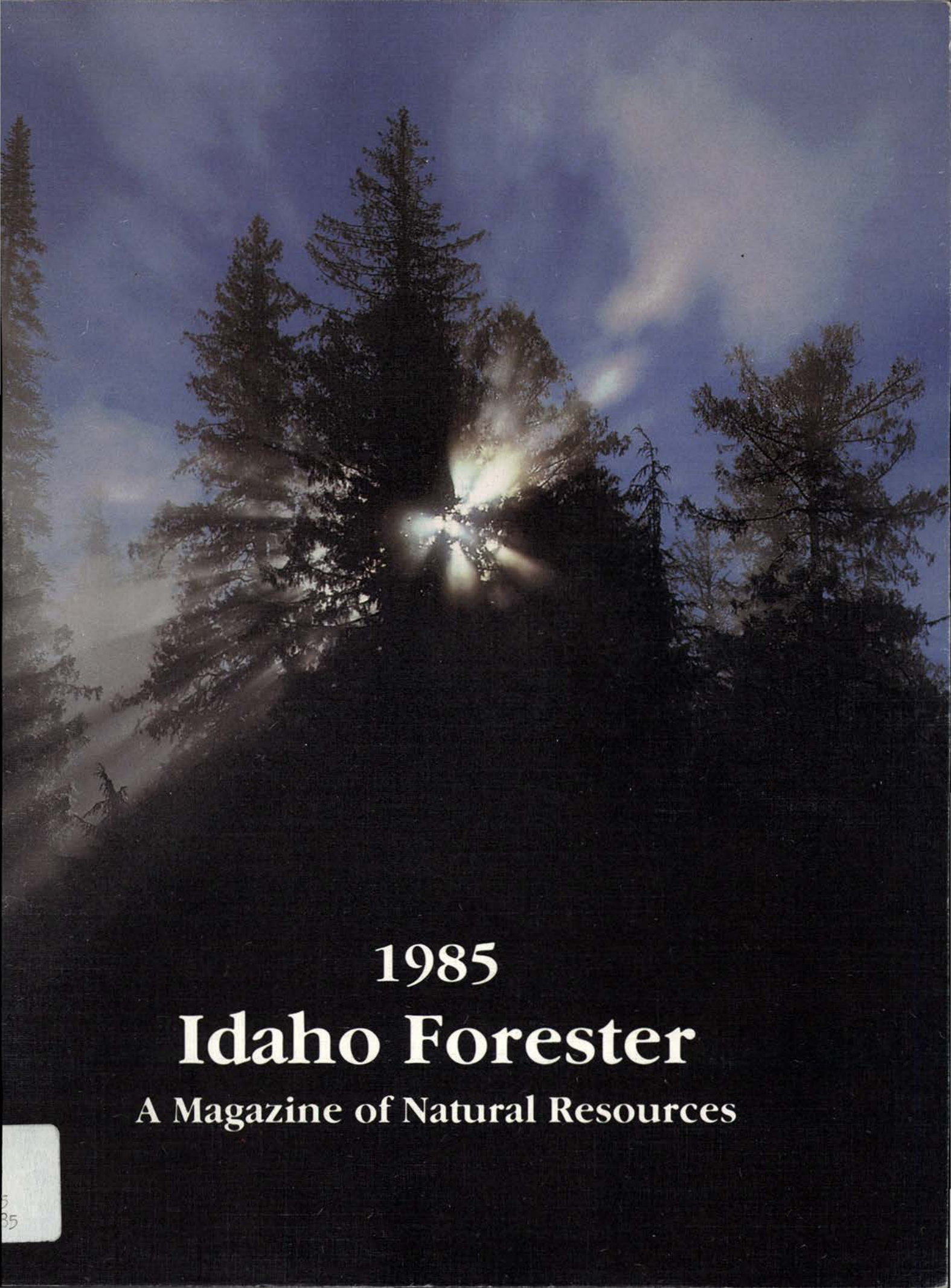

1985
Idaho Forester
A Magazine of Natural Resources

Dedication

The *Idaho Forester* staff dedicates the 1985 issue to **John H. Ehrenreich**, Professor of International Forestry and Range Management, and Dean from 1971 to 1984. He brought our College to a place of preeminence among all colleges in Idaho and among colleges of forestry in the United States.

Needed: Wind and Sun for Fresh Ideas

an Editorial

When I came to the University of Idaho, just fifteen months ago, I was not looking for a degree, but for interesting and enjoyable studies. I haven't been disappointed—the program here has proven more exciting than I ever imagined. Classmates, professors, and hospitable Moscow folk have shown me new worlds and new ways of thinking.

But I am also aware of a wave engulfing schools across the nation that both students and faculty must recognize and resist. This is the disregard for purposeful learning in favor of rote memorization. Let's face it: Students are rarely taught, challenged, or inspired to be thinkers.

Although universities are institutions of higher learning, they don't work primarily for students. The 'extras' that once complemented education, like research and sports, are now ends in themselves, while classroom instruction is in danger of becoming sterile. It is too easy for teachers to rely on a structured program involving little more than presenting information and testing recall of facts. And the university system on the face of it does little to encourage innovative, non-traditional teaching methods. Professors are evaluated mainly on their number of publications, research dollars brought in, and numbers of students in their course or department; quality of instruction is hardly considered.

At the same time, we students are too busy generating paper and cramming for exams to pursue subjects in-depth. The grind of classwork keeps us isolated from society and nature—the world for which we're 'preparing'. With few exceptions, our coursework should be directly involved in current happenings. How much better to tell a prospective employer "I produced this slide/tape program on Idaho wildlife, and published an article on this wilderness management decision," than "I studied wildlife ecology and forest policy."

Not only should the method of instruction be vitalized, but we need a change of surroundings as well. Could we not learn forestry better in a forest? During my career here, I've had only two classes that ever met outside—Bird Identification, and Conservation Writing. Certainly for the latter, it would have been just as easy to stay at our plastic desks under a fluorescent glow, but our professor knows that we need wind and sun for fresh ideas.

While the institution does little to foster creative and critical thinking, students are also guilty when satisfied to accept a milktoast education. Too often, we scribble furiously in our notebooks for 49 minutes as if the instructor was an all knowing sage, rather than a guide to introduce new ideas. We work to please the omnipotent red pen. It seems to me that by this stage in life, we could disregard grades and pursue our studies because we value the concepts presented. As consumers purchasing exposure to information, we should demand more and accept less.

Students and faculty must both work to protect the integrity of higher education. I hope that as our 75th anniversary celebration comes to an end, we will look to the future with renewed commitment to enlightening and enriching studies.

Cecilia Lynn Kinter

Cecilia Lynn Kinter, Editor

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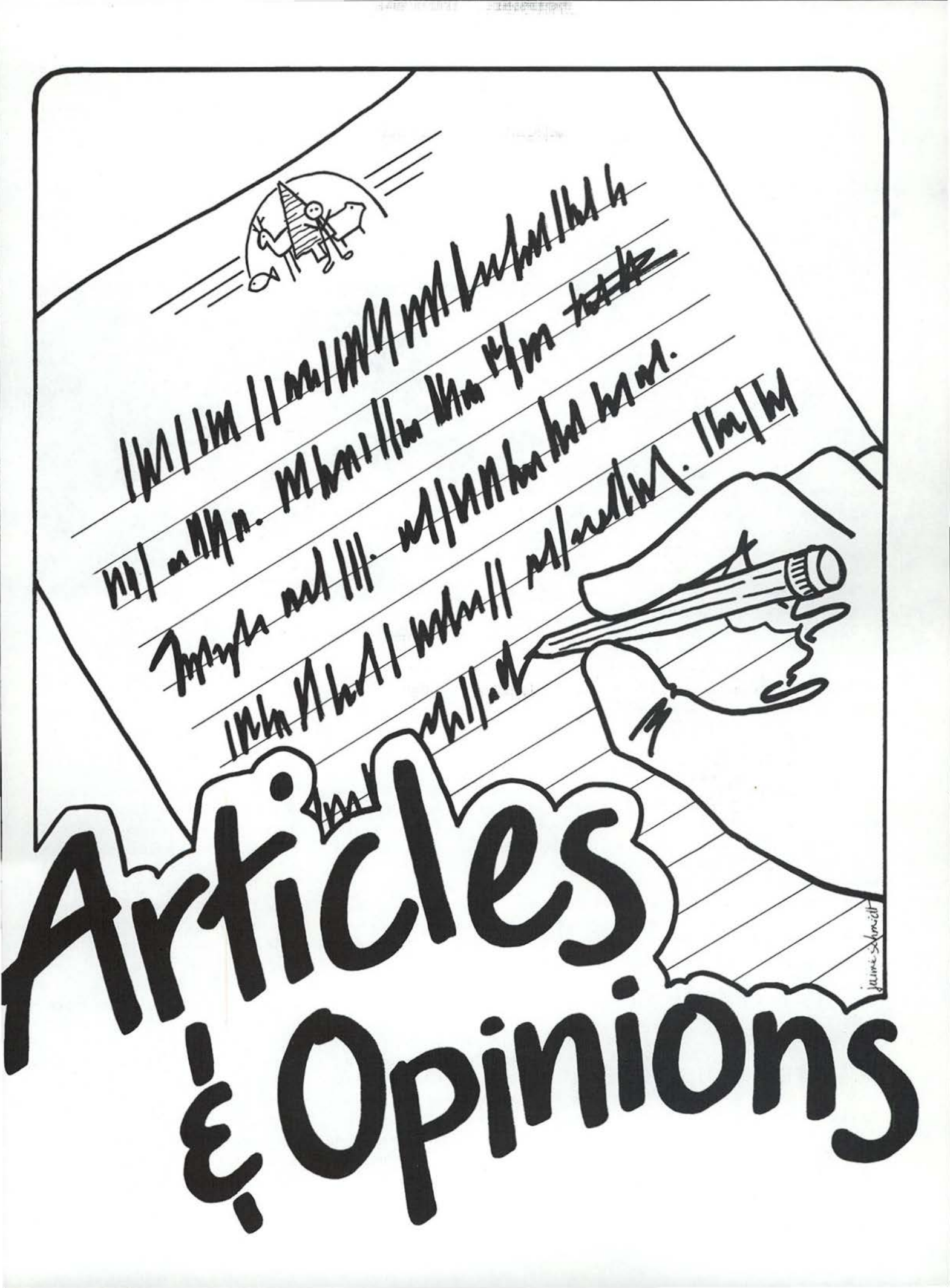

Articles
& Opinions
jaime schmidt

Why Idaho Needs a State River System

by Murray D. Feldman

Idaho is blessed with over 16,000 miles of rivers and streams. Among them is the Salmon—the famed "River of No Return" and longest undammed river in the lower 48 states. The Salmon and five other Idaho rivers, totaling 571 miles, are preserved in their natural state as part of the National Wild and Scenic Rivers System. Still, over 1,700 miles of free-flowing rivers in Idaho are not protected from dams, diversion projects, or development along their banks. Many of these unprotected river areas contain outstanding fisheries, spectacular waterfalls, rugged undeveloped canyons, valuable wildlife habitat, and a myriad of recreational opportunities. But these values may soon be lost unless Idaho establishes a state natural and recreational river system.

As a result of federal legislation in 1978 that encourages the construction of small-scale hydropower projects, development pressures now threaten Idaho's rivers more than ever before. Over 200 permits are pending before the Federal Energy Regulatory Commission for hydropower developments on Idaho rivers. Many of these, like the five projects planned for the Henrys Fork of the Snake River near Yellowstone National Park, would destroy valuable trout streams, waterfowl nesting areas, and recreational opportunities. The Salmon River Basin alone has 63 hydropower projects proposed for its streams. The cumulative effect of all these developments in a single river basin could spell disaster for anadramous fish runs.

> Cumulative effects of all these developments could spell disaster.

Other states are also experiencing this proliferation of small-scale hydro projects, and twenty-eight of them have enacted state wild and scenic river conservation programs to control developments on protected streams. Idaho, with its wealth of fine rivers, has no such program.

Why does Idaho need a state river system when there is already a federal program to preserve free-flowing rivers? A state river system would give Idaho a more efficient and effective program to manage its river resources than the federal system provides. The state water plan notes that "a state system would be more responsive to the needs and desires of Idahoans," and it "could be managed to improve the recreational sector of the state's economy." A 1978 report by the General Accounting Office concluded that federal protection of wild and scenic rivers is slow and costly. The report also stressed the importance of state wild and scenic river programs, noting that the original supporters of the Wild and Scenic Rivers Act planned for state programs to supplement and enhance the federal system.

Despite shortcomings, federal protection is needed in some instances to prevent unnecessary dams and water projects. Although state river programs can be valuable tools for controlling land use development, several court decisions have supported the federal government's power to approve or construct dams despite state laws to the contrary. Only federal protection under the Wild and Scenic Rivers Act can effectively prohibit all dam building.

There are two methods of obtaining this federal protection for a free-flowing river. The first is through an act of Congress. Since Congress has added only seven rivers outside of Alaska to the federal system since 1978, this is not a promising technique. The second method is through designation by the Secretary of the Interior upon request from a state's governor when a river has been made part of a state authorized wild and scenic river program. With a state river system, Idaho would be able to use this

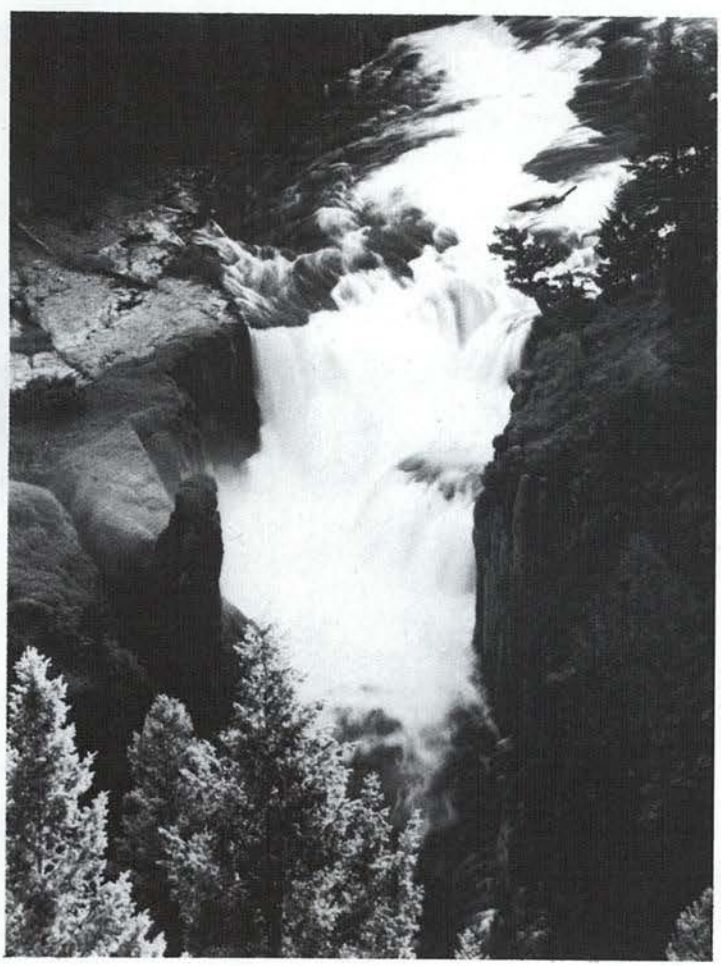
second approach to obtaining federal protection from dam building.

A bill introduced in the Idaho legislature in 1980 to create a state river system was defeated by agricultural and development interests. After a late start, a citizens' initiative campaign in 1984 could not gather enough signatures to place a river system measure before the voters. Although these past efforts to create a state river system in Idaho have failed, there is still promise for the future. The concept has the support of the governor, the state water plan, several conservation groups, and over 90% of the river floaters questioned in a recent survey by the College of Forestry's Wildland Recreation Management Department. Hopefully, the grass-roots effort that has begun to form around the failed initiative drive will soon help secure passage of a state river system, either through the legislature or by ballot initiative.

During the past two years Idaho river floaters have been surveyed by the Department of Wildland Recreation Management to measure support for a state natural rivers system.

Unless such a system is created, many of Idaho's remaining free-flowing streams will be lost to dams, diversions, and development projects. When the churning rapids and rugged canyons fall beneath the rising slackwater, and when the blue-ribbon trout streams are sucked dry by diversion projects, priceless pieces of Idaho's natural heritage will be gone forever. A state natural and recreational river system for Idaho can protect these resources and prevent the loss of free-flowing rivers.

Murray D. Feldman is a graduate student in Wildland Recreation Management currently studying state river conservation policies.



Mesa Falls on the Henrys Fork of the Snake River is but one example of the many river resources statewide now threatened by development pressures.

I've known rivers:
Ancient, dusky rivers
My soul has grown deep like the rivers.

Langston Hughes

The Evolution of Point Springs Experimental Area

by Lee A. Sharp

We didn't think our eighteen-inch-wheel Chevy truck would have any trouble going north through the stand of sagebrush between Pierce Lane and the Sublett Road. But about halfway across, we encountered a large ravine and sagebrush that stood higher than the top of the cab. Tough going for about a mile, then the sagebrush grew shorter again. Nevertheless, it took us almost an hour to travel four miles. There was very little vegetation other than sagebrush and greasewood, and a Bureau of Land Management vegetation survey stated that it would take 27 acres to support a cow for one month. The BLM planned to seed an area located eight miles east of Malta .

The year was 1951. One of my graduate students and I were out to make an assessment of the area prior to seeding. The 7,000-acre unit was planted in the fall of '52 and named Point Springs for a large spring located at the point of the mountain a few miles south.

The 1950s was a period of substantial investment by public and private land owners in rangeland improvements. The range improvement program that had started in the 1930s with the Civilian Conservation Corp and the fledgling Division of Grazing, created by passage of the Taylor Grazing Act, ground to a standstill during World War II. Following the war, renewed interest developed in improving rangeland as the economy gained strength in the late 1940s.

Invasion of many drier rangelands in the intermountain region by halogeton, a toxic annual weed introduced from Russia, splashed across the pages of *Life magazine* in 1945, when a sheep rancher in the Raft River Valley lost most of a band of sheep to halogeton poisoning. This undoubtedly stimulated Congress to enact legislation for control of this introduced species. Since halogeton is an annual plant and not a good competitor with perennials, an important strategy adopted to comply with requirements of the 1952 Halogeton Control Act was to seed areas to adapted forage species. Personnel from Range Resources and the Department of Agronomy at the University of Idaho concurred with this strategy based on studies begun in the Raft River Valley in 1949. These studies indicated that an artificial seeding program was effective in controlling halogeton and improving range conditions.

The halogeton control program that developed led to a cooperative study aimed at evaluating range improvement practices in Idaho. As the study started in 1953, investigations focused on the seeding program underway in southern Idaho. A number of large scale seedings, established by both private and public managers, were selected by the U of I departments of Agricultural Economics, Agronomy, Animal Science, and Range Resources. Forage yields, vegetation composition, range condition, animal weights and gains, methods of seed bed preparation and seeding, and costs and benefits of rangeland seeding were to be investigated.

It soon became apparent that gathering livestock weights and gains was not practical from a physical and logistical standpoint—lack of livestock-handling facilities was a major obstacle. So late in 1954, the university negotiated with the BLM and a group of livestock producers that grazed the Point Springs area for a cooperative study at this site.

The Bureau agreed to furnish the area for studies, install fences for various livestock grazing treatments, drill a well, and build a corral for handling the livestock when they were weighed. Members of the Point Springs Grazing Association agreed to furnish yearling cattle, and to assist in handling and weighing livestock. The university assigned members of their

staff to plan and supervise the experiments, provide a scale for weighing livestock, evaluate utilization levels on forage productivity, and ascertain costs and benefits under various sytems of grazing.

BLM dug the well and built fences and a corral in the fall of '54 and early spring of '55. Cattle arrived for the studies in May. In '57, a rain-drenched grad student converted "headquarters"—a wall tent—into a 16-foot shack, and the Bureau donated a trailer nine years later. We got furnishings from government and university surplus, and with green stamps.

Over the years, many U of I students and faculty members have participated in the studies at Point Springs. BLM range managers have come and gone. There are only two or three original livestock cooperators remaining, and the University now works with second and third generation descendants of these people and others who have purchased some of the original ranches. Many interesting and hilarious stories can be told about various activities that have taken place at this research site.

On May 24 and 25, 1984, over 100 people met to commemorate the 30th year of studies at Point Springs Experimental Area. Former undergraduate and graduate students, BLM state directors and managers, and University faculty members who had worked at Point Springs came to relive old times. The Idaho Cattle Association scheduled their spring meeting so that they could participate in the festivities. Director of the BLM, Robert Burford, who spoke at the May 24 banquet, commended livestock cooperators, the university, and local BLM personnel for the work at Point Springs and their part in demonstrating the value and importance of a cooperative effort in resource management. The renaming of the area—The Lee A. Sharp Experimental Area—was a surprising and humbling experience for this author. Although grateful for the honor, I doubt that the longer name will replace "Point Springs" known and used by so many over the years.

Dr. Lee Sharp, a Professor of Range Resources, is the primary founder of this experimental area and has been its animating spirit over the past three decades.

Plan to stay off the ranges when the ground is soft. Grass grows by inches but is oft times destroyed by feet.

R.A. Long

If you have built castles in the air, your work need not be lost, that is where they should be. Now put foundations under them.

Henry David Thoreau,
Walden

On Three Years of Teaching at the University of Idaho

by Michael Frome

My theories of education begin with the principle that learning derives from life, all of life, as an unending process from birth till death. This is followed by the second principle that the student learns best by continually cultivating senses of observation and perception. That is a fundamentally individual activity.

