants in the process of emigration."



Sandra Myres' analysis, based on her survey of 159 women's diaries and reminiscences, agreed with Jeffrey. "Far too often women have been pictured as reluctant immigrants, trudging mournfully after the wagons, constantly turning around to gaze homeward." Many feared going and dreaded leaving civilization, but many were enthusiastic. Eighteen percent of the 159 women Myres studied opposed the trip, while 32 percent were strongly in favor. In her view, "there is little evidence that women were coerced by their men into undertaking the journey."

Once the decision was made, the farm sold, and wagon packed, it was time to start the journey. Where previously the transcontinental trail traffic was mostly male, the 1840s farm-family emigration changed the general composition of the emigrants. Up until 1849, women constituted 15 to 20 percent of the travelers. Very few women traveled outside families; indeed there is only one diary existing of a woman who traveled without husband or family. The overwhelming majority of women on the trail were married. The gold

rush changed the character of the migration, for tens of thousands of single men headed west in the 1850s. But the number of farm families was, according to Faragher, "probably not significantly lower than in previous years"; they continued moving throughout the gold rush years.

On the trail the work roles adhered strictly to traditional sexual division. Women cooked, washed, and cared for the children. Men took charge of the wagons and stock, chose routes and campgrounds, and were responsible for the train's safety. The emigrant guidebooks offered advice and hints to the men, but provided none for women. Women either learned for themselves or learned from other women.

Only a few women had previous trail experience. Their tasks were familiar domestic chores, but changed and made more difficult by the trail conditions. Women had to gather buffalo chips and learn to cook with them. Cooking over an open fire was a new experience for many women, and they prepared all their food on the ground. The rose in the mornings at 4 a.m., an hour or half hour before the men, built a fire, boiled water, milked the cow and fixed breakfasts of coffee, bacon, beans, and bread. Lunch was cold, usually fixed the night before. In the evenings the women carried water, cooked dinner, did dishes, made beds, cleaned wagons, aired provisions, and mended clothing. The women washed on stop-over days when possible.



Another task was child care. Older children fended for themselves, but they sometimes lagged behind or got lost. Younger children needed constant watching to prevent accidents. They all suffered from illness or were frightened, crying, or fretful during the trip. Mothers carried the ultimate responsibility and greatly feared a child's death. Jeffrey stated, "Part of women's exhaustion was psychological."

At the beginning of the trip, both sexes attempted to maintain the division of labor based on separate "sexual spheres." They worked to preserve their domestic environment while moving. Women acquired their status through homemaking, and homemaking occupied their time on the trail. However, as the miles went by and civilization was left behind, women could not keep their domestic world intact. They continued to be responsible for their defined chores of cooking, washing and child care, but trail conditions demanded women be available to pitch in when needed. Social and sexual mores changed and feminine restraint was temporarily abandoned. Distinctions blurred between feminine and masculine work.

Men occasionally cooked, helped with washing, packed and unpacked bedding; more often, however, women drove and yoked oxen, scouted the trail and found campsites. Women were expected to pitch in during emergencies and many took regular turns at driving the wagons. A full third of the women diarists in Faragher's study mention their driving. Women who were widowed on the trail were expected to take charge and continue with their children. Many of the women enjoyed the extra work. They relished the newfound freedom and

happily performed all the necessary tasks. Others, however, resented the added responsibility.

John Mack Faragher viewed women's trail work as being structured around the men's. Women tended to their families when the train stopped for the day. When the men went off duty the women's work continued. Even while on the move, women were not relaxing. They were either working to gather fuel, or on call to lend help when needed. Women's work was a rhythm of long hours on call with shorter periods of intense activity.

Just what chores the women performed during the day is not clear. Faragher states the diaries are "fuzzy and indistinct" about the matter. Men were supposed to talk and lead the oxen while women enjoyed the privilege of riding in the wagon. During the first weeks of travel this ideal was maintained. "This distinction between riding and walking was so basic that it came close to a role-defining division between the sexes." But most women walked and many walked most of the time, just to lighten the wagon load. When women walked they gathered fuel; when they rode they mended or knitted. "The difference remained that women could ride when they tired of the walk, while men could not." Sandra Myres stated that women had little to do during the day in terms of physical labor, so they had time to visit with other women, sew, write letters, and gather flowers.

