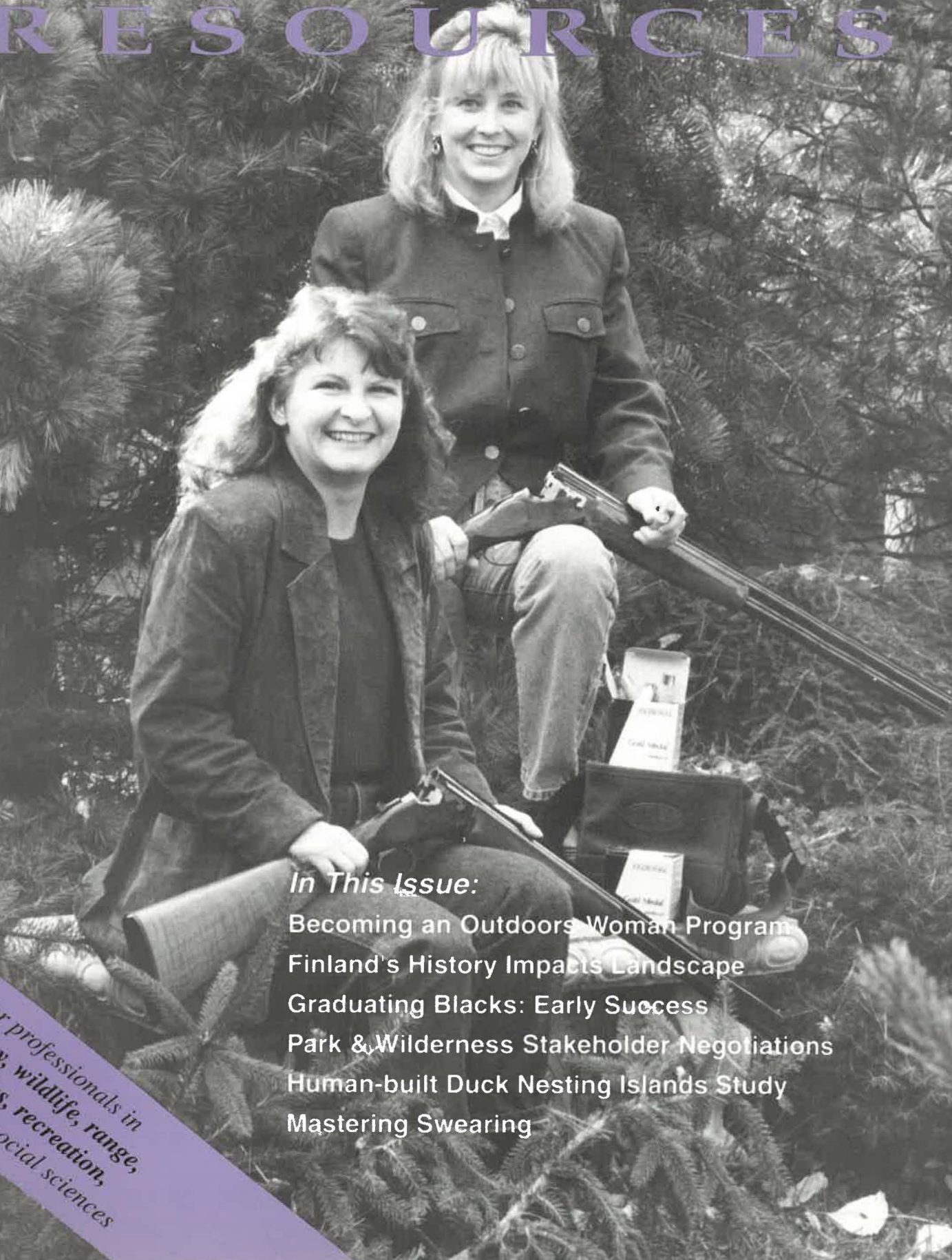


women in

Volume 19 Number 1 Fall 1997

# NATURAL RESOURCES



*In This Issue:*

- Becoming an Outdoors Woman Program
- Finland's History Impacts Landscape
- Graduating Blacks: Early Success
- Park & Wilderness Stakeholder Negotiations
- Human-built Duck Nesting Islands Study
- Mastering Swearing

*for professionals in  
forestry, wildlife, range,  
fisheries, recreation,  
and related social sciences*

## *If formulas and quotas work in college athletics, why can't they work in natural resources hiring? Good question.*

After Affirmative Action went down to defeat in California (the voters' action was upheld by the Supreme Court this year) many of us thought we read the handwriting on the wall. Then just recently, some Texas voters, by about the same margin as in California, went to the polls and voted to keep it. So the handwriting is not at all easily read on the wall.

One of the interesting things about the debate—which is coming to a neighborhood near you, no doubt—is that everyone seems to agree that "quotas for gender and race are not good," that it is denigrating to get a job or contract or into a university if he or she got it or into it by means other than merit. As if they were mutually exclusive.

Where did that silliness start? One of the best government programs going is Title IX. It is a gender equity program started in 1972 for universities who take government money thus impacting the math department as well as the athletic department. The goals are fairness—in service and programs—for women and men. While the math department is rarely in the news, athletic departments across the country often are. Title IX as it works out in athletics is quintessentially quota driven. And it is quintessentially merit driven at the same time. They are not mutually exclusive. And they have worked very well for women in athletics at universities and the good effect ripples on down to junior and senior high school girls and upward to professionals. About the math department, I'm not so sure.

The first thing to remember about the way it works in university athletic departments is that gender equity is a moving target. One of the reasons it moves is that there are proportionate considerations. This means one has to take into account the percentages of women and men in a given university's student population. As the men to women ratio changes (moving upwards for women here at our university), then women proportionally get more scholarships. We are now at about 44 percent women and 56 percent men, but are planning for 45 percent women and 55 percent

men as the trend seems to be going in that direction.

And there are other impacts on the formula. At our medium sized university, we recently moved up an athletic conference notch to the Big West from the Big Sky, allowing more football scholarships for men. So the formula, which had been pretty much in balance for the smaller number of athletic scholarships awarded to men for football under the Big Sky Conference, expanded. Under Title IX, scholarship slots automatically moved upward for women, too. Yes, a quota system—in this and similar universities—monitored by the government, the conference, the NCAA, and watched by the Women's Sports Foundation.

Our university chose to start a new (for us) women's sport, soccer, to use their expanded scholarship numbers. But do you think for a minute that those women's soccer scholarships will go to any Jane Blow off the street? No, they will be awarded for a specific athletic ability and athletic merit. Regardless of how you feel about educational institutions spending money on athletics, you have to admire the elegance of the movable formula, the movable quota, the unmovable merit in these cases.

At our university, we are doing a self study on coaches' salaries, and have done reviews on proportionate numbers of coaches, uniforms, equipment, access to facilities, and athletes' grades, leading, perhaps, to tweaking of who gets what depending on funding. At this writing, we are searching for a women's soccer coach. They are hard to find and our associate athletic director, while still searching to fill the position, has had to begin preparing the team herself. A formula, in other words, doesn't deliver the goods, people do, but that doesn't negate the intent nor should it diminish the effort if there are temporary impediments.

Since 1972, the NCAA, which had to be dragged—and in some cases litigated—into support of women in the system, is now overwhelmingly for it. They understand that a formula, once implemented and understood, provides for goal setting, for rancor

reduction, and equal opportunity. In some big-city universities, where there are often more women than men enrolled, the opportunities and constraints move in different ways. But athletics still are guided by the same formulas; sometimes sports are dropped as the balance shifts, or big university big-time football chooses to support other sports—but this is the beauty of the known formula. Most universities have not completed all requirements, and many never will given the plasticity of the parameters, but those who monitor Title IX look for movement in the right direction, for good will, planning, and fair funding.

Would women's sports at universities—the seed bed and nursery for blossoming professional sports and young girls' sports coaches—wither and die if Title IX were itself to wither or be bludgeoned to death? No, I don't think so, but who among us doubts who would win in battles between women's soccer and men's football if all restraints and formulae were removed.

*Dixie L. Ehrenreich, Editor*

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Fall 1997  
Volume 19, Number 1



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*Diane Humphrey Lueck  
Christine L. Thomas*

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and

*Christine L. Thomas*

Director

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University of Wisconsin

Stevens Point

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Increasingly, external threats to park and wilderness resources appear on the radar screen for managers and federal natural resource agency employees. Successful negotiations include all stakeholders, yet address pollution sources at sites such as the Grand Canyon (below) and provide industries and other sources with flexibility and incentives to curb pollution.



Photo of the Grand Canyon with good visibility, taken in 1983.

Your issue on Range was excellent. Weeds and their spread deserve the highlight they got in several of the articles you ran. Pulling weeds can play havoc on bare hands though, and gloves should always be worn. There are accounts here about a soil scientist on the Idaho Panhandle National Forest who lost two fingers because they were infected with tumors caused by the knapweed sap. After the sap got into broken skin on his hands, his finger joints were affected, then he developed tumors in the tendon sheath. There is a carcinogen called retin which was believed to have caused the benign tumors which would have continued to spread if the fingers had not been amputated.

Ann Johnson, Spokane, Washington

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The School of Forest Resources ([www.afrc.uamont.edu/sfr/index.htm](http://www.afrc.uamont.edu/sfr/index.htm)) is located on the University of Arkansas at Monticello campus and has responsibility in the Land Grant System. Situated in the Coastal Plain, the School is a short distance from the Mississippi Alluvial Plain and the forests of the Ozark and Ouachita Mountains. Opportunities abound for work in private as well as public forests. The School has programs of teaching (undergraduate and graduate), research, and extension with 25 faculty and professional staff. A USDA Forest Service research unit is located in the forest resources building. **Applications will be accepted until January 5, 1998, or until suitable candidates are found.** Applications should include current vitae, college transcripts, names, complete address and phone numbers of three references should be sent to:

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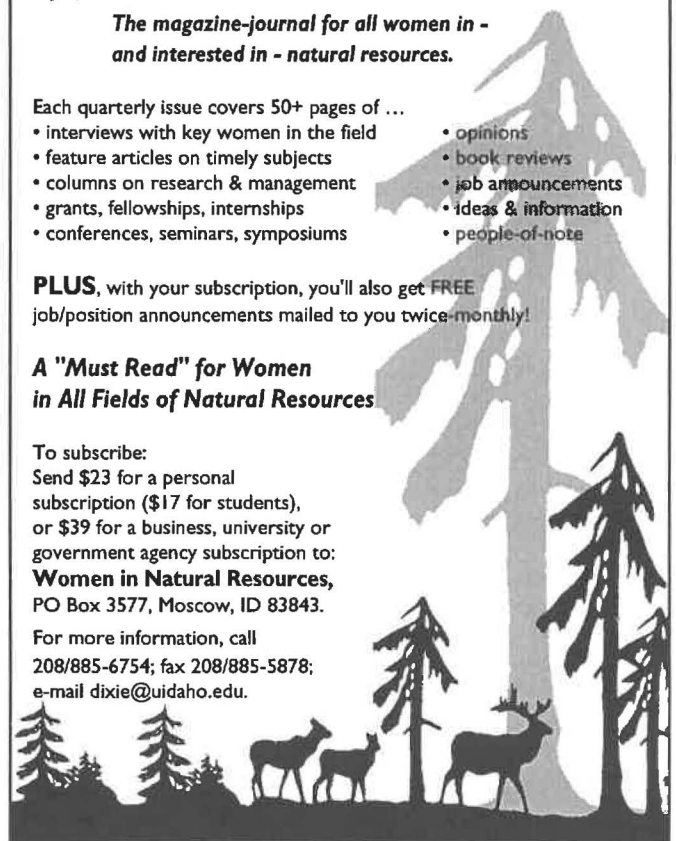
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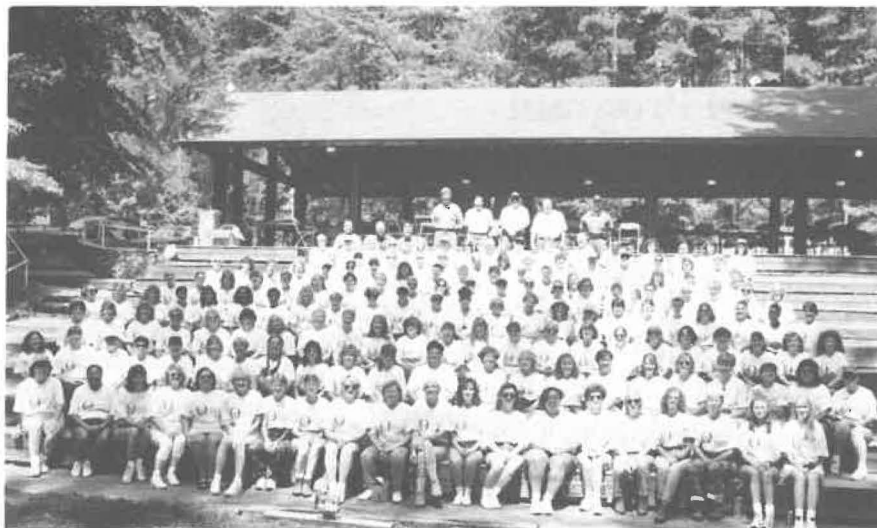
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South Carolina's 1997  
**Becoming an  
 Outdoors-Woman**  
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# Effect of the *Becoming an Outdoors-Woman* Program On Attitudes and Activities of the Participants

Diane Humphrey Lueck  
Christine L. Thomas



Figure 1. Shaded areas show states and provinces offering workshops in 1997

## Introduction

The *Becoming an Outdoors-Woman* (BOW) program was started in 1991 to address the limited opportunity that many women have had to learn outdoor skills in the traditional ways that men have. The program was designed to teach fishing, hunting, shooting and non-harvest outdoor skills in a non-threatening atmosphere. The first workshop was well received and the program spread to 40 states and three Canadian provinces by 1996. During 1997, 44 states and eight provinces will offer BOW workshops (Figure 1).

The enthusiasm generated by the first BOW workshop was gratifying to the organizers. However, preparation for each workshop took months of staff time: locating a facility, determining classes, contracting with instructors, preparing publicity, accepting registrations, and actually presenting the workshop. The clinics were intended to be self-sustaining, with registrations from participants covering workshop costs. Most state agencies, however, had to add the responsibility for coordinating a BOW workshop to the duties of a staff person already working in hunter education or in information and education programs.

Agencies and sponsors understood that the workshops were popular and successful in terms of registrations and positive public relations. They wanted to know whether or not the workshops had an influence on the attitudes and activities of the participants. This study

was conducted to answer these questions.

## Literature Review

### *Women's Participation in Fish and Wildlife Recreation*

Women have historically participated in traditional fish and wildlife-based recreations at a rate much lower than men. A 1995 survey showed that eight percent of hunters nationally are women (Duda 1996). This corresponds with US Fish and Wildlife Service (1993) figures that were generated in 1991, where women were shown to make up seven percent of the hunting population. A Texas study shows that females comprise 20 percent of that state's licensed angling population (Ditton and Hunt 1996).

In 1990, the University of Wisconsin-Stevens Point sponsored a conference to look at the reasons for lower participation by women. The conference, *Breaking Down Barriers to Participation of Women in Angling and Hunting*, had as its audience conservation club leaders and state agency personnel. The conference generated a list of 21 perceived barriers to participation (Thomas and Peterson 1990, 1994, 1995).

### *Cultural and Traditional Barriers*

Cultural and traditional barriers have separated women from the outdoor experience. Women reported family commitments, a lack of partners, shyness, lack of transportation and physical inability as limits to their outdoor involvement (Henderson et al. 1988). Jackson (1990) called the

gender roles expected of women an antecedent restraint on their activities, and added personal capacities, personality, and socialization to the list. Discrimination has been demonstrated toward women in the field of outdoor recreation, especially in attitudes about inherent differences in roles and abilities between the sexes (Theobald 1978). The Theobald (1978) study looked at publicly supported outdoor recreation programming in Ontario and concluded that "It is obvious from this investigation that discrimination against women does exist, in many cases long-standing discrimination with cumulative effects" (p.237). Theobald recommended that agencies provide programming that is attuned to the special needs of women.

Many barriers to outdoor activities are social-based fears rather than physical ones. Women may fear non-acceptance by the group, not being able to keep up, letting one's self down, or making wrong decisions (Ewert 1988). Matthews (1995) listed the need for social support and lack of role models by urban anglers as two of the barriers that kept them from fishing.

### *Education Barrier*

Most of the barriers to participation related to the lack of opportunity women have to learn outdoor activities during childhood compared to their male counterparts. Research (Thomas 1990) indicated that prior to the first *Becoming an Outdoors-Woman* workshop in 1991 there were no other skills workshops in the

United States that included shooting, fishing, and non-harvest activities and were targeted specifically to women. The first BOW workshop (offered in Wisconsin) was designed to determine whether women would avail themselves of the opportunity to learn outdoor skills in a non-threatening, supportive atmosphere. The success of that workshop led to others.

## Methods and Research Approach

### Research Question

In March 1994, Perry Olson, then-chair of the Communications Committee of the International Association of Fish and Wildlife Agencies (IAFWA), sent a survey to state directors of resource management agencies, asking whether they supported involvement in the Becoming an Outdoors-Woman program. In his summary of that survey, Olson (1994) reported that 98 percent of the respondents were familiar with BOW and that 74 percent intended to implement the workshops in their states. The Executive Committee of IAFWA endorsed the program at the 1994 North American Wildlife and Natural Resources Conference.

The popularity of the BOW program showed that if an opportunity to overcome the education barrier was offered, women would take advantage of it. There were no programs for women, similar to BOW, to evaluate the impact of such a skills clinic. Would addressing the education barrier be enough to move women to self sufficiency in fish and wildlife-based recreation activities? Did workshop participants continue their activities beyond the clinics? Did the workshops change participant attitudes? Did participants participate in the outdoor recreation economy?

To answer these questions, BOW national sponsors funded the research project reported here (Lueck 1995). Funding sponsors included the Archery Manufacturers Organization, National Shooting Sports Foundation, National Rifle Association, Safari Club International, Rocky Mountain Elk Foundation, North American Hunting

and Fishing Clubs, Wildlife Forever, Cabela's and Gander Mountain, Inc. A mail survey instrument based on the total design method (Dillman 1978) was developed to examine attitudes, activities, and equipment purchases of Becoming an Outdoors-Woman workshop participants. Questions were weighted on a Likert scale (Weisberg et al. 1989) asking for responses ranked High Increase to Marked Decrease or else Strongly Agree to Strongly Disagree.

### Survey Populations

The survey was sent to all participants in all eight of the Becoming an Outdoors-Woman workshops held in 1991, 1992, and 1993. This included workshops in Wisconsin, Nebraska, Arkansas, Texas, Oregon, and Washington. The surveys were sent in 1993 to attendees of 1991 and 1992 workshops. Participants of 1993 workshops were surveyed in 1994. To give a basis for comparison and to determine whether workshop attendance made a difference to responses, a control survey was developed. Women who were on BOW mailing lists because of their interest in outdoor activities but who had not attended a workshop were sent the control survey.