The process may be as important as the product. Stated another way, the real message of education may not be in its content, but in the method in which it is conveyed. I don't ask or expect students to accept my opinions. I like it best when they challenge them. This relates directly to my theory that students learn best through doing, that while textbook and classroom may provide valuable guidelines, it takes the pursuit of real issues to fully comprehend.

I encourage students to exercise initiative, independence, and imagination.

I've seen students shun the notion; they take shelter in the classroom as a refuge from reality. I recall that one student in his or her evaluation of a graduate seminar on current issues I conducted in 1983, referred to my approach to teaching as "untutored." Another (or perhaps the same) student complained that the class wasn't sufficiently structured, that no reading list was provided at the beginning of the semester. I did, however, tell the students we would discuss current issues and asked them to read the newspapers. A few did, but newspaper reading and keeping abreast of the news somehow seem detached from contemporary education. Those, after all, embody the unexpected.

My approach is simple. I don't give true-false quizzes or multiple-choice examinations. I have given quizzes, but hardly ever for grading purposes. I ask natural resource majors questions about resource history and current events. I ask them to identify individuals such as George Perkins Marsh, John Wesley Powell, Frederick Law Olmsted, Gifford Pinchot, Stewart Udall and Walter Hickel; to name the Chief of the Forest Service, the Secretary of the Interior, to explain the role of the Bureau of Land Management and the importance of Senator James McClure in determining natural resource policy. I don't ask these questions to find out how much my students know, but to indicate areas of knowledge that may prove valuable to them.

I encourage students to exercise initiative, independence and imagination. I insist on treating them as mature people with thinking competency. It doesn't always work. Or possibly I should say it doesn't work with everyone. In the seminar on current issues I invited Bill Voxman, math professor, community activist and member of the Moscow city council, to speak on political involvement, politics and local parks. Personally, I felt that listening to Bill and the chance to dialogue with him should have made the entire course worthwhile. It was the kind of thing that could have changed a young person's life. One student commented in the evaluation, however, that Voxman was irrelevant to the purpose of the course.

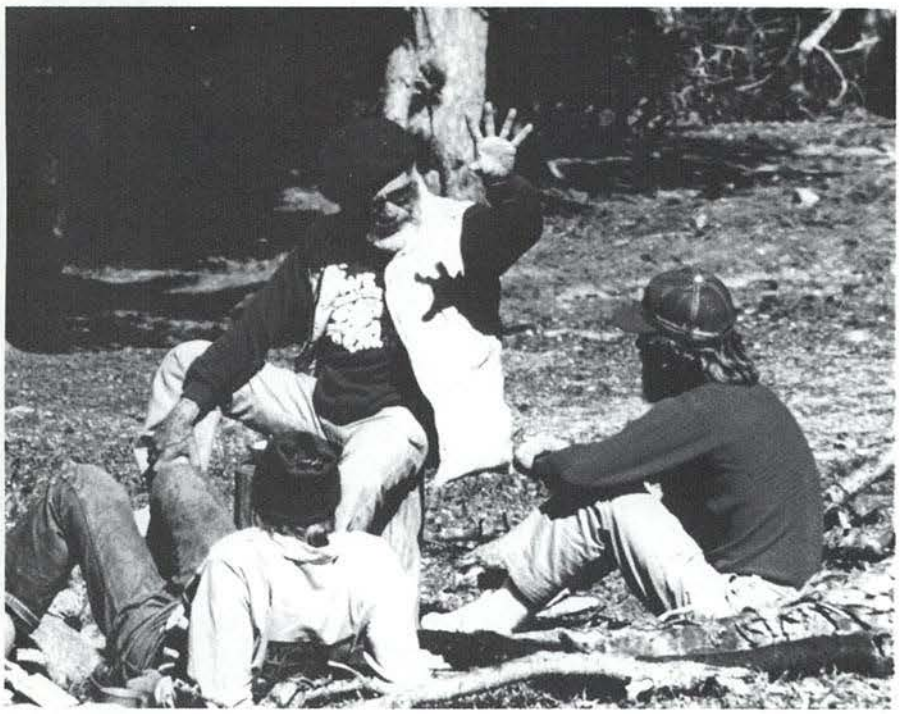
That kind of response can be discouraging. Fortunately, another student wrote as follows:

"Class discussions allowed me to become more aware of issues affecting the environment. By increasing knowledge and understanding, my interest has grown. I have become more aware of the importance of keeping up on current events. The day I was most influenced was when Bill Voxman came to speak. His lecture on how we can make a difference encouraged me and increased my ambition to actively participate."

I challenge students to accept the responsibility for their own learning and to broaden their interests to more than technical career dimensions. Peters and Waterman in their best-selling book, *In Search of Excellence*, designed for corporate management, write:

"Professionalism in management is regularly equated with hard-headed rationality. We saw it surface at ITT in Harold Geneen's search for the 'unshakable facts.' It flourished in Vietnam, where success was measured by body counts. Its wizards were the Ford Motor Company's whiz kids, and its panjandrum was Robert McNamara. The numerative, rationalist approach to management dominates the business schools. It teaches us that well-trained, professional managers can manage anything. It seeks detached,

I challenge the students to accept responsibility for their own learning.



analytical justification for all decisions. It is right enough to be dangerously wrong and it has arguably led us seriously astray."

I interpret this brief excerpt as an argument by Peters and Waterman for a system of education based more on individualism and human values. The emphasis currently is on acquisition of facts and certain skills designed to qualify the student for specific employment. The approach is pragmatic, leaving little room for the intuitive, ethical or spiritual. I've heard experienced educators lament the lack of initiative on the part of today's students, without ever questioning the validity of the system in which students are bred, a system that inhibits adventurous curiosity and individual exploration, favoring instead conformity and pressure to achieve in established modes. Yes, of course, formal education is a useful means of acquiring valuable information and the necessary degrees for a given career, but there is a lot more to fulfillment. It lies beyond grades and pedantics, into the realm of personal experience, of assuming responsibility for one's own destiny, and of willingness and desire to learn by doing.

"We've clung to an educational model that was developed before society moved on," writes Dr. John C. Gordon, Dean of the Yale School of Forestry and Environmental Studies, in an article titled "Educating Tomorrow's Foresters," in a recent issue of American Forests.

"We need, in educational jargon, vastly enhanced humanistic skills to see and understand society's problems, and vastly increased scientific skills to be intellectually flexible enough to solve them."

Dean Gordon cites an "educational transformation" as imperative to the survival of the forestry profession. Well, that's one way to look at it and I'm glad that someone prominent in resource education is talking about it. I myself am not so much concerned about the survival of a profession, or of an institution, as in the training or self-training of the whole person. This leads to my mention of another article which makes the point that the best of formal, structured education isn't even the key to career success. Writing in the Harvard Business Review, J. Sterling Livingston, a Harvard Professor of Business Administration, unveils what he calls the "myth of the well-educated manager:"

"How effectively a manager will perform on the job cannot be predicted by the number of degrees he holds, the grades he receives in school, or the formal management education programs he attends. Academic achievement is not a valid yardstick to use in measuring managerial potential. Indeed, if academic achievement is equated with success in business, the well-educated manager is a myth.

"Managers are not taught in formal education programs what they most need to know to build successful careers in management. Unless they acquire through their own experience the knowledge and skills that are vital to their effectiveness, they are not likely to advance far up the organizational ladder."

My three years at the University of Idaho have taught me more than I've taught anyone else. Teaching is learning. We learn together, from each other. The most precious lesson that I've learned here is to have faith—in myself and in my students. I've heard it said that today's generation is materialistic, self-serving, striving for commercial success only, but I don't believe it. Despite the pressures to program young people into those channels, I find them with the capacity to dream and fulfill lovely and daring dreams.

In the course I gave in the fall of 1984 on Conservation Writing, students showed they could not only express themselves creatively but could get their works published—and for pay. On the last day of class, I quoted a line tossed off orally by Dylan Thomas. He'd been asked about the Welsh mountains. "Ah, the Welsh mountains," he exclaimed. "They go through you in the morning like a harp!"

After sharing that compelling touch of imagery, I said to my students that what I had really tried to accomplish was to help them open their hearts and look inside themselves to evoke their own particular talents or genius, qualities waiting and wanting to make each of us complete.

Michael Frome is a visiting professor in Wildland Recreation Management and author of the forthcoming book Promised Land—Adventures and Encounters in Wild America.

Secondary Forest Products from the Dinderesso National Forest

by Janet K. Miller

In attempts to alleviate Africa's fuelwood crisis, thousands of hectares of native savannah have been cleared and planted with fast-growing exotic species. Little thought has been given to the effect this might have on local populations who depend on "useless brush" for more than just firewood.

Traditionally, subsistence farmers have complemented their cultivated foods with native plants found in the bush. These bush foods provide variety and important vitamins and minerals in an otherwise high carbohydrate diet. During the rainy season when cultivated foods are depleted, and during drought years when harvests are bad, consumption of non-cultivated foods increases. Due to recent drought and resulting scarcity of cereals, people are depending more on native plants. Native species not only provide food, but fodder for livestock, effective medicines, and raw materials for daily need of urban and rural residents as well.

Natural forest cannot be converted to plantation without potentially devastating impacts on the rural poor. Substitutes for bush products, most of them imported, will be sought elsewhere and people with little cash income will have to pay for the them or do without.

While stationed in Burkina Faso with the Peace Corps, I investigated secondary forest products from native tree and shrub species found in the Dinderesso Classified Forest. Much of my information comes from urban and rural markets where secondary forest products are sold. These include three daily markets in Dobo-Dioulasso—the main market, the five o'clock Farakan market, and the Accartville market adjacent to the classified forest; and weekly markets at Bama and Valle de Kou, where Mossi people gather, at Bana, and at the Fulani camp north of Dinderesso just outside the classified forest on the road from Diarradougou to Bobo. These villagers are mainly Bobo farmers and settled Fulani herdsmen. They gave me information on secondary forest products that are not marketed, but are none-the-less important.

Surveys in the Marketplace

For the market surveys I asked the following about a product: local name, use, unit price, plant species of origin, plant part used, and geographic origin. I also noted a product's abundance in the market and tried to find out who had collected it and whether or not the seller was the original collector.

Without a small portable scale to weigh products sold in bulk, I had to calculate unit prices by volume, so I carried with me a known volume—a tin cup. In West Africa consumable goods are sold by the pile or by a small dish measure. I calculated how many piles or dishes of caterpillars it took to fill my cup and extrapolated a price per 1000 ccs. I also carried a 45 cm ruler for finding volumes of products that were not measurable in the tin cup, such as wads of bark or wooden mortars. These metric measures allow one to make trans-market or trans-seasonal price comparisons on each product.

> Virtually every plant in the bush has some medicinal use.

Market etiquette complicated my work. For things like hoe handles, mortars, furniture and other durable goods, one is expected to bargain. However, when bargaining leads to agreement on a fair price, one is expected to buy. Rather than bargain to the real price and anger the merchant, I accepted the first price

I encountered other complications with sellers of consumable goods. Prices for these goods are fixed and one generally does not touch the merchandise without the intention to buy. In order to measure these products, I had to handle them, which made me less than popular at first. But I found that by chatting, explaining what I was trying to do, and tipping the seller with peanuts or candy, peace was kept and she would answer my questions about her merchandise.

Learning From Collectors

To gather information outside the marketplace, my techniques were more diverse. Rather than one-time interviews with as many people as possible, I found it more productive to build a relationship with a core of informants. This way I got more information from all types of people—young and old, men and women, people in their homes and craftspeople at work. As they grew accustomed to me, they were willing to volunteer otherwise unattainable information.

Sometimes I picked samples of trees and shrubs and asked villagers for the local names and uses. I also accompanied my informants into the bush as they went about daily tasks. One informant was a medicine seller in the Accartville market. When she complained about the difficulty of getting far enough into the bush to gather medicines, I offered to take her on my motorcycle. We spent several Sundays in the classified forest where she picked big sacks of leaves and I took samples and made notes.

I gathered a surprising amount of information while en route to places. Whenever I saw someone in the bush

hacking or picking at plants or carrying a headload of shrubs or greens, I asked for information about the forest product. All of my interviews and surveys were conducted in Djoula—the commercial language of West Africa. This was a mixed blessing. I had the advantage of talking with people directly and not risking distortions by a translator, and people were more friendly and open to a foreigner who had interest enough to learn their language. On the other hand, I found quite a few people who spoke only Bobo, Sembla, or Moré, and did not know plant names in Djoula.

The research was conducted from mid-March through late August, 1984. Because many secondary forest products are seasonal, this information is not presumed complete.

Uses of Native Plants

Of seventy-seven species documented, nearly half are valued to some degree as food. Fruits, seeds and leaves are eaten, some straight from the plant, others after elaborate preparation involving days of work. Women and children are the main food gatherers, and preparation of food is exclusively a woman's domain. I divided bush foods into four categories: snacks, acidifiers, sauce ingredients and prepared ingredients.

Although perhaps an acquired taste, caterpillars are enjoyed in sauces and as snacks.

Men, women and children gather and eat snacks, with children being the main consumers according to most people. Snacks are usually eaten when they are found, so many never make it home, much less to the market. Since these are fruits, they are highly seasonal. Of the twenty-three snack fruits documented, nine are marketed, including baobab (*Adansonia digitata*), ronier palm (*Borassus aethiopium*), akee (*Cola cordifolia*), and néré (*Parkia biglobosa*).

Acidifiers are always leaves or fruits with a sour taste. The leaves and fruits are not eaten, but an extract is made by pounding them and adding the pounded material to water. This sour water is then strained and added to *to*—a carbohydrate diet staple, pronounced "toe"—or porridge. Acidifiers are seasonal but can be dried and stored for year-round use. Except for nyama (*Bauhinia reticulata*) leaves, all acidifiers documented are marketed. These include the fruit of sira (*Adansonia digitata*), and poponi (*Landolpjia heudlotii*), and fruit and leaves of ntomi (*Tamarindus indica*). Lemon juice is also used and can be considered a substitute.

Sauce ingredients are generally leaves, but include seeds, flowers and fruits as well. Women gather these and use them in the sauce which always accompanies to or rice. Twelve ingredients are documented, and sira leaves and bumbu (*Bombax costatum*) flower buds and calices are marketed on a fairly large scale.

Karité butter and sumbala, the prepared ingredients, are in a category by themselves because of their complicated preparation and importance in rural and household economics. Karité butter, used in sauces and for frying, is the staple oil in the bush. A woman must work all day long to make it from seeds of the karité tree (*Vitellaria paradoxa*). Sumbala, a sauce seasoning made from rotted néré seeds, requires three days of elaborate preparation. Mossi people also make sumbala out of kari (*Acacia macrostachya*) seeds. Karité butter and sumbala are prepared for home consumption and for sale in even the smallest bush markets. The standard market size ball is about 3 cm in diameter, but larger family-size balls, are also available. During periods of scarcity the price is sometimes raised, but a more common strategy is to make smaller balls. The substitute for sumbala, though nutritionally inferior, is imported bouillon cubes or monosodium glutamate. The substitute for karité butter is any number of commercially available oils.

The caterpillar must not be omitted. It eats karité leaves and is found in great numbers late in the rainy season. Although perhaps an acquired taste, caterpillars are a protein source and are enjoyed in sauces and as snacks.

Soft drinks are made with the pulp of ntomi fruit and crushed ginger. Palm wine, the sap of sebe (*Borassus aethiopium*), is drunk as a soft drink or fermented. An alcoholic beverage is made from damantere fruits (*Cordia myxa*), and bark of nongona (*Grewia bicolor*) is added to every batch of millet beer to settle debris and remove bitterness.

Virtually every plant in the bush has some medicinal use to treat people or livestock and all parts of the plant are used. I frequently encountered men, women and children cutting medicinal leaves, but it seems that men are the main collectors of bark and roots. These people were often gathering bulk quantities to sell to medicine sellers in Bobo-Dioulasso.

Every market in Bobo has at least two traditional medicine sellers, although they are conspicuously absent from rural markets. The only traditional medicines which I found for sale in the Bana market, apart from amulets and charms, were sold wholesale to people who came by truck from Bobo. These buyers in turn sold them to medicine sellers in the city. Medicine is one of the things rural people can gather that city dwellers must buy. Substitutes for these traditional medicines would be imported pharmaceuticals.

Craft wood is exclusively men's concern. They make mortars and pestles, tool handles, kitchen utensils, musical instruments, stools, and other wooden objects vital to daily life. Traditionally,

woodworking has been reserved for the castes, especially blacksmiths. Craft wood as a raw material is never found in the market since the craftsman cuts his own wood and chooses species according to what he plans to make.

Wood is available for every need, from lightweight kokonpeku (*Lannea acida*) for animal yokes to dense gwele (*Prosopis africana*) for mortars that will withstand 10 years of pounding. In addition to the wood's physical qualities, religious beliefs also influence the choice. Lengue (*Afzelia africana*), a tree known throughout West Africa for its ability to house spirits, is used to make "talking drums." Sunsun (*Diospyros mespiliformis*) is said to have protective qualities for the person using it, and so is chosen for looms, leather workers' tool handles and cutting boards, herders' staffs, and hoe handles.

Forage is sold in Bobo to city dwellers who keep sheep and goats. The selection is more or less limited to gweni, lengue, jala, and grasses, which men bring in from the bush by the bicycle load. As grass disappears in the dry season, livestock in the bush depend increasingly on tree and shrub forage. The Fulani herders recognize many species as vital to the survival of their herds.

Nectar forage is an often overlooked resource—flowers of many trees and shrubs provide nectar from which bees make honey. Milk and honey are both forage-dependent foods which provide cash income and high quality food supplements to villagers and herdspeople.

I gathered information on firewood by talking with women in their kitchens, observing types of wood they had stockpiled, and interviewing wood dealers in Bobo-Dioulasso. Primary fuel species include: kolokolo (*Afrormosia laxifloria*), shulafinsan (*Trichelia emetica*), wo (*Parinari* spp.).

Gwele and siri are both known as "blacksmith's tree" because of the high quality charcoal they produce. Most cooking charcoal is left over from dolo (millet beer) fires.

Species chosen for construction have straight limbs and trunks and are used as support poles for sunshades and thatch roof frameworks. I had the ideal chance to find out which species people preferred when the Bana marketplace was renovated and everyone built new sunshades. The most popular seemed to be wolo (*Terminalia* spp.), siri, and karité. Tying fibers from woody plants are also important construction materials.

Certain trees and shrubs play an important role in Bobo traditional religion. Leaves, roots, and wood are all used for ceremonies and religious implements. For instance, many Bobo masks are made entirely of specific types of leaves. I got many evasive answers to my questions concerning the role of trees in religion, but I did learn that among the Bobo it is taboo to burn lengue wood, and that some individuals are forbidden to cut certain tree species or eat their leaves. Also, particular individual trees are known to harbor spirits. Forest managers should proceed with sensitivity when involving villagers in planting or harvesting these species.

With the remaining products that come from the bush, the shelves of a hardware store could be well stocked. Palm leaves alone are made into pigeon coops, chicken carriers, fish traps, utility baskets, drum tighteners, sleeping mats, potscrubbers, strainers, and sifters. A number of bark fibers are used to tie mats, attach arrows to shafts, and secure cumbersome headloads. Saps and bark extracts are used as dyes, tannin, oxidizers for pottery, and glues.

Fruit fibers from nére fruit are used to sew up cracked calabashes (gourd containers), and those of banayiri (*Ceiba petandra*) are stuffed into cushions. People even clean their teeth with toothsticks cut from certain trees. They also spin and weave a silk-like waterproof cloth from cocoons of caterpillars which live in ntomi trees. This cloth brings a high price.

These products are made for home use but are also found in markets. While their commercial substitutes are easily identified, the prices of such substitutes are well beyond the means of most rural people.

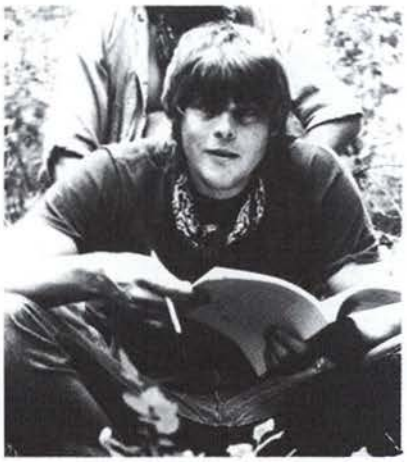
As an alternative to exotic plantations, the natural forest can be managed to produce fuelwood and maintain secondary forest products that are vital to local people. I hope that these findings will be used in a forest management plan integrating native species and participation of villagers living around the forest. I also hope that this study will provide inspiration to those planning forestry projects in the developing world.

Janet Miller graduated from Lewis and Clark State College, in Oregon, with a BA in Biology. She held a forestry position in the Peace Corps from June 1982 to November 1984 and is currently seeking employment.

Reminiscing — Summer Camp 1984

by Robin Naugler and Cathi Bailey

The summer of 1984 found 25 students from our college at the U of I Forestry Field Station in McCall, Idaho. The intensive four-week wildland ecology course brought many new experiences for all of us. Along with increasing our knowledge in various natural resource disciplines, we gained new insight, experience in the field, and new friendships. Although the course was tough, the good times we had together made it all worthwhile.



Robin Naugler and Cathi Bailey are seniors in Wildland Recreation Management.