The historians agreed that even with the dislocations in social behavior and the expansion of women's work roles, the women were essentially conservative and "few abandoned their conception of women's nature or ceased to value 'female culture.'" According to Jeffrey, some women welcomed the expansion of their role, but "few speculated on the significance of their actions or capitalized on their increased importance within the family . . . most women found the trip neither exhilarating nor liberating . . . Women hoped not to expand their domestic sphere but to recapture it." Even when women rebelled in specific instances against masculine decisions or leadership, there was never "any clear rethinking of the female role or of the relations between the sexes." The months of the trail offered women the chance to challenge stereotypes of expected female behavior or to question sexual ideology. "Yet, few women did so; most did not find it easy to throw off accustomed ways of thinking even when forced into new ways of behavior." In the trail experience, women found comfort and personal reinforcement in their female sphere and they were reluctant to change it. Carl Deglar stated the women "clung almost possessively to their traditional roles."

The reasons for this response need explanation. Nineteenth-century women lived by a code of social behavior. The "cult of true womanhood" dictated that women be responsible for cultural and social values. Women devoted themselves to others to maintain social stability within the home and therefore within society. Women espoused moral truths, and their submissiveness actually marked their moral responsibility. This ideology was the ideal of individual women's lives, and the trip west threatened to disrupt it.

Frontier conditions forced women to do male tasks and to modify their standards. A broader definition of women's place threatened women's claim to moral superiority. But if women could use their domesticity to preserve culture and maintain social values by serving their families, they could create a new western society. According to Jeffrey, "Rather than being guardians of culture and morality, women might become creators."

An example of women's attempts to maintain an ordered world on the trail can be seen in the division between men and women over observing the Sabbath. The

question of observing the Sabbath or not divided trains; to an even greater extent it divided men and women. Having Sunday as a rest day offered women their lone day for recreation, and honoring the day meant women's religious propriety was upheld. But the weekly stopover became too costly timewise. Faragher stated that "it is a measure of the weak social position of women that in this instance, despite institutional and (as it were) divine support for their position, they usually lost out to male practicality."

For men, the trip only extended the social lives they enjoyed at home. They organized the trains, enjoyed social hunting forays, and participated in male camaraderie after the day's work was done. The visible social camp life was masculine, for men gathered for cards, storytelling, races, and even fighting. "Women were nearly always back at the family fire or perhaps visiting another woman at hers." The emigration disrupted women's social and cultural lives. They were unable to keep close attachments with other women because of the frequent changes in the composition of the trains. Men found it relatively easy to adapt to the trail social life; women found the superficial relations formed there inadequate. Women were living in a male-constructed enterprise and their anguish was loud and deep over the need for same-sex social interaction. They needed their feminine world for stability.

**MEN FOUND IT RELATIVELY EASY
TO ADAPT TO THE TRAIL SOCIAL LIFE.
WOMEN FOUND THE SUPERFICIAL RELATIONS
FORMED THERE INADEQUATE.**

The trip west offered men the chance to break away at a time in their lives when they were physically able to pursue their dreams. The trip was a chance to better themselves; it was a time of testing. However, as Lillian Schlissel points out, the trip could not have occurred at a worse time in women's lives. Almost every married woman traveled with small children. One of every five women on the trail was pregnant. Women sometimes bore children without help, adequate care, or medical advice. Schlissel stated "neither pregnancy nor the care of very young infants were judged by emigrant families as sufficient cause to defer travel." Women's relationships with women were important for aiding with childbirth and illness. Women were determined to keep their social worlds and their families intact, despite dislocation or disaster.

The historical portrait emerging of overland women has managed to surprise at least one historian. Julie Roy Jeffrey hoped to find pioneer women using the frontier experience as a means of liberation from the stereotypes and behaviors that she personally found constricting and sexist. She discovered that women did not liberate themselves and she found why they did not. Jeffrey wrote, "I now have great sympathy for the choices these women made and admiration for their strength and courage." Domesticity neatly defined women's place and it helped them re-establish their sense of identity and self-respect once the temporary dislocation was over. "It served as a link with the past."