Surveys were mailed to all 761 participants of the first eight workshops. Four hundred forty-nine surveys were returned (59 percent of the 761 mailed). Four hundred control

surveys were mailed to a random sample of the names on each state's mailing list. Two hundred four (53 percent) of the 400 control surveys were returned. No significant demographic difference emerged between the two populations. Virtually the only difference was attendance at a BOW workshop.

To determine whether responses of workshop participants were significantly different from the responses of the control group, chi-square analysis was run on responses. Difference between observed and expected frequencies was significant at  $P = 0.05$ .

## Survey Results

### Activities

Workshop participants and the control group were given a list of outdoor activities representing workshop classes. They were asked to indicate changes in participation level in those activities since the workshop or during the past year, ranking changes from High Increase to Marked Decrease. A significant difference in activity level between the groups was shown in all but one activity (hunting with dogs). Overall, participants reported an increase of 18 percent for all activities listed (Figure 2). Their decrease average in all activities was less than two percent. The control group showed an overall increase average of 12 percent for all

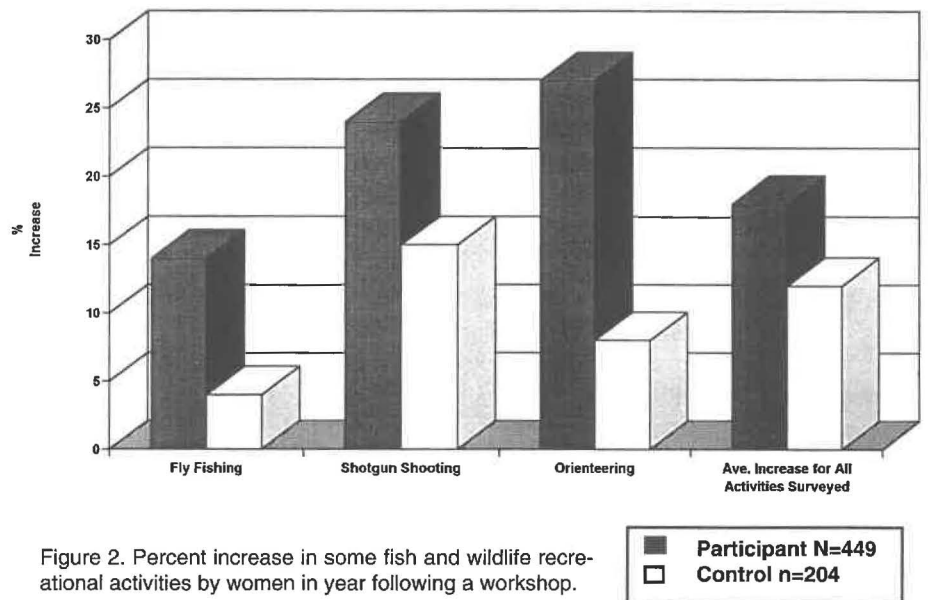


Figure 2. Percent increase in some fish and wildlife recreational activities by women in year following a workshop.

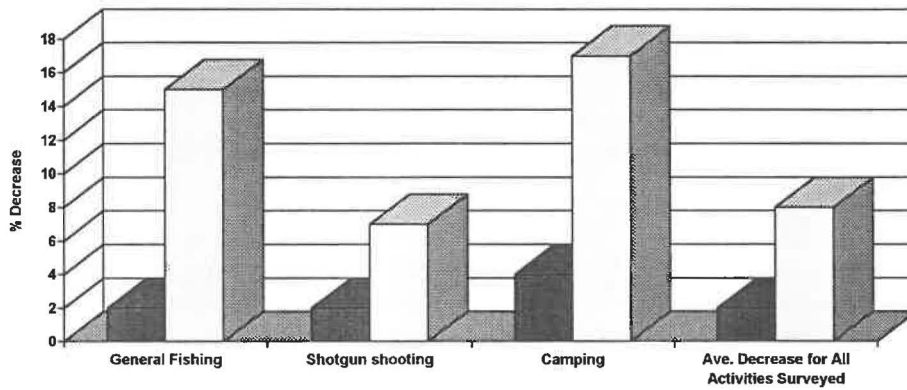


Figure 3. Percent decrease in some fish and wildlife recreational activities by women in year following a workshop.

■ Participant n=449  
□ Control n=204

activities listed, and a decrease of eight percent. Workshop participants reported a low decrease in participation—less than four percent in any listed activity. The control group, however, showed decreases of 17 and 15 percent even in camping and hiking (Figure 3) indicating that BOW workshops also prevent women from dropping out of non-harvest activities. Sixty-one percent of participant respondents said the workshop was “important” or “essential” in increasing outdoor activities. Five percent said the workshop did not affect participation.

#### Purchases

The survey asked about purchases of outdoor clothing and equipment during the year following the workshop or, for the control group, during the past year. There were few differences between workshop participants and the control group. Eighty-seven percent of the participant respondents and 83 percent of the control group said they bought outdoor equipment or clothing for themselves. Items bought and the percentages of respondents in each group were very similar. Fishing gear, shooting or hunting gear, and camping equipment were nearly equally represented in purchases. Purchase of Dutch ovens—equipment used for a class taught at the workshops—was the only item with a significant difference.

“Fit my size and ability” was a highly-cited factor influencing purchases, and a factor that affects many women. Ill-fitting equipment and clothing was cited as one of the barriers to participation by women in hunting and angling (Thomas and Peterson 1990, Thomas et al. 1995). Demonstration at a workshop did appear to affect purchases. Sixty-four percent of participants said that some or all of the equipment or clothing they bought was the same brand as demonstrated at a workshop, and 72 percent said that demonstration influenced the purchase. Fifty-six percent of participant respondents said they did acquire clothing or equipment from a BOW workshop sponsor or contributor, and an impressive 82 percent said they would make an attempt to buy from a sponsor or contributor.

#### Attitudes

Both survey groups were asked to rank statements about attitudes toward outdoor activities representing workshop classes from Strongly Agree to Strongly Disagree. The attitudes of workshop participants were on average more positive than those of the control group. An especially notable effect of the workshops was in the area of the shooting sports. Sixty-four percent of participant respondents said they felt more positive toward the shooting sports after

attending a workshop, whereas only 47 percent of the control group responded positively. In addition, only five percent of the participants responded that they felt more negative toward shooting sports, while an appreciable 21 percent of the control group responded negatively. In a related question, 86 percent of participants said they were likely to hunt or fish in the future, with 76 percent of the control group giving a positive response.

## Discussion

Attending a “Becoming an Outdoors-Woman” workshop had a positive influence on the participants surveyed. In many cases, participants discovered an interest and ability in an activity they might have otherwise never considered. In addition, they tended to continue these activities, with an average dropout rate of less than two percent.

The increase in some activities was directly attributable to BOW workshops. For example, fly fishing by participants increased 14 percent during the year following a workshop as compared with four percent in the control group (Figure 2). Shotgun target shooting and hunting, rifle hunting, and bow target shooting and hunting all showed strong increases by participants. Turkey hunting was another example of a specialized class that had an effect on participant respondents. While only two percent of the control group showed an increase, nine percent of workshop participants increased this activity. Perhaps the most notable increase came in orienteering, a growing sport that is unfamiliar to many novice outdoor enthusiasts. While eight percent of the control group increased this activity, a sizable 27 percent of workshop participants reported an increase in orienteering.

An important point to consider in interpreting these data is that each participant only attended four sessions at a workshop, not all 20 activities listed in the survey. Therefore, those 30 women who reported an



increase in muzzleloader activities, for example, may be a low percentage of respondents; but this represents a high percentage of the women who actually enrolled in muzzleloading.

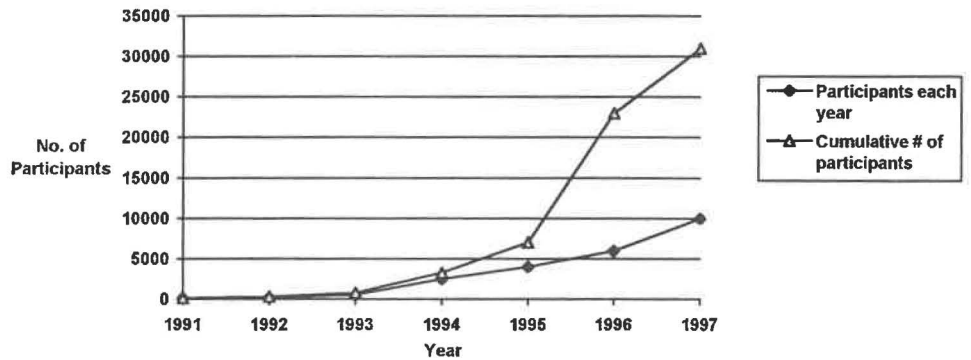
We believed that exposure to the outdoor skills would awaken an appreciation of nature and conservation in participants. It was encouraging to note that 76 percent of participants responded that they were more interested in environmental protection after attending a workshop. Only 51 percent of the control group said they were more interested than they had been a year ago.

### Audience

It is possible that fairly experienced women attended the first BOW workshops in each state, intrigued by the opportunity to meet other women with similar interests and the chance to participate at the beginning of something new. More true novices may attend clinics in subsequent years. Further research is needed to determine this. Women who are repeat attendees often bring a friend or two with them. These friends, or participants who have heard about the BOW workshop from a previous attendee, may have less experience in outdoor skills.

In addition, the first workshops were advertised primarily in male-traditional avenues, such as flyers in sports shops, columns in the sports section of the newspaper, or hunting magazines. These efforts may have reached women who were already somewhat experienced in outdoor activities. In recent years however, articles in the "Living" section of newspapers and in health and fitness or travel venues have reached more urban, less-skilled audiences. If this less-experienced audience is indeed the group that is being reached by subsequent workshops, changes in activities, attitudes, and purchases may be even greater than those of the first group of participants surveyed. Again, further research is needed to make this determination.

Figure 4. Women Reached by Becoming an Outdoors-Woman Program in US and Canada, 1991-1997



Although there was no significant demographic difference between the control group and the workshops participants, there were some notable trends. More than 65 percent of both groups of survey respondents were childless or had adult children. This may mean that these women have more time to be involved with outdoor activities. In addition, over 90 percent of the two groups of respondents were Caucasian. This does not reflect the ethnicity in the country overall, and may indicate that publicity for the workshops does not reach minority groups.

### Future Directions

In 1997, 85 Becoming an Outdoors-Woman workshops will reach 10,000 women across North America (Figure 4). Many more women tried to enroll, but were turned away for lack of space. Arkansas and New Jersey turned away more than 25 (Speer pers. comm., Pettigrew pers. comm.); South Dakota and Louisiana could have filled 50 more slots (Hachmeister pers. comm., Breed pers. comm.) and South Carolina could have filled another workshop of 100 women (Thompson pers. comm.). We need to find ways to provide more opportunities.

- Programs need to be developed that take women from the BOW setting and ease them toward independence in the field. These programs will move us toward the Matthews (1995) model of multiple efforts and an infrastructure that fosters long-term participation. Some states have experimented with this, including

New Mexico where women were offered a free cow elk hunt (Carrier 1996); and Texas Parks and Wildlife, where bird hunts and backpacking trips have been organized for BOW graduates. Iowa offers IOWA—Iowa Outdoor Women's Adventures (Neumann and Baker 1996); and Wisconsin has developed Beyond BOW to offer more intensive, focused workshops.

- Organizations are needed that foster outdoor activities for women. Many states have begun this. South Dakota, as an example, has started Outdoor Women of South Dakota (Hachmeister 1996). Wisconsin, Texas, New Jersey, Iowa, and Minnesota have coordinators dedicated primarily to BOW and Beyond BOW opportunities (Lueck 1997). Existing conservation groups should then take the initiative to move women from these workshops into their ranks.

- Build a cadre of qualified instructors to work with these specialized audiences. Instructors are needed who are sensitive to the needs of adult learners, beginners, and women. A project is already underway to implement an instructor orientation program.

- Remove barriers that have existed for women at the youth level. Iowa's Outdoor Journey for Girls is a good example of one such program (Baker pers. comm.). Girls who complete that four-day program are both Hunter Education and Aquatic Education certified. The program is fully enrolled each time it is offered.

This program should tell us that more girls and women would take hunter education, if they could take it in a less-threatening setting.

The results of this research confirm that the Becoming an Outdoors-Woman program accomplishes many of the goals of the developers and sponsors by removing barriers to outdoor recreation through education (Thomas and Peterson 1994). Women who attend workshops become more active in outdoor activities, they participate in the outdoor economy, and they take a greater interest in environmental protection. What the research doesn't tell us is how—or if—agencies, industry, and conservation groups will meet the demands of this now more-active constituency.

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*Diane Lueck, pictured right below, is an outreach specialist with the College of Natural Resources, University of Wisconsin-Stevens Point (UWSP). She is the assistant director of the international Becoming an Outdoors-Woman program, working with the 44 states and eight provinces that offer the award-winning skills clinics. Both Lueck's Master's in adult education in natural resources and her Bachelor's in resource management are from UWSP. Prior to her current position, Lueck worked as a program assistant for UWSP Cooperative Extension Service.*

*Christine Thomas, pictured left below, is a professor of resource management at UWSP College of Natural Resources where she serves as discipline coordinator for the Human Dimensions of Natural Resource Management discipline. Thomas, who is the first female tenured full professor in the college has been active in the past in regional issues related to women in natural resources, having co-chaired two Midwest Regional conferences related to work force diversity. In addition to her teaching and outreach efforts, Thomas has research interests that center on resource agency administration, involvement of women in the outdoors, and Wisconsin conservation history.*



# NEWS & NOTES

## Railroad workers in six states face charges in illegal hunting

A yearlong investigation by the Idaho Department of Fish and Game has revealed a poaching ring that involved employees of the Idaho Northern and Pacific Railroad. Charges will be filed against 10 people in six states who were caught killing wildlife from trains and along the tracks. "All of them were on a train in a remote area, and they didn't think anyone was watching them," Fish and Game conservation officer George Fischer said. Officials of the railroad cooperated. Violations included killing an eagle, mountain lions, bear trapping, interstate transportation of illegally taken game, hunting without a license, tags, or stamps, waste of deer and waterfowl, and shooting from a moving vehicle. Each violation can carry a fine of up to \$1,000, a six month jail-term, and civil penalties to make up for the loss of wildlife from the state. Under a new state law, "flagrant violators" can face lifetime revocation of hunting licenses and a doubling of civil penalties.

Associated Press, November 6, 1997

## What is Ecotourism?

Ecotourism is on the rise, but what exactly is ecotourism? One of the problems in discussing this subject is that the word means different things. To demographic researchers, ecotourists are affluent travelers who want to enjoy maximum privacy in remote places of extraordinary beauty and are willing to pay for high standards of service. They tend to be professionals with an interest in conservation who select destinations with attention to quality and the type of experience offered. They appreciate ecolodges, such as Robert Redford's opulent Sundance Resort in Utah.

To the Ecotourism Society, the term means "responsible travel to natural areas which conserves the environment and improves the welfare of local people." To the Canadian Environmental Advisory Council, ecotourism is "an enlightening, nature-oriented travel experience that contributes to conservation of

the ecosystem while respecting the integrity of host communities." There are subtle differences between these definitions.

A 1992 U.S. Travel Center survey predicted that 43 million U.S. travelers would take an ecotourism trip by 1995, including seven million who would spend from \$2,000 to \$3,000 for a nature-based tour. Included in this report were traditional sightseers who visit national parks; adventure travelers—experiential consumers—who travel for the exhilaration of nature thrills such as white-water rafting, hiking, rock climbing, snorkeling, mountain biking, snowmobiling, cross-country skiing, and hot air ballooning; traditional sportsmen and women who hunt and fish; and campers ranging from backpackers to RVers.

People who travel for the sake of an experience or challenging activity are adventure travelers...but it is not necessarily presented or undertaken in a manner that is sensitive to the environment or to local culture... Ecotourists are travelers who give paramount attention to having minimum impact on the places they visit.

John Poimiroo, *California Coast & Ocean*, Summer 1997

## About Raccoons

Early naturalists believed the raccoon was related to the bear and classified it as *Ursus lotor*, which means "washing bear." It was reclassified in 1819 as *Procyon lotor*. The name *Procyon* refers to the star that rises just before Sirius, the Dog Star and *lotor* (Latin for "washer") refers to the raccoon's habit of playing with its food (not washing it).

Native to North America and no other continent, raccoons are found in practically every state. They are extremely adaptable and thrive in areas where other animals have declined due to shrinking natural habitat—including urban areas. They are among the most intelligent mammals. Psychologists say raccoons are next to monkeys in intelligence. Their "language" ranges from 13 to 20 meaningful sounds: churr (the most common with many modula-

tions), whimper, whine, growl, snarl, coughing bark, and hiss. Flashy, shiny objects fascinate raccoons. They are classified as carnivores, but will eat almost anything. With skillful hands, the raccoon can catch frogs, minnows, crayfish, clams and mussels, earthworms, crickets, birds, eggs, insects, mice, and other creeping critters. But it eats garbage, nuts, fruits, berries, grains, and grasses, too. Raccoons live in hol-

continued on page 40

## Publications

*What Nature Suffers to Groe: Life, Labor, and Landscape on the Georgia Coast 1680-1920* by Mart A. Stewart (University of Georgia Press), explores the mutually transforming relationship between environment and human culture on the Georgia coastal plain. Each of the successive communities (from the Georgia Trustees, plantation culture of rice and cotton, and the postbellum society of wage-earning freedmen, lumbermen, and others) developed unique relationships with the environment which in turn created unique landscapes. Some cultures worked well on the landscape and some did not.

*The Big Book of Opportunities for Women* is a comprehensive directory focusing on organizations of interest to women. Helpful for students, counselors, job seekers, employers, and program directors. Phone 800-306-9941 to Ferguson Publishing Co. for price.

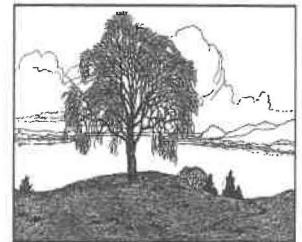
The husband and wife team of David P. Barash, an evolutionary biologist and Judith Lipton, a clinical psychiatrist, draw on their respective areas of expertise to explore the central fact that men and women are fundamentally, unalterably different. *Making Sense of Sex: How Genes and Gender Influence Our Relationships* (New Island Press \$24.95).

Two new books from the New York Botanical Garden can be found among others at <http://www.nybg.org>. The first is *Medicinal Plants: Can Utilization and Conservation Coexist* by Jennie Wood Sheldon, Michael J. Balick, and Sarah A. Laird. They explore the questions of loss of habitat, over-harvesting, and extinction for the 25 percent of all modern-world pharmaceutical remedies which come from plants.

The second one is about the pines of Latin America. Titled *Pinus* (*Pinaceae*) by Aljos Farjon and Brian T. Styles, it is the first critical revision since Shaw in 1909. Many people tend to think of pines as a genus largely distributed in forests of the temperate region and are unaware of the importance of tropical pines. Aljos Farjon stepped in to finish this work of Brian T. Styles after his death in 1993 at the age of 58. For email correspondence, [scipubs@nybg.org](mailto:scipubs@nybg.org).