Natural Resources Week 1984

by Claire Rausch

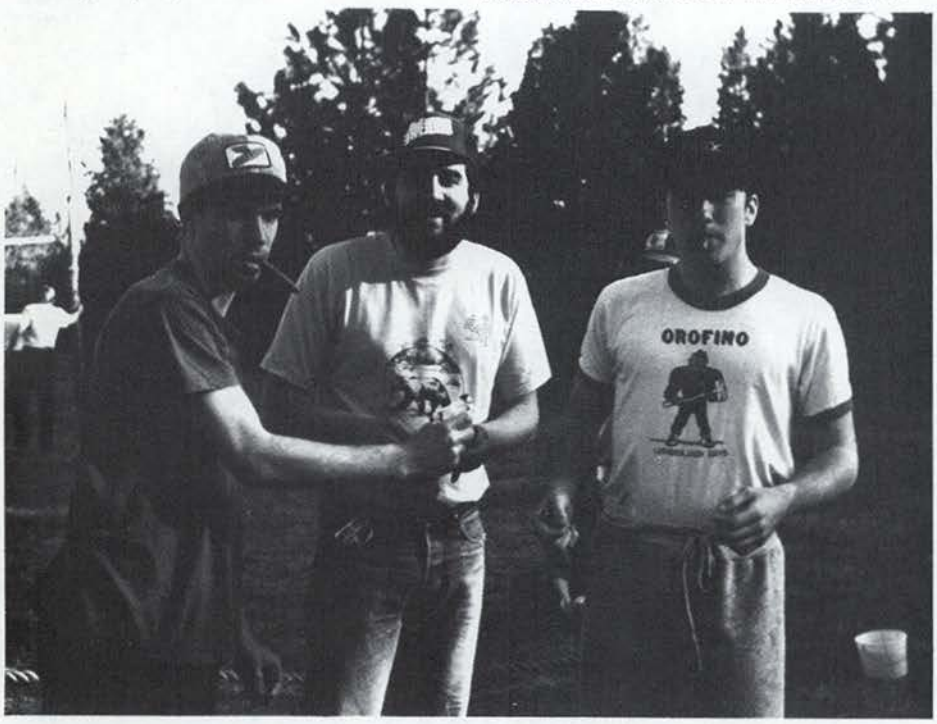
It was cold and rainy on Thursday night when Natural Resources Week began with the annual film festival, but that was all right because all the movies had arrived on schedule, there was a great turn-out, and we were inside. What a relief! Five months of planning and the first night was over without complications. Satisfied, I headed home to get some sleep.

Hours later, I developed a terrible case of butterflies as I thought about all the events that were scheduled outside on Friday. Considering the fact that it had rained almost every day of the past two months, combined with the fact that I was taking statistics, I concluded that the probability of rain during the weekend was quite high. Well, if it rained, we would simply move all the activities indoors. There was one major problem though. How on earth could we squeeze the Associated Foresters' Logger Sports team into the lobby of the Forestry Building? I prayed for sunshine.

After thirty-three wonderful minutes of sleep, I awoke and peered out the window. The sun, which had been hibernating for two months, was finally shining. Dan LaBossiere was right—it was going to be warm and sunny after all.

The official kick-off began at noon and was held on the west plaza of the Forestry Building. In between classes, students, teachers, and other members of the community had the opportunity to meander through our wilderness skills course to check their expertise or to learn something new about low-impact camping techniques. The Associated Foresters' Logger Sports team demonstration generated enthusiasm for a cross-cut saw face-off between Dean Ehrenreich and U of I Vice-President Jack Loudon—suit coats and all. The Wildlife Society was busy judging entries in the spicy chili cook-off, while members of the Wildland Recreation Management Association distributed information regarding recreation opportunities in the Pacific Northwest. The Forest Products Club and Student Affairs Council joined in by selling old-time forestry photos and t-shirts.

The limber pole never lets one reach its end or go home dry.



Water guns, cigars, and lighters were the tools of the trade for participants in the Big Meadow stogie smoke.

Later that afternoon we glanced back over the past 75 years of our college, as keynote speaker Michael Frome addressed changes in natural resource management. Then alumni from each department spoke on the development of the college's individual disciplines.

Friday evening, the first annual student-faculty-alumni banquet was held. After a delicious roast beef dinner, each department presented their outstanding senior award: Fisheries—Sally Rau, Forest Products—Terri Harris, Forest Resources—Dan Fink, Range—Dave Foster, Wildland Rec.—Laura Grannis, and Wildlife—Gerry Shimek. The Student Affairs Council also presented the outstanding faculty award to Dr. Joe Ellen Force, and the Boot in the Butt award to Karel Stoszek. The highlight of the evening was a "Natural Resources Week Past and Present" slide show arranged by three Wildland Recreation Management students. After it was over, lots of smiling

The Dean of CFWR and the Vice-president of UI willingly challenge two forestry students.

faces assured me that another action-packed day was a success.

Big Meadow Creek on Moscow Mountain was the site of the barbecue Saturday afternoon. Some folks joined the on-going volleyball game, while others simply relaxed in the sunshine. However, most of us wandered over to the food service line to get a juicy flame-cooked half-pound hamburger and all the trimmings. After everyone had eaten, the majority of the people fell victim to the post-bloat snooze syndrome and were flat on the grass in the sunshine.

Later on, the intense sun and 70° temperature enticed a handful of courageous (or insane?) students to attempt the infamous limber pole. Twelve bruised bodies, a torn swim suit, and one sacrificed pair of glasses later, there emerged a winner—Chris Vetter.

Those who didn't get enough abuse from the limber pole moved on to the stogie smoke. Participants armed with squirt guns chased each other around and tried to extinguish each others' cigars. Paul Dzwonowski managed to escape the spray, and smoked his cigar in record time.

Overall, the day was a very enjoyable one. It gave everyone a chance to take time off from their busy lives, relax, and enjoy good food and company. It was a fitting finale to an action-packed weekend.

As I walked to school Monday morning, it was cold and rainy. Natural Resources Week had come and gone, and all the planning and hard work that went into it seemed trivial. However, knowing that we had taught at least a few people about the development of Natural Resource Management was very rewarding for me, as well as the Student Affairs Council members who sponsored this event. A 75th anniversary is a fitting reason to celebrate Natural Resources Week and those involved with the College of Forestry, Wildlife and Range Sciences have dedicated themselves to another 75 years of excellence in natural resource management.

Claire Rausch is a senior in Wildland Recreation Management and was the chairperson for Natural Resources Week in 1984.

No cake, but plenty of hamburgers, hot dogs, potato salad, beans, cookies, and beer for the masses at the Big Meadow picnic.

School Forest Update

by Harold Osborne

What has 18 arms, 18 legs, 9 heads, makes a lot of noise and appears to go in all directions at the same time? The newly revised School Forest Advisory Committee, that's what. Acting Dean Ernie Ables has called together department representatives, as well as the forest manager and associate deans, to chart future directions of the School Forest. This committee is charged with the formidable task of overseeing management of the 7,158 acre FWR Experimental Forest.

The committee is made up of the following individuals:

Ernie Ables;
Jim Fazio, Associate Dean for Academics;
George Belt, Associate Dean for Research;
Harold Osborne, Forest Manager;
Leon Neuenschwander, Forest Resources;
Leonard Johnson, Forest Products;
Jim Peek, Fish and Wildlife Resources;
Jim Kingery, Ranger Resources; and
Ed Krumpe, Wildland Recreation Management.

Getting a group with diverse backgrounds to agree on any one point is always difficult. The fact that the members are all strong-willed, opinionated professors complicates the issue. A typical meeting might go like this ....

Osborne: "We're planning to harvest 1.5 million board feet of sawtimber from the West Hatter Creek Unit next year."

Peek: "There goes that prime winter range and thermal cover for the whitetails."

Kingery: "There should be a 30% increase in available AUM's."

Krumpe: "Isn't that the area where a cross country ski trail was planned? I suppose it'll be OK if your clearcuts are small and the boundaries are irregular, not straight up and down the hill."

Neuenschwander: "Ed, did you ever try to burn up a slope along an irregular fireline? The thing with fire — the boundaries are straight sooner or later!"

Johnson: "Looks like an excellent opportunity to test out my new cable yarder."

Ables: "What will the impact be on the fishery resource? Oh that's right, there are no fish on the School Forest. OK, how does that affect our allowable cut?"

Osborne: "Maybe we will just harvest a couple of hundred thousand board feet over in the Flat Creek Unit."

Somehow the committee always works out various problems by keeping in mind the main goal of the School Forest — to support teaching, research, and service functions of the College. The committee attempts to evaluate FWR needs and short and long-term consequences of various actions. Then it directs the forest manager to act accordingly. A technical on-site review committee assists the manager at the "on the ground" level. Just how is this accomplished? Read on.

Student use of the forest has greatly increased in the past few years with construction and upgrading of major access roads. During the past 13 years, about 21 million board feet of timber has been harvested from the forest, mostly by the FWR student logging crew. The entire range of silvicultural practices has been used, making the forest an ideal field lab for silviculture classes.

Doc Partridge finds enough wood rotting fungi in harvested trees to keep his forest pathology class plenty busy, and log scaling and timber cruising students are right in there practicing on log decks. The use of fire is probably the most exciting field-oriented activity in the College. And Leon Neuenschwander's prescribed burning students are ever eager to ignite what they can of the slash left after harvest.

After site preparation is complete, Dave Wenny's forest planting class may plant a few trees and conduct a regeneration survey or two (or four or six or more if you talk to students). All this time Photo Joe Ulliman has his students remotely sensing the forest and interpreting aerial photos.

Then along comes Charlie McKetta leading the students in forest investment analysis and harvest scheduling. They put a price (based on timber of course) on the whole 7,158 acres, including natural areas, and calculate the allowable cut. Somehow they keep deciding that we should clearcut the entire place and put it to the highest and best use. Good thing our teaching, research and service goal won't let that happen.

Interpretive Methods Lab, under the leadership of Dr. Sam Houston Ham, builds signs for the forest so you know where to go, where you've been, and what you've seen along the way. With an active livestock grazing program on the Forest, Jim Kingery shows the benefits of range management to his students, while Karel Stoszek finds many examples of cow damage to trees for his forest protection class. Jim Peek's wildlife management class also discovers lots of interesting critters in the forest.

While field trips, class projects and examples of management practice are the major use of the forest, it is also the site

for a wide array of research. A few of the more recent M.S. theses are:

Effects of Slash Pile Burning on Chemical and Physical Soil Properties, by D. Davenport, 1984.

Probability Models to Predict Douglas-fir Seed Tree Mortality after Prescribed Burning, by J. Spicer, 1982.

Livestock Grazing, Fire, and Their Interactions Within the Douglas-fir/Ninebark Habitat Type of Northern Idaho, by G. Zimmerman, 1979.

Analysis of the Productivity, Costs, and Site Impacts of a Second General Small-log Skidder, by R. Rummer, 1982.

Production, Costs, and Site Impacts for a Mini-skidder when Skidding Small Diameter Trees, by M. Leverick, 1980.

Artificial Versus Natural Regeneration: A Biologic and Economic Analysis, by S. Fitzgerald, 1983.

Much of this research results in publication beyond a master's thesis.

Other projects in progress include the application of herbicides to manage competing vegetation in conifer plantations, effects of site preparation methods on germination and establishment of conifer seeds, horse logging as applied to the selection harvest method, thinning for firewood production, uneven-aged and all-aged harvest regeneration methods, and use of a small cable yarder using intermediate support technology.

Students and researchers are not the only ones out on the forest, though. The general public also benefits. Many people tour silvicultural demonstration areas, observe the operation of new harvesting equipment, and see the results of intensive stand management. Each year, tours are conducted for woodland owners, tree farmers, foresters, and other groups. The forest is also an outdoor classroom for workshops, like a short-course on horse logging sponsored by the Experimental Forest and planned for fall 1985. Our forest is a busy place.

The School Forest will continue to play an integral part in the education of resource managers at the University of Idaho. Research will be more strongly emphasized, and the service function will be strengthened.

The advisory committee will no doubt have a few heated discussions, but like any group of land management professionals they will reach workable solutions to the varied management goals. The School Forest will live on, in spite of all the arm waving.

Harold Osborne manages the Experimental Forest and is an Assistant Professor in Forest Resources.

Preserving Idaho's Natural Diversity in Research Natural Areas

by Charles Wellner

Idaho's vast acreage contains many undistrubed ecosystems, each which harbor a unique diversity of plants and animals. This range of natural diversity is vital to a healthy environment.

In order to insure protection of a representative range of wild communities, federal, state, and private agencies are building a system of Research Natural Areas. This will provide preserves for science and education, maintain a baseline standard for comparing ecosystems altered by human action, and save germ plasm reservoirs.

The Federal Committee on Ecological Reserves defines a Research Natural Area (RNA) as "a physical or biological unit in which current natural conditions are maintained insofar as possible. These conditions are ordinarily achieved by allowing natural physical and biological processes to prevail without human intervention. However, under unusual circumstances, deliberate manipulation may be utilized to maintain the unique feature that the Research Natural Area was established to protect."

The Federal Committe lists the following objectives of RNAs: "1) to preserve adequate examples of all major ecosystem types or other outstanding physical or biological phenomena; 2) to provide research and educational opportunities for scientists and others in the observation, study, and monitoring of the environment; 3) to preserve the full range of genetic and behavioral diversity for native plants and animals, including rare, endangered, or threatened species and disjunct populations; 4) and to provide a basis for organized research and exchange of information on Research Natural Areas."

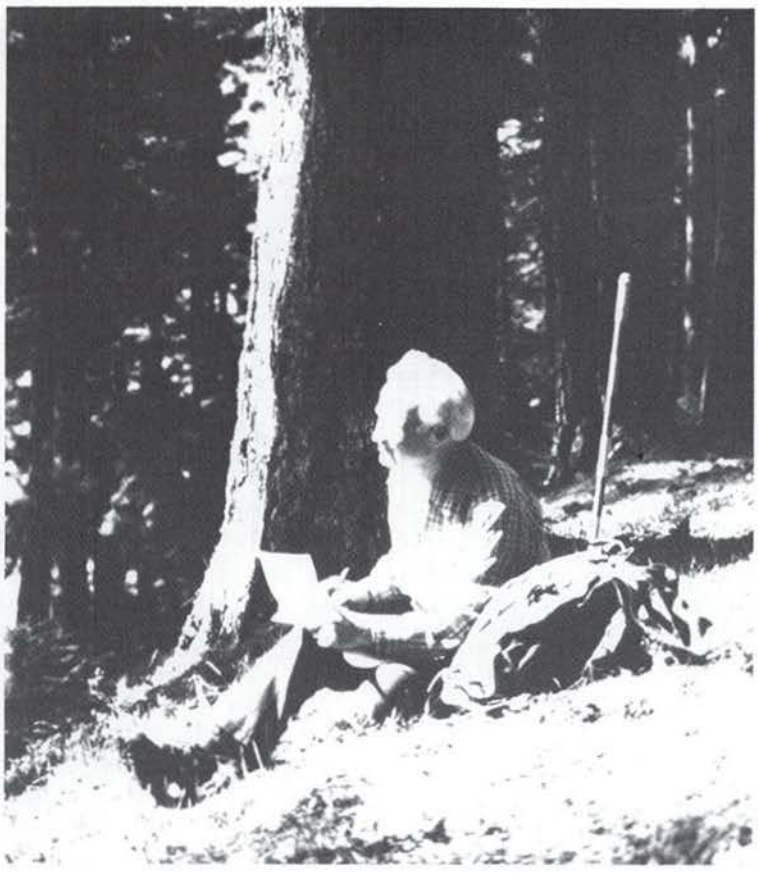
These areas are relatively small. The Forest Service recommends that as a minimum they should be 300 acres. Established RNAs in Idaho range in size from the 33 acre Idler's rest Nature Preserve, near Moscow, to O'Hara Creek — 7000 acres on the Selway River, and average about 1000 acres. To the extent possible each RNA should include an entire small drainage basin in order that the water flowing from the area be undisturbed, too.

A number of agencies and land owners have a part in the RNA program in Idaho. The Forest Service has been establishing RNAs since the late 1920's. The first RNA in Idaho, Teepee Creek on Priest Lake in the Kaniksu National Forest, was established in 1935. The Rules and Regulations for the National Forest Management Act of 1976 require that each National Forest Plan give consideration to the need for RNAs. The Bureau of Land Management and certain other federal agencies have for many years been interested in establishing RNAs. The Idaho Department of Parks and Recreation has designated three RNAs. The Nature Conservancy has five nature preserves in Idaho that are in many respects equivalent to RNAs. And Idaho State University owns a nature preserve that is used primarily for research and teaching.

Much of the effort in Idaho concerning RNAs has been made by members of the Idaho Natural Areas Coordinating committee. This is a loosely-knit organization of volunteers that resulted from an April 1974 workshop in Boise. Fred Johnson, Professor of Forestry, and this author planned the natural areas workshop, and it was led by Dean John Ehrenreich of the University of Idaho College of Forestry, Wildlife, and Range Sciences, and Roger Bay, Director of the Intermountain Forest and Range Experiment Station. The resulting committee held several annual workshops, catalogued and classified natural diversity in Idaho, and determined which elements of natural diversity already occur in reserved areas and which elements still need protection. In 1974 the Idaho Committee authored a publication, *Research Natural Area Needs in Idaho — A First Estimate*, which, with updates, has served to identify RNA needs in Idaho.

From the start, the Idaho Committee embraced six technical committees: Grasslands and Shrublands —Chairman Edwin Tisdale, Emeritus Professor, University of Idaho; Forests — Charles Wellner, U.S. Forest Service, retired; Alpine — Professor Douglass Henderson, University of Idaho; Aquatics — Professor Fred Rabe, University of Idaho; Rare and Endangered Plants — Robert Steele, Intermountain Forest and Range Experiment Station; and Endangered Animals — Professor Charles Trost, Idaho State University. Members of the technical committees have published several reports during the last ten years. Possibly the more important of these are *Aquatic Natural Areas In Idaho* by Fred Rabe and Nancy Savage of the Aquatics Technical Committee, and *Vascular Plant Species of Concern in Idaho* by Robert Steele, Steve Brunsfeld, Doug Henderson, Karl Holte, Fred Johnson, and Patricia Packard of the Rare and Endangered Plants Technical Committee.

The Idaho Committee has concentrated its efforts on federal lands, especially those administered by the BLM and Forest Service, and has worked closely with the USFS Northern Region and Intermountain Region RNA committees. In 1983 the Forest Service and The Nature Conservancy funded a study of potential RNAs on the five BLM districts in south-



Chuck Wellner is always striving to preserve pieces of Idaho.

ern Idaho. The Idaho Committee has recommended needed RNAs to all National Forest supervisors and BLM district managers in Idaho.

To date the following RNAs and their equivalents have been established in Idaho:

Forest Service	22
Bureau of Land Management	2
National Park Service	1
Dept. of Parks and Recreation	3
The Nature Conservancy	5
Idaho State University	1
Total	34

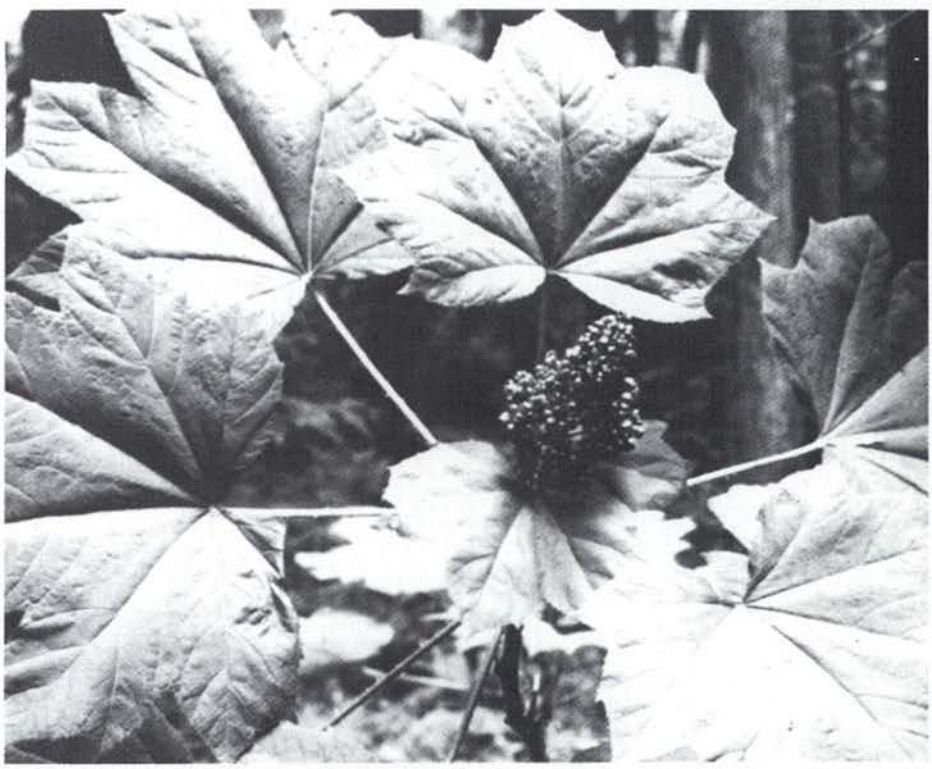
This number will increase substantially when consideration is given in the planning process to RNAs recommended for establishment on Forest Service and BLM lands.

Recent developments are very encouraging. In 1984, The Nature Conservancy established an Idaho Natural Heritage Program financed jointly by The Nature Conservancy and Idaho's Department of Fish and Game. This program will improve knowledge of natural area needs, systematically record and store information about elements of natural diversity, and give emphasis and continuity to identification and establishment of needed natural areas.

Much remains to be done, however. National Forests and BLM districts should be encouraged to establish recommended RNAs. Additional searches are needed to locate undisturbed areas that harbor important elements of natural diversity not yet included in established or recommended RNAs. Improved classification systems, inclusion of elements of natural diversity not yet considered, and development of rarity ratings to guide priority of action are developments that will sharpen knowledge and preservation of natural diversity.