In Lillian Schlissel's view, women left their homes to make the journey with their men and children, and they kept their families together. "Their legacy to history was the survival of the family on the westward journey."

John Mack Faragher viewed the portrait more starkly. The trip west was a test of women's inner strength. They did more than their share; they were

comforting wives and attentive mothers. "They did all this because of, not in spite of, their not wanting to leave home in the first place." Faragher viewed women's social dependency as the result of systematic oppression. Their induction onto the trail was that of self-denial, of active passivity and endurance. "The move West called upon people not to change but to transfer old sexual roles to a new but altogether familiar environment."

Sandra Myres attempted to destroy the old myths about western women, but she warned about creating new ones. She disagreed with picturing the women as exploited drudges deprived of western liberating virtues. She also warned against blaming women's continual hard work for their failure to return to familiar social roles or for their failure to create new ones. In Myres' view there is no evidence that the trail was harder on women than it was on men. Both endured physical and emotional stress. The trail experience demanded great adaptability, and trail life taught women to handle new conditions and new problems.

It is still being debated whether the frontier offered liberating experiences and economic opportunities as well as social and political opportunities. According to Myres, there is evidence that it did not. While some interpretations say women did not take advantage of the frontier experience to liberate themselves from stereotypic responses, there is enough evidence to support the view that frontier women adopted flexible attitudes and experimented with changing behavior patterns. Some women accepted the changes enthusiastically; others resisted them. Myres concluded "What has perhaps confused the various interpretations of woman's place and the westering experience is that the reality of women's lives changed dramatically as a result of adaptation to frontier conditions while the public image remained relatively static. Image, myth, and stereotype were contrary to what women were actually experiencing and doing."

How correct is this interpretation? Are the myths, images and stereotypes contrary to women's experiences or are they actually extensions of the reality? The recent historical perspectives of women on the Overland Trail have shown that women attempted to perpetuate the stereotype--to keep their families, their domestic circles, and their moral power intact. Further research in primary source materials will generate both more theories, interpretations, and a fuller appreciation of Overland Trail women's accomplishments and contributions--such is the beauty and challenge of history. Saving the Oregon-California Trail from destruction will serve as a living testament to both the price overland women paid, and the progress they made, when they participated in one of the greatest experiments in our nation's history.

*Reprinted from *Overland Journal* 1 (2):35-39.

**Julie Roy Jeffrey *FRONTIER WOMEN: THE TRANS-MISSISSIPPI WEST 1840-1880*, (Hill and Wang, New York, 1979); John Mack Faragher *WOMEN AND MEN ON THE OVERLAND TRAIL*, (Yale University Press, 1979); Lillian Schlissel, *WOMEN'S DIARIES OF THE WESTWARD JOURNEY*, (Schocken Books, New York, 1982); Sandra L. Myres, *WESTERING WOMEN AND THE FRONTIER EXPERIENCE 1800-1915*, (University of New Mexico Press, 1982).

SHARON BROWN is a historian for the National Park Service. She is deeply interested in the history of women and has had articles and book reviews published in that field.



CAN YOU HELP



The Eastern National Park and Monument association has announced the establishment of the Ronald F. Lee Graduate Research Fellowships. The \$5,000 award will go to graduate students whose doctoral theses deal with the conservation, geological, archaeological, architectural, ecological, historical, biological, environmental, scientific, and preservation interests of the national parks. While the deadline has passed for this year, write for information to F. L. Rath, Jr., Executive Director, Eastern National Park and Monument Association, P.O. Box 671, Cooperstown, NY 13326.

Time is short for some who sold their land to the federal government during the 1930s depression. At the time, they retained mineral rights on their property, usually for five years, after which the rights reverted to the federal government.

However, mineral rights owners, their lessees, or other parties of interest, may apply to extend their rights under "future interest" leasing before the 50-year deadline. Otherwise the rights revert to the federal government and become available for others to lease.