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## MYSTERIOUS MEDDLING

Reviewed by Jonne Hower

Move over Smoky Bear! The ladies of the 80's have become the women of the 90's! And they are alive and well and working in natural resource agencies.

Meet Anna Pigeon, Park Service Law Enforcement Ranger, a creation of Nevada Barr. And, meet BLM Law Enforcement Ranger Dee Laguerre, created by Kirk Mitchell. And, then there is Ginny Trask, Forest Service Dispatch Officer, created by former Forest Service fire fighter, Lee Wallingford.

All three experience some of the same things I do in my job...the personnel system, the endless reports and requirements, the need for polite, public service. However, these ladies are all characters in murder mysteries. I love reading them but I am not sure that I want to my job to be like theirs. And, I'm not sure whether I really want to come to work and meet these ladies or not. Now, don't get me wrong, I'd like to talk with them, but I never, ever want to discover a dead body. I don't want to tumble down a cliff (Anna Pigeon did in *Track of the Cat*), dive head-first into a clump of willows (Dee Laguerre did in *High Desert Malice*), or have a load of Christmas trees dropped on me by a front-end loader (Ginny Trask did in *Cold Tracks*.) Maybe, on second thought, my boring, old job is okay, after all!

*Track of the Cat*, *A Superior Death*, *Ill Wind*, *Firestorm*, and (due in 1998) *Blind Descent*, are all Anna Pigeon Mysteries, by Nevada Barr, (Avon Books, New York). Anna Pigeon is a likeable widow. Following the senseless death of her husband, Anna joins the National Park Service as a law enforcement ranger, but her career shifts in each book. I think this series of books is notable for the writing. Clearly written by an interpreter, Barr opens *Ill Wind* as Anna Pigeon muses (during a staff meeting, no less) about the Anasazi.

*No graveyards....yet all people die. Unless you ate them, burned them, or mailed them to a friend, the bodies had to go somewhere... In any event, there would at least be bones. A*

*civilization that lived and died for six hundred years should leave a mountain of bones.*

In Kirk Mitchell's *High Desert Malice*, and his *Deep Valley Malice*, (Avon Books, New York), BLM law enforcement officer Dee Laguerre patrols the Great Basin as she tries to come to terms with her Basque heritage and a childhood spent growing up in a sheep-raising culture in the midst of cattle country. You can experience the desert through the eyes of someone out to prove herself to the community, the agency, and natural resources in general.

In *High Desert Malice*, Mitchell explores some current issues facing natural resource agencies such as the increasing battle between mining development, wilderness designation, and the desire of the ranching industry to continue operating as in ages past. Seeing and knowing about mining development first hand, the Cayuse Valley ranchers—cattlemen and sheepmen alike—decided to spare their range the same fate, even if it meant reducing the acreage available for grazing. The creation of a wilderness area, however detestable to them, turned out to be the only way they had to guard their water resources....

In *Cold Tracks*, *Clear-Cut Murder* featuring Frank Carver and Ginny Trask, author Lee Wallingford (Walker and Co., New York) describes his protagonists' situation: Single parent Ginny Trask is a Forest Service fire dispatcher who teams up with big-city police officer Frank Carver turned Forest Service law enforcement officer to solve a murder. There is a local-boy environmentalist celebrity, a body dumped in a prescribed fire area, a connection to big crime, plus an office romance, and eventually, career enhancement. And there is "aw shucks" dialogue. Frank Carver observes,

*You'd be good at it [law enforcement], Ginny...you've got a way of getting into other people's heads—I mean understanding how they think... Well anyway... it's something to consider...*

Written by one-time Forest Service fire-fighter turned school teacher, Lee Wallingford's *Cold Tracks* was highlighted in a previous WiNR issue.

Closely-related, although not featuring a heroine working for a natural resource agency, an additional murder mystery series by Sarah Andrews features geologist Em Hansen who works for private industry. *Tensleep* finds her working as a roustabout in the Tensleep, Wyoming country. But she has moved to Denver and taken to wearing suits and high heels and reporting to work in a high-rise office building in *A Fall in Denver*. Just out this year is *Mother Nature*, with Em Hanson going undercover in her own profession of oil-drilling to discover the murderer of a Senator's daughter. All are published by Signet (New York).

Here's Em reflecting on her job and circumstances after she has learned that a fellow worker and friend had been killed in a car accident....

*It was a long night. I sat staring into my coffee until long after it was cold. Bill was the only thing that had made the job bearable. This damned job...[t]his irritating job sharing this cramped trailer with Howard the drunk, this God-forsaken job on the edge of the earth with these loud-mouthed roughnecks, this son-of-a-bitching job...*

Well, you get the idea. Although not many of us work on a drilling rig, maybe you could relate, as I did. Yes, indeed, all these ladies are something to consider. Grab a cup of tea, choose your book, and have a great read! I found all are easy and fun to read (except, of course for the few I named that aren't out yet). You can breeze through some in an uninterrupted evening; some might take a weekend. Or, spread them out over many days by reading on your break.

Jonne Hower works for the Bureau of Land Management in eastern Oregon. She is a WiNR editor.

# Idaho's One-of-a-Kind The Idaho Rangeland Resource Commission

Margaret Soulen

The Idaho Rangeland Resource Commission (IRRC) was created by the Idaho State Legislature in 1994. The Commission is composed of five members, each of whom brings his or her own experience and knowledge about Idaho's rangeland. Currently serving on the Commission are Bud Purdy, Eric Davis, Blair Fisher, K. Lynn Bennett, and me.

The Commission, the only one of its kind in the country, is supported by nine advisory members representing government agencies and other interested groups. When the Commission began meeting in 1996, we started work on a mission statement and funding formula. The funding bill, which passed the legislature last spring, experienced broad support from across the state from both political parties in both the senate and house.

The Commission's work will be funded by a 2 cent per acre assessment on private dryland grazing land, an assessment of 10 cents per animal unit month (AUM) on active AUM on Bureau of Land Management and Forest Service permits, and an assessment of 10 cents per AUM on state grazing leases. This formula should generate about \$317,000 annually, assuming everyone pays according to plan. Realistically, however, the amount available will be somewhat smaller.

Rancher participation in the Commission is mandatory. However, any person may request in writing, within 30 days after payment, a refund of all or any portion of an assessment levied by the Commission. To date, only a small percentage have requested refunds.

The Commission sees itself as a tool for educating both the general public and rangeland users:

- Everyone needs to understand and support balanced, responsible management of our rangelands.

- The public needs to realize there are benefits in allowing ranchers to use rangelands.

- Likewise, producers need to develop a respect and understanding of the needs of recreation users of rangelands.

The Commission is a vehicle to bring all participants together, help educate them so they can make informed decisions, and foster a spirit of cooperation which will be beneficial not only to rangeland users, but to the range itself.

As Idaho continues to grow and the demands upon our rangeland resources increase, we have a responsibility to make sure the land stays not only economically viable for livestock producers, but also retains its scenic and recreational values. We have to respect all uses.

The Idaho Rangeland Resource Commission hired a full time Executive Director July 1, 1997 to handle the day-to-day work. Her name is Gretchen Hyde, (pictured right), and she comes to the position from Agri-Beef of Boise.

The primary focus of the Commission will be educational communications through mass media aimed at the general public, together with programs developed for use in schools and within the livestock industry.

The long-term health of Idaho's livestock industry will depend upon the support of policies which balance economic and environmental concerns. This end is only attainable if the public understands, accepts, and supports basic principles of land stewardship and conservation through rangeland management. It is the Commission's goal to be part of this educational process.

*Margaret Soulen is Chair of the Idaho Rangeland Resource Commission. She is a partner with her father and brother in the family sheep and cattle operation in Weiser, Idaho. This article was originally written as an editorial in Ag Environmentalist, March 1997.*



Idaho has about 10 million acres of private grazing lands (private, state, and tribal), composed of 6.6 million acres of rangeland, 1.4 million acres of pastureland, and 2 million acres of grazed forest land.

These private grazing lands are often intermingled with, and interdependent on, public grazing lands managed primarily by the Bureau of Land Management and the Forest Service.

# LIGHTEN UP

Ok, tell the truth. Are you too serious for your own good? Take this very scientific survey, which you can score yourself, and find out...

\_\_\_\_\_1) Do you take time every day to do at least one of the following: read *Dave Barry*, read *Dilbert*, or watch the *Late Show* with Letterman?

\_\_\_\_\_2) Do you think *humorous* is a bone in your upper arm?

#### Scoring

1) Yes: plus 5 points

No: minus 10 points

2) Yes: minus 5,000 points

No: plus 20 points

#### What Your Score Indicates

1) - 5,000 to 0 points: Hello, you need to get a life!

2) 0 to 10 points: See number one above.

3) 10 or more points: Keep up the good work!

Let's talk about humor, because the subject of humor in the work place is an important one believe it or not, and deserves some attention. Why would a management column talk about humor? Well, try thinking about your sense of humor as a gift, and a tool. Having a laugh or generating a smile can relieve tension or conflict, cause you to view a situation in a whole new light, and/or connect you positively to others. All of these benefits can help you at work (as well as in your personal life). In fact, can you imagine life without any humor?

What kind of a work environment do you find yourself in? Can people use "appropriate" humor with one another and laugh out loud? Can you laugh at yourself and poke fun at each other in a way that doesn't include ridicule or put downs? Obviously there are situations where humor is not appropriate, but in my view, there are far more situations that could benefit from a little humor. Just keep this simple rule of thumb in mind and you should be ok. Put-downs and de-

meaning a particular ethnic group are probably not appropriate in the work place.

When we share a moment of laughter with another there is a connection, personalities touch one another, and it can be a delightful shared experience. When we express our sense of humor, we are telling others about ourselves, and we are indicating the nature of our relationship with that person. Haven't you ever adapted a joke told about another group to something like "How many Foresters does it take to.....?"

Odd as it may sound, we feel flattered when a co-worker seeks us out with a joke or humorous anecdote. Chances are they are telling us because they think we will identify with the joke or story, and share their point of view. And well, it often shows that they like us. Hearing a joke is good, "getting it" is better yet. We are included by virtue of the fact that we've shared that perspective on the world. And we've shown a side of us that's not just business as usual.

What makes something funny? Even though we are all individual in what tickles us, some things are likely to get a laugh from anyone. Gross exaggeration—beyond the realm of the possible—is one of these things that make us laugh. Dave Barry, humor columnist for the *Miami Herald*, is the master of this, among other techniques. He comments on his sea travel: "Finally, after two hours, which in a small bouncing boat feels approximately as long as the Reagan administration..." He also says about his small boat: "Buster is our boat. It usually sits on a trailer in our backyard, forming an ideal natural habitat for spiders. Spiders come from as far away as Brazil to make their homes on Buster."

People will also laugh at a combination of unlikely things. Take David Letterman's stupid pet tricks. How many of us would see any reason to put a hoola hoop around a pit bull? Not many, obviously! So, when we see a pit bull wriggling to keep the hoop going,

while hanging by its teeth from a rope, it's funny. Here are some other examples.

Juxtaposition or switching around a logical order can get a laugh from people. "I've traveled to every one of the Unites States, and North Dakota," said a consultant friend of mine. Yes, it was a put-down of North Dakota, but that's where he was from. Going outside the usual thought pattern is usually good for a laugh, and may even produce good ideas. Consider this applied to a letter or memo. Wouldn't it make you chuckle to receive a letter on the subject of conservation or dam building with carbon copies to Gifford Pinchot and John Muir?

Surprises and surprise endings can delight and amuse. Dave Barry, in describing his trip to California's wine country said, "The wine country is an area near San Francisco that is abundantly blessed with the crucial natural ingredient that you need to have in a successful wine country: TOURISTS." How about the boss who, after her group completed a difficult NEPA document, marched the whole interdisciplinary team down to the Dairy Queen for treats? I recently surprised participants in an intense team building session by having them play a Mad-libs word game. Adjectives, nouns, and other types of words are inserted into a story which no one is allowed to see prior to suggesting the words by these categories. The stories always turn out to be hilarious and this time was no exception. The levity raised everyone's comfort levels in what was at times a difficult session.

A friend of mine was part of a team greeting a solemn group of prospective clients in a large conference room. There was an awkward moment while the visitors pondered where to sit. My friend said, "I know, why don't you all sit on that side of the table in the order of your importance to the company?" Fortunately, everyone saw the humor in something that just doesn't conform to meeting ritual... and the ice was broken.

We're taught not to use bathroom humor in public, but when a department head admitted "I haven't been this relieved since I overcame bed-wetting," her group loved her for her honesty and fun spirit. Certain taboo subjects, such as those having to do with bodily functions can serve as the subject of great humor since everyone can identify with them.

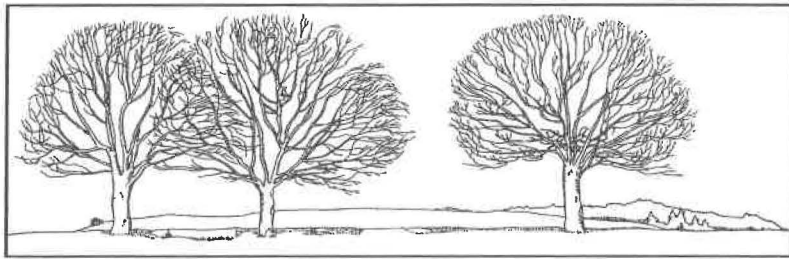
Clever plays on words, which are frequently unintentional almost always get a laugh. "Did you hear what happened to the Italian Chef? He pasta-way." Or, "If I had my life to live over, I'd live over a delicatessen." I bet you've heard this one: "I'd rather have a bottle in front of me than a frontal lobotomy."

Let's look at what you can do with a sense of humor, and what a little humor can do for you. In other words, let's consider the benefits. Maybe you don't consider yourself a good joke teller or especially funny. That doesn't matter, all that's needed is that you look at situations with a fresh perspective, see another side, and lighten up. Here's what you can accomplish with a dash of humor:

#### **Break the tension**

I've found that the more tense a situation, the more likely participants are to mis-speak, trip, or make some mistake which causes laughter. It's as though comic relief is the pressure escape valve. Have you ever noticed how people tend to laugh or giggle when they are nervous? A planning team I recently worked with was undertaking a complex and controversial management plan. At the outset, the team leader passed out a cartoon with a picture of General George Armstrong Custer saying, "It could have been worse, I could have been on this planning team." Every member of the team chuckled at the comparison, and a bond between people on the newly formed team was initiated.

Scott Adams, the insightful creator of Dilbert, produced a comic strip titled "The Seven Habits of Highly Deffective People." Groups I have worked with have really gotten a kick out of my suggesting these items as a set of team building ground rules. They include such direction as, "ignore any signs of discomfort in others," "use humor to belittle people in public," "show up late and raise controversial issues," and "give advice on things you don't understand."



#### **Preserve your dignity**

Laughing at yourself for something you've said or done can be a good way to deal with an embarrassing situation, and also demonstrates that you've retained your perspective. When it's sincere and spontaneous, laughing at yourself can demonstrate grace and even preserve your dignity. Your message to others is that although you are professional in your work, you don't take yourself so seriously that one situation is going to get you down.

Take the story of a woman who was to receive a prestigious award at an evening banquet. After finishing her meal she made a quick trip to use the restroom and check her hair and makeup before receiving her award. As she hurried back to the head table, she thought she heard a snicker or two from the dinner guests. Upon reaching the table, she noticed to her horror that when she had pulled up her panty hose in the restroom, she had inadvertently included the end of the toilet paper roll. When she left the bathroom, she was trailing a portion of the roll from under her dress. What a horrible and humbling moment she faced! Put yourself in her place and examine your options. Tears and retreat would have been too painful for both her and the audience who had come to honor her. So, she cracked a joke, and put herself and everyone else instantly at ease.

#### **Coping with unfortunate incidents**

An unfortunate incident is frequently a source of humor. Although this may seem cruel, underlying the joke telling is a need to cope with the situation. Remember all the difficulties experienced by the space station Mir? During the problems, it was joked that "A meteor has hit the space station. The meteor did \$1 million in improvements." These kinds of jokes, while appealing to most of us, are sometimes not appropriate for the work place.

#### **Build rapport**

Humor is a powerful tool for inclusion and connection. Have you noticed how some of the best speakers start off with a joke or story that the group can relate to? Not everyone

can do this, but if you can, it develops an immediate rapport with the audience. You will have their full attention for your message after establishing a connection with them.

People who laugh together share a certain sense of community. They have a bond which although it defies description, builds esprit and camaraderie. The smokejumpers are a good example of this. They work hard, face difficult and dangerous situations together, and they laugh. This makes them insiders with each other. Being able to find humor creates cohesion, reinforces what people are all about, and brings people together. Law enforcement officers, and many other groups of people who do similar work, also share inside perspectives, and find humor in the unique situations they face. There are many things that co-workers have in common; why overlook those situations that evoke a smile or laugh?

#### **Increase productivity**

"Just a spoonful of sugar helps the medicine go down," sang Mary Poppins. It's true. Workers who enjoy being there and have fun mixed in with their work will be more productive. My brother Tim, was a ski instructor and always said, "My students just didn't learn as well if they weren't enjoying themselves--so I made it fun for them." It's been proven that if you're happy, you're more able and willing to help and work with others, and you'll feel good about what you yourself can accomplish.

You've probably heard about the woman who was feeling down, and her friend said "Cheer up. Things could be worse." So she cheered up and, sure enough, things got worse! My hope for you is that you'll cheer up—lighten up, actually—because I believe that things *will* get better for you.

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# FINLAND

## Wars, Internal Migrations, Farm/Forest Policies, and Reparations Have Changed the Finnish Landscape Many Times

Kimberly G. McKanna

### Country Overview of Finland

The state of Finland today is a relatively affluent, industrialized country with a presidential parliamentary system and a unicameral legislature. With a total area of 338,145 square kilometers (roughly the area of New England, New York, and New Jersey), Finland is the sixth largest and most sparsely populated country in Europe, with population density varying tremendously from north to south (da Costa 1987). Since 1900, Finland's population has increased by 70 percent to the current five million, of which roughly 10 percent live in the capital, Helsinki (Anderson 1954, Ministry of the Environment 1988).

Located on the Fenno-Scandinavian Peninsula of Northern Europe, Finland has a maximum length of 1160 kilometers (km) and maximum breadth of 540 km. The Arctic Circle crosses Finland, so that the northern one-third of the country experiences some degree of perpetual winter darkness followed by excessive summer light. There are 188,000 lakes of at least 500 square meters—proportionally more than any other nation, covering 9.9 percent of the total area—located primarily in the eastern half of the country. It must be noted, though, that the average depth is a mere seven meters and the volume of water is thus small.

The country is bordered by the Baltic Sea, the Gulf of Bothnia, and the Gulf of Finland, forming a coastline of 1100 meters. Finland also has roughly 17,000 islands. Unlike her neighbors, Finland has no mountains—the highest point is 1300 meters—and the average height above sea level is 152 meters. However, due to the last glacial period and isostatic uplift, Finland gains roughly seven square kilometers of area annually. The area

of swampland is extensive—"Suomi" (Finnish for Finland) means "swamp"—and roughly one-third of Finland was still considered swampland at the end of the Second World War (Anderson, 1954, da Costa 1987).