Action to establish natural areas is urgently needed. As developments encroach on previously undisturbed lands, rare elements of natural diversity are disappearing at an alarming rate. Our efforts in the next few years will determine whether or not examples of Idaho's range of natural diversity will be preserved.

Charles Wellner is retired from the U.S. Forest Service and is an Affiliate Professor of Forest Resources. He founded the Idaho Natural Areas Organization and has been instrumental in the establishment of several RNAs in Idaho.



Idaho's Endowments — An Investment in the Future

by Stan Hamilton

Never prophesy, especially about the future.

Samuel Goldwyn

Idaho has a dowry—as generous a gift as ever graced a marriage.

The marriage occurred in 1890 when Idaho became the forty-third state to join the Union. The dowry was a series of land grants from the federal government, including the Public School Endowment grant for 1/18th of the land surface of Idaho as contained in Sections 16 and 36 of every township in the state.

The Endowment Lands

Idaho's total land grant of 3,650,763 acres included the Public School Endowment and eight other endowments as follows: Agricultural College, Charitable Institutions, Normal School, Penitentiary, Public Buildings, School of Science, State Hospital South, and University of Idaho.

All of these are administered in the same manner as the public school endowment except the building grant. It was created for the sole purpose of generating income for use in constructing public buildings. Therefore, all revenues that come in, both principal and interest, may be expended by the Legislature for this purpose.

The Public School Endowment grant was set up to generate revenues for common schools. The lands and funds created from the sale and lease of land and harvestable resources, such as timber, minerals, and forage grasses, were to be held in trust forever.

An examination of current holdings, however, shows that the pattern is not the original Section 16 and 36 grant, primarily because the State did not acquire all of the grant in place.

One prerequisite of the grant was that the land be surveyed, yet hundreds of thousands of acres of the original grant lay within mountains that were unsurveyed and still remain so. The State took these lands "in lieu" elsewhere, notably in Priest Lake and Floodwood State Forests. In addition, the grant required that there be no prior title encumbrances, such as a preemptive homestead or mineral claim. These lands, also, the State took "in lieu."

Another reason for the changed pattern is that the State has exchanged land with the U.S. Forest Service to block scattered timberlands into larger, more manageable parcels. Through these changes, we have substantially increased revenue-producing capability of state lands and reduced management costs.

Lastly, the Land Board has sold state lands for various reasons over the years. Those sales have altered the ownership pattern to that which you see today. The state endowment now encompasses more than 2.5 million acres of land, including about 880,000 acres of commercial timberland.

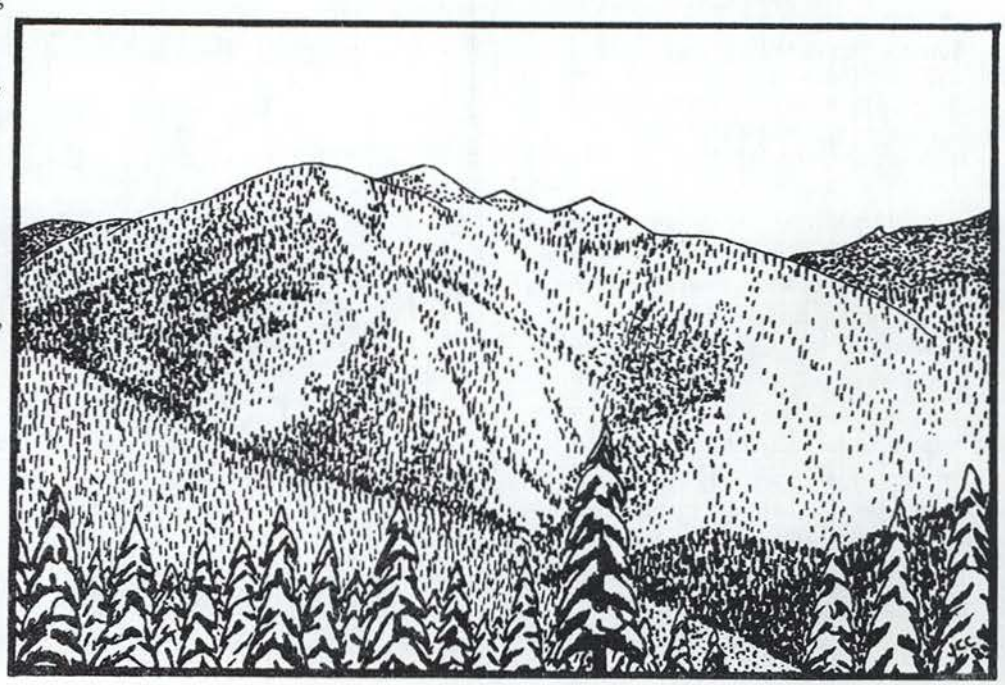
The Endowment Fund

The endowment fund—the depository for revenues from the sale of land, timber, minerals, and other products of the land—currently contains about 235 million dollars. Some 68% of this is held in the Public School Endowment Fund—the largest of all the funds. The endowment fund is increasing by 12-15 million dollars annually. Since statehood, the revenue from these sources has been invested in federal, state, county, city, village, or school district bonds; state warrants; or corporate bonds.

To prevent the fund from being depleted, a provision was included in the Idaho Constitution stating that only the interest earned is expendable. The principle fund may never be spent, thus providing a perpetual source of revenue for public education.

The Land Commissioners

Administration of endowment lands is charged to the State Board of Land Commissioners by Idaho's Constitution. This



Board is composed of the Governor, Secretary of State, Attorney General, State Auditor, and Superintendent of Public Instruction. The Director of the Department of Lands is the Secretary to the Board. The Land Commissioners must manage endowment lands to produce the greatest long term return for the endowment fund.

The Department of Lands carries out the constitutional functions of the State Board of Land Commissioners. To perform these tasks, the Department has a staff of about 200 people scattered among eight supervisory areas around the state.

Forest Resource Management

Timberlands represent by far the largest asset of the various endowments. Approximately 880,000 acres of commercial timberlands are held in the Idaho trusts.

The Department currently manages timber on a biological rotation basis which provides for a sustained annual harvest of about 165 million board feet from eight supervisory areas as shown below:

Annual Allowable Harvest*	Supervisory Area
19.5	Priest Lake
11.4	Pend Oreille Lake
39.0	St. Joe
63.6	Clearwater
16.5	Payette Lakes
10.0	Southwest Idaho
0.0	South Central Idaho
5.0	Eastern Idaho
164.6 MMBF Total	

This annual allowable harvest is based on forest inventory work done over the last 25 years or so, and the reliability of this work decreases somewhat with each passing year due to physical changes in the resource base.

The Department is updating its current inventory data at a rate of one or two supervisory areas per year. Area personnel under direction of our inventory specialist measure inventory plots. The data is then evaluated to project stand inventories. We expect to complete this round of work by 1989.

The current measurements will be used to refine existing data to the point where "once a decade" remeasurements will probably no longer be needed. Careful attention to annual changes, caused by harvest and other events, and periodic spot measurements should allow us to maintain an accurate inventory.

In the past, the Department has used Kemp's Formula to calculate annual allowable cut from inventory data. Kemp's Formula is a conservative method for determining annual allowable cut on a biological rotation basis. Today we are looking at other tools to manage the state's timber assets more aggressively.

For sometime now, the Department has been considering financial rotation models as a tool for harvest scheduling. Indeed, such a tool, MUSYC, has been used on the Priest Lake inventory.

Unfortunately, huge volumes of decadent, old growth hemlock predominant in the Priest Lake State Forest resulted in a recommendation to "cut everything" during the first decade—an alternative not available to the Department because of the virtually nonexistent pulp market.

Our next effort in using the financial rotation model will be in the Pend Oreille Lake Area, where our timber has an excellent "uneven age" distribution that should result in a useful financial harvest ranking by the mode. Used in conjunction with other planning management tools, we anticipate development of a harvest schedule in the Pend Oreille Lake Area that will further promote aggressive management of timber assets.

As the Department seeks more aggressive means to harvest state-owned timber, we must also work diligently to produce young, thrifty forest stands that will maximize returns to the endowment in the next and future rotations.

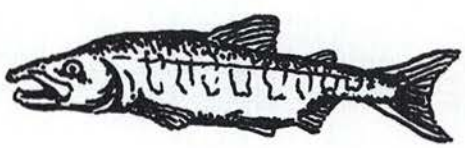
To that end, the Legislature has authorized the appropriation of 10 percent of timber revenues for improvement of the capital asset—the land and timber thereon.

The Department has used this fund actively to restock and manage harvested acres for faster growth and higher returns. Again, we have turned to computers and current technology to help us determine "what if" and forecast the results of our management actions.

We in the Department have long sought tools that would help us meet our charge to "maximize returns to the endowment." Routine use of computers and increasing sophistication in available software has provided us with those tools, but the constraints remain—lack of markets, low prices, lack of competition, and lack of staff and funding.

Idaho has a dowry in its 880,000 acres of commercial timberland. Our task is to make it produce the most at the highest prices for the least cost. The Idaho Department of Lands has its challenge for the future.

Stanley Hamilton is the Director of the Idaho Department of Lands.



Faculty Changes

by Pam Vaughn

***With the resignation of John Ehrenreich as Dean, Ernie Ables stepped in as Acting Dean in early August. Lewis Nelson is serving as Acting Head of the Fish and Wildlife Department in Dr. Ables' absence.

***The college's newest faculty member, Dr. Chuck Harris, joined the Wildland Recreation Management Department as Assistant Professor last fall. Dr. Harris received his B.A. from Oberlin College, his M.S. from Colorado State University, and his Ph.D. from the University of Michigan. He most recently taught at Purdue University as a Visiting Assistant Professor.

***Dr. Larry Tennison, Associate Professor of Forest Resources, is on leave for about two years as a Watershed Management Scientist with the Food and Agriculture Organization of the United Nations. His duty station is at the Forest Institute, Peshawar University in Peshawar, Pakistan.

***Just returning from a semester as a Visiting Professor at Pennsylvania State University is Brian Dennis, Assistant Professor of Forest Resources.

***In December, 1984, Maurice Hornocker and Elwood Bizeau retired from their positions as leader and assistant leader, respectively, at the Idaho Cooperative Wildlife Unit. Both are professors in Wildlife Resources. Bizeau joined the University in November, 1967 and Hornocker in January, 1968.

***Ronald Stark, Forest Resources Professor, retired in the fall after 14 years of service at University of Idaho. He will continue to serve the College of Forestry on a part-time basis, particularly in research.

Pam Vaughn is a secretary in the Dean's office.

Chuck Harris has quickly become familiar with the often fast pace of being an assistant professor in the CFWR.


?
The next 15 years...

State of the College

At the Portal of Change

by James R. Fazio

It is a pleasure to again be invited to contribute to the award-winning *Idaho Forester*. This issue is an especially important one in that it marks the end of our year-long commemoration of the College's 75th anniversary. It is a milestone issue that will be placed in the university archives along with last year's fine edition and other memorabilia from our celebration. Someday scholars will look at these volumes when trying to discover what we were doing, thinking, and daring to dream about in 1985.

One thing our future colleagues will see is a profession virtually dazed by change—not only the technological milieu that has put mini-computers into the cruiser's vest, but also the social changes that have put resource management in a fish bowl. Today, every action by a resource professional is open to public scrutiny and is likely to be challenged if the manager's decision is not seen as serving the public interest. Then, too, dramatic shifts in our economy have devalued timber and minerals, while shifts in our politics have re-valued private enterprise.

We can also see change reflected in the interest that young people have in associating themselves with careers in the natural resource professions. Enrollments in forestry schools nationwide have dropped twenty-nine percent since 1975. Undergraduate enrollments alone are one-third less than they were just five years ago, and even the spectacular rise of female students has leveled off at about twenty-six percent of the total. Enrollment of minority students remains at a paltry two percent, despite aggressive recruiting campaigns here and at our sister institutions across the nation.

In my message last year I was optimistic about our enrollment figures and believed we were at the beginning of an upturn in all categories. Today I am still hopeful, but less sure. Instead, I believe this is a "shake out" period for forestry education, just as it is for forest industries and natural resource management professions as a whole. As such, it is a time for professionals and organizations to be alert if they hope to survive.

I wish I had the answer to what the winds of change portend. The best I can do is make some educated guesses. These would include the following: 1) There will be more emphasis on quality and less on quantity—both in the kind of students we attempt to attract, and the substance of our teaching and research programs. 2) Students will need to be more aggressive and flexible in their search for jobs; but for those who are, prospects will be brighter due to fewer graduates, large numbers of expected retirements in the next five years, an eventual thawing of government hiring freezes, and greater opportunities for contracting and self-employment. 3) Alert students will enhance their education and employability by broadening themselves through courses in business, communication skills, and other applied social sciences. 4) Major emphasis will shift to continuing education as practicing professionals seek to keep up with new technology, better methods, and social change. 5) International markets and service opportunities will grow even more important, but at the same time, a concentrated effort will be needed to meet demands for providing practical services to Idaho's people and businesses. And 6) Idaho will be a "growth area" of the country, attracting people who

This is a 'shakeout' period for forestry education.

value the state's recreational and living qualities. This, in turn, will put greater pressures on wood and other commodity producers to conduct their activities in ways compatible with citizens' expectations. In every case, these changes have important implications for both students and educators, and we can ill afford to ignore them.

I will stop with that, having risked enough already to be viewed as visionary or fool by future judges. Let me now revert to some facts about this year.

As our 75th year draws to a close, we can look back on many activities—banquets, dances, the Seminar Series, tree plantings, media events, a book about our history, and a lot more. The most lasting event, however, will be the creation of the 75th Anniversary Scholarship Fund. The generosity of alumni, faculty, and other friends of the college has been rather overwhelming. No, we have not received any huge contributions, and we may not even make our endowment goal of $75,000. But ours is not a profession of the wealthy, and even our industries are hurting. A flow of $10.00 to $100.00 has been the result, and from this we will be able to offer many new scholarships each year, in perpetuity, to the best students our high schools and two-year schools can provide. To me, this is the celebration of our 75th year. It is a celebration of commitment to the future, which after all is the hallmark of our professions.

When our new dean is installed in office this summer, he or she will face the task of recognizing the achievements of our past, the challenge of change, and the strengths and weaknesses of our college. It will be necessary to mold this knowledge into a plan for our future that will keep us at the forefront of natural resources education. To do this, it will also require renewed commitment on the part of faculty, students, and alumni. I believe we have the spirit within our college not only to meet the challenge of change, but to do it with enthusiasm. If we do not, we will sink from our place as one of the nation's most reputable schools, and rightly so. On the other hand, if we dedicate ourselves to the future, rather than insisting on prolonging the past, 1985 will be the first of another seventyfive years of success and leadership in education, research, and public service.

Dr. Fazio is Associate Dean for Academics in the College of Forestry, Wildlife and Range Sciences.

The hope of the future lies not in curbing the influence of human occupancy—it is already too late for that—but in creating a better understanding of that influence and a new ethic for its governance.

Aldo Leopold

Fun Seekers Take Heart, the Future is Ours

by Charles Wells

Where does your mind wander when you're asked to contemplate the future? Does it go star trekking with Sally Ride on the Space Shuttle? Or does it get boggled in population dynamics and natural resource allocation models?

From past evidence in technological advancement, much of the future is created by a desire to make the present more efficient; and even though the desires are there, the discoveries are often made by accident. Who would've thought of using an ultra high frequency telecommunication microwave signal to cook your evening meal or heat your morning coffee? It probably wasn't until an unsuspecting technician working on a huge microwave satellite dish accidentally had his insides broasted like a holiday turkey, that the idea of microwave cookery became a desire that should be available to every household.

And why not? Anything that can reduce our chores and increase our free time is a plus. It's time which can increase our quality of life, either monetarily or with leisure activities.

Leisure time is becoming increasingly more important to those of us interested in Wildland Recreation Management. We won't necessarily be trying to increase leisure time with inventions, like solar-charged photovoltaic chips to replace the hassels of white gas in backpackin g stoves. Rather, we will have to modify the experience opportunities available to the masses in order to meet their enjoyment standards during this extra leisure time.

So who are these masses? How will they change in the future? Who's going to have to prepare to deal with them, and how? These are the sort of questions my mind sometimes wonders when I think about the future. Then there is the big question, 'how will the world change?' Will it be via a technological accident? Optimistically, I think not.

I see a futuristic world where political power struggles are balanced harmoniously on a unified world trade market system. America's role in this system is already being defined. In an effort to balance the U.S. budget, economic laws must be enforced. This means all government subsidies must be eliminated, and with that, many U.S. based manufacturers will go down the flusher.

I see America concentrating on exports and dominating the world in computer and electronic technology. Our country will continue to be a primary influence on the world supply of wheat and other grains, as well as a major provider of wood fiber and wood products. The 'Yuppie (young urban professional) Revolution' will maintain the U.S. as a world leader in consumerism. Goods manufactured abroad, using American technology, will be higher in quality and less expensive than those made in the U.S. This will further eliminate domestic factories, reducing world competition, and with it, the world's work week to a rotating 3-4 days.

For the world, leisure time will be as accepted as the American Express Card. Tourism and travel will become the leading world industry. America's most valuable imports won't be expensive commodities, they'll be revenue-generating tourists! Why? Because America will become the playground of the world with

her 190,811,268 acres of National Forests and 97,017,973 acres of National Parks; not to mention the combined mega acres of National Monuments, wildlife refuges, historic sites, state forests and parks, private museums, safari parks, and amusement parks. Tourism and travel will not only give Americans more jobs than all the ailing manufacturers could ever hope to provide, but the industry will create many new jobs worldwide.

Tourists will be the masses from around the globe which future recreation managers will have to provide for. The most significant adaptation that future visitor-oriented managements must make is to bridge the language and cultural gaps.

How can these futuristic problems be confronted today in order to be prepared for tomorrow? To some extent, the Department of Wildland Recreation Management has already taken a step in this direction by offering a degree option in tourism and travel. To expand on this option will take an adventurous spirit. It's up to you to seek overseas internships, or jobs and internships in regions of this country which can be just as alien and rewarding, like Florida. Take time to travel and expose yourself to foreign cultures. Go as low budget as you think impossible ... bicycle Europe or hike South America. Force yourself to depend on learning the language and customs of the countries you visit in order to survive. Guaranteed this will be a far more valuable learning experience than studying a foreign language here in the states, and certainly more fun. After all, isn't that what life is all about — fun? And isn't that the movement of the future — towards a holistic planet of fun seekers?

Only time can tell if any portion of my vuarnet vision will come true. But it is already evident that with the aid of technology, the world is shrinking. Every year foreign visitors are flocking to our country and national parks in increasing numbers. If we, as future managers, want to better serve these diverse publics and avoid potential conflicts, we must be linguistically versatile in our interpersonal, literal, verbal, and visual communication skills. With a good foundation for these skills, future recreation managers will develop a sensitivity that could lead to a holistic planet of fun seekers and make America the world's most popular playground.

Charles Wells is a senior in Interdisciplinary Studies in natural resource communication.

Where are We Headed in Fisheries?

by Christine Moffitt

Fish are more than sport to much of the world: they are a major source of protein. Because of the harvest of food fish, the need to understand fisheries exists even in cultures lacking the means to appreciate recreational fishing or indigenous nongame species and their habitats.

In fisheries sciences, as in many professions, changes within our society have altered the scope and extent of the career. Over past decades, the emphasis on fish has expanded to include habitat, the entire ecosystem, and even the global biosphere, including fish and those who interact with them (Fig. 1). World economics has become an important factor in certain fisheries. More recently, global environmental impacts are being recognized as an important component.

One of the best examples of environmental impact across ecosystem boundaries is acid rain. Atmospheric emissions of sulfur and nitrous oxides can create acid rain hundreds of miles away from a point source (Fig. 2). It is a complex environmental problem. The acid rain is killing fish and wildlife, decreasing forest productivity and affecting soil fertility. Moreover, many surface drinking water supplies are in jeopardy from toxic metals put into solution by acid waters. Because of leaching of copper pipes some communities with acid water supplies have been advised to flush their systems if water has remained in the pipes for one day!

Another example of a widespread environmental impact is shown in a recent study at Oregon State University. Researchers found that the ocean productivity available as food to many coastal anadromous fish may be limited. Some salmon ranching operations may be overburdening the system with consumer fish and thereby decreasing the viability of wild, hatchery, and ocean-ranched stocks—a sort of "tragedy of the commons." Problems of resource allocation will become more and more evident as demands increase. Industry and society's method of coping with acid rain, allocation of oceanic productivity, and other problems are evolving as these issues unfold.

Attitudes about oneself, others, and the resources will affect the determinations and interpretation made and the weighing of certain issues. The zeal with which things will be accomplished depends on personal enthusiasm and drive. Changing values and traditional roles for members within society, such as the addition of female and minority professionals, all lead to a different collective perspective and will affect and, in some cases, accelerate changes. For example, Native American Indians have become a powerful political force in fishery decisions, and institutions have been forced by court action to consider the Indians' viewpoint.