Lands purchased under the 1937 Bankhead-Jones act are located in National Forests and Grasslands throughout the country. About two million acres were transferred to the Bureau of Land Management in 1958.

As a courtesy, BLM is trying to identify parcels where the rights will revert so rights owners can be notified. The agency is asking industry and the public to send the following information to the BLM office managing the geographic area for any parcel which may have changed mineral ownerships. They need:

- Copy of the conveyance document--usually a warranty deed.
- Copy of the title opinion.
- Abstract of title, listing transactions that have occurred.
- Legal description of the parcel.

Again this year, the Student Conservation Association, through its Park, Forest and Resource Assistant (PFRA) Program, is offering expense-paid, volunteer positions of approximately 12 weeks duration in national parks, national forests, wildlife refuges, and other public and private conservation areas throughout the United States.

These positions enable selected individuals to participate in the work of government agencies responsible for the care and management of the country's public lands, or to assist in the activities of private organizations dedicated to land and resource conservation.

Application deadlines are listed below. Please note that they vary depending on the starting dates of positions.

- For positions starting between: January 1 and February 28--application deadline is November 15, 1984. For positions starting between March 1 and April 30 -- application deadline is January 15, 1985. Interested students should send a postcard requesting an application and listing for the 1985 Winter/Spring PFRA Program to the Student Conservation Association, Dept. RA, P.O. Box 550C, Charlestown, New Hampshire.

Federated Women in Timber (FWIT) is a coalition of Women in Timber organizations in the states of Alaska, California, Idaho, Montana, Oregon, and Washington, with hope of expanding into other states. The federation serves as the coordinating and information-sharing umbrella.

Women in Timber organizations support the wise and productive use of our nation's forest resources. They support sound forest management and use of forest resources--and believe science and technology, combined with environmental care, can provide a sustained supply of forest products without damaging the environment.

To join, or for more information contact Mary Addleman, P.O. Box 665, Forks, Washington 98331 (206-374-5179).

The numbers of women in the forestry profession has grown enormously in the past decade but not so our understanding of the issues confronting our entry into the profession. I am planning to develop a research project during this next year to interview women forestry professionals and begin to compile information describing the general characteristics of women foresters, their job situations and issues arising from their employment contexts. We need to know their aspirations and impediments to achieving goals, and their perspectives on the forestry profession.

I am currently in the proposal writing stage and would like to hear from anyone interested in being a part of the initial interviews to explore the range of issues and lead to the development of a comprehensive study. And from anyone interested in or currently planning similar research. Or, of immediate concern, any suggestions of funding sources for the initial phase of the research.

My plan is to interview at least 50 women representatives about the positions, locations, and interests of women in the profession. From these in-depth interviews, I would like to design a questionnaire that could allow for the systematic gathering of information while still containing an open, in-depth format allowing issues to surface not part of previous analyses.

If anyone has any ideas, information or simply expressions of support, I would very much appreciate hearing from you.

Margaret A. Shannon, Natural Resource Sociologist, Resource Policy Analysis, 220 Rosedale Blvd., Buffalo, New York 14226 (716-832-1249)

POSITION AVAILABLE
UNIVERSITY OF IDAHO
DEAN, COLLEGE OF FORESTRY,
WILDLIFE AND RANGE SCIENCES

For information about salary, closing date, and other requirements, contact the chair of the search committee: William E. Saul, Dean of the College of Engineering University of Idaho, Moscow, Idaho 83843 (208-885-6479).

One on One: Win the Interview, Win the Job

by Theodore T. Pettus (Random House, Inc., \$10.95).

Review by Janet Bishop

Most people fail to get the job they want not because they are not qualified, but because something went wrong in an interview they were not prepared for.

Pettus targets his book to the kind of person who already knows what she is after and just needs to make sure she gets it.

His first words of advice are to know the organization. What is its mission, its philosophies, its objectives? Who are the key personnel and what are their backgrounds? When you fail to investigate the interviewer, you are held at the mercy of his or her line of questioning and can no longer control the interview to your own advantage.