With its ameliorating effect on the climate, the Gulf Stream makes agriculture and forestry possible at a higher latitude than anywhere else globally. Indeed, it has been noted that 88 percent of the land area is forested, affording more than four hectares of forest land per capita, making Finland one of the most densely forested countries in the world—roughly 10 times more forest per person than any other part of Europe (Anderson 1954, da Costa 1987).

An abundance of forests is the most significant feature of Finnish vegetation. Forests are Finland's principal resource and they are described throughout the literature as her "Green Gold." Although the majority of Finland is in the northern coniferous forest zone, the southwestern region lies in the continental European oak zone and Lapland is considered as alpine-arctic. Finland's forests are dominated by Scots pine (*Pinus sylvestris*) (45%), Norway spruce (*Picea abies*) (37%), and birch (*Betula pubescens*) (15%) (Ministry of Agriculture and Forestry 1990). Even in urban areas, parks and sheltering woodland are common (da Costa 1987, Holopainen 1984, Ministry of Agriculture and Forestry 1990, Ministry of the Environment 1988, Ministry of Foreign Affairs 1991).

Nearly one quarter of Finland's forests are state-owned, while 63 percent of the forests are in non-industrial private ownership. The remaining forests are owned by timber companies (8%) and municipalities and parishes (together, 4%). Most of the state's forests are

in the northern regions, while southern forests are primarily privately-owned, producing a disproportionate share of the annual growth. With an average holding of 37 hectares, there are 400,000 private forest owners—nearly 10 percent of the total population (Ministry of Agriculture and Forestry 1990, CFB Tapio 1992). It is estimated that 20 percent of all Finns earn their living directly or indirectly from the forests (CAFFI 1991).

Finnish mythology, crafts, and architecture are all based firmly in the forests, and much food is still gathered from them. Further, most Finns spend as much free time as possible in the forests and countryside and holidays are typically spent in activities related to nature. To preserve the natural environment, Finland has established a considerable number of conservation areas (Economic Commission for Europe 1988).

Finland's economy is based on private ownership and free enterprise. Due to a limited domestic market, foreign trade is extremely important to Finland. Between the world wars, Finnish industry was characterized by its division between the forest industry producing export goods, and all other industries dependent on the domestic market. In the 1940s and 1950s, when World War Two reparations forced the development of other industries, the forest industry lost its exclusive control of the export market (da Costa 1987). Through the 1960s and 1970s, participation in European integration and a free trade agreement with the EEC resulted in a substantial diversification of exports and a drop in the significance of forest products and the forest industry. This has been paralleled by a drop in forest industry employment over the past 40 years, largely due to increased mechanization following the Sec-



ond World War (da Costa 1987). Despite this, the wood and paper industries still occupy a key role and together export 80 percent of their production, constituting 39 percent of Finland's exports (CAFFI 1991, Hyttinen 1990, Ministry of Foreign Affairs 1991). The Central Association of Finnish Forest Industries (1991b) noted that of all the world's nations, Finland is likely the state most dependent on its forests and forest industries. This is primarily due to the abundant forest resources and the quality of the wood.

In recent years, Finland has been responsible for five percent of the global forest production and 10-15 percent of all forest exports, worldwide (Ministry of Agriculture and Forestry 1990). She provides 15 percent of the world's paper supply and nearly 30 percent of world trade in fine papers (CAFFI 1991, FFA 1992). The metal and engineering industries, which have increased production by roughly 300 percent since the war (Ministry of Foreign Affairs 1991), have assumed the lead role, however, employing one in three Finnish workers; quality is evidenced by the fact that most of its products go to western nations despite the Soviet Union's status as a most favored nation for trade (da Costa 1987).

Traditionally less affluent than the other Scandinavian countries, Finland is still one of the wealthiest and most technically advanced countries in the world (Hyttinen 1990). A member of the European Free Trade Agreement since 1961, Finland is also a member of the United Nations, GATT, the IMF, the World Bank, the OECD, and—as of 1995—the European Community. Since the Second World War, the percentage of service industries has expanded tremendously (da Costa 1987, Ministry of the Environment 1988, Ministry for Foreign Affairs 1991). Learning and education are highly respected; illiteracy is unheard of (Niiniluoto 1960).

### **Finns and Natural Resources: A Necessary Union**

While the industries have been responsible for determining the intensity of forest management and the direction of forest policy, agriculture has also affected forest policy by determining the patterns of land use and forest ownership (Pärnänen 1979). Throughout Finland, sales of timber from privately

## **To Understand Finland's Natural Resources Situation, Look First to Finland's History**

Finland's recent history may be explained by a single and simple truth: the country is located between Sweden and Russia. Her early status as part of the Kingdom of Sweden was forever quit with the defeat of the Swedish-Finnish army during the Napoleonic wars. In 1808, Finland was annexed as an autonomous duchy of Russia. Officially under the authority of the Czar, however, Finland maintained its central authority and Russia created a de facto Finnish state (da Costa 1987, Jutikkala 1960a, Klinge 1981). Finland retained its Lutheran religion, Swedish official language, Swedish civil and criminal law, and a Gustavian form of government (Klinge 1981, Lukacs 1992, Ministry of the Environment 1988, Wahlback 1982).

Czar Alexander guaranteed his new subjects the continuation of all rights they had enjoyed as members of the Swedish Empire (Jutikkala 1960a) and Russian rule actually gave Finland considerably more autonomy than she had had under Sweden. Hoping to establish a Finnish capital less subject to Swedish influences, Alexander moved the capital from Turku to Helsinki in 1812 (Millward 1964).

Finland's self-sufficient government, army, and independent currency had an important positive effect on life and modernization. From 1869 onwards, significant laws in Finland could only be made, changed, or repealed with the consent of the Finnish government. Russia was at that time a more cosmopolitan nation than Sweden, and Finland benefited from the western migration of talent from St. Petersburg (Griffiths 1991).

As Finnish reforms progressed, however, her position under Russian "authority" became more sensitive, leading to tension with the Czar's government. Russian attempts to dominate Finland, particularly with respect to military and economic matters, led to conflict between the Russian government and the increasingly nationalistic Finnish upper class (Griffiths 1991, Jutikkala 1960a, Klinge 1981, Vloyantes 1989). By 1908, the situation had become volatile especially as key political positions went almost exclusively to Russians as the Czar tried to unify his vast empire (Ministry of the

Environment 1988, Vloyantes 1989). Vloyantes notes that the Finnish upper class saw these changes as a cultural attack by an inferior society.

As the Russian Revolution in the spring of 1917 restored Finland to a temporary position of autonomy, many Finns discussed the idea of independence. A proposal for independence was passed on 6 December and Lenin's government, which had as much as it could handle in stabilizing the rest of the Russian nation and which further assumed that a communist revolution would be forthcoming in Finland, acknowledged Finnish independence on December 31, 1917. Most of Europe quickly followed suit (Jutikkala 1960a, Klinge 1981, Lukacs 1992).

Immediately after independence was declared and acknowledged, however, Finland was engulfed in civil war. Opposing political groups were supported by Germany and Russia, who used the Finnish civil war to extend the continental war (World War I) between the major powers (da Costa 1987, Derry 1979, Jutikkala 1960a, Klinge 1981, Ministry of the Environment 1988).

The "Whites" were aided by troops from Germany, while the "Reds" had the support of Lenin's troops. Unlike the majority of the Finnish Senate, The Commander-in-chief of the Finnish Whites, Mannerheim, was cautious about establishing political relations with Germany, arguing that Germany was going to lose the war and that the Finns would lose their self-confidence if refused the chance to liberate themselves (Griffiths 1991, Jutikkala 1960a, Lukacs 1992).

In the end, the "Reds," supported by Lenin, were defeated in May 1918. The existence of a non-communist state so close to a major Soviet city fueled Soviet security fears and was largely responsible for the Soviet attack on Finland in 1939.

In July 1919, the Constitution was ratified and under the 1920 peace treaty with Russia, the Petsamo area of Lapland was added to Finland's former territory, extending the country to the Arctic Ocean (Klinge 1981). Because Finland already had its own system of representation and administration, universal suffrage, a civil

# History

(Continued)

service, and financial institutions, it experienced far less change in the following years than the other countries that achieved independence after World War I (Klinge 1981).

After the war, agrarian reforms that transferred property to the rural proletariat were rapidly effected, resulting in increased domestic stability, especially for the two-thirds of the population still dependent on forestry and agriculture (Jutikkala 1960b, Klinge 1981). It is important to note, however, that the civil war and its causes continued as the primary issues in Finnish domestic politics throughout the 1920s and 1930s and served to divide Finnish society (Alestalo and Kuhle 1984, Griffiths 1991). Additionally, immediately after the two civil wars there was conflict over the Soviet-Finnish border through Karelia. While it was settled by a compromise in 1920, irredentism in Finland and Soviet support of the communist underground in Finland continued to antagonize both major factions and contributed to numerous government crises (Jutikkala 1960b, Wahlback 1982).

The global economic depression of the late 1920s and early 1930s further affected Finland's economy and society. Large numbers of small landowners in Finland joined the unemployed as seasonal employment in forestry became economically impractical. At this time, the Agrarian Party (later known as the Centre Party) first achieved prominence in Finnish politics (Jutikkala 1960b).

Throughout the 1920s and 1930s in Finland, there was a growing anti-Communist movement. When Finnish foreign policy and public opinion began to sympathize with the growing German state in the 1920s and 30s, the Soviets were suspicious and nervous. Despite a 1932 treaty of non-aggression between Finland and the Soviet Union, it was feared that the Finnish Government would allow a third state to use Finland as a staging area from which to attack the Soviet Union (Griffiths 1991, Gripenberg 1960).

Hoping to preempt such action and force Finland to play the role of buffer, the Soviet Union bombed Helsinki on 30 November 1939, leading to the Winter War. Lasting five months, Finland managed to achieve several victories in repelling attacks. Throughout the war,

Soviet casualties outnumbered Finnish losses by a factor of ten (Trotter 1991). Despite this, by March 1940 the Finnish army had been forced to withdraw and surrender Viipuri, a coastal city east of Helsinki. The Finnish army had lost one-third of its forces when the Peace of Moscow was signed 12 March 1940. In the end, Soviet goals were realized: a military base near Helsinki and the moving of the border away from Leningrad. This resulted in a 12% loss of territory and the resettlement of the 420,000 Finns who were forced to move or become Soviet citizens (Griffiths 1991, Klinge 1981).

Finland's feelings of injustice following the Winter War, combined with heavy loss of life and supplies during the war and the suspicion that Moscow was determined to ultimately absorb Finland (Gripenberg 1960), had an important effect on Finnish foreign policy when the German-Soviet non-aggression pact began to show signs of strain. Obligated to pick a side in order to secure supplies and determined to avoid a Soviet occupation and/or permanent annexation, Finland set aside her ideological dismay at Nazi policies and declared war on the Soviet Union on 26 June, 1941, just after the start of Operation Barbarossa (Klinge 1981, Vloyantes 1989).

Throughout the Continuation War, as it was called, Finland did not establish a formal alliance with Germany and both the Finnish government and Marshall Mannerheim (Commander-in-Chief) were able to follow a strategy that served Finland's needs alone (Griffiths 1991, Klinge 1981).

Finland fought for the retrieval of the ceded Karelian territory and parts of eastern Karelia that Finland had tried to obtain following the War of Independence. Realizing, however, that Finland and the Soviet Union would remain neighbors regardless of the war's outcome, Mannerheim refused to allow German troops to be incorporated with Finnish units, deliberately ignored German directives, refused to advance beyond the old border (which was presumably Finland's only goal), refused to let Finnish troops take part in the siege of Leningrad, and did not attempt to disrupt Soviet service lines to the Arctic in the attack on Murmansk (Griffiths 1991, Gripenberg 1960, Klinge 1981).

owned forests made it financially possible for family farms to survive in a land which is physically unsuited for agriculture. Forests play such an important role in the life of rural landholders that Grey (1988) observed, "a typical farmer, when asked how much land he owned, would first describe his forest land rather than his crop area."

Finns believe that while an individual owner may have the right to manage as he or she sees fit, including the sale of timber, the forests as a whole belong to the entire nation. It is unacceptable for an individual Finn to treat a forest in such a way that its value to society is diminished (Osara in Marsh 1954). As is the case in the other Scandinavian countries, Finland observes a traditional right of access to the forests. The so-called "Everyman's Right" means that anyone is entitled to use and enjoy forests, regardless of ownership. There is no fee to enter any forest and a person may enter private property without permission. Finns may travel by foot, skis, or cycle and camping is permitted. Bodies of water are considered common property, and berries and mushrooms (whose collection and sale yield considerable income for many Finns) may be picked anywhere. The few restrictions on these rights include prohibitions against motorized vehicles, campfires, use of agricultural areas where access might damage (privately owned) crops, and the area immediately surrounding private structures. While Finns are careful to not abuse these rights, they take full advantage of them (Ministry of the Environment 1988). Significantly and as a result of this right, Finns feel that they have the right to determine policy for privately owned lands, as well as those in public ownership (Reunala 1992).

## Land Tenure and Finland's Early Settlement

As early as the 14th century, the State was trying to promote the settlement of the uninhabited wilds in order to provide the State with new taxpayers. This was achieved by granting settlers permanent ownership of any land they cleared. As a consequence, by 1520, free peasants owned roughly 96 percent of the land (Laitakari 1961, Marsh 1954). An important contribution from this era was the concept of forest as a fief—a property to be maintained and passed to the next owner in a productive condition (Greeley 1953).

By the next century the term "General State Lands" had appeared and in the 16th century, edicts issued by the King of Sweden provided a firm basis for State ownership of land. These edicts gave the State title to all land that could not be proven to be in the possession of any village or holding. The separation of State lands from private began in the late 18th century (Laitakari 1961); under a policy known as "Isojako," a wide-ranging land consolidation and enclosure program was begun in 1750. This policy defined the size and borders of each ownership unit and henceforth it was impossible to claim ownership of land merely by virtue of occupancy. Active settlement policies used tax exemptions to bring formerly uninhabited lands into use (Holopainen 1984, Ministry of the Environment 1988). From this point on, most of the forests were in private ownership and forest ownership became a matter of official settlement policy.

Holopainen (1984) makes the point that throughout the "Isojako" era, land ownership policy and land reform programs had been primarily instigated by the socio-political situation rather than by forestry interests: "The principal motivation has been to secure the existence and well-being of agriculture and the farm population." Similarly, it has been observed that settlement activities and land clearance for agriculture are highly significant features of Finland's history and cultural heritage (Selby 1980a). This would seem to imply that forest policy is insignificant compared to agricultural considerations, until one remembers that farming in Finland is virtually impossible without the simultaneous management of the forests. Given a constant land area, the amount of forest land and the intensity of management required to provide a given amount of timber are directly related to the amount of land under cultivation.

In the last decades of the 19th century, Finland, far more than any other Scandinavian country, experienced severe social problems among the landless rural proletariat who could not be trained in other branches of the economy and who chose not to emigrate to the New World (Alestalo and Kuhnle 1984). By the end of the century, roughly 80 percent of the rural population did not own land and nearly as many (77%) were dependent on the landed gentry. The serious social problems and unrest caused by this landless population set the stage for a long series of social

reforms after independence and decades of commitment to private forest ownership (Kähönen 1966, Reunala 1974). This history also resulted in extreme territoriality by private forest owners who believed that land ownership was the only route to a higher standard of living (Hietanen 1982, Mead 1981). Meinander (1960) noted that part of this desire to own land stems from the prominent and profitable role of the forests in industry.

### Forestry Enables Agriculture

In the late 1930s before the Second World War, roughly 65 percent of the entire population was still engaged in agriculture (Jutikkala 1960b) and agriculture was a keystone of the economy until the 1950s, when there were sweeping changes in Finland's industries and economy (Alestalo and Kuhnle 1984). Finland's climate and soils are poorly suited to agriculture, however, and economic security and self-sufficiency has always been tied to the forests: while family farms have traditionally predominated, they have rarely been large enough to support a family.

Forestry enables agriculture in many well known ways: through timber sales, which produce money to increase a farm's profitability or pay taxes, for example. It provides building materials for structures and fencing, supplies the farm with heating material and with grazing for livestock (Alestalo and Kuhnle 1984, L. G. Haartman in Honkajuuri 1968, Mead 1958, Reunala 1974). Modernization in Finnish agriculture became possible only as farmers began to acquire capital through the sale of timber (Alestalo and Kuhnle 1984).

In the first half of this century, forestry specialists were rare and the vast majority of forest work was done by farm families. Forestry provided work (such as thinning, felling, hauling, and floating) and employment during the winter months (Lihtonen 1949, Osara 1950, Waris 1960). This combination of forestry and agriculture is the only method by which people have been able to settle permanently in regions of poor soils, harsh climate, or sparse population (Osara 1950 in Osara 1985). Looking at his contemporary society, Saari (1936) noted that in many parts of the country, the majority of a farmer's income comes from the forest, rather than from crops and livestock. Further, Osara and Meinander (1960) ob-

served that with only agriculture or only forestry, the standard of living would be much lower—farm forestry is a basis for the nation's economy.

### The Landscape Changes After the 1944 Armistice: Huge Territory Losses to the USSR

Heavily involved in World War Two from 1939-1945, Finland was on the losing side. She lost territory, was forced to sign an agreement of friendship with Moscow, and was compelled to pay reparations. Finland felt her situation poor, difficult, and threatened relative to her neighbors, the victorious Soviet Union (which had become a great power), and Sweden (which had become prosperous due to the war). Further, the demands of Britain and the Soviet Union to condemn the political leaders of the non-victorious belligerent nations had a negative psychological effect on Finland. War trials led to the conviction of President Ryti, two prime ministers, and several other Finnish political leaders (Klinge 1981).

Included in the terms of the treaty was the cession to the Soviet Union of approximately 43,800 square kilometers—12.5 percent of Finland's total land area and roughly 10 percent of Finland's total area (these figures vary by +/- 2 percent depending on which official publication is consulted). The ceded areas were in the Karelian Isthmus, the Kuusako and Salla districts in northeastern Finland, the ice-free port of Petsamo in the north, and the Porkkala Peninsula to the west of Helsinki (Fontell 1960). These lands, which in 1938 had accounted for 13 percent of all agricultural production, also contained 12 percent of all forest land, and 25 percent of developed hydroelectric facilities. Further, the ceded territory included another Finnish port, Viipuri, which was the outlet for the water way system through which much of Finland's timber reached seaports.

These figures do not accurately represent the calamity to the nation, as the large majority of industry's modernized facilities and industrial complexes (including 93 mills or factories and as much as 25 percent of timber export production facilities) were located in the ceded territory (FAO 1946, Frederickson 1960, Poukka 1968, Sevola 1991). On the other hand, the loss of both forest land and

*Widespread they stand, the Northland's  
dusky forests,  
Ancient, mysterious, brooding savage  
dreams;  
Within them dwells the Forest's mighty  
God,  
And wood-sprites in the gloom weave  
magic secrets.*

- Jean Sibelius

the forest industries' production capacity resulted in an equilibrium: timber was not rendered worthless due to the industries' devastation; neither were industries forced to purchase timber from those devastated forests (Holopainen 1968).