It is increasingly important for everyone to be informed about many issues, and to possess a variety of skills in order to understand and cope with changing perspectives. Many early fisheries professionals chose their careers because they liked to fish or to work in remote areas. While these attitudes are by no means handicaps in the profession, we need diversity of background among professionals, including those persons that may have very different primary interests. For example, we need men and women who like to work in a variety of settings with fish, computers, engineering or labora-

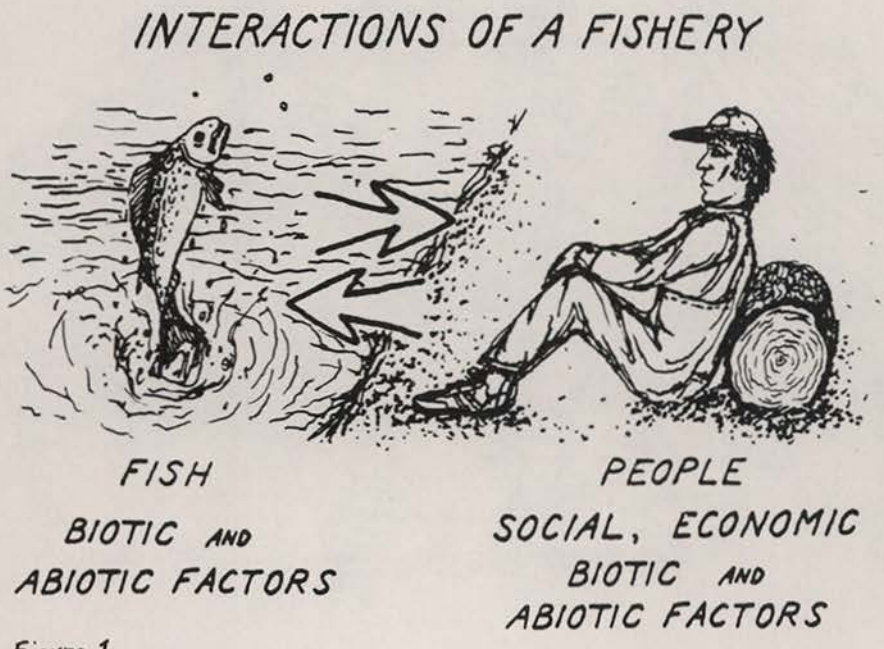


Figure 1.

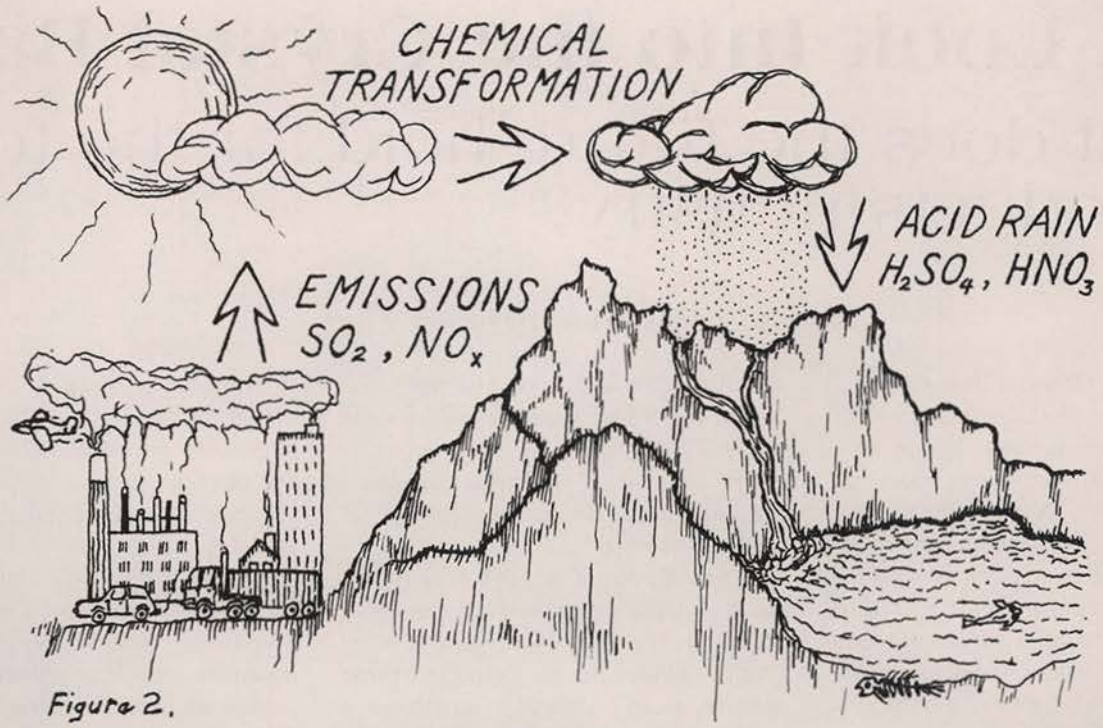


Figure 2.

tory analyses, economics, law, and public relations.

The American Fisheries Society is the oldest and largest professional organization for fishery biologists, and its members are specialists in a variety of subfields. This diversity of affiliations includes: fish culture, fish health, fisheries administration, fishery education, water quality, early life history, marine fisheries, exotic fish, fishery management, fish genetics, bio-engineering, computer use, and fisheries economics. Each of these specializations has members with separate values and approaches. The common ground is an interest in solving problems. I hope that our professionals do not share the same hobbies because the world and its issues are much too diverse to be approached from a common mold.

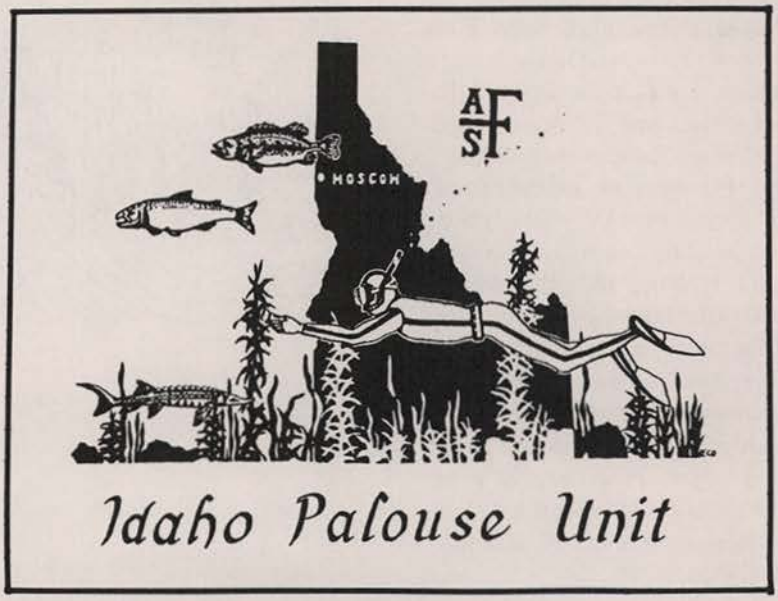
It is the worry of many freshmen that they must know 1) what career they want, 2) where they want to live, and 3) how to obtain both. Perhaps some of this pressure is good, but not if it takes the exhilaration from learning. The phrase "take time to smell the flowers" is appropriate.

The college curriculum should allow students to explore a variety of options, not necessarily force them to choose a single option beyond a strong general approach. The idea that a career is something for which you train and enter is misleading. A career continues to evolve as you are in it, and you must be able to evolve with it. The important skill is learning how to learn more. Computer use is a good example—few professionals in fisheries today were initially trained with computers, but most are using them. By the same logic, if a student majors in one thing and ends up working in another, nothing is lost. Another perspective is gained that ultimately may be valuable in the new profession.

I shudder to think that we could produce a class of students that have all taken the same courses from the same professors, and all end up in the same working place. If this happens, we have failed to respond to a true educational mandate; we have failed to develop students' individual personalities and interests.

I urge all of us to expand our perspectives, and look beyond our regionalism. There are many challenges to come.

Christine Moffitt is a visiting assistant research professor in Fisheries Resources.



A Look Into the Crystal Ball

What does the future hold for the forest products industry?

by Arland Hofstrand

During the 60's and into the early 70's, the forest products industries experienced a phenomenal period of growth. The United States was in a period of boom. Money was cheap, housing starts were high and the mills were producing at capacity. During this period of rapid expansion, the industry relied heavily on solid wood production and plywood. Then the bubble burst. Sudden and drastic increases in the cost of energy, money and raw materials, etc., almost brought the forest products industry to its knees.

Since then, the forest products industry has experienced cycles of ups and downs, but the general trend has been toward recovery albeit slow.

So what can we look forward to in the future? Producers of forest products have learned to tighten their belts. They have had to streamline their production processes through the use of improved equipment which are often computer controlled. Improved efficiency of operation and closer milling tolerances have resulted in obtaining more products from a given raw material base.

In housing, the trend will be for more modular construction and less toward the more expensive stick construction. The floor area of the home will decrease and there will be an increase in multiple dwellings. However, the extent of this trend will be governed by federal, state, and local building codes, restrictions placed on borrowing, and other regulations which affect the use of land. The demand for lumber will remain approximately the same but we will probably see an increase in composite panel use.

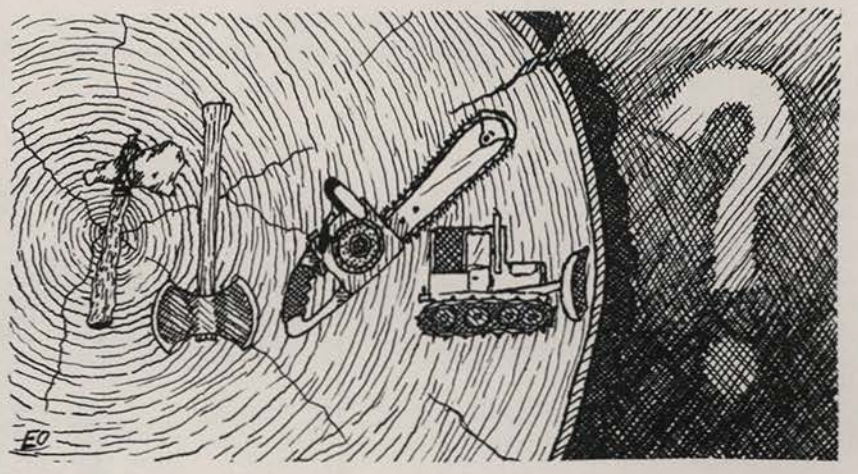
The outlook for the pulp and paper industry is bright. Production of pulp and paper products is expected to continue to increase in the U.S. and the world. Computerization and mechanization of mills are improving the productivity and efficiency of the pulp and paper industry. Production processes are constantly undergoing modification and improvement.

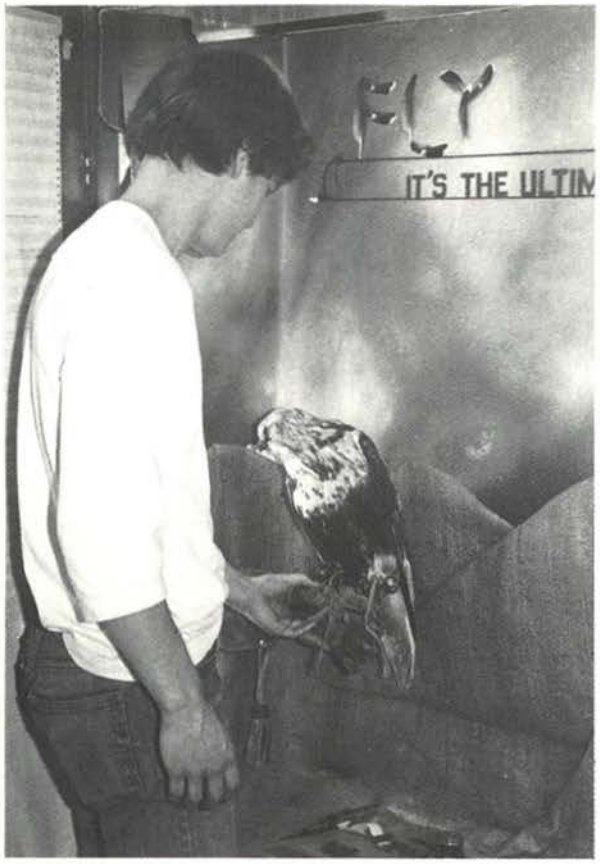
Consumption of paper will continue to grow. New paper products for specific end-uses are constantly being created. With expanded use of computers, there will be a large growth in computer printing papers. Products for the packaging of food will continue to grow.

The pulp and paper industry will continue to address some of its major problems. Energy conservation at mills has significantly affected energy consumption. There is a trend toward the manufacture of cheaper grades of paper to avoid the high capital investment required for Kraft pulp mills. Water and air quality associated with pulp mills will continue to be improved as more effective control equipment becomes available.

Overall, the future of the industry is not bleak. There will be improvement over time. In some forest products industries this improvement will be gradual while in others the improvement will be more rapid.

Arland Hofstrand is a professor in Forest Products.

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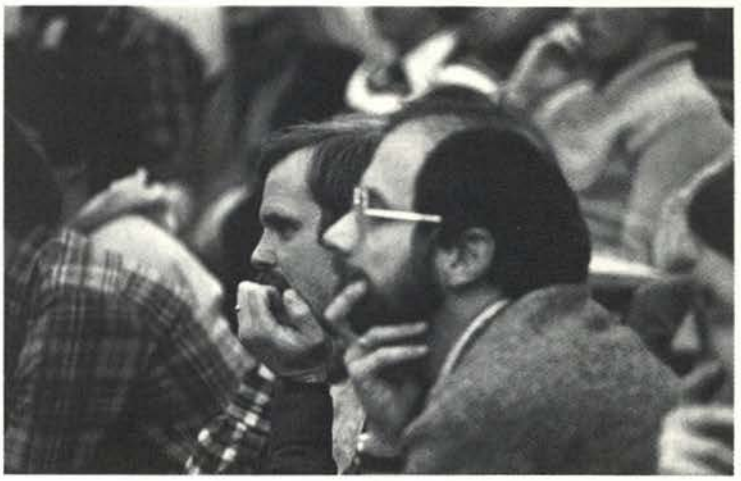
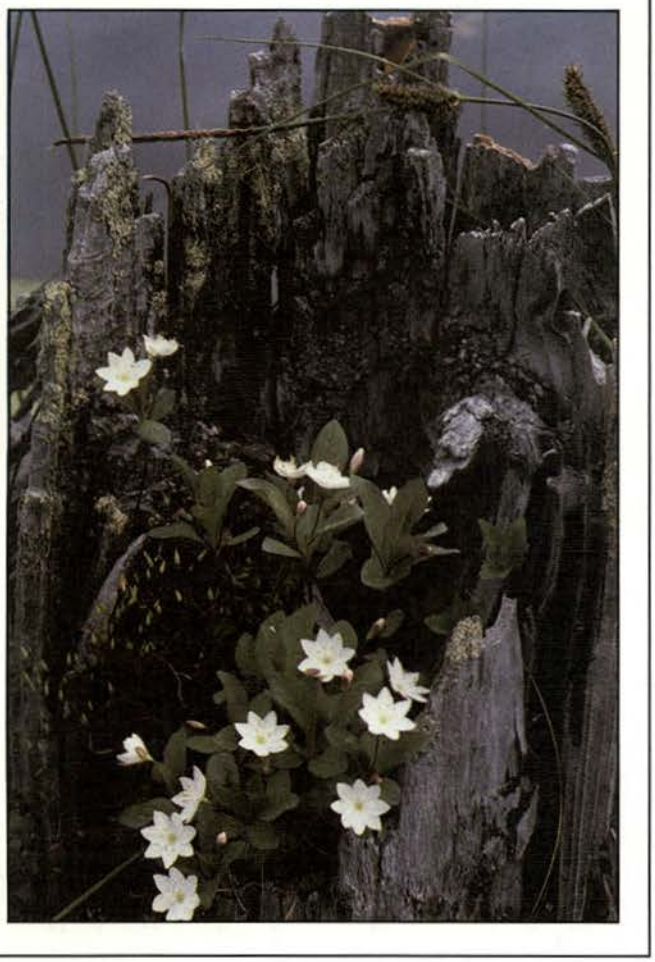
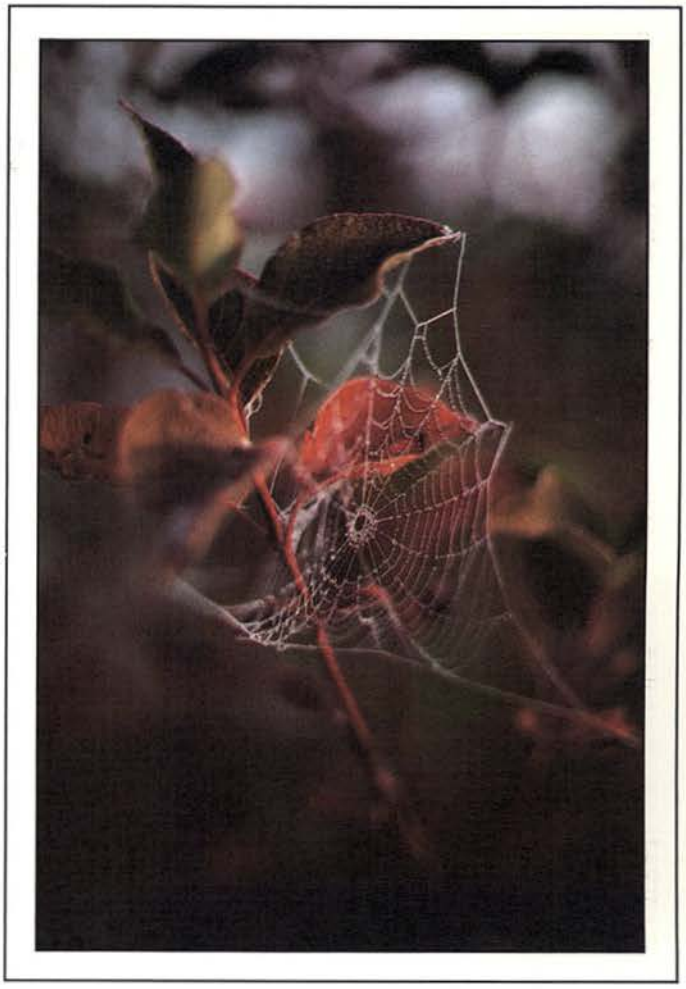




As the hand held
before the eye
conceals the greatest
mountain,
so the little earthly life
hides from the glance
the enormous lights and
mysteries of which the
world is full,



and he who can
draw it away
from his eyes, as
one draws away
a hand,
beholds the great
shining of the
inner world.

— Rabbi Naehmann of Bratzlav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Wildlifers and Landscape Architects Plan Nongame Future

by Kerry P. Reese

I have a little saying, taped to the wall of my office, which my father gave me as I left home for college: "People don't plan to fail; they just fail to plan." We've all heard these admonitions. But how many of us really plan far into the future? It's tough sometimes to think about next semester, let alone next year. Eight University of Idaho wildlife and landscape architecture students, however, are doing just that. In fact, they are designing habitat development plans to benefit nongame wildlife and the public for years to come.

Nongame is the newest aspect of wildlife management and is unfamiliar to many. It includes all species of wildlife not normally hunted, trapped, or otherwise harvested. The nongame portion of Idaho Fish and Game, headed by Martel Morache, is a young, emerging program officially initiated on July 1, 1982. Funds for nongame projects are generated through voluntary contributions from taxpayers via the state tax checkoff. Past nongame projects include peregrine falcon reintroduction; field work on woodland caribou, Idaho ground squirrel, Shoshone sculpin, and boreal owl; structures for nesting birds, such as bluebirds and ferrugineous hawks; and ecological leaflets on Idaho's colonial waterbirds, threatened and endangered species and how to attract wildlife to backyards.

How did U of I students get involved in a nongame project? Last year the Department of Fisheries and Wildlife was approached by Fish and Game personnel concerning a possible project on two plots of state-owned land, one next to Fish and Game headquarters in Boise, the other adjacent to the Regional Office of Fish and Game in Lewiston. The idea is to provide habitat expressly for nongame as public demonstrations of what can be accomplished on relatively small parcels of land (4 and 7 acres). Attracting wildlife to backyards is a well-known and often-practiced art, but developing larger areas for maximum use by nongame wildlife has not been attempted. With cooperation from Idaho Fish and Game, Department of Landscape Architecture, and Department of Fisheries and Wildlife, these two projects are now underway.

Four senior landscape architecture students—Anne Ford, Dale Gephart, Mike Hill, and Curtis LaPierre—under supervision of Dr. James Kuska, are teamed with four senior wildlife students—Arlene Blumton, Brian Janosik, Christopher Ourada, and Eric Schenck—who are taking a directed studies course from Dr. Kerry Reese. Two pairs of students will develop plans for each site. The landscape architects will contribute technical expertise in site preparation, trail design, structures, interpretation, and construction. The wildlifers will provide expertise on wildlife species likely to use the areas, vegetational and structural components of habitats required, and food habits of the wildlife. Pairs of students will then combine their knowledge into a detailed plan that provides maximum possible wildlife habitat on the areas, yet allows for human enjoyment and education.

Nongame is the newest aspect of wildlife management.

Right now, the areas are not much to see. The Lewiston area is a hay field, and the Boise area has several wild rose patches, weeds, and a few isolated woody plants. As I write this in January 1985, we don't yet know what these habitat plans will entail, nor which aspects of the plans will eventually be implemented by Idaho Fish and Game. I do know that within several years the nongame of Idaho will have two attractive areas that were greatly enhanced by the joint efforts of two University of Idaho departments.

Why not "plan" to visit these two sites in 1990? Better yet, stop by this summer, and then again in 1990, to see the results. If you can't visit this year, or in the next five, perhaps I can report back to you with the project results in the 1991 *Idaho Forester.*

Dr. Kerry Reese is an Associate Professor of Wildlife Resources.

The animals will never speak, although they have much to say about leading a dignified life.