Of key interest and use is the chapter on how to answer the questions your prospective boss will ask you. This chapter is packed full of questions that surveys have shown are asked most often regardless of the job classification. Another critical point that Pettus makes: an important part of the interview is learning whether or not the job is right for you.

Although each chapter is filled with advice on appropriate behavior, dress, or self-defense strategies (including great comebacks for sex-biased questions), the most significant for me was the discussion of attitude. If you are confident of your abilities and purpose and are not afraid to be judged, then you are most likely the best qualified for the job. The only ammunition you need is to be prepared.

And what if you are hired -- or rejected? Pettus offers encouraging, constructive advice down to the final decision. Should I say yes?

How do I say no? What can I learn about myself from the interviewer's decision not to hire me? From interviewing protocol to getting a better job just after you've been fired, Pettus' theories on "one-on-one confrontation" in the professional world show you how to be the right person for the job you want.

• Janet Bishop, Research Coordinator of the Small Business Development Center at Washington State University, is living proof that One on One works.

• A former advertising executive, Theodore T. Pettus has worked on numerous presidential, senatorial, and congressional campaigns. He now works as a consultant and free-lance writer and lives in New York City.

STATE OF THE WORLD 1984 is the first of an annual "report card" from the Worldwatch Institute on the state of the world in achieving sustained yields in natural resources and the global resource base--land, water, energy, and biological support systems. Written by Lester Brown, Worldwatch President, and his colleagues, this book continues the Worldwatch tradition of presenting well-documented, well-written, and interesting reading. Each resource is examined in light of its current state and discusses future possibilities contingent on policy implementation. Examples are refreshing and different from the usual ones cited in literature. The book concludes with a chapter on reshaping economic policies that call for new economic indicators. The amount of recycling a nation performs is one of those economic indicators. This, like some of the other Worldwatch productions, may become a classic.

• Reviewer Beth Kersey is a graduate student and coordinates international programs for the Strengthening Grant at the College of Forestry, Wildlife, and Range Sciences, University of Idaho.



Ramona Hammerly

RESEARCH IN PROGRESS

WOMEN WITHIN THE ENVIRONMENTAL MOVEMENT STUDIED

Along with two other undergraduate students, I am working on a summer research grant which focuses on women within the environmental movement. One woman is looking at the affirmative action program proposed for the Provincial Ministry of Environment. My second colleague is interested in the evolution of women's roles within environmental groups since the early 1970s. I am researching women's attitudes and perceptions of environmental issues in order to determine if women have a unique perspective or contribution to make to such issues. Our research will culminate in papers which we hope to present at a seminar to be held in the fall of 1984. We will be organizing the seminar and are in the process of putting together ideas for it now.

Catherine Scott
Environmental Studies Program
University of Victoria
Victoria, British Columbia,
CANADA

GENECOLOGY OF TAMARACK IN MAINE AND NEW BRUNSWICK

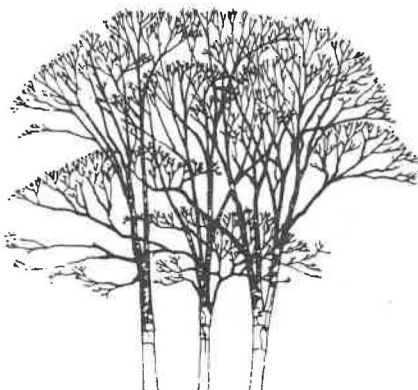
This study looks at the genetic variation among families of tamarack in Maine and New Brunswick. Scheduled to begin next year, with planting of the root cuttings, each will be monitored for form differences and growth rate during subsequent field seasons. I think that there will be some natural variation but because of limited research performed in the past, the results could be different from the expected. My co-investigator is E.K. Morgenstern of the University of New Brunswick and the work is funded by the Canadian American Center.

Kathy Carter
Assistant Professor of Forest Biology
University of Maine at Orono

AN EVALUATION OF THE CAUSES AND AGE OF MORTALITY OF URBAN TREE SPECIES IN IDAHO

Trees in Idaho's cities are being surveyed to determine causes of mortality and their symptoms. Past records and inventories will be used to find the age of trees where mortality or breakage is predicted. Inferences will be made about the desirable classes of various species based upon their relative susceptibilities and hardiness. A summary of condition classes and probable life span of Idaho's city trees may be used by urban tree care personnel for making removal recommendations and for determining monetary value.