Also included in the ceded territory were several of the national parks and six nature reserves that had been established in the late 1930s. Härkönen (1992) noted that roughly 10 reserves were left and that the ceded lands represented about one-third of the pre-war park and reserve system. This loss of land had an impact on the amount and location of land designated for protection during the post-war era.

## **Forced Resettlement and the Land**

The ceded areas were home to more than 10 percent of Finland's total population of four million (figures range from 410,000 to 480,000) and following the cession, these Finns were forced to abandon their homes (Fontell 1960). Many of these had already been evacuated a few years earlier but returned again during the Continuation War as Finnish troops temporarily reclaimed ceded areas (Griffiths 1991, Klinge 1981). Following the cessions mandated by the 1944 armistice, citizens were again forced to relocate within Finland's new borders (Klinge 1981).

Roughly half (230,000) of the refugees from Karelia, Porkkala, and Petsamo were from families whose primary livelihood was dependent on agriculture (Pihkala 1952) and it was clearly desirable to maximize productivity and minimize the shock of relocation by settling farming families on farmable land (Fontell 1960, Lindroos 1992). The Prompt Settlement Act contained resettlement and compensation provisions for ex-servicemen with families, war widows and orphans, and war invalids, in addition to the refugees from ceded lands.

In addition to the Karelian region, refugees also came from the ceded territories of Porkkala and Petsamo. The Porkkala territory, located roughly twenty kilometers west of Helsinki, represented 38,073 hectares, of which 12,611 were arable and 25,897 forested. The population of 700, most of whom were engaged in land-based occupations, was relocated, and the Soviet Union used the area as a military base for 10 years, during which time maintenance of both agricultural and forest land was neglected. (When the Soviet Union chose to return the Porkkala area to Finland in 1955, expensive improvements and restorations were necessary [Anonymous 1964]).

All refugees' resultant confidence that their plight would receive appropriate attention may have been responsible for the virtually unanimous decision to move (and remain Finnish citizens) rather than remain in their homes and become Soviet citizens (Hietanen 1982). Further, while Finland already had a long history of settlement, this tremendous land redistribution was the greatest; the effort reaffirmed Finland's commitment to family farms and private, non-industrial forestry. *Jakaja Asutushallitus*, a professional journal that dealt exclusively with the issues of post-war resettlement, was published for more than a decade and is still the principal source of material on this aspect of Finnish history.

## **The Land Acquisition Act of 1945**

The most important piece of legislation in the immediate post-war years was the Land Acquisition Act of 1945, resulting in the establishment of roughly 40,000 new farms within Finland's new boundaries. This was achieved by the transfer of public lands, company lands, parish and community lands, private estates, and the larger privately-owned farms. Of the land used, cultivated and potentially-arable land comprised roughly 725,000 hectares, while 1,958,000 hectares were forested (Fontell 1960).

State-owned forest land and bogs were appropriated first, with the result that there exists almost no State-owned land in the south (Hartikainen 1992). In some districts where land was in short supply it was also obtained from private estates and farms through compulsory sales (Lihtonen 1949, Millward 1964). The amount of land taken from private owners depended upon their

total holdings: owners of 25 hectares surrendered 10 percent of their land, for example, while those with 800 hectares or more were required to relinquish 80 percent for resettlement. Additional legislation, the Voluntary Acquisition Regulation Act, offered special incentives for private owners to sell their land to settlers and 23 percent of all redistributed land was obtained in this manner (Pihkala 1952).

Depending on need and circumstances, tilled fields, forest land, or both were distributed (1949) and while the resettled people were kept busy improving the land through drainage work, forest clearance, and building, most materials were provided by the government and the land was given at little or no cost (Marsh 1954). General economic conditions after the war necessitated the urgent clearing of land for agriculture, as this was the only possible way to replace the farm land lost in the ceded area; the peak years for forest clearing were 1949 and 1950 (Saarinen 1966). Due to this clearing (roughly 150,000 ha), the forest resource base decreased while the population that it was obliged to supply increased in size (Marsh 1954). Smeds (1960) observed that the high prices paid for timber and pulpwood during the post-war years acted as an incentive for further land clearing. While Finland had followed a deliberate settlement policy since independence, the transfer of lands which occurred as a result of the post-war resettlement program was unprecedented in both scale and long-term effects. The Land Acquisition Act started a cascade of agricultural and forestry policy changes which has continued to the present time.

In addition to war invalids, orphans, widows with children, and ex-servicemen with families (Pihkala 1952, Saarinen 1966), to ensure political and social harmony, land was also granted under very favorable purchase terms to people who had no land prior to the war but wished to start farming. Unlike other groups, however, these owners were required to pay and the State retained ownership until payments were completed—typically a decade. As a result, the State had greater control than usual over the treatment and utilization of the forests on these farms and following the post-war years of fuelwood cutting, reconstruction needs, and high stumpage prices, these forests were typically in better condition than others (Kärkkäinen 1992b).

Control over the Act's execution was given to the Ministry of Agriculture, with practical responsibility falling to its Department of Settlement Affairs. By October 1, 1945 (the deadline for land applications) approximately 50,000 applications had been made for land (Saarinen 1966), most of which were approved with full ownership rights given (Anonymous 1960). Frederickson (1960) wrote that while Finland "has been unique in finding effective and creative means of dealing with displaced persons...in purely economic terms the [resettlement program] was costly." It is estimated that the average cost to resettle each of the more than 400,000 refugees was 650,000 Finnmarks (roughly US\$2000 each, totaling US\$1,000,000,000)—expensive until one considers the social and political disaster that would have likely resulted from less-vigorous government attention to a huge landless population following defeat in war (Fontell 1960, Frederickson 1960). Refugees were given the option of receiving money rather than land but very few took this alternative due to high inflation after the war and a national psyche which accorded prestige to farmers and a traditional lifestyle (Kärkkäinen 1992a).

The National Board of Forestry had the responsibility for dividing State Forests into lots of sufficient size for each new group of settlers. Under the 1945 Act, "cold farms" were established. These were so named because their agricultural land was entirely or almost entirely derived from the clearance of forest (Pihkala 1952). Upon occupation, they lacked buildings and the farmer had to literally create a viable farm and home out of veritable wilderness (Mead 1958). Because it invariably took several years' hard work before these farms became profitable, families settled on such farms required considerable state subsidization at first (Millward 1964). Lindroos has noted that in many cases where new farms could not support a family, the forests were severely over-harvested to procure money through timber sales (1992).

Most of the land taken for settlement required drainage. Under the funding provisions of the Land Acquisition Act, such action was executed much more speedily than under normal circumstances. Many established farmers took advantage of this legislation to improve the productivity of their forest and farm land or in some cases, that which remained after relinquishing part

of their property for settlement (Millward 1964). By the beginning of 1960, 243,285 hectares had been drained and sixteen billion Finnmarks (roughly US\$50,000,000) had been spent on road and drainage works, while costs of an additional four billion Finnmarks were anticipated as being necessary to complete the work (Anonymous 1960).

In the years prior to the war, most reclamation projects were on mineral soils. After the war, however, the great majority of the reclaimed area was located on peatland, particularly in northern Finland. This implies a change in reclamation tactics and a willingness to achieve the large-scale cooperation and preparation necessary to reclaim swampland and make it more productive for both forestry and agriculture. The drainage work had two peaks of activity: 1948-1949 and 1953-1954. During this period of reclamation, new vehicles for mechanized work were also developed (Hartikainen 1992, Smeds 1960).

In 1958 the Land Acquisition Act was repealed and the Land Using Act (and supplemental legislation) took effect on January 2, 1959. By then, the Act had already resulted in the distribution of 775,000 hectares of arable and cultivable land, fallow, and pasture, as well as 1,940,000 hectares of forest land. Also, almost 15,000 kilometers of roads had been built, increasing the pre-war total of 66,500 kilometers by roughly 27 percent (Anonymous 1960). Continuing settlement activities covered by the provisions of the Land Acquisition Act were not affected and by 1968, some 2.8 million hectares of land had been acquired and redistributed, roughly half of which had been state-owned. To make this land productive, an additional 19,000 kilometers of roads were constructed and 265,000 hectares were drained (Anonymous 1968).

In harmony with the provisions for expropriation of farm land in the Land Use Act, it was required that agricultural land be accompanied by forest land. To ensure that timber on expropriated lands would still exist when title was transferred to the new owner, the Land Use Board retained the right to ban fellings in the area; the removal of top soil and other property which would affect the value of the timber stand was also restricted (Suominen 1966). An important part of the Act prohibited the conversion of

vigorous, good-quality forests. The Act also forbade the transfer of property which was essential for wood storage or forest workers' lodging (Sulminen 1966).

Even with such provisions, the net result was that overall land-use policy favored agriculture at the expense of forest improvements and sound long-term management (Frederickson 1960, Holopainen 1968). Due to the great shortage of provisions at the end of the war, Finnish policy aimed at self-sufficiency in food production. Finland's climate and possibilities for food production, combined with a small domestic market, have made this a costly goal, however (Frederickson 1960, Holopainen 1984, Millward 1964, Organization for Economic Co-operation and Development 1989, Osara 1972, Selby 1992). It is difficult for an independent farmer to run a profitable farm in Finland's economic climate and for several decades following the war, agriculture in Finland enjoyed considerable subsidization. Prices were kept above world market prices and bonuses and tax incentives were given for the clearing of new agricultural land.

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*The Finno-Ugric peoples are the children of neither the sea nor the hills, the steppes nor the deserts, the plateau nor the tundra, but of the forests of the North. The forests and the Spirit of the North—it is these that have shaped the character of the Finno-Ugric peoples through the millennia, it is these which define not only our character, but our inner strength.*

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*Kimberly McKanna's Bachelor's is in Earth, Atmospheric, and Planetary Sciences from the Massachusetts Institute of Technology. Her Master's in Natural Resource Science is from Washington State University. McKanna then worked on a Ph.D. in Political Science at Colorado State University before enrolling at the Colorado Institute of Law Enforcement Training and becoming a police officer. This article, the first of two, is based on her Master's thesis research, which addressed the impact of World War Two on Finnish forest policy. She spent four months in Finland and Sweden gathering data.*

# Duck *Nesting* Paradise

**Craig Bihrlle**

To female ducks, man-made islands in some North Dakota wetlands must look like a waterfowl version of tropical paradise. Each spring, ducks descend on some of these islands to build nests in fascinating numbers, crowding in like sun-worshipping tourists on a warm white-sand beach.

Attracting ducks is exactly what waterfowl managers have in mind when they build small islands in large wetlands. The theory was, and still is, that islands act as safehouses, separating duck hens and their nests from two primary nest predators, red fox and skunk.

On the mainland, where many duck species nest in upland grass near wetlands, fox, skunk, coyote, raccoon, badger, ground squirrels and several kinds of birds destroy a high number of nests. In some areas of the Prairie Pothole Region, where upland grass is relegated to small pockets easily searched by predators, nest success for mallards can be well below the 14 percent needed to maintain the population. Even in areas with large blocks of grassland cover – like Conservation Reserve Program acres – predators are known to disrupt about 75 percent of all initiated nests.

On managed islands, duck nest success is usually much higher. Gulls and other avian predators still get some eggs, and an occasional mink can cause significant damage if it swims to a populated island. However, fox, coyote and skunk are thwarted by the expanse of water. On some islands where 100 or more hens might nest on a secured acre, high success translates into lots of ducklings from a small area.

## **A Study on Occupancy**

While many of North Dakota's 200-some artificial nesting islands produce dozens of duck broods in a given year, others sit almost vacant, even in years of record duck numbers like 1996 and 1997. Ann Dahl, an independent researcher

working out of North Dakota Game and Fish offices, is trying to discover why. Dahl, whose Ph.D. is in waterfowl biology, is leading a two-year study to determine why some islands attract more ducks than others.

The bottom line is...the bottom line. Islands can be highly effective at producing ducks, but they are also expensive, averaging about \$20,000 for a one-acre model. In the future, waterfowl managers want to build islands in places where they will generate high use. Hence the study.

The North Dakota Game and Fish Department is the lead agency for the nesting island study, with significant participation from the U.S. Bureau of Reclamation, U.S. Fish and Wildlife Service, Ducks Unlimited and Northern Prairie Science Center. Mike Johnson, Game and Fish Department waterfowl biologist and overall project supervisor, says islands are just one of many strategies that can improve duck recruitment in the Prairie Pothole Region, and help meet the goals of the North American Waterfowl Management Plan. "In order to make those islands produce," Johnson says, "we want to know that we put them in



Study Leader Ann Dahl (right), and assistant Kathy Olstad, scour an island for nests in methodical back and forth fashion. Each nest is marked with a numbered willow stick so it can be revisited later.

the best places, to somehow guarantee high occupancy and high nest success. In order to do that we needed better information," Johnson added.

### One Year Down, One to Go

Dahl began her work in 1996, paring down close to 300 created islands in North Dakota—more than 200 built by Ducks Unlimited since 1985—to 26 sites that two-person crews would visit and thoroughly search four times from April to mid-July. In addition to counting duck, goose, shorebird and songbird nests, and tracking their success or failure, Dahl's work also involved mapping the landscape surrounding each wetland by ground survey and aerial video.

While duck nesting success on islands has been studied before, the landscape portion of Dahl's research is a new twist. "One of the main theories," she says, "is that the percent of upland in cropland might affect how many birds use an island."

The theory works something like this. In some parts of North Dakota, wetlands with created islands are surrounded by active cropland, which provides little habitat for nesting ducks. Elsewhere, wetlands with created islands are surrounded primarily by native prairie and CRP grasslands, which may provide adequate to ideal upland nesting habitat. Assuming the same number of ducks are initially attracted to each area, the hypothesis is that island use by ducks would be greater in areas with more cropland, because there isn't as much other nesting cover in the landscape.

With one year of research in the books, and another search season winding down, Dahl isn't ready to confirm that hypothesis yet, but she and her assistants have discovered some impressive duck-nesting efforts on various islands.

### Some Surprising Numbers

On 34 islands that range from one-quarter to one acre in size, searchers found 1,265 duck nests in 1996. On two islands, every nest hatched. On two other islands, a predator – most likely a mink – invaded and wiped out about 70 percent of the nests. Overall, 920, or 73 percent of the island nests hatched.

In 1996, the average island attracted 37 nesting duck hens. Five islands held fewer than 15 nests. Three islands had more than 100 nests each, a density that ranks with the highest ever recorded, and invites inspection into responsible factors. "I never expected to find anything like that," Dahl said.

One high-density site is the Hoffstrand Waterfowl Production Area in Benson County. It has two islands, both about a quarter acre in size. One island is covered with just grass, the other is cloaked with rose bushes and other brush. Last year, Dahl said, the grass island had 20 nests and the rosebush island 150. What's more, brush covers only two-thirds of that island. "That's where most of the nests are," Dahl added. "It's amazing to stand there, with a dozen nests in view." With nests sometimes only a meter apart, hen ducks don't seem to mind, however. About the only problem, Dahl says, is nest parasitism, when some hens – especially redheads – lay their eggs in another bird's nest.

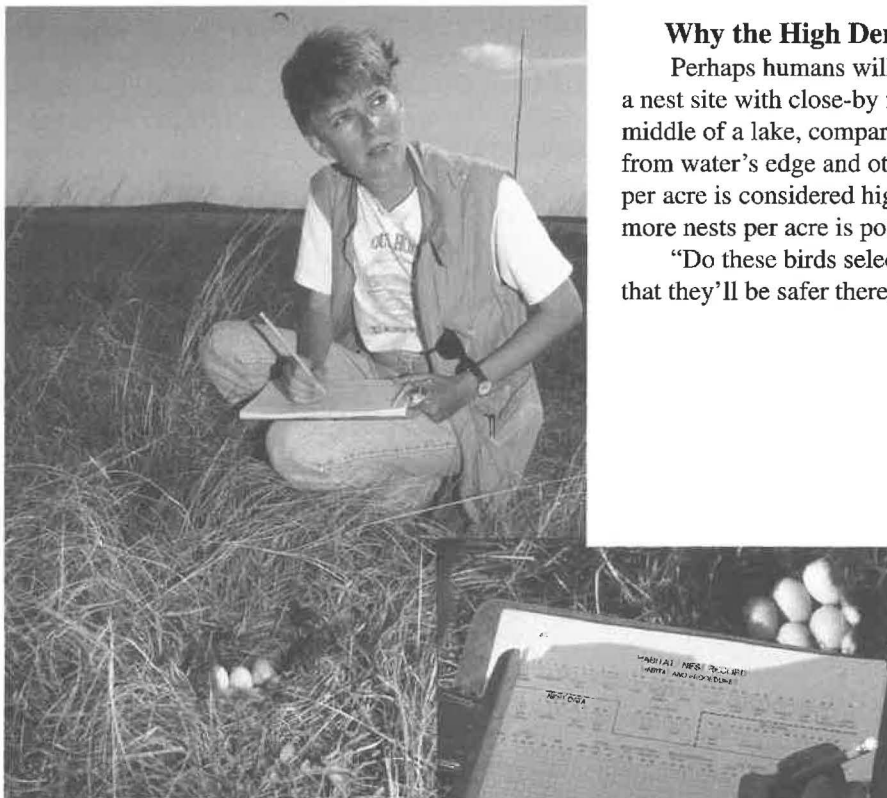
Another high density site was Lake Alice in Ramsey County. Two islands of less than an acre each combined for 225 duck nests in 1996. Nest success at Hoffstrand was 73 percent, and 65 percent at Lake Alice. Between them, less than three acres of islands probably produced more than 1,600 ducklings (average six per brood) last year. Unfortunately, high water flooded the Lake Alice islands in 1997.

That's the kind of potential waterfowl managers envision for all future created islands.

### Why the High Density?

Perhaps humans will never know why a hen mallard chooses a nest site with close-by neighbors on a tiny grass island in the middle of a lake, compared to a grassy swale a good distance from water's edge and other hens. After all, a nest density of one per acre is considered high for good upland cover. A hundred or more nests per acre is possible on islands.

"Do these birds select these islands because they recognize that they'll be safer there, and they'll have a better chance of



Ann Dahl records information from a duck nest. Details such as species, how many eggs, and extent of incubation are important.

The drought of the late 1980s and early 1990s was hard on the duck population, drying up most wetlands in North Dakota. However, dry wetlands make for easy nesting island construction. Many islands built during that time were ready to produce when water returned to the prairies. In fact, so much water has returned that a number of islands are now submerged. High water wave action is also eroding banks on some islands as below.



producing young, or is it accidental,” Dahl wonders. “I feel that just based on the number of birds that are on these islands, somehow they recognize them as a safe place.”

After the 1997 field work is finished, the final touch is to try to find some answers, Dahl says. “What we have learned through our initial analysis,” she stated, “is that there’s no simple answer.” Final evaluation after the second field season probably won’t provide “The Answer” either. What Dahl thinks she will find are several factors that increase the likelihood that a created island will attract nesting ducks.

Those factors might include the amount of cropland in the landscape; the amount and type of cover on an island; the number of other wetlands in an area that attract ducks in the first place; and where in the state the wetland is located.