Barry H. Lopez

The Range Revolution: A Study in High Tech

by Dave Bryant

A revolution is quietly taking place out in the sagebrush that will eventually provide modern Zane Greys with enough material for several novels. It started about the time that interest in the Sagebrush Rebellion bagan to fade, and centers on adoption of the personal computer for range use. Range managers, ranchers, range students, and range devotees of all descriptions are finding themselves in the fast track of personal computer usage. The University of Idaho Range Resources Department is no exception. In fact, U of I Range faculty members are at the forefront of the revolution with their acquisition of ten personal computers, plus peripherals, in the last two years.

Coffee breaks are now littered with conversations about disk drives, printers, formatting, and color graphics. Three years ago topics such as AMPS, range stewardship, the grazing fee formula and habitat typing were hot items. In reality they are still fairly hot, but may never be the same now that they are capable of being stored on double-sided, double-density floppy disks for fast retrieval.

What does it all mean? Are horses obsolete? Does anybody visit the range anymore? Does anybody care?

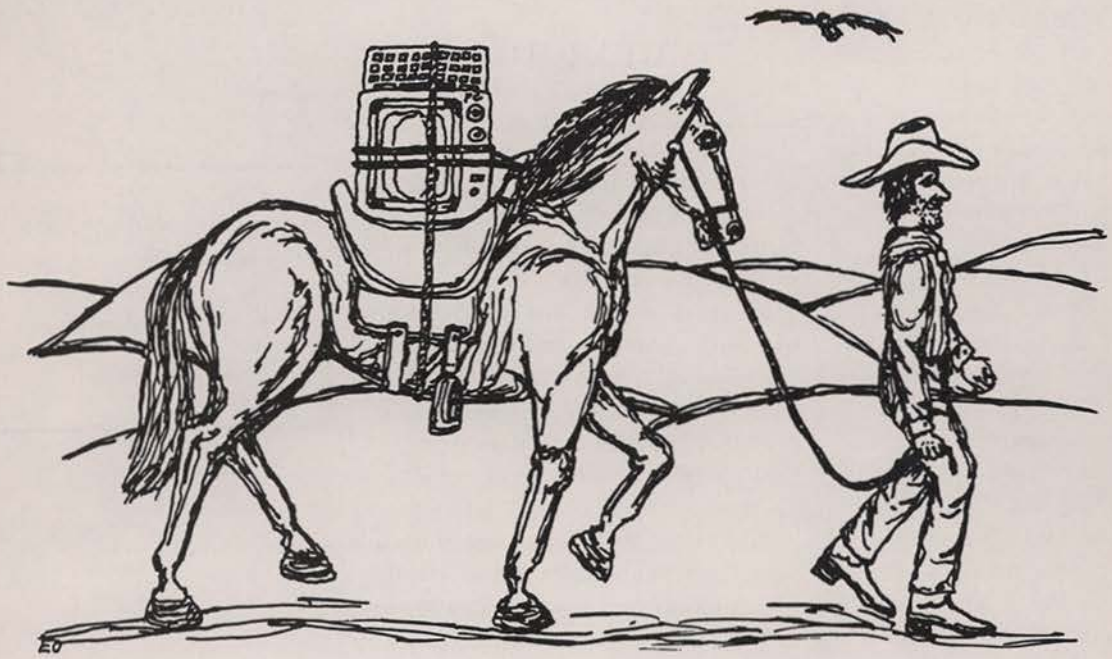
Hang on to your Tony Lamas, my friend; all is not lost! In fact your job as a range manager is becoming infinitely more exciting, more challenging, and undeniably more complex. The electronic wizardry that may now be a little baffling will eventually become a handy tool for management purposes. Even now, its potential for playing management "what if?" games is being realized. Predictive models are currently on the drawing boards (excuse me, the computer monitors) that will make better use of available information in the decision-making process.

Deciding which pasture or range unit to move the cows into this year will be a little easier with a range data base at your finger tips. Integration of past weather records, utilization surveys, plant phenology data, and trend estimates will be possible in a manner previously unknown.

The best part is that you will be able to ride (or walk) the range once more. IBM-PC's and HP-110s gobble up data at an alarming rate. The range revolution is an information processing revolution of enormous proportion. Use of video-tape cameras, sophisticated field recorders, field-durable micro-computers, and advanced remote-sensing technology will become increasingly common. And range managers will still need to visit the range once in a while.

Right now I'm working on a special saddle case for my little HP-110. If I could just afford a Think-Jet printer and disk drive to go with it, I would be all set. Happy Trails!

Dr. Bryant is the head of the Range Resources Department.



Forestry Revisited: Year 2017

by John Dirks

Mud flew as Alex punched the accelerator on the 2017 Universihaul III. A melifluent voice on the advertisement channel had proclaimed the vehicle a "solar-augmented powerhouse crafted for tough 21st century electrotravel," but Alex recognized betrayal in the dirty viscous fluid oozing into his boots. He unwound a length of cable, wrapped it around a tree, and stood back while the truck winched toward its vital anchor. "my old Chevy just turned in its grave," Alex said, climbing back in the driver's seat.

Nichole smiled as the battery-powered vehicle—a loathsome piece of technology measured against those trucks thriving in the age of petroleum—churned its way to drier ground. She logged on the auto-c and loaded a topo-disk.

"You know what that mud dripping from your boots means? We're lost."

"But I distinctly remember this cut-off . . ."

"Alex, it's been twenty-five years." Her words reverberated in the cab, each syllable looking for escape from its harsh implications.

"Stray from the technical flock for a change and put some blind faith in your husband's intuition. We sure can't drive any farther; let's slog up this draw."

Nichole knew better than most forest programmers that topo-disk systems were occasionally wrong. The data, of course, was collected by people—too crude to match precise auto-c standards.

"Thou art obstinate, Alexander," she said dryly. The door hissed open and she stepped onto the moist earth.

Twenty-five years earlier, in 1993, the rain and wind had chilled them to the marrow. Now synthetic neoskins interacted with their bodies' transpiration process to protect them from nature. Early summers on the Clearwater, however, were unaffected by info-technical advances, by sociopolitical revolution and restructure, or by the inconsistencies facing a man and woman confronting their past. Patches of snow clung to the north slopes like fading memories. Life forms touched by the season's generosity flourished on the forest floor. Trees sifted rain—non-toxic rain—through their branches, announcing the arrival of each drop, a symphony that both enchanted and troubled Nichole and Alex. Were their trees members of this orchestra? Less conspicuous instruments—insects, fungi, bacteria—played their parts quietly and relentlessly as the couple hurried on.

Every sinking step on the trail evoked uncertainty. They had left the confined, choked city seeking a fragment, a descrete moment and location a quarter century past. Neither was certain they were in the right place.

A three-forked cedar standing tall at the top of the draw jolted Nichole's memory. "Alex, the moose!"

"Where?"

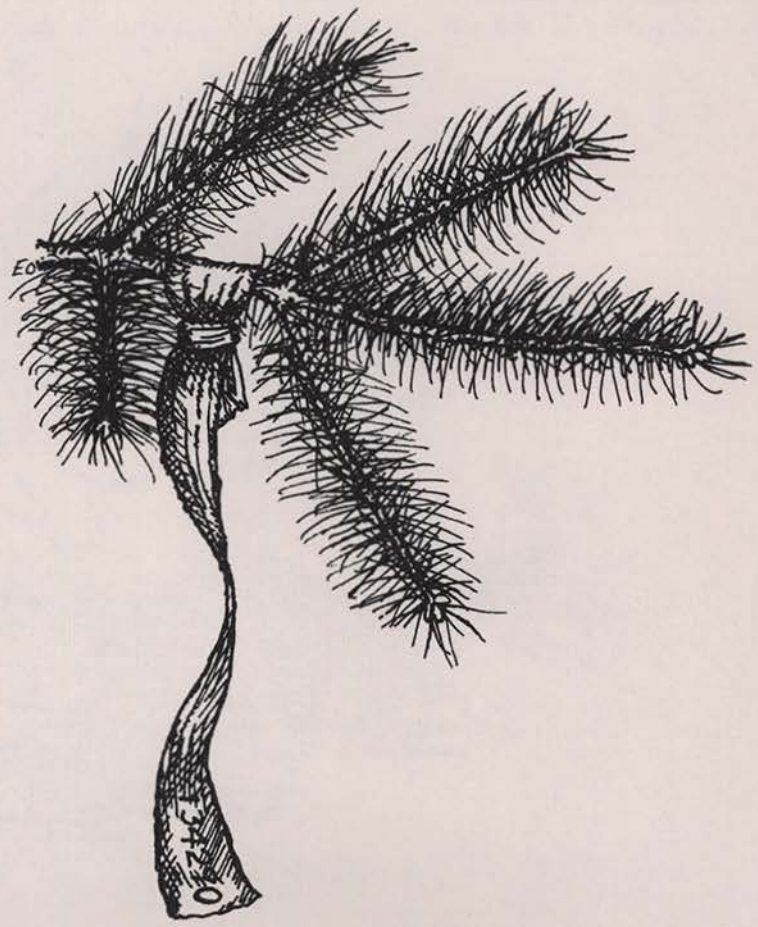
"Not now; then. This is where we saw them!" She pictured the cow walking slightly ahead of a newborn calf, one of the mental snapshots she paged through when attempting to shake her urban hooks.

"What did I tell you?" Alex hoped his voice did not betray his relief.

Little remained of the trail they had walked that distant spring, but occasional orange and black ribbons marked "USFS" revealed another recent visitor.

Nichole and Alex had worked together that season, fallen in love, and eventually married. He studied forest ecology, an endeavor judged by most as unsuitable for the times. Employable students viewed him with the respect one would give a dying man digging a grave. Alex, however, quickly learned the utility of ecology applied to human systems and the corporate world. He quit a successful teaching career when the demand for his books about life without fossil fuels boomed near the turn of the century.

Nichole had embraced computer



science with brutal efficiency. Her interest in natural resource issues led to graduate work in biotechnical systems analysis. With a specialty of designing and perfecting grayware, her consulting for resource-related firms proved lucrative.

Nichole reached the top of the draw. Alex found her staring at the 20-acre unit on the hillside.

"I can't believe it."

"It is unbelievable," he echoed.

The vigorous conifers reflected an outcome neither had anticipated. Their earlier stay on that unit had been cold and trying. Food was running out, tents leaked at night, paychecks were late, and the nearest town was seventy miles away, accessible only by a thin ribbon of muddy road. Eight haggard faces and effete bodies loaded up bags of trees each morning, then deposited them in the ground with hoedads: scrape, thud, pry, and plant—four hundred a day, seven days a week.

A Forest Service man supervised the independent young contracting crew. He played by a selective set of rules, watching over them and the planting units as a shepherd would his flock. The rough conditions facing the crew affected their work, something he had seen happen more times than he cared to remember over the past seven years. Morale slipped and they grew distrustful of a distant employer. Their seedlings, planted with j-roots and air pockets, and other mistakes infuriated the foreman. Frequently his sympathy for the crew turned to rage and frustration.

Memories of the day when a newborn moose staggered up the draw after its mother prompted Nichole and Alex to return to the unit. Their supervisor had lost control that day; he saw the crew at its worst and hit the breaking point. Seven years of rationality and conditioning were left behind like deep footprints on the muddy slope as he raced screaming at the tree planters. His cries of "Sorriest crew I've ever seen!" and "Does even one of you care?" stung them with guilt.

Alex recalled the moments before the Forest Service man's outburst. He was telling Nichole it was useless to plant spruce up on the ridge; the sun and soil would suck them dry; the spruce seedlings must have been the only ones available at the nursery. Alex also remembered Nichole and him planting spruces that afternoon on the ridge with renewed drive and intensity.

Now, twenty-five years later, they gazed up in awe at the large healthy spruce, about an afternoon's worth in number. They could easily see what the orange ribbons with black "CUT" meant: designated for laser thinning; elimination. The aerial harvester/forwarder could thin an entire drainage in one day, its gunship-style laser cutters seeking out markers, severing stems with pinpoint accuracy. No one was certain it was cost effective.

The chain of events was clear to them. An urban field man had spotted the blue-green spruce on aerial photos. The anomaly had climbed the organizational latticework until it reached someone with the authority to issue a directive: Spruce Do Not Grow On Ridgetops. The spruce were in their twenty-fifth season of unusual and vigorous growth. Nichole and Alex vowed this season wouldn't be their last.

"You know what we should—"

"Let's go," Alex interrupted, and they began climbing the ridge to collect a few orange and black souvenirs of their day in the forest.

John Dirks graduated in Forest Resources in 1984. He is currently retired and awaiting a large research grant from a multinational corporation.

Leaders or Followers: Our Future As Foresters

by Joe Carbone

While attending a small liberal arts college in New England, I made a friend who talked about a career in forestry. I thought that I too, would enjoy life in a lookout tower, so I began my forestry education. Three years at the University of New Hampshire gave me a little better idea of what forestry was all about, and I began to work my way into a career with the U.S. Forest Service. But after

Forests do not need foresters to manage them.

maintaining trails, cleaning outhouses, fighting fires, marking timber, administering timber sales, and chewing a little tobacco, I began to wonder if there wasn't something more to this profession. So I decided to return to school to gain additional insight on how I might contribute to the world as a forester.

Now that I am finishing my graduate studies, I find myself with more questions than when I started, and wonder what will be next. Thoughts of a lookout tower diminished long ago, my once-to-be forester friend is a lawyer, and I still find myself thinking about my future role as a forester. Courses in legal process and natural resources law exposed me to the influence of the courts in forestry (my friend may have had the right idea); forest policy exposed me to the role of Congress in my profession; social ecology brought out some ideas about society's relationship with its biological surroundings and man's use of natural resources; and some public administration seminars offered a perspective on the forester as an administrator. All offered a far different perspective of forestry than I had in the past, and added a new dimension to silviculture, forest ecology, economics, and forest management.

What is my future as a forester, or that of other foresters? Will we be leaders or followers? This is the theme of the 1985 Society of American Foresters' national convention, to be held in Fort Collins, Colorado, this July and it is a good question for us to ponder as we think about our futures in the forestry profession. We have been primarily trained in the natural sciences; yet Congress, the courts, and others from outside our profession exercise a great deal of influence in natural resource policy decisions.

Foresters—leaders or followers? I do not choose one or the other, because a professional must be both. As professionals we offer society our service and expertise, so we must be followers to the extent that we are employed to manage the forest for its owners. As professionals we also hold a great deal of knowledge about the forest—its plants, animals, soils, water, and the composition and succession of these. As leaders we can teach others what we learn in our research. As followers we can learn much from other professionals in recreation, wildlife, fisheries, botany, hydrology, sociology, economics, public relations, and administration. As followers we can lis-

Only when people are confident in our judgement will we be able to lead.

ten and understand what people need and want from the forest. As leaders we can recommend ways to provide these, while teaching that wise use entails protection and conservation of all that makes up the forest ecosystem.

As industrial foresters we can lead because our knowledge of economics and silviculture can be used to help supply

timber and other resources, and provide a livelihood for those who work in the forest and with its products. We can lead by applying our knowledge of forest ecology to industry's plans so we assure profit for industry and goods for consumers in years to come. We can follow both the goals of industry and the laws of nature.

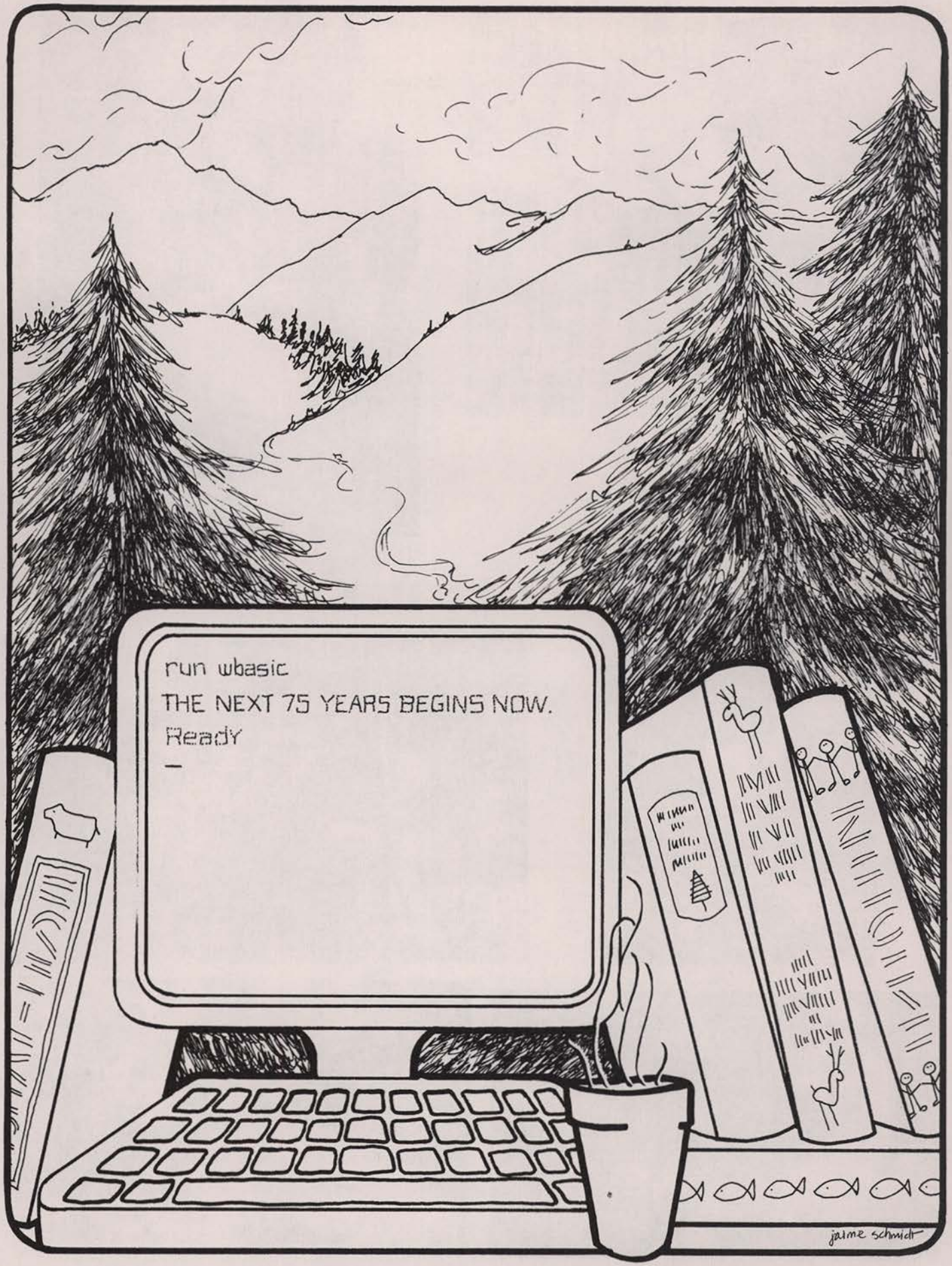
As private and international consulting foresters we can lead by educating landowners about their forests' potential. We can follow by listening as landowners tell us of their needs. We can lead by showing them how to understand, use, and protect their forests for their own well-being and that of future generations.

As public foresters we can be leaders, because oftentimes we are also administrators with tough decisions to make. We also follow because there are legislative acts as well as court orders. We lead because we are entrusted to manage great expanses of land for many uses and products. We follow because we manage forests for people and not for the sake of management.

Trees may die and regenerate, and forests may be lost to fires, floods, insects, and volcanos; but nature brings them back. Forests do not need foresters to manage them. People do need forests, however, and they can use some leadership to help them meet their needs, for those needs are many and often conflicting. People do not need foresters to tell them what those needs are, only how to best meet them—now and for the future. This is the challenge of our profession—knowing when to follow, when to listen, where and how to learn, and when to lead.

As we look at our future as foresters we should strive to be leaders, as our profession has had great leaders before; but, we must be followers if we are to truly understand the people for whom we work. This does not mean that we lead only because we act according to our employer's wishes, but that we lead because we are men and women trained to exercise conscientious judgement when making and carrying out natural resource decisions. Only when people are confident in our judgement will we be able to lead.

Joe Carbone is a graduate student in Forest Resources specializing in forest policy.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THE NEXT 75 YEARS BEGINS NOW.
Ready
jaime schmidt


AND THE

Communicating Through a Magazine of Natural Resources

by Joe Ulliman

Traveling through the pages of time, we tour the history of the College of Forestry with all its personalities and nuances. It is an interesting journey, best envisioned in this publication—one of the finest continuous records of the flavor of the times. It's sad we can't reconstruct more of the *Idaho Forester's* history, but here is what we can garner.

The *Idaho Forester* began in 1917 with a statement by editor R.N. Cunningham: "In this, the first independent publication of the Forestry Club so far attempted, the editors have tried to create a booklet containing considerable information which will be of interest to men engaged in forestry work and at the same time reflect the spirit and condition of our school."

The first issue, 36 pages and 6 3/4" x 10" in size, had professional articles, school news, and advertisements, and was produced by an editor, a business manager, and six associated editors under the auspices of the Associated Foresters. This issue, like those that followed into the late Thirties, had a literary bent many today would call flowery. One short article, which I find fascinating, described quite vividly the Lumberman's Ball, fittingly nicknamed the Timberbeast Hoedown.

The magazine was not published in 1918 and 1919, and the 1920 issue made no comment in respect to those years; we can assume World War I had some influence. The Forester of 1920 had 36 pages, a very simple graphic cover, and was dedicated to Major F.A. Fenn. Each subsequent issue, until 1955, was dedicated to some individual or group who influenced forestry matters, or to graduates or faculty. There was no dedication in 1956 and 1958 and few between 1966 and 1978. Dedications have been continuous since 1979, including the 1983 dedication to the 1942 *Forester* editor, Philip C. Habib.