Stacy Vineberg
Graduate Student
Forest Resources
University of Idaho



George W. Thomson, Chairman of the Department of Forestry at Iowa State University reports on the following researchers:

Rita Sonnelitter-Schoeneman--Working title: "Cultural practices and leaf rust resistance in integrated management of *Populus* plantations."

Description: Integrated scheme to manage *Melampsora* populations through manipulation of growth conditions, use of resistant materials and chemical applications.

Gail Hall--Working title: "IOWA TIGER: Iowa Timber Inventory; Growth Estimation and Economic Review."

Description: A computer program which will enable small landowners to estimate present and future timber volume value through the use of computer simulation.

Kelley Peters--Working title: "The Determination of Lifting Windows for Forest Nursery Seedlings."

Description: Identifying the best time to lift seedlings in the fall while minimizing seedling shock and maximizing subsequent survival and growth.

DISEASE-SUPPRESSIVE SOILS STUDIED

Disease - suppressive soils are the subject of research at Oklahoma State University (OSU), Stillwater, Oklahoma. There are two types of soil suppressiveness, biological (living) or abiotic (nonliving). An abiotic condition exists when the pH or mineral balance is such that the soil will not support harmful bacteria or fungi. Biological suppressiveness occurs when beneficial microorganisms increase to the point that they control harmful ones.

In the OSU research, two lots of soil were autoclaved to kill all organisms and two other lots were untreated. *Rhizoctonia solani*, a fungus which causes damping off disease in vegetables, was added, then pepper seeds were planted in each of the four soil sample lots, and the amount of damping off disease was recorded.

In nonautoclaved soil, an average damping off of 14 percent was recorded. When the *Rhizoctonia* was added, disease increased to 17 percent. When *Rhizoctonia* was added to autoclaved samples, the damping off of pepper seedlings jumped to 94 percent.

The research thus showed a loss of the natural barrier by sterilizing the sample, which meant a biological organism had been controlling the *Rhizoctonia*.

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WOMEN IN FORESTRY

Information for Contributors

The journal *Women in Forestry* aims to provide information and ideas for, from, and about women on topics related to: the natural resource professions and associated social science fields; the use and conservation of natural and cultural resources; and issues of administration and personnel of special interest to women in natural resources. We want to serve as a source of ideas, contact, and support, to help women in the natural resources reach their professional goals.

We seek contributions that will effectively integrate the factual, the personal, and the philosophical aspects of our profession. There is a place to express insights or experiences as brief as a few lines or paragraphs, as well as for articles several pages long. We want *Women in Forestry* to provide interesting, thought-provoking reading, and not to be merely a repository for factual data buried in esoteric technical jargon and statistics.

Look through this issue to get ideas of where and how *you* can contribute. Contributions in the following categories are especially welcome:

- Letters and opinions
- Articles and reports
- Interviews or suggestions for people to interview
- Calendar events, conferences, meetings
- Book reviews and announcements of new publications
- News and notes
- Abstracts or clippings from other publications (please provide information on source)
- Announcements and awards
- Positions wanted and positions available
- Requests for specific types of information
- Summaries of research in progress
- Cartoons or other humor (original or clipped with source noted)
- Advertisements
- Photographs or drawings

As you can see from this issue, our format is flexible. For material acceptable for publication in *Women in Forestry*, we will provide, as needed, help with editing, illustrations, and layout. Authors of feature articles will be sent a photocopy of the final version of their article for proofing and approval. All letters must include author's name and address, but names will be withheld from publication upon request.

With all contributions, please include your name, job title or specialty, full address, and phone number(s) where you can be contacted most easily. For longer letters, opinions, or articles, please also include a brief biographical sketch (approximately one paragraph) giving both professional and relevant personal information about yourself and your article that might interest readers of *Women in Forestry*.

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