Finding one single answer probably isn’t critical, according to Mike Johnson. “In our view, nesting islands are a major component of the North American Waterfowl Management Plan in North Dakota,” Johnson said. The key to the current study, he said, is learning enough “so you can put the right strategy in the right place, so you get the most ducks for your dollar.”

Accomplishing that will go a long way toward maintaining the gains the continental duck population has made in the last few years.

*Craig Bihle is associate editor of North Dakota Outdoors Magazine. The photos are also by Bihle. This article is reprinted with permission from the August 1997 issue.*

- The idea for islands has been around for many years. Some of the first work was done at J. Clark Salyer National Wildlife Refuge in northern North Dakota, when 70 islands were constructed specifically for waterfowl in 1935.

- Most islands built today are at least a half acre. Island cover is planted, as opposed to leaving seeding responsibility to the wind.

- Agencies use several guidelines to determine where to build islands:

- 1) Location must be an alkali or brackish lake. These waters have few cattails and other habitats that attract food sources for predators, i.e., muskrats or mink. Mink and raccoon cause the most predation problems by mammals on nesting islands in freshwater wetlands.

- 2) Islands must be at least 100 yards from the nearest shoreline.

- 3) Landscape must have a high density of breeding duck pairs and a history of low recruitment, or produced adult ducks.

- 4) Area must not have large amounts of competing upland nesting cover.

- Most islands, including some of those in Ann Dahl’s study, are monitored for mammalian predators; when predators are found, they are removed by trapping or other means.

- Ducks are not the only birds that nest on islands. Many of them have a goose nest or two, as well as shorebird nests. Avocets are particularly fond of islands; one site had 50 avocet nests. Rare piping plovers have also nested on a few islands.

- Mallards and gadwalls are the most common ducks found on islands.



Example of a hatched duck nest.

# Graduating Blacks: Some Joint Programs Show Early *Success*

Oghenekome U. Onokpise  
Don Rockwood  
Ted Willis

During the past three decades, the lack of interest in forestry and its related professions has kept the enrollments of minorities for degree programs in forestry and natural resources conservation (FNRC) at extremely low levels. Between 1968 and 1990, only 200 to 300 black students enrolled in forestry programs, with most of the black forestry graduates being produced through the Tuskegee University Pre-Forestry program (Kolison, Jr. et. al., 1995, and Anderson et. al., 1996). Recent membership data from the Society of American Foresters (SAF) revealed that of the more than 18,000 members of SAF, women make up 10 percent, African-Americans accounted for 0.42 percent, Hispanic and Native Americans constituted 0.39 percent and 0.35 percent respectively, while Caucasian males were 88.8 percent (Kolison, Jr. et. al., 1995, and Anderson et. al., 1996). The report also indicated that minorities were less likely to renew their

memberships in SAF. This lack of appeal for minorities or women may be due to perceived or existing barriers or stereotypes in the forestry and natural resources conservation professions at large (Ehrenreich, 1996, and Mobley, 1996).

However, since 1991, a number of public and private agencies have put in place mechanisms to enhance minority participation in forestry and natural resources. Therefore, the main objective of this paper is to report on the progress made to date with emphasis on the FAMU-UF 2 + 2 joint degree program in Forestry and Natural Resources Conservation. This joint degree program involves students spending their Freshman and Sophomore years at Florida A&M University (FAMU), and their Junior and Senior years at the University of Florida (UF). A second objective of the paper is to highlight problems encountered and provide suggestions for further improvements.

## Program Initiatives and Financial Partnerships

Although programs—in pre-forestry and related sciences—have existed and currently exist in a number of Historically Black Colleges and Universities (HBCUs), Alabama A&M University, North Carolina A&T College and University, and Tuskegee University, it was only in the early 1990s that concerted efforts were made to have degree awarding programs in FNRC at the HBCUs, especially at the 1890 Land Grant Universities and Tuskegee University. For example, in 1991, Southern University received a grant from the United States Department of Agriculture-Forest Service (USDA-FS) for the establishment of a four-year degree program in Urban Forestry. Similarly, Alabama A&M University, also with funding from USDA - Forest Service, has expanded its instructional logging and harvesting programs into a four-year degree program in Forestry with enhanced research activities (Shufford, 1995). And in November, 1991, the Forest Service led a consortium of public and private organizations to sponsor a one-week symposium on Minorities in Forestry and Related Sciences (MINFORS), which was very well attended by all HBCUs. This symposium has become an annual event (Carter, 1994; Hendreson et. al., 1996; Otero and Brown, 1996) with the most recent one being held at Virginia Polytechnic Institute and State University in October, 1996.

Meanwhile, the USDA-FS worked closely with FAMU and the University of Florida (UF) to establish a 2 + 2 joint degree program in FNRC through a tuition financial assistance grant in 1992 (Onokpise, 1995). This program takes into account the uniqueness of FAMU to recruit and graduate minorities. UF has well respected programs in forestry and natural resources and a commitment to educate minorities. And with funding from the USDA-FS and private industry, such as Weyerhaeuser and the Kellogg Foundation, Tuskegee has continued to maintain and even expand its forestry program by implementing 2 + 2 and 3 + 2 joint degree



First graduate (holding plaque) from the FAMU-UF 2 + 2 joint degree program in Forestry and Natural Resources Conservation. He is surrounded by family members and FAMU and UF officials. Standing from left to right: Loukas Arvanitis, Professor, UF; Wayne Smith, Professor and Director, School of Forest Resources and Conservation, UF; author Oghenekome U. Onokpise, Professor, FAMU; Maurice Evans, first 2 + 2 FNRC joint degree graduate; Ernestine Evans (Maurice's mother), Gilbert Evans Jr. (Maurice's brother), and co-author Ted Willis, Personnel Manager, USDA Forest Service.

programs with several universities that include Auburn University, Iowa State University, and UF (Kolison, Jr. et. al., 1995). In the first case, students spend their freshmen and sophomore years at Tuskegee University, and their junior and senior years at one of the 1862 land-grant universities. In the latter case, students spend three years at Tuskegee University and obtain a Bachelor's degree in Forestry, and the remaining two years at the 1862 university where they earn an M.S. degree in specialized fields of agriculture, forestry and natural resources (Kolison, personal communication). These relationships and cooperative efforts have been forged on the basis of several factors which include a proven record of successful partnership, dependability, and a knowledge of mutually beneficial goals (Onokpise, 1995).

### Recruitment and Retention

Recruiting and retaining minority students in FNRC has always been very difficult. As one author writes, "It is like trying to convince a talented white student to attend Harlem Inner City University and major in African Studies. The question becomes, 'Why should I do that?'" (Heard, 1995). The so-called "good old boy" image and symbols are quite pervasive at many of these Forestry and Natural Resources events, such as the annual Forestry Conclave (Heard, 1995; Jordan and Ford-Logan, 1994; Jordan and Williamson, 1990). Besides symbols and images, there are specific problems, e.g., competition for minorities with other universities, other disciplines, other program scholarships and grants (Heard, 1995).

Given these problems FAMU, UF, and the Forest Service (we), have used a five-pronged approach for recruitment:

(a) *On-campus summer apprenticeship*

*and workshop programs* organized by FAMU. During this time, high school students from our targeted schools and surrounding counties are exposed to things like in vitro propagation of forest tree species as part of understanding biotechnology in forestry and natural resources.

(b) *Brochures and flyers for extensive distribution to high schools throughout the Southeast*, were designed and distributed, especially in the state of Florida. Through subsequent contacts with high school counselors, interested students were identified and encouraged to apply for admission and tuition assistance.

(c) *Identification and selection of qualified middle and high school students to attend "Forestry 2000,"* a one-week-long orientation to careers in Forest Resources co-sponsored by UF and several public and private agencies and organizations.

(d) *The participation of our USDA liaison officer and college recruiter at annual career fairs* held on FAMU campus and heavily attended by freshmen and sophomores who are undeclared majors.

(e) *Invitation letters sent, and phone calls made to incoming FAMU freshmen with GPAs of 3.0 or better* to consider careers in forestry and natural resources.

We have been most successful with (d) and (e) methods for recruiting students into the program.

As for retention, we have taken advantage of the mentoring and support services at FAMU and UF respectively. Students are encouraged to use available tutorial classes in calculus, physics, chemistry, and biology. Additionally, new courses have been introduced. The first, "Forestry in Rural and Urban Environments," was offered in the Fall Semester of 1992. It was written as a hybrid

combining "Introduction to Forestry" and "Introduction to Urban Forestry." Thus, the rural-urban forest continuum is covered as a means of introducing forestry to new students while preparing them for advanced forestry courses. Recently, we introduced a "PreDendrology" course to prepare our students for the Dendrology course at UF. This PreDendrology course was necessitated by the feedback received from our transiting students.

It should be noted that until recently, a majority of the students enrolled in the joint degree program came from urban settings and had not previously been exposed to forestry and natural resources environments. Furthermore, stereotypes mentioned earlier remain critical points in the mindset of the incoming freshmen.

We have enhanced retention through internships (IS) and students' cooperative education programs (SCEP). Earlier on, students were sent out on IS and SCEP at the end of their freshman year (Table 1). Presently, students from high schools or rising sophomores and juniors from the Schools of General Studies and Community Colleges are sent on internships in the summer prior to their enrolling in the FNRC program. We have since modified our grant to cover travel to IS and SCEP sites.

As indicated earlier, students are required to participate in internships and cooperative education programs during their tenure in FNRC. Apart from serving to enhance student retention, these IS and SCEP local units, USDA-Forest Service Ranger Districts and Experiment Stations, enable the students to gain hands-on experience in several areas ranging from fighting forest fires to utilizing geographic information systems (GIS). Students have served at various loca-

Table 1: Examples of Local Unit Assignments (Internships-IS and Student Cooperative Education Program-SCEP) for FAMU Students over the Past Four Years.

NAME	FOREST SERVICE REGION/OTHER	LOCATIONS
Alexcia Slydell	Scott Paper Company	Saraland, Alabama.
Christopher Lewis	6	Suislaw National Forest, Oregon.
Christopher Webster	9	Wood Products Laboratory, Madison, Wisconsin.
D'amu McBride*	6	Wenatchee National Forest, Washington.
Mandisa Trader	9	Wayne Hoosier National Forest, Indiana.
Marcus Warwell	4	Intermountain NF Experiment Station, Montana.
Raymond Crump	State & Private Forests	Green Mountain National Forest, Vermont.
Reginald Stewart	6	Winema National Forest, Oregon.
Shawn Lester	4	Sawtooth National Forest, Idaho.
Tamaria Jackson	9	Wayne Hoosier National Forest, Indiana.
Tangella Randolph	5	Stanislaus National Forest, California.
Terrence Campbell**	State & Private Forests	Illinois Urban Forest Program, Chicago, Illinois.

\* Also interned in Region 8, Apalachicola National Forest, Florida.

\*\* Also interned in Region 5, Stanislaus National Forest, California

Table 2: Status of Students Enrolled in the FAMU-UF 2 + 2 Joint Degree Program in Forestry and Natural Resources Conservation(FNRC) Program(1992-1997).

STUDENT NAME	STATUS	DEGREE/MAJOR
Alexcia Slydell	Graduated	B.S. Elementary Education
Angela Williams	In College	Agri-business
Anthony Moreland	Graduated	B.A. Journalism
Christopher Lewis	Terminated	Terminated
Christopher Webster	In College	FNRC
Caswellyn Banks	In College	Criminal Justice
D'amu McBride	Terminated	Withdrawn
Hector Socias	Senior in College	FNRC
Mandisa Trader	Graduated	B.S. Elementary Education
Marcus Warwell1	Graduated	B.S. FNRC
Mary Jones	Withdrawn	Withdrawn
Maurice Evans	Graduated	B.S. FNRC
Nichole Moore	Terminated	Terminated
Orville Fitz-Henley	Junior in College	FNRC
Quinton Washington*	Graduated	B.S. Political Science
Raymond Crump	Graduated/ROTC	B.S. Engineering Sci/Tech.
Reginald Stewart	Junior in College	FNRC
Shawn Lester	Terminated	Withdrawn
Stacey Miller	Terminated	Withdrawn
Stephanie Shuler	In College	Landscape Architech.
Tamaria Jackson	Graduated	B.S. Mathematics
Tangela Randolph	Graduated	B.S. Elementary Education
Terrence Campbell	Graduated	B.S. FNRC

\* Awarded Hubert Humphries National Scholarship Award. Now in Law School.

1 Enrolled in Graduate School and specializing in Forest Genetics.

tions (Table 1). Over 60 percent of student interns have already earned certification as fire fighters by the time they return to campus, providing needed professionals for the forestry and natural resource conservation industry.

A final method to encourage retention is the award of Associate in Arts (AA) degree as students transit from FAMU to UF. This ensures that students do not have to take general education courses when they arrive at UF. Similarly, students receive the B.S. in Agricultural Sciences in the Summer semester after obtaining their BS in Forest Resource Conservation. These approaches were implemented in order to ensure that students remain in the program until graduation.

#### Enrollment and Status of Students

Since the fall semester of 1992 when the FAMU-UF 2 + 2 joint degree program in Forestry and Natural Resources Conservation (FNRC) was implemented, a total of 23 students have enrolled in the program (Table 2). An analysis reveals that at the end of summer 1997, a total of three students have graduated with B.S. in Forest Resources Conservation from UF and B.S. in Agricultural Sciences from FAMU. Thus, in five years, 13 percent of the students have graduated into the FNRC professions. This percentage is expected to increase to 27.5 percent in 1998 and 1999 respectively. Given

the apathy that has surrounded this profession for minorities, we consider this a very good to excellent accomplishment for a program that was implemented only five years ago.

Interestingly, our first three graduates have majored in three diverse disciplines of forestry and natural resources. The first graduate, Spring Semester, 1996 (Figure 1), now works in Deschutes National Forests, Oregon, as a Forest Fire Specialist/Ecologist. One of our last two graduates (Spring, 1996 and Summer, 1997 respectively) is in graduate school specializing in Forest Genetics at UF while the second graduate, who majored in Urban Forestry, started work in October, 1997 as an Urban Forester for the Forest Service State and Private Industry, Region 8, in Athens, Georgia.

Table 2 also reveals that 74 percent of the students have remained in College; 53 percent have graduated (three in Forest Resource Conservation and six in other disciplines as shown). In fact, one of the students who graduated Summa Cum Laude in Political Science has received the Hubert Humphries National Scholarship award for graduate studies. The point we are making is that even though students changed from FNRC majors, they went on to graduate in other areas of specialization due in part to the unique curriculum that has been developed for the FNRC program. The curriculum is designed for the student to meet requirements for the

award of AA degree at the minimum while preparing for advanced undergraduate classes. Thus, courses in Biology, Physics, Chemistry, Mathematics, and Microcomputers are taught regularly. Provisions are also made for tutorial classes for each of the students. Therefore, when students change majors, they are fundamentally ready to continue undergraduate work in most disciplines especially those that are science based.

#### Problems Encountered

Despite the success we have had in producing graduates in FNRC, we are yet to graduate one black or minority female in FNRC after five years of program implementation. We believe that the female students first recruited into the program had different perceptions and expectations of FNRC from what they experienced during their IS activities. Just one female has transited from FAMU to UF only to be terminated after two semesters, for failing to maintain the required minimum grade point average of 2.5 to receive tuition assistance. However, like many of the students who withdrew from the program earlier, she returned to the university to earn a degree in Landscape Architecture.

A second problem encountered is the limited support received from private industry. The initial enthusiasm and euphoria of workforce diversity that permeated the forest industry in the early 1990s is fading with



downsizing and related activities. Thus, although we have received visits from several companies, none has provided any financial assistance to recruit or retain students in the FNRC. While Scott Paper Company provided one summer internship (Table 1), and International Paper Company a research grant for in vitro propagation of sweetgum, Weyerhaeuser Company has not made any contributions to the FAMU-UF 2 + 2 joint degree program—even though it made the most visits to our programs.

A final problem to be urgently addressed is that of out-of-state tuition fee waivers. Presently, these fees range from \$180 to \$300 per credit hour for out-of-state students compared to \$68 to \$75 for in-state students. Such waivers could lead to the doubling of enrollments from south Georgia and south Alabama in the FAMU-FRC programs.

### Recommendations

The FAMU-UF joint degree program in Forestry and Natural Resources Conservation has succeeded in producing graduates in diverse disciplines. This trend is expected to continue given the unique nature of the curriculum. While some of the freshmen or sophomores recruited may not graduate in FNRC, many of those changing majors eventually graduate from the university. Because of the significant difficulties we have had in retaining female students, and in recruiting other minorities (Hispanics, Native Americans, Asians, and White females), we recommend that some other approaches be initiated. These initiatives could include black female professionals presenting lectures and seminars to regular classes, and encouraging local units to expose female students to other black female professionals in the field whenever possible. Seeking funding for

a female faculty member on the FAMU side, as the program expands, to serve as a role model very early in the degree program is another goal.

The recent approval of a renewal grant for another four years will ensure the sustainability of FAMU-UF-FNRC program beyond 2000. However, more collaboration and financial support is needed and will be sought from the private forest industry to enhance partnership and program sustainability between FAMU-UF, the Forest Service, and the private sector.

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Student intern (IS), Christopher Lewis, learning to use GIS



# Mastering the Curse

Karen Lyman

Before I can truly be friends with a person, I must know a few fundamental things about their character. I need to know how deeply they value education, cherish all children, believe in equal opportunities, a woman's right to choose, and most importantly, do they know how to swear?

I don't ask, "Can you curse?" Because generally, this is the sort of thing that comes up naturally in the course of conversation. It isn't the most important criterion I hold for the basis of friendship, but I need to know because I do swear. A lot. And people who don't at all, who can't even say "hell" without blushing and apologizing to all the ladies in the room, are not the sort of folks I can hang with on a regular basis.

It's a part of me, like my professionally adjusted hair color, penchant for certain holidays and preference for the color red. I don't consider any of those things out of my control, but they are part of what makes me who I am. For better or worse, swearing is one of those things.

I'm not really proud of it, just like I don't readily admit to coloring my hair, but it isn't all bad. Once, cursing

actually became an asset, something I'd never dreamed would happen. After I entered the professional world of forestry, an area often populated by the kind of men for whom obscene language is a requirement not an option, my ability to remain on my feet (as opposed to fainting with shock) helped. I knew that they cranked up the heat of their profanities for my benefit, but then, their weaponry was weak.

My ability to swear proficiently definitely helped some when I found myself managing logging crews. The men may have been bigger, meaner and not exactly thrilled to find me in charge, but they could not gross me out or even out gross me. Their crudeness did not faze me in the least. And when we finally forged a truce it was because we spoke the same language (not just swearing) and they evidently respected that.

In my own defense, I don't usually use curses as implements of war. They're not generally nouns in my usage, but adjectives, adverbs. It's their descriptive flair that I like. And besides, every other

word I say isn't filthy. I'm colorful, I tell myself. It's punchy verbiage I'm after, and for some reason, the solid, guttural sounds of certain four-letter words serve my purposes perfectly. They're elemental, base, and to the point. They've got muscle.

The fact that I like those words is almost beside the point—I'm afraid cursing is too old a habit for me to break without becoming entirely mute. I uttered my first bad word before the second grade, in response to my baby brother calling me a filthy name.