In 1921, the magazine increased to 48 pages and bore a new cover—a design by Mrs. Vernice Behre, wife of C. Edward Behre who was the faculty advisor for 1922. It pictures an idyllic scene of a silhouetted forest ranger on horseback under a forest canopy backdropped by lakes and mountains. This cover appeared for 16 years following.

The 1922 *Forester* was dedicated to Charles Houston Shattuck, first dean of the school and "father" of the campus arboretum. Dr. Shattuck, who left the university in 1917, wrote interesting pieces on early school history for the 1922 and 1927 magazines.

The *Idaho Forester* continued at a high quality pace through the 1920's with dedications to timber industry personnel, former governors, and legislators, each of whom usually contributed an article. There were technical papers and enticing stories, such as "A Tale of Captive Bull Moose," and "A Forest Mystery."

For some unexplained reason, the 1931 through 1934 issues were edited by a faculty member, Arthur M. Sowder, who had been student editor in 1925. The magazine continued with the same format, cover, and quality, though. When Thomas S. Buchanan edited it in 1935, he noted that "This year, for the first time since 1930, the *Idaho Forester* is being edited by the Associated Foresters . . . In the past, the *Idaho Forester* has maintained a high ranking position among similar publications and it is our aim to entrench that position even more firmly."

These magazines bring to light some interesting aspects of the school. For example, the institution at Pocatello was a branch of U of I from 1927 to 1947, and the forestry program there was referred to as the Southern Branch of the School of Forestry. The *Idaho Forester* had a Southern Branch editor starting in 1935. The 1936 magazine welcomed the first woman student in forestry, Miss Vera Roberta (Bobbie) Montgomery, although no reference to her is found among later issues.

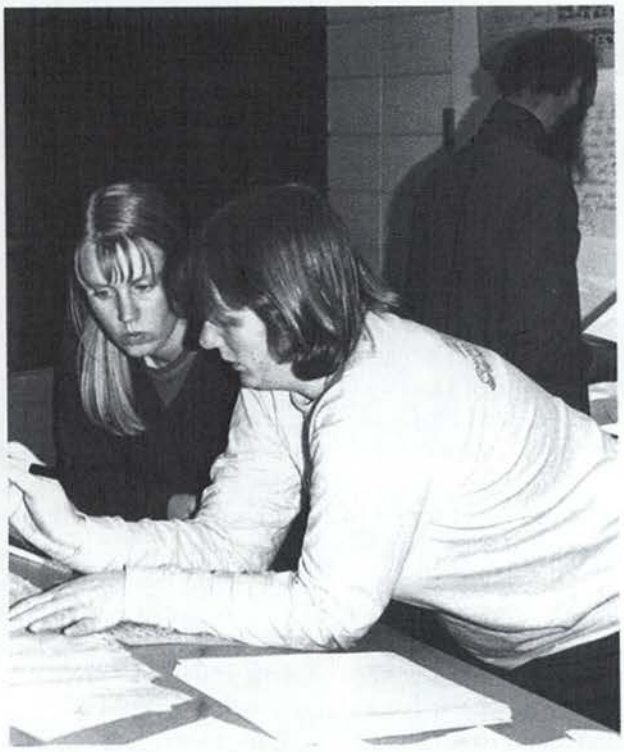
In 1938 the cover changed to a simple design of a tree supported by a capital letter "I" (based on the pin design of the Associated Foresters) and titled "The Idaho Forester" with volume number and date. This cover continued through 1946, then for three years was converted to a graphic outline of the state inside a large "I" with natural resource symbols placed appropriately in the state. It reverted to the 1938-1946 cover until 1956. Since 1957, the cover has been a different photograph or drawing.

The 1945 to 1950 magazine was smaller—6" x 9", but in 1951 it returned to the previous format of 6 3/4" x 10". Since 1969, though, it as been 8½" x 11". The length varied from 60 to 70 pages through the 1950's, gradually decreasing to less than 40 in the late 1960's and early 1970's. Then the trend reversed for a high of 84 pages in 1979. It has remained in the 60-80 page range since.

In researching past *Idaho Foresters*, I found many facets of the magazine interesting or humorous. A few I'll record here; others are yours to discover. The mid-50's periodicals had unique names for academic classes: 1954—Yield, Thinnings, Clearings, Regeneration; and 1955—Wood Bosses, Scalers, Riggin Slingers, Flunkies. I came across an interesting quote in the 1981 edition. Warren H. Bolles (1929) wrote that he was "just pluggin' along, content to wear old clothes, drive an old car, live in an old house, and sleep with an old woman."

There are probably many spelling and grammatical errors in all issues of the Forester, but the most blatant was in 1961 where someone inadvertently spelled Forestry—Forestery.

The 1965 issue gave us a new generation



Layout is the most delicate part of producing the Idaho Forester.

and the first woman staff member, Leslie Betts. Unfortunately, she was listed under a category of staff called "Flunkies," although two men were in the same group. The magazine showed two women in the sophomore class that year, Miss Betts and Nancy K. Nelson, both of whom graduated in 1967. Barbara Lee Vars, a student in Wood Utilization who started in 1953 and finished in 1963, was the college's first woman graduate.

There was no issue in 1968—the first time since 1919. Dwayne K. Parsons, in a 1969 editorial said, "I was editor in 1968 when our publication failed to meet deadlines. The responsibility was mine and I lost control. The *Idaho Forester* had found itself short on assistance, funds, and readers. In an effort to revive the publication, which was almost given up as a lost cause, we made some revisions. This issue is the first product of what we felt should be done."

The 1969 staff did change the size of the magazine to 8½" x 11" and gave it a semi-technical, rather than social, content. This included eleven articles, a half page of club news, two pages on the Foresters' Ball featuring the Foresters' Queen and her court (the latter two items inexplicably not included in the Table of Contents), and an Alumni Directory in a total of 36 pages—not the smallest issue, but close to the 32-page issues of 1970 and 71.

More color was added to the magazine in the 70's. A three-color cover first appeared in 1973 and a color centerfold in 1977; both have continued to the present, except when artists' drawings replaced photos. The 1977 issue also had some colorful articles on how to make your own homemade brew (A Lovin' Glassful) and how to ride the trains like bums of old (The Hungry Route). R.N. Cunningham noted in the same issue: "I would like to compliment you on the quality of recent *Idaho Foresters*. I was editor of the 1917 issue and can see that you have come a long way since then."

Kate Sullivan, our first woman editor, turned out a best-selling magazine in 1976—one that had an artwork cover, black and white centerfold pictures, and a top margin format that was continued through 1983. Since Kate, there have been many women editors or co-editors, and at the rate of change, the entire staff will soon be all women.

The 1979 staff also marked record sales. For the first time, the magazine was sub-titled "A Magazine of Natural Resources." An alumni news section was reinstituted, a patron and sponsors program was begun, and a cover photo contest was initiated. Judging of slides by experts from around campus produced a very attractive cover and centerfold.

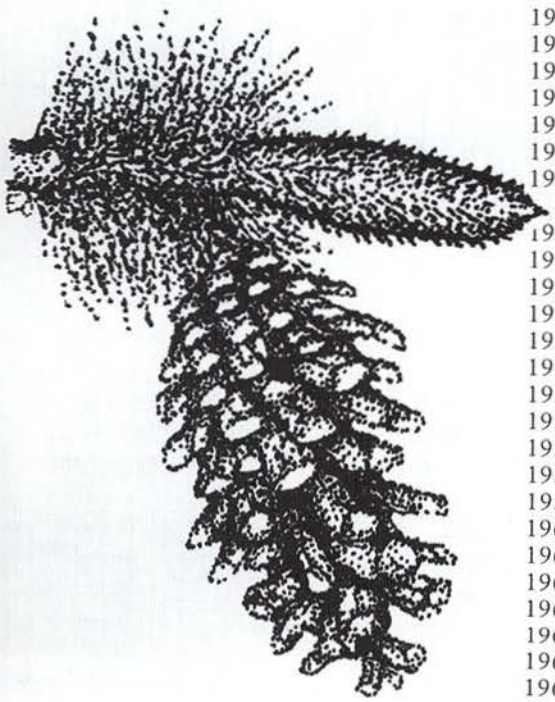
The 1979 issue was entered in a first-ever Society of American Foresters student publication contest for forestry

The Idaho Forester *staff is always striving to be different and better from the years past.*

and natural resources colleges in North America. It won first place in that contest and has done well each year since: 1980–1st, 1981–2nd, 1982–2nd, 1983– 1st, and 1984–1st.

Nineteen hundred and eighty-four introduced the 75th anniversary of the College, and included a brown leaf center section, "Seventy-five Years in Review." Now we are looking ahead: Will the future be as promising and successful as the past? You can find out and get the flavor of the times in the *Idaho Forester*: A Magazine of Natural Resources.

Joe Ulliman is a professor in Forest Resources and has been the faculty adviser for the Idaho Forester *since 1975.*



It is better to know nothing than to know what ain't so.

Henry Wheeler Shaw (Josh Billings), *Proverbs*

YEAR	EDITOR	HONOREE
1917	R.N. Cunningham	None
1920	James W. Farrell	Major F.A. Fenn
1921	Carthon R. Patrie	Dean Francis G. Miller
1922	W. Byron Miller	Charles Houston Shadduck
1923	Russell M. Parsons	Walter D. Humiston
1924	J.W. Rodner	Ben E. Bush
1925	Arthur M. Sowder	I.H. Nash
1926	Charles E. Fox	Lloyd A. Fenn
1927	Galen W. Pike	Graduates of the School of Forestry
1928	John B. Biker	Charles C. Moore
1929	Prentice Balch	George M. Cornwall
1930	William Krummes	Harry I. Nettleton
1931	A.M. Sowder	Charles K. McHarg, Jr.
1932	A.M. Sowder	Huntington Taylor
1933	A.M. Sowder	H.C. Baldridge
1934	A.M. Sowder	E.A. Bryan
1935	Thomas S. Buchanan	C.L. Billings
1936	Leon Nadeau	R.H. Rutledge
1937	Fred Mathews	Graduates of the School of Forestry
1938	Kenneth Hungerford	Major Evan W. Kelley
1939	Nelson Jeffers	Faculty of the School of Forestry
1940	Tom J. Croney	Ferdinand A. Silcox
1941	William W. Read	Clarence E. Favre
1942	Philip Habib	U.I. Foresters in Service
1943	Marshall E. Spencer	U.I. Foresters in Service
1944	George V. Johnson	U.I. Foresters in Service
1945	D.R. Seaberg	Alumni, School of Forestry
1946	Irv Wentworth	The Future of Forestry
1947	Steele Barnett	Alumni, School of Forestry
1948	Frank Hawksworth, Art Brackebusch, and Bob Walkley	Idaho Cooperative Wildlife Research Unit
1949	Bob Walkley	Forest Industries of Idaho
1950	Glen Youngblood	Harry T. Gisborne
1951	Howard Heiner	Pres. J.E. Buchanan
1952	Howbert Bonnett	Men of the U.S. Forest Service
1953	Roger Bay	Dwight S. Jeffers
1954	Art Andraitis	Faculty, College of Forestry
1955	Pete Preston	U.S. Forest Service
1956	Ralph Kizer	None
1957	Neils Christiansen	Virgil Pratt
1958	Ralph Roberts	None
1959	Kenneth Solt	Alumni, College of Forestry
1960	Chalon Harris	Albert W. Slipp
1961	Gene Brock	Roger L. Guernsey
1962	Lee Gale	Charles A. Connaughton
1963	Roger Hungerford	Edwin C. Rettig
1964	Dick Olson	Pres. D.R. Theophilus
1965	Ed Wood	David S. Olson
1966	Howard A. Wallace	None
1967	Andy Card	None
1969	Dwayne K. Parsons	None
1970	Thomas B. Miller	None
1971	Steven C. Wilson	None
1972	Morris M. Bentley	None
1973	Terry Mace	William R. Schofield
1974	Bob Schoemaker	None
1975	Al Merkel	None
1976	Kate Sullivan	None
1977	James Dunn	Dean Emeritus Ernest Wohletz
1978	Tracy Behrens and Jan Bal	None
1979	Michael Hollmann and Cynthia Mitiguy	John Howe
1980	Michael Hollmann and Elizabeth Strassheim	Kevin Leber
1981	Dave Lubin and Kristine Jackson	Edwin W. Tisdale
1982	Ann Coffman and Eva Phillips	Secretaries
1983	Mimi Hendricks	Philip C. Habib
1984	Andrew Froelich	Staff, Faculty and Students of past 75 years

Endless Pressure

by Jim Tangen-Foster

"The Northwest is strewn with living monuments because people fought for them. There have also been defeats, but not because I didn't give it all I had." Brock Evans spoke these words on what it's like to win—and sometimes to lose—at the Eighth Annual Wilderness Resource Distinguished Lectureship sponsored by the College of Forestry.

The lecture was delivered in mid-November, soon after the election. He has been fighting battles for the environment for over twenty years. As the Northwest representative for the Federation of Outdoor Clubs and as chief lobbyist for the Sierra Club, Brock Evans has helped pass the Clean Air Act, the Clean Water Act, the Alaska Lands Act, legislation creating North Cascades National Park, Mt. St. Helens National Monument, and the Alpine Lakes and Hells Canyon Wilderness Areas. In his most recent battle, for a congressional seat in Washington's first district, he received 110,000 votes, but still lost by 20,000 votes.

The spiritual value of wilderness speaks to the collective essence of American psyche.

A week later he was on the University of Idaho campus speaking at seminars and press conferences and earning cheers for his talks. He shared his insights and grief about the election and revealed his plans for the future. He will follow the same formula that has seen him through so many battles—"Keep yourself in low gear and keep going. Things take time, but you have to keep your own soul together."

Brock Evans: lawyer, mountaineer, lobbyist, and Eighth Annual Wilderness Resource Distinguished Lecturer.

Evans talked about the physical and psychological trauma of running for office. "It's a time of no redemption . . . a feeling of being naked and alone." Losing, especially when the election was so close, left him full of grief, pain and doubt. "How do I reach in and find the spirit to go on? Where do I go from here?"

He found the answers in Olympic National Park, listening to the surf, feeling the big trees and hiking in the rain forest. "After a day or so I felt a great healing. On the last day I began to smile again." In the wilderness, Evans said he realized forces greater than himself. It is the same lesson that all environmentalists must learn: "Some things we can control and some not; but life goes on."

Evans has proven his staying power. His career has been dedicated to conservation and environmental issues since he graduated from the University of Michigan Law School in 1963. He discovered his passion for wilderness when he spent a summer in Glacier National Park. "It was like some lost chord was plucked inside me, and it's been humming ever since."

He entered a law practice in Seattle, joined the Mountaineers, and began to see the "crimes against the land." Sitting on a peak near Snoqualmie Pass, he saw a clearcut below. He saw things going wrong in the backcountry and became passionately concerned. His commitment to environmental activism eventually brought him to Washington D.C. as a lobbyist, first for the Sierra Club, then the National Audubon Society. He was labeled by *Fortune* and *U.S. News and World Report* as one of the most effective conservation advocates in the Capital.

Brock Evans knows where the power lies—it lies with the people. Addressing a seminar of Idaho students of resource management, Evans exhorted his faith in grassroots and face-to-face communication. "People in Idaho want things to stay the way they are. The job of the advocate is to focus the discussion, to let them learn what is at stake." He cited polls that indicate 92% of the American people want more wilderness. People in Idaho must stand their ground, Evans said. The 500,000 acres of rock and ice that made up the wilderness bill proposed by the Idaho congressional

delegation was a "wilderness destruction bill." He expressed the fervent hope that next time around, the congressional delegation will listen to the voice of all the people, not only the voice of industry.

The job of the advocate is to focus the discussion.

Evan's formula for success is to hold the line: "Don't ever quit, because the other side will quit before you do if you hang in there. We're far better off than we were twenty years ago. We start from nothing and build to great things. The battle for Hell's Canyon took seven years, the North Cascades eleven years, and twenty years to save the River of No Return. Evans summed up the key to success in four words: "Endless pressure, endlessly applied."

The spiritual value of wilderness speaks to the collective essence of the American psyche. It is, according to Evans, as valuable as social security and child labor laws. America is unique in its reverence for wilderness. It is "in our spirit, in our soul." Brock Evans, in his words at the University of Idaho and in his actions over the years, has shown that he loves America. The "living monuments" for which he has fought clearly represent his gift of love.

Jim Tangen-Foster is a doctoral student in Wildland Recreation Management.

The true ownership of the wilderness belongs in the highest degree to those who love it most.

John Muir

As far as possible men are to be taught to become wise, not by books, but by the heavens, the earth, oaks and beeches, that is, they must learn to know and examine things themselves and not the testimony and observations of others about the things.

Comenius, 1600's

Special Thanks

The staff of the *Idaho Forester* thanks the following people for the effort they put into the publication of this magazine.

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A heart-felt thank you to all alumni who gave so generously to the Idaho Forester. *Your encouragement and financial support helped us reach new heights.*

Forester *staff and students of FWR*

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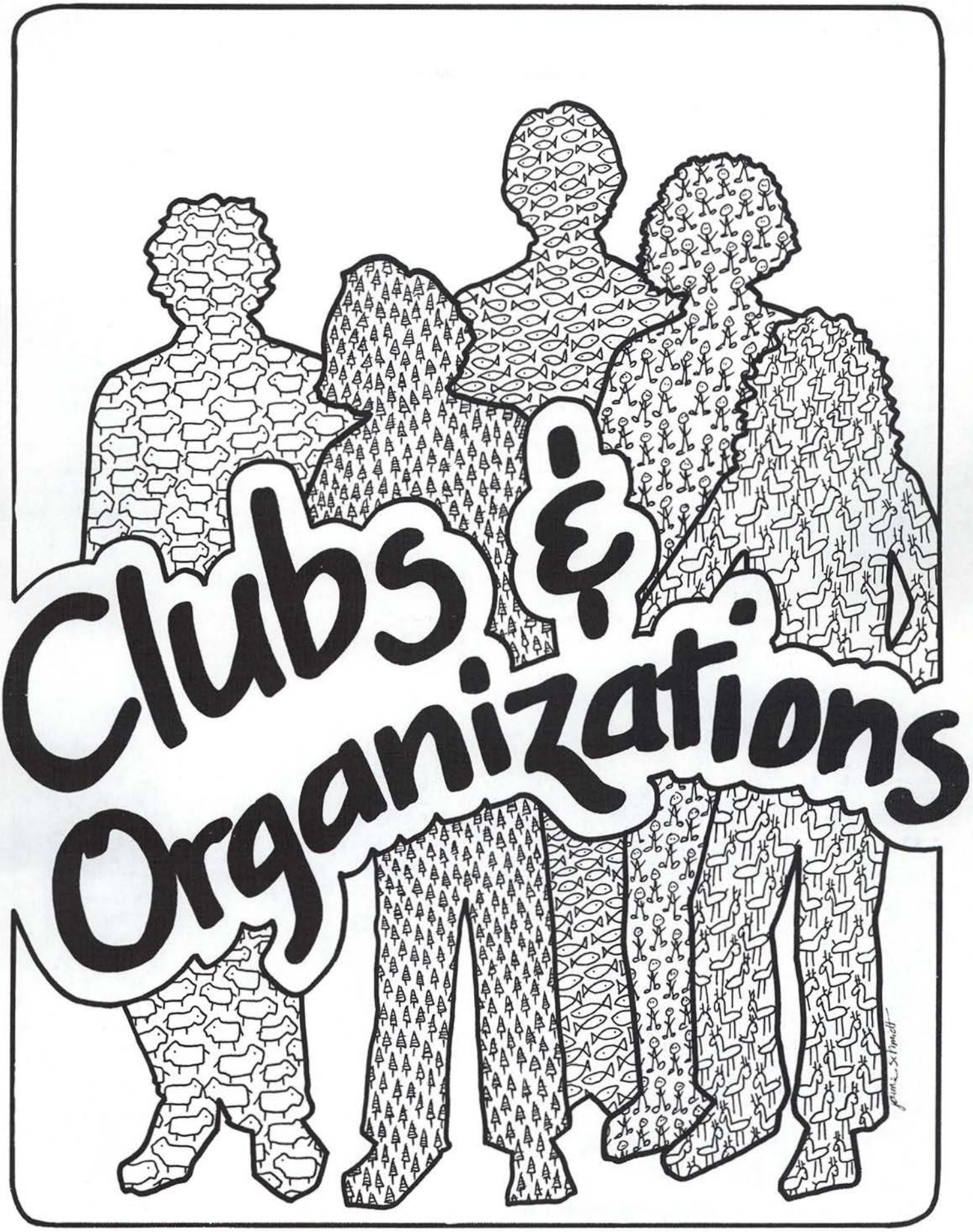
ASUI Activities Board

Scenery is our noblest resource. No nation has ever fallen from having too much scenery.

Enos A. Mills,
Rocky Mountain Wonderland


Clubs &
Organizations

SAC — A Bridge for Better Communication

by Robin McCoy

The Student Affairs Council represents views and opinions of students and faculty of the college. With representatives from each club—Associated Foresters, Forest Products Club, Palouse Fisheries Society, Range Club, Wildland Recreation Management Association, Wildlife Society, Xi Sigma Pi, Idaho Forester, and the Snag—SAC has been deemed the voice of FWR. In addition to 10 student representatives, faculty members Jim Fazio, Ed Krumpe, and Joe Ulliman advise the council and provide support on all issues.