My brother never developed his swearing skills fully, although his talk can get a little peppery when the mood strikes. We've decided that we picked up our early attempts to curse at my father's office building. It had to be there, since my mother doesn't swear and our teachers certainly didn't. I'm not condemning my father because he can't technically be classified as foul-mouthed, like I am. Although he swears on occasion, he spits the words out, like he doesn't really enjoy it.

And that's one thing about cursing, you have to

enjoy it, at least a little. I learned the subtleties of forbidden language at the knees of an older woman, my mentor in sin. Yes, Lisa, at the ripe old age of 10, knew it all. In addition to her other skills, which included clinical reports about sex, she was Master of the Curse, having been at it since birth. She taught me everything she knew, which was plenty. I can still see the two of us, leaning up against the chain link fence at school, she being the prettiest girl in her class, a church friend, and the eldest daughter of a straight-laced doctor—and me a year younger and in awe—seriously discussing the possibility of our going to hell over this particular habit. It was more of a philosophical debate, because we certainly had no plans to quit the curse.

We continued to expand and develop our abilities, even during church. Our Methodist minister threw us out of a service one Sunday for sitting in the front pews and writing "evil" words on our bulletins. It wasn't as traumatic as it sounds. We'd already been kicked out before for playing five card draw in the same front pew. We could swear like

seasoned merchant marines but were too stupid to sit in a less conspicuous place.

I do admit my language can shock. And even though I have stealthily concealed the extent of my bad habit from the general public (consider that I write nearly 10,000 words per week, each acceptable by any grandma's standards) when you are as prolific a curser as I am, it leaks out on occasion.

Sometimes in front of my parents. They've never criticized me for it, never slapped my face after something profane slipped out of my lipsticked mouth, and I've always wondered why. Maybe they consider my language poor—a best case scenario—but are grateful that I remain tattoo-free, hold a job, and keep my family together.

I do have a couple of neighbors for whom I must completely shut down the vile stream. It isn't always easy, especially when we get into passionate discussions. I probably look very strange to them, a female Homer Simpson without the finesse, face contorted, mouth working, struggling to find an acceptable word. It's hell, let me tell you.

And yes, I've heard every single argument against cursing and all the put downs for those who continue to do it anyway. Sure, we are immature losers who can't think of a really swell four dollar word so we ignorantly substitute a four-letter one to cover our inability to communicate. I've heard that people like me turn to cursing as a crutch for our poor imaginations. Or maybe it's glandular, I don't know.

I believe that true maturity—if such a thing really exists—is expressed not by any particular word or the ability to resist certain others, but by knowing the right thing to do or say, when it should happen, and then doing it. If I can manage that and my colorful language, then maybe it isn't such a terrible sin and maybe I'm not such a simpleton. But it's a choice like many others and if you're not interested in friendships with people like me, don't sit in the front pew.

*Karen Lyman is Associate Editor of Women in Natural Resources*

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## CASE STUDIES

# Multi-Stakeholder Negotiation As A Resource Management Tool

Karen A. Malkin

**Increasingly, external threats to park and wilderness resources appear on the radar screen for managers and federal natural resource agency employees.**

Several General Accounting Office and other reports have recognized the threats to parks and wilderness areas and the agencies' struggles to address them.

In a recent case study, the Grand Canyon Visibility Transport Commission (GCVTC)—controversial, multi-stakeholder consensus-based negotiations—resulted in comprehensive recommendations to help protect park and wilderness areas from visibility impairing pollution. It provided industries and other sources with flexibility and incentives to curb their pollution.

The comparison of GCVTC and its successor organization to a contemporaneous regional body, the Southern Appalachian Mountains Initiative (SAMI), is instructive.

### Introduction

The National Park Service (NPS) Organic Act instructs park managers to preserve and protect the resources within the units of the National Park System "in such manner and by such means as will leave them unimpaired for the enjoyment of future generations." (Organic Act of 1916.) The Wilderness Act of 1964 contains a similar charge applicable to all Federal Land Managers with responsibility for wilderness. External threats (e.g., an industrial facility near a park) challenge managers' abilities to uphold these mandates. Several General Accounting Office (GAO) and other special reports have recognized the threats to parks and wilderness areas and agencies' struggles to address them. Air pollution recognizes no boundaries and presents a particular challenge (Satchell, 1997; Testimony, 1994; GAO, 1994; GAO, 1990).

The Clean Air Act (CAA) contains a legal framework for Federal Land Managers (FLMs) to work with the Environmental Protection Agency (EPA), states, and tribes to protect public resources from air pollution. In particular, the CAA provides mechanisms (see 42 U.S.C. Sec. 7475, 7491) to ensure protection of specially designated Class I national parks and wilderness areas. Among these is the Prevention of Significant Deterioration (PSD) permit program for major stationary sources of air pollution built or modified after 1977.

A 1990 GAO report focusing on five Class I areas, however, found that existing sources, "grandfathered" from the PSD provisions of the CAA, contributed significantly to emissions at these areas. Emissions from "minor" sources simi-

larly excluded from the CAA major source PSD program also contributed. In particular, the report found the contribution of "grandfathered" sources is "particularly great to sulfur dioxide emissions, accounting for more than 75 percent in all five areas and more than 90 percent of the sulfur dioxide emissions around Cape Romain Wilderness and Rocky Mountains National Park." (GAO, 1990.) Sulfur dioxide emissions are a major ingredient in visibility impairment. The "grandfathered" sources are older stationary sources, such as power plants, that were expected to retire shortly after passage of the 1977 amendments. Many of these older sources, however, are still fully operating. With deregulation of the electric power industry, EPA and others anticipate that the life of the older sources may be further extended, since it is generally less expensive to generate power from these older sources that lack scrubbers and other pollution control devices. Another CAA provision establishes a national visibility goal of no "manmade" impairment in mandatory Class I areas (42 U.S.C. Sec. 7491). Where visibility impairment to a Class I area may be reasonably attributed to a "grandfathered" source, regulators may require that the source install and operate Best Available Retrofit Technology (BART). Due to the expense and burden industry associates with BART, extensive studies are required to prove attribution. As a political and practical reality, it is extremely difficult to get controls on the older sources through the BART process. In fact, although NPS and EPA, working with states and stakeholders, managed to get two older sources controlled, these negotiations were held outside of the BART process, on request of

the industry participants who wished to avoid setting precedent.

The legislative history of the CAA, charges the FLM with an "affirmative responsibility" to protect park resources and encourages the FLM to be vigilant and file lawsuits, when necessary, but the traditional litigation paradigm may be less than ideal for a number of reasons. Litigation and positional bargaining may be lengthy processes that up the pressure and prevent FLMs from living in harmony with their neighbors. Given the mandates and the nature of the problem, multi-party negotiation processes may be necessary to protect air and other resources, and to help foster regional partnerships that meet mutual needs sustainably (*e.g.*, economic growth and resource stewardship). This paper presents case studies, and suggests an approach that could work well in a wide variety of situations.

#### Grand Canyon Visibility Transport Commission Case Study

To help address visibility impairment at Grand Canyon National Park and 15 other Class I areas on the Colorado Plateau, the 1990 CAA Amendments mandated the creation of the Grand Canyon Visibility Transport Commission (GCVTC). Because of their legal stewardship responsibilities for Class I areas on the Plateau, NPS and the U.S. Forest Service were mandatory members of the Commission. Starting in 1991, EPA formed the Commission initially with the states and FLMs (inviting the Governors and two bureau directors to join) and eventually with several tribes in the transport region to look into the causes of the visibility/haze problem and recommend solutions.

Although they lack Class I areas on the Colorado Plateau, because of their responsibilities for Class II areas on the Plateau, U.S. Fish and Wildlife Service (FWS) and Bureau of Land Management agency heads successfully petitioned EPA for membership on the Commission early on. Each head of the four FLM agencies, named a designee to serve as Commissioner. For example, the Superintendent of Grand Canyon National Park served for NPS; for FWS, the head of the Air Quality Branch served both as

#### Acronyms—in order they appear

CAA—Clean Air Act  
EPA—Environmental Protection Agency  
FLM—Federal Land Manager  
PSD—Prevention of Significant Deterioration  
BART—Best Available Retrofit Technology  
GCVTC—Grand Canyon Visibility Transport Commission  
PAC—Public Advisory Committee  
OC—Operations Committee  
WRAP—Western Regional Air Partnership  
SAMI—Southern Appalachian Mountains Initiative  
AQRV—Air Quality Related Value  
EMO—Emission Management Option  
BATNA—Best Alternative to a Negotiated Agreement  
NAAQS—National Ambient Air Quality Standards  
FACA—Federal Advisory Committee Act  
VTC—Visibility Transport Commission

Commissioner and on working committees. The Commissioners met infrequently (about once a year) to provide direction and finally to approve the recommendations offered up through the committee process.

While technical and assessment committees investigated the causal connection and associated costs of control, two other committees—a Public Advisory Committee (PAC) and an Operations Committee (OC), each consisting of representatives of the government commissioners—engaged in a consensus-building process to develop recommendations, which were presented to the EPA Administrator June 1996. EPA has until the end of 1997 (18 months from receipt of the report) to promulgate regional haze regulations, including criteria for measuring "reasonable progress" toward the national visibility goal. 42 U.S.C. Sec. 7492(e)(1). EPA's regional haze proposal is open for public comment until December 1997.

What worked? The PAC, a diverse and large group of individuals (with close to 80 members and additional participants), needed educating about the problem they were tackling (*e.g.*, what visibility impairment looks like and what pollutants and sources contribute to it) as well as groundrules for tackling it. The PAC members knew they were engaged in a time sensitive, precedent setting process and, if they failed to reach

consensus, solutions would be dictated by the government (*i.e.*, first through the OC and later through EPA). The PAC members knew their mission, understood whose interests they were representing (as well as their own), and what the alternative to negotiating was.

Largely because of NPS educational outreach efforts directed at the PAC members appointed by the federal commissioners, these appointees were able to share their knowledge and help influence the larger PAC group. In general, the PAC members who felt connected to a Commissioner or an organization they cared about, such as NPS, were more likely to attend meetings and to generate broader public interest in the visibility issue at stake.

What were the problem areas, and how were these resolved? Although the basic scientific knowledge predating the formation of GCVTC was validated by the National Academy of Sciences in the early stages of the Commission process, delays and confusion in the generation and assessment of more specific causal and cost data (*e.g.*, a particular source's or regional source sector's contribution to impairment at Class I areas and what the net cost would be of controlling that source or source sector) seemed to stir up PAC members' institutional and personal biases and threaten the legitimacy of the consensus building process. Because the technical subcommittees were chaired by federal experts and much of the raw technical data (*e.g.*, monitoring) and analyses (*e.g.*, modeling) had federal origins, some state and industry representatives raised bias allegations. Similarly, environmental and other representatives raised bias allegations concerning cost data generated from industry sources (*i.e.*, that the costs were inflated and did not reflect true life cycle costs). Nevertheless, through constant informal peer review of the inputs and because of the deadlines set out in the Congressional mandate, the assessment did move forward.

In addition, many representatives were concerned that aspects of agreed to criteria (such as, socioeconomic implications regarding human health and tourism) were given short shift in the

assessment or not addressed at all. The failure to follow through the planned course of assessment, led to legitimacy concerns with the process, raised by diverse stakeholders, internally (in the GCVTC committees) and externally (e.g., the media and in other political forums).

Through the OC, a fallback assessment approach was initiated, using available funds and keeping reasonably within the Congressionally mandated deadline for recommendations. (CAA Section 169B(d) requires the report to be submitted to the EPA Administrator within four years of establishment of GCVTC; the GCVTC report came out about six months late.) NPS triggered development of this approach by sending a letter from the NPS Director Roger Kennedy to Commission Chair Governor Symington, expressing concerns about imbalance in the assessment and suggesting fixes. In addition, NPS actively followed the issue through to the end, pointing out sources of previously overlooked /misinterpreted information in written comments to the Commission.

The recommendations are somewhat fuzzy, and require considerable planning to track the "voluntary" emission reduction components and implement numerous aspects. For example, the Commission recommended "education about pollution prevention," without articulating a specific action plan with deadlines, products, goals, and so forth. For stationary sources, the Commission recommended tracking sulfur dioxide emission reductions anticipated for utilities, and instituting a market-based program to reduce emissions if anticipated reductions did not occur on a timely basis. With the aid of neutral facilitators (contractors in this case) and a dedicated drafting group, options were presented, discussed, refined, and eventually endorsed on up to the Commissioners. The Commission's report to the EPA Administrator contains a comprehensive set of recommendation addressing emissions controls and pollution prevention across all source sectors, as well as need for monitoring, emissions inventory, and study of some temporal sources, such as road dust and agricultural burning.

A new group, known as the Western Regional Air Partnership (WRAP), met in 1997 and recently approved a charter and organizational structure for accomplishing the GCVTC recommendations and perhaps other regional work related to air quality. WRAP is a permanent organization with more governmental entities and stakeholders and more detailed substantive work to accomplish than GCVTC. The first official meeting of the new organization occurred Fall 1997.

Both GCVTC and WRAP can serve as useful case studies in organizing large, regional groups of governmental and nongovernmental stakeholders to solve common problems. The Congressional deadlines and funding helped motivate participants to action, making GCVTC tasks and meetings a higher priority than they would otherwise have been for busy people.

#### **Southern Appalachian Mountains Initiative Case Study**

While the GCVTC was Congressionally mandated as a visibility transport commission, the Southern Appalachian Mountains Initiative (SAMI) was instead initiated "voluntarily" in response to controversy over FLM adverse impact determinations concerning new source PSD permits. (See 57 Fed. Reg. 4465-70 (1992); 55 Fed. Reg. 38,403-08 (1990).) These determinations were supported by numerous scientific studies, which were largely unrefuted. The controversy focused on whether measures should be taken to remedy the adverse effects documented in the Class I areas.

In 1992, states, NPS, Forest Service, and EPA launched SAMI to "ascertain solutions to the air pollution problems of the Southern Appalachians" (SAMI Bylaws, Article I, 1993). By design, SAMI is an inclusive organization with a large committee structure and an open door policy. SAMI's mission is:

*Through a cooperative effort, identify and recommend reasonable measures to remedy existing and to prevent future adverse effects from human-induced air pollution on the air quality related values (AQRVs) of the Southern Appalachians, primarily those of Class I parks and wilderness areas, weighing the environmental and socioeconomic*

*implications of any recommendations.* (SAMI Bylaws, Article III, 1993).

For the past four years, SAMI has been developing information for an integrated assessment to evaluate emission management options (EMOs) to help achieve its mission. A coalition of groups working with NPS helped move forward 13 "near term" EMOs, which called for voluntary educational and policy measures such as turning out lights to save energy. These EMOs were approved by the SAMI Governing Body in June 1995. Implementation (e.g., letters suggesting policies for various organizations to adopt) is still underway.

Although many have expressed interest in SAMI, few stay "voluntarily" involved for the duration. Funding problems persist, as do arguments as to what the essential components of the assessment should be and how information should be integrated into the assessment. Since there are no established procedures for approving work products and recording decisions related to the assessment, issues remain unresolved and are the subject of repetitive conference calls and meetings. Contractor selection is also a dilemma due to the lack of group consensus on criteria and weighting of criteria.

An even more fundamental problem concerns interpretation of SAMI's mission. Industry and some state representatives view SAMI's primary purpose as assessing the costs and emissions reductions associated with implementing the 1990 Amendments to the CAA. They believe the costs associated with this baseline implementation are already too high to be justified. By contrast, NPS and other SAMI participants believe SAMI should view implementation of the CAA Amendments as a given and consider what additional measures should be taken to address SAMI's mission. The CAA Amendments directly charge EPA with assessing the overall costs and benefits of implementation, and reporting the findings to Congress. EPA is working on this assessment (42 U.S.C. Sec. 7612). EPA and other studies predict that measures beyond current CAA implementation plans are necessary to meet the national visibility goal

and remove the existing adverse impacts to AQRVs in the Southern Appalachian Class I areas.

Even if SAMI is able to complete the assessment before the millennium (as presently planned), and presumably the committees would then present recommendation to the Governing Body for endorsement, there is no clear understanding of what would happen next. In response to a letter sent from the NPS Director and the Forest Service SAMI Governing Body official to the SAMI Governing Body, Chair, we learned that each EMO the Governing Body may endorse would be handled on a case by case basis, with implementation left up to each state or each pollution source "voluntarily." There is no procedure in place to ensure that recommendations endorsed by the Governing Body get implemented consistently and appropriately throughout the region.

Overall, by contrast to the GCVTC, there is no clear sense of what SAMI's primary function is and of what the consequences are of SAMI's failure to produce any results. The next section examines principles of negotiation, and applies them to SAMI and WRAP by way of constructive illustration.

#### **Basic Concepts for Multi-Stakeholder Negotiations**

The Harvard Negotiations Project has published a number of popular books, e.g., *Getting to Yes*, *Getting Together*, to help revolutionize the traditional positional style of negotiating taught in law schools throughout the nation. As shown below, these same basic concepts may be modified and applied to help multi-stakeholder or partnership negotiations as an effective resource management tool, where managers can be both firm and flexible.

#### **Preparation and Best Alternative to a Negotiated Agreement (BATNA)**

Too often, resource managers are called to meetings with potentially hostile parties on short notice. Instead of walking in "cold," try to get a sense of the conflict and prepare a BATNA; i.e., know what your best alternative is to negotiating with these people. In order to know your BATNA, you will need to under-

stand your purpose. What goals are you trying to achieve? Is your meeting with decision-makers? If not, who are the decision-makers? What is *their* BATNA? Be prepared to articulate your BATNA as a warning, if the other parties want to walk rather than negotiate.

In the WRAP context, FLMs would need to meet with EPA principals to develop a mutual understanding. FLMs need to ask, what will EPA do with the GCVTC recommendations in the absence of WRAP or other state/tribal regional efforts to specifically implement these recommendations? Will EPA's long-awaited regional haze program be promulgated, in such manner that once implemented it would achieve similar emission reductions for the Colorado Plateau as the GCVTC recommendations would achieve? FLMs would need to consider whether WRAP is the "only game in town" to address visibility/haze impairment at Class I areas in West. On July 18, 1997, EPA submitted a proposal for a regional haze program for public comment. This proposal acknowledges the GCVTC recommendations, and sets forth a measurable definition of reasonable progress toward the national visibility goal which may be somewhat more ambitious than GCVTC recommendations provided for.

For SAMI, the BATNA may be a regional air management partnership (RAMP) to develop EMOs and emission reduction milestones to implement the revised National Ambient Air Quality Standards (NAAQS), the regional haze program, and any additional measures

agreed to. The RAMP might have some of the same members as SAMI, but may be structured as a more formal governmental institution with jurisdiction to both develop and implement strategies throughout the region.

The RAMP concept is being developed by the Federal Advisory Committee Act (FACA) Subcommittee for Ozone/Particulate Matter/Regional Haze Implementation. Revised, more stringent NAAQS for ozone and particulate matter were issued as final rules on July 16, 1997. The regional haze proposal was issued for public comment on July 18, 1997. Since many parts of the SAMI region will likely be in nonattainment of the new NAAQS, a RAMP would give SAMI a legal mandate with deadlines and consequences for failure to meet these deadlines (i.e., loss of federal highway funds). (See 42 U.S.C. Sec. 109-10.)

Another alternative would be to request that EPA form a visibility transport commission (VTC) for the SAMI region. In that case, the same legal provisions relevant to GCVTC would apply. Such a commission could be influential in implementing the regional haze program for that area.

Keep in mind, the RAMP and VTC options require action by other parties, especially EPA. Are there alternatives NPS could pursue on its own? For example, could NPS institutionalize and publicize its own emission reduction measures (e.g., providing mass transit in parks) to lead by example? These are



The GCVTC at work in 1993, photo courtesy Western Governors Association



the sorts of considerations to develop your BATNA. In preparing for negotiation, think about your BATNA as well as the other elements discussed below.

### *Interests*

Make sure you understand your organization's full array of interests, and be prepared to articulate them in a manner that will satisfy organizational needs and policies. Have a process for caucusing to review how things are going, and ensuring your interests are being addressed. Ask questions that get at the other parties' underlying interests, desires, and concerns. Make a genuine attempt to understand the other parties, including their perceptions and perceived choices. Observe their behavior. A role reversal exercise can be particularly beneficial in improving understanding. That is, have a colleague act out your role, while you act out the role of the other party you are negotiating with. When key representatives seem to disengage (lack commitment) during a meeting, give them tasks and roles, or find other ways to acknowledge them. Think about changing your own behavior to better engender cooperation.

In the WRAP context, understanding interests is a complicated inquiry since each state and tribe may have different interests. Understanding these interests will help direct development of an acceptable regional implementation plan for the GCVTC recommendations. Similarly, for SAMI, the largeness of the organization makes this a burdensome inquiry. By focusing on key decision-makers, such as Governing Body members, the task may be simplified.

### *Options*

Brainstorm on possible options to meet key interests. Separate the inventing of options from commitment. In a contentious or multi-party negotiation, use a neutral facilitator to set out options. Ultimately, the best solution is one with the least waste; *i.e.*, interests are satisfied to the maximum extent mutually feasible. The classic example is of two girls fighting over an orange. One wants the peel for baking; the other wants to eat the fruit. The no waste solution would give the whole peel to the girl who wants it, and the whole fruit to the girl who wants that.

For WRAP and SAMI meetings, a neutral facilitator should help promote open communication and joint problem solving of diverse interests. In addition, by having a small group of junior or nondecision-making representatives do the options brainstorming, fear of committing too soon will be diminished. Instead, an array of possibilities may be examined in various combinations.

### *Legitimacy*

This refers to the standards or criteria by which the fairness of a possible solution can be measured. A legitimate agreement is one where no one feels cheated. Part of preparation involves knowing how to articulate the relevant FLM policies or mandates, which help shape a legitimate solution. As mentioned earlier, the GCVTC negotiations became particularly contentious due to the lack of a timely, comprehensive assessment that addressed all criteria GCVTC had agreed to. A fall back approach helped save the negotiation in addition to identifying criteria.

For WRAP and SAMI, it is important to establish groundrules in dealing with criteria to avoid perceptions of bias in the multi-stakeholder process. That is, if an assessment is inconclusive or if important information is unavailable, what will decisions be based on? What if lack of funding hinders development of certain aspects of the assessment? Will the findings of the National Academy of Sciences or a similar scholarly organization suffice as a basis for policy choices? Developing criteria or standards of legitimacy as well as fallback criteria or standards, will be important.

### *Communication*

Clear and efficient communication among parties and through the media can be essential to a good negotiation outcome, particularly in a controversial multi-party (government/private) context. Listen to the other parties, and paraphrase or ask questions to ensure you understand them. Put reasons, standards of legitimacy, before conclusions or bottom lines. Have a timekeeper and meeting recorder to help keep meetings on track, and to record decisions and assignments. Again, a neutral facilitator can be of assistance.

For the WRAP and SAMI voluntary regional bodies to be effective, it will be important for WRAP members to communicate openly in meeting forums, and not just behind closed doors in caucuses. To keep everyone on board, internal and external communication plans as well as a general workplan or framework for meeting the mission goals of the organizations should be adopted and followed. A one text approach to draft workproducts where a small workgroup is in charge of drafting and revising a single document may be effective to focus the larger group's thinking and promote efficient time management.

### *Relationships*

The desired relationship is a good working one that can deal with differences during the negotiation and in the future (good neighbors). The general rule is to be unconditionally constructive on relationship issues. Do only those things that are good for the relationship and good for you, regardless of hostile or emotional actions from other



negotiating parties. The key is to separate substantive issues from relationship issues and deal with each on the merits. Keep in mind the relationship history, and where you would like to see the relationship in the future. A good rule of thumb is to consult before deciding. For example, when you know a decision on an environmental impact statement is of interest to a stakeholder, ask him: "What would you think if I issued the record of decision approving the preferred alternative?"

In the WRAP context, there is a lot of baggage in the form of stale or ongoing state/federal/tribal conflicts on various issues. The WRAP effort is probably unprecedented in terms of its comprehensive membership of governmental entities involved in air regulatory, science, and policy matters in the West (12 Western states and 12 tribal representatives are invited, as well as EPA, Department of the Interior, and Department of Agriculture). In SAMI, both environmental and industry groups have membership on the Governing Body, along with federal and state agencies. Consensus is required of these non-governmental interests as well as of the state and federal officials. Although consensus is strived for, in the event a vote is taken, only the states have voting rights. Since air pollution and ecosystems respect no political boundaries, a good working relationship with various levels of government is important for the resource manager. By establishing clear ground rules for communication (e.g., through internal and external communication plans), the relationships among these entities should improve.

### Commitments

While it is important to commit early to a desirable process by setting groundrules, hiring facilitators, developing communication plans, and so forth, substantive commitments should be made only after listening, learning, and inventing options. In the multi-stakeholder context, FLMs probably should caucus and carefully think about ramifications before committing an individual land management agency or all FLMs to a decision. A good outcome has commitments that are well planned, realistic, and operational.

For WRAP, adequate funding and political commitment are necessary to carry out any plans for implementing the GCVTC recommendations or other recommendations WRAP may adopt. Ultimately, the commitments should be structured so that all final decision-makers need do is say "yes." The GCVTC recommendations were loosely structured as a "yesable" proposition, but without the full planning and operational structure to make the recommendations become reality in and of themselves. The challenge for WRAP and SAMI is to develop options that lead to well planned, operational commitments that will improve air quality and remedy the adverse impacts of concern at parks and wilderness areas.

### Conclusion

With more preparation and an upfront agreement on process, a thoughtful, principled negotiation may ensue to the benefit of all stakeholders. Instead of taking a backseat and letting conflicts unfold in a contentious and litigious manner, resource managers should be proactive and initiate a constructive, principled, negotiation process.

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*Karen Malkin, pictured below, represents and advises the National Park Service, U.S. Fish & Wildlife Service, and Department of the Interior, as appropriate, on a wide range of air resource related issues before Congress, the public, the Environmental Protection Agency (EPA), state and federal agencies, and regional commissions. She initiates, coordinates, and provides policy direction for Clean Air Act and related legal and policy matters. She received her undergraduate degree from The Johns Hopkins University and her law degree from Georgetown University Law Center. She is admitted to practice law in the District of Columbia, in California, and before the U.S. Supreme Court. In 1996-97, Malkin completed Harvard Law School's Negotiation Workshops.*

The views presented are solely the author's and do not reflect official agency positions.



low trees and young are born in litters of two to four in April or May after a nine-week gestation. The mother raccoon is devoted and protective but the male does not help.

Cindy Thompson, *Outdoor Alabama*, Summer 1997

### Stickies Slow Paper Recyclers

The sticky stuff on Post-It notes, postage stamps, labels and tape are recycled along with office paper and junk mail. They gum up machines. They leave recycled paper speckled with black dots and weaken it, causing tears in the giant manufactured rolls. For the paper industry, the consequences have been serious. Four giant recycling mills—in West Virginia, Maryland, Massachusetts, and Maine—have been built since 1994 and have shut down. A dozen mills are operating at partial capacity. Altogether, these mills have defaulted on more than \$1 billion in bonds and bank loans. Recyclers have been also hit with falling prices and weak demand, but the main culprit in the mills' decline are the technical difficulties with self sticking materials in office paper. This affects only writing paper not low quality papers such as tissue. The percentage of newsprint, for example, has climbed steadily over the years to 63 percent in 1996. When the mills' losses on writing paper began piling up, a "stickies summit" was held in Washington to bring together recyclers, adhesive makers, the postal service and others for solutions.

Dennis Cauchon, *USA Today*, October 7, 1997

### Human Impacts on Antarctica

In trying to understand changes in the world's environment we need to know what is natural and what is induced by our activities. The best place to measure the elements of change is in a place free of industry and people—and Antarctica has no industry and very few people. Atmospheric mixing transports pollutants around the world and incorporates many of them in the snow falling on Antarctica, thereby providing a record of the atmospheric changes. The snow turns to ice, preserving an historical record stretching back almost 500,000 years. Analysis of these snow and ice samples has identified long-term patterns of change in the greenhouse gases CO<sub>2</sub>, and methane, and recent changes in global levels of radionuclides (from atmospheric nuclear testing) and lead (from mining and leaded fuel). Combining these historical data with current daily atmospheric measurements enhances our ability to identify current trends in CO<sub>2</sub>, CH<sub>4</sub>, nitrogen oxides, and CFCs. For example, such measurements have already alerted the world to serious depletion in levels of atmospheric ozone. The antarctic data provides the baselines against which changes in the rest of the world are measured.

There are also other global baselines established by Antarctic monitoring. Nobody uses

pesticides in Antarctica, so measurements there can establish the baseline for global levels of these pollutants. Organochlorine pesticides, polychloro-biphenyls (PCBs) and mercury have been clearly detected in penguins and petrels, fish, and even mosses and lichens. Increasingly sensitive and sophisticated analytical equipment is even providing leads to where the pesticides might have originated.

David W.H. Walton, *International Journal of Wilderness*, September 1997

### Breakfasts of the Experts. Hmmm. Some BIG differences.

*Stephen Gullo*, Institute for Health and Weight Sciences, New York says: I frequently work late into the evening, so I normally wake up at 8:30 am. Before breakfast, I go for a half-hour jog. If I feel energetic, I'll also spend about 20 minutes on my NordicTrack Strength Trainer to tone my upper and lower body. I typically have one or two slices of low-calorie wheat toast and an omelet made from the whites of five or six eggs and sliced mushrooms, green peppers, onions, and tomatoes. If I'm in the mood for more texture, I might throw on a slice of no-fat cheese. On the days when I am not feeling as hungry, I cook two to three ounces of oatmeal—or have a bowl of shredded wheat with 100 percent skim milk topped with half a banana or some strawberries. I'm very careful about eating cold cereal—strictly consuming only two to three ounces—and I never eat bagels. A bagel, which can have more than 100 calories, has very little fiber. I also drink one cup of coffee each morning, with one teaspoon of sugar-free cocoa added for flavor, and a dash of 100 percent skim milk. Then I take a multivitamin with antioxidants. If I'm in a rush, I will eat a container of no-fat, fruit-flavored yogurt with one teaspoon of bran sprinkled on top.

*Bonnie Lierman*, Center for Science in the Public Interest says: Since I have three kids, ages four, eight, and 10, my mornings are pretty hectic. I wake up early, fix breakfast and lunch for my children, then get off to work. I save time by eating a container of low-fat, decaf coffee yogurt during my 20-minute drive to work. I try to avoid caffeine. On mornings when I have extra time, I eat a healthier breakfast—about one ounce of shredded wheat or Wheaties with blueberries and bananas on top and one-percent milk.

*Bottom Line: Personal*, October 15, 1997

### A Public Apology

Looking out over the East River from my jail cell, and still running for public office, I realize that I have taken several actions in my life for which I owe public apologies. When I was 21, I smoked marijuana every day for one year. I would like to apologize for the next 15 years of anxiety attacks and drug-related phobia, including the feeling that when Ed Sullivan introduced Wayne and Shuster he was actually signalling my parents that I was high. I would like to apologize to my wife Karen, who still believes in me, and to

the Marijuana Growers Association of Napa Valley and its affiliates, for any embarrassment I may have caused... Several years ago, in California, I ate my first clam and said it tasted "like a gonad dipped in motor oil." I would like to apologize to Bob 'n' Betty's Clam Fiesta, and especially to Bob, who I found out later had only one testicle... In 1992, I was interviewing one Ms. Anna Floyd for a secretarial position when my pants accidentally fell down around my ankles as I was saying, "Ever seen one of these before?" Even though I was referring to my new Pocket Tape Memo Taker, I would like to apologize to Ms. Floyd for any grief this misunderstanding might have caused her. I would also like to apologize to the Pocket Tape people and their affiliates, and to International Hardwood Designs, upon whose floor my pants fell upon. I would especially like to apologize to my wife Karen, whose great understanding fills me with humility... I would like to apologize to the Jewish people, to the state of Israel, to my family, who have stood by me, and to my wife, Karen, who has also endured my 17 affairs and three out-of-wedlock children... Now on with the campaign.

Steve Martin, *The New Yorker*, October 17, 1997

### South African Conservation

Although South Africa has a rich and interesting history of environmental activity undertaken by nongovernment organizations, few studies have documented the part played by black environmental groups. As Jane Carruthers noted, many writers of conservation history have deliberately excluded or minimized the role and perceptions of blacks. While Carruthers wrote from within the context of the history of game protection, her comments remain valid for the field of conservation history as a whole... Given the association of white privilege and power within the conservation ideology as it developed during the colonial era, it has proved easy to marginalize and distort the role of blacks. The conservation ideology which developed in South Africa was, like its counterpart elsewhere on the continent, based on a wildlife-centered, preservationist approach. The Eurocentric focus of the developing conservation ideology, combined with the exclusion of black perceptions and interests from that ideology, had the effect of further alienating and excluding blacks from the embryonic game protectionist movement of the late 19th century. In this context, the development of a formal conservation ethic (as opposed to precolonial ecological practices and ideas) and the formation of environmental organizations among black South Africans took place belatedly and on a racially segregated basis... Not surprisingly, an organized environmental response among blacks emerged only during the 20th century, and when it occurred, it took a completely different shape than that of its white counterpart.

Farieda Khan, *Environmental History*. Vol 2, No 4, October 1997

The University of Memphis' Center for Research on Women invites scholars who are interested in women of color generally and/or southern women in the United States to send information about themselves. "Our goal," according to Lynet Uttal, assistant professor of sociology in the Center, "is to create a list to help those of us working in these areas to find one another. We can use the list to locate speakers for professional meetings, identify job candidates, locate contributors for book projects, and more." If interested, call 901-678-2770 for information.

The Society for Range Management meets in Guadalajara, Mexico February 8-12, 1998 for its annual meeting. There is a women's lunch scheduled in addition to the papers, field tours, and banquets. For more information contact SRM in Denver by fax at 303-355-5059.

Scholars from all disciplines are invited to submit proposals for papers related to common property resource management for the conference scheduled June 10-14, 1998 in Vancouver BC Canada. For registration or paper information, contact Evelyn Pinkerton, School of Resource and Environmental Management, Simon Fraser University at [iascp98@sfu.ca](mailto:iascp98@sfu.ca) or at <http://www.sfu.ca/~iascp98/>

Drake University in Des Moines, Iowa will be hosting the mini-conference entitled "Ecofeminism: An Iowa Conversation." The conference to be held on March 13 and 14 will include key note speaker Karen Warren. Contact Dan Spencer, Professor of Religion and Ethics, 515-271-2885 or email [ds5391r@acad.drake.edu](mailto:ds5391r@acad.drake.edu) for more information.

The Design and Environment Conference focuses on the links between the design of the built environment and the transformation to a sustainable society. The meeting will be held December 5-8, 1997, University of Canberra Australia. Email Dr. Janis Birkeland [jljb@design.canberra.edu.au](mailto:jljb@design.canberra.edu.au) or fax 06 201 2279.

The Western Section of the Wildlife Society's Natural Resources Communication Workshop will be held January 12-16, 1998 at California State University, Chico. The weeklong workshop is designed to help natural resource workers more effectively communicate with the general public using good visual aids, especially 35mm slides. Participation is limited to 16 people. Late applications will be taken if there are cancellations. Call Dr. Jon Hooper, 916-898-5811.

Iowa Women in Natural Resources is celebrating 10 years as an organization at its annual professional development conference February 19-20, 1998 in Guthrie Center, Iowa. Conference sessions will cover a wide variety of natural resource and workplace issues. Call Julie Sparks 515-281-6159 or [jsparks@max.state.ia.us](mailto:jsparks@max.state.ia.us).

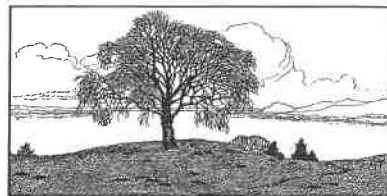
The U.S. Geological Survey is asking for the public's help with deformed amphibian research. U.S. and Canadian residents should call the North American Reporting Center for Amphibian Research in Jamestown ND at 1-800-238-9801 or use the data entry form on the website <http://www.npsc.nbs.gov/narcom>. NARCOM is interested in normal or malformed amphibians.

Wilderness Science in a Time of Change is the theme for the Wilderness Research Conference at the University of Montana, Missoula, May 23-27, 1999. This is a change of date. Information can be found at 406-243-4623 or <http://www.wilderness.net>.

The world's population has increased four-fold since 1900, and, if current growth rates continue, it will double again in just 45 years. We are testing the limits of our planet as never before. Zero Population Growth has developed classroom-tested curriculum materials, some of which have environment as a focus. For information on workshops for teachers or other information contact 1-800-POP-1956.

For those of you who refuse to be tamed, International Adventure Travel offers a 15-day biking, hiking, and rafting adventure that travels 235 kms across Costa Rica from the Pacific to the Atlantic, solely by muscle power. Contact them at 1-888-805-0061 or [bikehike@interlog.com](mailto:bikehike@interlog.com)

1998 Fire Prevention workshop will be held at Skamania Lodge, Columbia River Gorge, Stevenson, Washington on February 2-6 1998. Contact Lou Gugliotta, Fire District No. 3, 8333 Agate Road, White City OR 97503 (541-826-7100) for various options.



Global Warming 9, is scheduled for June 9-11 1998 in Hong Kong. Contact the program committee at CWIC, PO Box 5275, Woodridge IL 60517-0275 for advance news on registration.

Graduate students working in tropical research can apply for Short-Term Fellowships at the Smithsonian Tropical Research Institute in Panama. Applications are due four times a year. Contact STRI Office of Education 507-227-4918 in Panama.

The Association for International Agriculture and Rural Development fosters international collaboration between development workers from universities, private voluntary organizations, donor agencies and foundations. It has a website at <http://www.aces.uiuc.edu/~aiard/>

Fire Effects on Rare and Endangered Species and Habitats will be held March 22-25, 1998 at Coeur d'Alene, Idaho to explore the relationships between wildland fire and rare and endangered species. Contact Maria Greenlee at 509-283-2397 or [greenlee@cet.com](mailto:greenlee@cet.com)

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