Each year SAC holds a variety of activities that not only raise funds for other college events, but also give students and faculty a chance to socialize. One of SAC's more popular events is the annual Sourdough Pancake Breakfast in November. The event, organized by Joe Ulliman, always draws quite a crowd, and this year was no exception. Joe's secret sourdough recipe is renowned in the college, and everyone comes to get their fill and watch Joe's mastery of a spatula. His support is much appreciated, as is that of all faculty who don aprons and become cooks and dishwashers for a few hours.

Earnings from the pancake breakfast are the primary funds for Natural Resources Week held in April. The whole college gets involved in this week of activities. Events include speakers from many natural resource professions, a film festival, several contests, school tours, dedications, and a banquet honoring students and faculty for their accomplishments. On the last day of the week, the all-time favorite barbecue is held at Big Meadow Creek. It is a good way to meet others in the college, and to learn what makes our college special—its people. A lot goes into planning the week's line-up, and the chairperson, Carol Boyd, is doing a fine job!

New activities to SAC this year are t-shirt and hat sales. These funded the purchase of new furniture for the reading room and a 75th commemorative print of the snag. SAC would like to thank everyone who supported us in these efforts, and who continue to wear the shirts and hats with our school's emblems.

SAC is proud to help the College of FWR celebrate it's 75th anniversary, and looks toward further improved communications for students and faculty of the college. Happy 75th, FWR—here's to the next 75 years!

Robin McCoy is a junior in Wildlife Resources and is the SAC chairperson.

Front row—Michaela Touhey, Candy Parr, Carol Boyd, Roberta Rene, Robin McCoy. Back row—Jim Fazio (advisor), Bonnie Lambers, Paul Hiebert, Judy Strassman, Alan Walsh.

Range Club

by Steve Jirik

The past year has been a fine one for the University of Idaho Range Club. The club was granted status as an official Student Chapter of the Society for Range Management, and is now one of only three in the country. Officers were recently elected with Ben Hensen, Chairman; Pat Brown, Vice-Chairman; and Margaret Van Gilder, Secretary/Treasurer.

The first Range Club event of the school year was the annual fall picnic at Big Meadow Creek. Dave Bryant's famous chili and those range zucchini graced the event, along with volleyball and, naturally, a little-on-the-side grass identification.

Our main fund raiser is the annual sporting goods raffle. This year the winner was offered a choice of a 7mm rifle, a 12-gauge shotgun, a backpack, or a cross-country ski package. Thanks to everyone who supported our raffle. Candy Parr, a student in Forest Products won, and chose the rifle. Good luck with it this fall, Candy!

In December, eight students and two faculty members attended the annual Idaho Section Meeting of the SRM. Four papers from the Range Department were presented: Carol Boyd reported on "Development of Grazed-class Photo Guides for Estimating Forage Utilization on Transitory Range"; Calvin Keta, a graduate student from Lesotho, Africa, gave a slide presentation on watershed management in his home country; Dr. Dave Bryant discussed the Range Resources program at the University of Idaho; and Dr. Ron Robberecht talked on "Roots, Reflections on Below-Ground Management." Our Range Plant Identification Team competed against other Idaho SRM members and Jim Harvey won 1st place. Also, Carol Boyd received the annual SRM Idaho Section Scholarship. Those who attended the meeting learned a lot.

The highlight of the year for the Range Club and department is the International Convention of the SRM, February 10-15, in Salt Lake City. This meeting celebrates the 38th anniversary of the society's first annual meeting held at Salt Lake City in 1948. The U of I will be well represented with 10 students and 5 faculty members attending. The traditional Plant ID contest with teams from the U.S., Canada, and Mexico, will be held there. Our team—veterans Craig Madsen and Jim Harvey, and new members Kirk Nilsson and I—have been working all year for the contest. A graduate student and former team member, Bob Josaitis, has taken us through helpful coaching sessions and grueling tests to prepare for the stiff competition. This convention is a unique combination of Range professionals, ranchers, researchers, consultants, land management personnel, and students.

The Range Club gives students the opportunity to expand their knowledge of range management, and have fun at the same time. Involvement in the Range Club also provides employment contacts through association with various professionals. Students from all majors are invited to attend our club activities.

Steve Jirik is a junior majoring in Range Resources.

Front row—Ben Henson, Dr. Lee Sharp, Valerie Miller, Dr. Dave Bryant, Steve Bunting, Jan Pence, Margaret VanGilder, Steve Jirik, Carol Boyd. Back row—Craig Madsen, Bob Josaitis, Kirk Nilsson, Ray Richmond, Larry Pritchett, Pat Ryan.

American Fisheries Society, Palouse Unit

by David Irving

Front row—Tom McArthur, Cindy Robertson, Dick Wallace, Bill Klontz, Ali Abdelghany. Second row—Paul Scheerer, Devona Lam, Marc Welt, Larry Klimek, Julie Schreck, Bob Bugert. Third row—Mike Falter, David Irving, Danni Klontz, Jake Kann, Ed Ohlweiler, Dave Bennett, Ray Butz, Dan Pfeiffer, Ted Bjornn. Back row—Bruce Roberts, Steve Kirking, Greg Phillips, Chris Hrusa, Frank Shrier, Christina Moffet, Craig Contor.

The Palouse Unit represents those people from northern Idaho and eastern Washington who are interested in aquatic resources. The unit is affiliated with the American Fisheries Society, an international organization of fisheries and aquatic sciences professionals and students. Chartered in 1870, the AFS is the world's oldest and largest scientific group dedicated to the advancement of renewable aquatic resources.

The goal of the Palouse Unit is to promote increased interaction among people from the Palouse area interested in aquatic sciences. To achieve this goal, we invite guest speakers to address our group, show movies, and conduct other social and professional functions. Topics and speakers presented during the 1984-85 school year include: 1) Stream Habitat Improvement in Southeast Washington, by Glen Mendel, Washington Department of Game; 2) Redband Trout in Idaho? A biochemical genetic investigation of suspected redband populations, by Dr. Lisa Wishard, Visiting Assistant Professor, University of Idaho; 3) An Assessment of Fishway Design, by Dr. Jack Orsborn, Washington State University; 4) Sturgeon in Hell's Canyon, by Jim Lukens, Idaho Department of Fish and Game; 5) Biology of Lampreys: Response of Gills to Pollutants, by Dr. Jon Mallatt, Washington State University; and 6) Fisheries in the Peace Corps, by Dave Harpman and Bob Phelps. Three social events worth noting are our annual fall and spring picnics and our unique and unusual wild game potluck dinner.

Club officers for the 1984-1985 school year are David Irving, president; Paul Scheerer, vice-president; and Julie Schreck, treasurer. Julie is a fisheries resource graduate student at U of I, and Paul is a zoology graduate student at WSU.

We extend an invitation to you to join our organization or attend any forthcoming meeting or event. Our meetings are scheduled for the fourth Thursday of each month, at 7:30 p.m., in Room 14 of the FWR building. For further information please contact the club president in the Department of Fish and Wildlife.

We look forward to seeing you.

David B. Irving is a graduate student in fisheries resources.

The Wildlife Society

by Brynna Evans

Although not large in numbers, the University of Idaho Student Chapter of the Wildlife Society is involved in a wide variety of activities throughout the year. As the fall semester got under way and previous members struggled back from jobs all over the country, we were excited to find that many new faces had joined our ranks. Our newly-elected president, Eric Schenck, was quick to get things rolling, along with the help of other officers: Chuck Bowie, vice-president; Brynna Evans, secretary; Mary Laspina, treasurer; and Judy Strassman, public relations.

We kicked off the new school year with a presentation by Dr. Eric Stauber about falcons and falconry. Later in the semester, Dr. John Ratti spoke to us about Vancouver Canada geese, a subspecies of Canada geese which lives in the forests of southern Alaska. Presentations such as these often attract people from outside the college community.

There are additional opportunities for Wildlife Society members to learn new ideas and techniques. During the hunting season, several students gained hands-on experience volunteering their time at check stations for the Idaho Department of Fish and Game. Others helped maintain some 120 bluebird nesting boxes near Troy, Idaho.

Social functions are also an important part of Wildlife Society activities. One of our most popular has been a party to which we each bring a few slides. Other favorites include barbecues and occasional cross-country ski trips.

In order to finance these activities, fund raisers are a necessity. This year we did quite well selling t-shirts and calendars. Bake sales also brought in some money.

The highlight of each year is the annual Wildlife Conclave. Members travel to meet other students and experts in their field. A few of us form a team and compete in the Wildlife Bowl held there.

As members of the Wildlife Society, students gain new insights and understanding in the wildlife profession. We also have a lot of fun as we learn. New faces are always welcome, so come see what we're all about!

Brynna Evans is a sophomore in Wildlife Resources.

Front row—Dr. Kerry Reese, Larry Klimek, Mary LaSpina, Robin McCoy, Charlotte Forbes, Debra Paxton, Fred Leban, Roger Lanier, John Rankin. Back row—Erick Schenck, Chuck Bowey, Judy Strassman, Brynna Evans, Cindy Wargo, Ralph Meyers, Ole Johansen, Bert Hoffbeck, Craig Perham.

Wrec Club Capers

by Lynn Kinter

Although Wildland Rec students are often too busy studying to recreate, some of us do break away from the books occasionally. And the Wildland Recreation Management Association, comprised of over 25 members and led by Claire Rausch, gives us ample chance to play.

Early in the year, secretary Cathi Bailey invited us all to a potluck, and one sunny fall day, we hiked on Grandmother Mountain. In February, students and professors geared up for an invigorating ski weekend at Clark Fork Field Station. Unfortunately, that trip got snowed out.

We also went to a variety of excellent brown bag seminars which were organized by vice-presidents Brian Carroll and Deb Rawhouser, and publicized by Brent Nixon. These included: Borah Peak Ecology, Life at the Taylor Ranch, Which End of an SF-171 is Up?, and Northwestern Geologic Features in 3-D slides. Club members Jeff Wilbanks and Robin Hartmann talked about their experiences in Forest Service Law Enforcement and in Hiking the Pacific Crest Trail, respectively. Other student presentations still in the bag for spring are Recreation with the Army Corps of Engineers, by Brian Carroll, and my tale of Goat Packing in the Wilderness.

But recreation isn't all fun and games; we worked hard on fund raisers—a raffle of outdoor gear and a notecard sale. Nancy Ray sold the most raffle tickets, so received a free evening of videos donated by Bill Owens. Bill, in turn, won the drawing and prize package. Our cards, produced by FWR graduates Amy Gillette and Terry Thompson, depicted Idaho's wild mountains and forests.

Some of the proceeds from our sales helped send Randy Hollander to the Governor's Conference on Tourism and Deb Rawhouser to Idaho Recreation and Park Society's state meeting. The club also provided a special Mt. Everest slide show, a photo board of students and faculty, and a reception for USFS Chief Naturalist Neil Hagadorn.

WRMA is involved in college-wide activities, as well. In a Herculean effort, several members straightened the old logging dory, which the Forest Products Club plans to protect. Our group will make an interpretive sign for the relic. And through SAC representatives Michaela Touhey and Roberta Rene, we will set up games and a wilderness skills course for Natural Resources Week. Finally, under direction of our adviser, Dr. Ed Krumpe, we'll do some spring cleaning at Big Meadow Creek Recreation Area.

With so many things going on, WRMA members have no trouble maintaining their reputations as devoted "wrecreaters," despite the call of the books.

Front row—Nancy Ray, Claire Rausch, Cathi Bailey, Bonnie Lambers, Murray Feldman. Back row—Robin Hartmann, Mary Rellergert-Taylor, Debbie Rawhouser, Dave Herda, Ed Ohlweiler, Ed Krumpe (adviser), Brian Carroll, Mike Mortemore, Michaela Touhey, Brent Nixon, Lynn Kinter.

Lynn Kinter, a junior in Environmental Interpretation, represents the WRMA at faculty meetings.

Beyond Logging

by Diana Hammer

The Associated Foresters Club is an active, yet low-key organization. We take pride in knowing that our members are not strictly "foresters." They are students from a wide range of disciplines within the College of Forestry, Wildlife, and Range Sciences. Consequently, our activities are highly integrated and professional; however, our professionalism doesn't limit the good times we have!

During the fall semester of 1984, the traditions of a School Forest Tour and Christmas Dance were carried on with impressive results. Another annual favorite, the Logger's Sports Meet, will take place April 26 & 27 after preparatory projects, like rebuilding the birling pond, have been completed. We expect to open the sports site in time to put on a demonstration for Natural Resources Week, April 13-20.

At the start of spring semester, we elected new officers. The results were: Jan Pence, president; Carol Boyd, vice-president, SAF; Julie Sherman, vice-president, Logger's Sports; Diana Hammer, secretary; Jay Marshall, treasurer; Bob Bealin, team steward; and Jeff Scott, School Forest chairperson. Other officers include Terry Fairbanks, program chairman, and Jeanne Higgins, Student Affairs Council representative.

Our first activity of the new semester was somewhat of an extension of the holidays—a cross-country ski trip in the Flat Creek Unit. We have also had various fund raisers. Besides the compass sale, bake sale, and slash-piling project of last semester, we will hold a Valentine's Day carnation sale, sell firewood, and complete the thinning project within our management unit on Moscow Mountain.

Julie Sherman, considered part cat, sees an end in sight.

Front row—Allan Walsh, Chris Vetter, Bob Bealin, Diana Hammer. Second row—Jeff Scott, Terry Fairbanks, Bruce Higgins (holding Melissa), Jeanne Higgins, Jan Pence, Mary Bowden, Darwin Baker, Ron Hinthorn, Julie Sherman. Third row—Ed Orcutt, forester, Jay Marshall, Dr. Harold Osborne (adviser), John Links, Dan Moore.

As described in our constitution, "the student chapter of the Society of American Foresters is held within the Associated Foresters by members affiliated with the national office." Working closely with the local Inland Empire Chapter, our members assisted with the booth at the Latah County Fair, and are helping to plan activities for the upcoming Community Forestry Days. Coincidentally, the local chapter also held their elections recently. We were glad to have the new chairperson, Roy Boyd, at our first meeting of 1985. Plans are also being made to attend the SAF Section meeting in Spokane, March 22 & 23. In addition, there will be the selection of SAF Outstanding Student.

Busy year!! But that's what makes life exciting. We would like to encourage everyone to participate in our activities, regardless of membership status. A helping hand is always needed and appreciated.

Diana Hammer is a junior in Forest Resources.

Forest Products Club

by Alan Prouty

Smokey looks for friends among all of the pictures.

The Forest Products Club is a student chapter of the Forest Products Research Society and members' interests include forest engineering, wood science and engineering, forest products business management and marketing, and pulp and paper technology.

The president of FPC is Alan Prouty, a graduate student in wood chemistry. Chris Danforth, a senior in the forest engineering option, is vice-president. Our secretary/treasurer is Peggy Stephenson, a freshman in forest products marketing and management.

Our primary goal is to enhance the education of forest products majors. A monthly guest speaker progam, with people from industry, government, and educational institutions, allows in-depth discussion of topics that are not possible in the classroom. It also acquaints students with what is happening outside the university.

Students are encouraged to participate in the Regional Forest Products Research Society Conference, the Northwest Wood Products Clinic, the Inland Empire Forest Engineering Conference, and other seminars. When possible, club funds help defray costs of attending these events.

Social activities sponsored by FPC include the annual John Howe Happy Hour and Pig Roast, held every April, and a big chili feed in the fall. We hold several fund raisers throughout the year for club activities.

Alan Prouty is a graduate student in wood chemistry.

Left row (back to front)—Brian Mulvihill, Matt Turner, Peggy Stephenson, Alan Prouty. Middle row—Larry Gregory, David Lange, Chris Danforth. Right row—Luke Aldridge, Paul Miller, Allan Walsh, Dave Ritter, Carl Harrison, Ron Hinthorn, Richard Thomas, Jon Fabricius.

Xi Sigma Pi

by Bryce Romig

The Epsilon Chapter of the Society of Xi Sigma Pi, the honorary fraternity of the College of Forestry, Wildlife and Range Sciences, has had a relatively active year. Officers are: Bryce Romig, forester; Carol Boyd, assistant forester; Aram Eramian, ranger; and Cindy Wargo, secretary/treasurer.

In addition to initiating fifteen enthusiastic new members, the group served as a scholarship selection committee for society members in the western region. Presently, the Epsilon Chapter is working with the Associated Foresters to renovate and document the school's logging boat which was used in the last log drive on the Clearwater River. This year, our service project will be to conduct building tours during Natural Resources Week.

Bryce Romig is a junior in Forest Resources.

Alumni News

This year we asked our alumni to write about the future of the natural resource profession. Below are their insights.

Class of 1917

Donald H. Yates

The world, and especially America, has advanced so much in technology that it has lost me. I have four grandchildren (two young men and two young women, not really children) who are experts in modern high technology, all well employed and directing others in the companies for which they work. When they meet socially with me I don't even know what they are talking about.

Heart transplants were common until an artificial heart was apparently used quite successfully; and then, just experimentally so far, baboon hearts to human bodies. What next? And where does the natural resource profession come into play?

Then don't overlook the Space Age. Adding women to our space flights has opened still higher potentials to new and needed exploration. What natural resource knowledge may come from the moon landings and then possible landings on other planets?

But back to Earth—the population growth worldwide (and the U.S. is no exception) is posing environmental problems that will accelerate the need for professional skills in forestry, wildlife, and range management beyond imagination.

My hope is that your graduates may become accepted authorities to help settle disputes between those who don't want a tree cut or an animal killed, and those who may be over-zealous in seeking economic advancement for the current population without sufficient regard for future generations.

An ordinary man in his dotage like me (now 89 years old), can't hope to be the sage to offer sensible advice as to what to expect in specific terms. All I can say is that FWR sciences are certainly to be looked to for the right kind of help.

Class of 1932

Joseph F. Pechanec

In 1927 after Dean Miller had gotten acquainted with our Freshman Class in Elements of Forestry course, he said we were the dumbest he every had. I don't think we are now any smarter about the future than we were then.

Class of 1935

Thomas Buchanan

Environmental factors, like acid rain, will increase in their importance. Plywood, as we know it today, will almost disappear, and flake and chip board will take over. Hardwoods will increase in importance.

Class of 1938

Arthur W. Nelson, Jr.

The 1962 'one man vote' decision of the Supreme Court, which said in essence, "acres, trees, and cows don't vote—people do," effectively transferred political power to urban areas, where people were generally less informed on natural resource issues, and whose views and desires for the forest may vary considerably from those of the rural constituency.

This was closely followed by court decisions which expanded the legal concept of "standing to sue," and which allowed interested citizen groups to go into court and challenge governmental actions with which they did not agree.

These two events resulted in a flood of litigation and legislation that permanently changed the atmosphere in which resource professionals must operate.

Resource professionals, in order to be effective, must be able to communicate well, not only with the urban population but also with the legislators which they elect. This will require resource professionals to become much more "people-oriented" than they have been in the past, and to be more aware of the political system and how it operates.

Some changes in the curriculum may be justified to help students meet this new challenge.

F.W. 'Woody' Snyder

As a retired Plant Physiologist, I am not in a position to evaluate major changes in the natural resource professions in the future. However, I suggest that we emphasize the need to control acid rain because the deleterious effects appear fully evident, and delayed control will cost our world society far more than the outlay for adequate control *now*. In addition, conserving the use of electricity and fossil fuels will help reduce the concentration of chemicals causing the acidity.

As a member of the class of 1938, I remember a response that a number of us used. When a fellow told an anecdote or exaggerated a bit in telling something, one of the fellows listening to what was said would pop up with this phrase: "Wow, top that one!"

Ernest Lavelle Thompson

I believe the environmental issues of our nation as a whole should receive more attention and action than is now being provided. Both air and water pollution appear to be increasing at a rapid rate. Additional research and preventative action programs need to be substantially increased. I grant that the public in general is becoming more cognizant of pollution and indicating a willingness to improve important aspects that need attention.

Foresters and other natural resource management majors have frequent opportunity to learn as much as possible about the environment and prime factors of pollution.

Class of 1939

Kenneth Baldwin

I graduated from Flushing High on Long Island, spent a year in Nebraska and then hitchhiked and hopped a freight train on the way to Moscow. It was the fall of 1933; between Pendleton and Pomeroy there was still a 34-horse combine working the hillside. Five of us worked at blister rust control that first summer in the Clearwater Forest. In August we were trucked to the Pete King Fire which eventually became the Selway. We saw the fire crown over the hill while lying in our sleeping bags at the fork of Lochsa and Selway Rivers.

Class of 1942

S. Duane Town

In the field of range management we are finding ranchers to be more professional themselves. Many of them are members of SRM and keep abreast of ideas that come forth. They also are more accepting of ideas presented to them by young range technicians, both men and women.

Ranchers are really getting into the computer age, especially in livestock breeding and management. They are making more use of information available to them.

The economic crunch and high interest rates are driving many of our young farmers and ranchers out of business. They are being foreclosed on and are losing their places. I think this is going to have a very adverse effect on natural resource professions. How can we stop this trend? It must be stopped!

Class of 1948

Jack Bohning

First and foremost, I see increasing challenges to complementing commodity and amenity values on wildland, regardless of ownership. With increasing conflict among the numerous vested and casual interests in wildland, managers will be continually embroiled in controversy, all highly political. In that environment, managers will be required to be adept in multiple skills more closely related to "people management" than to land management. For example, both oral and written communication skills will be essential. Impose this on a rapidly changing technical scene, paced by burgeoning computer technology, and resource managers of the future may well be required to walk on water. In short, it will be an exciting, frustrating, challenging, exhausting time for the persons in responsible management positions.

Class of 1984

Tom Lance

One thing I can relate is that natural resources jobs will continue to take a beating for at least another four years. What will we need to turn the trend around? Revival of the 1970's era environmental movements? Maybe so.

Looking way down the road, I can't predict any need for increased numbers of natural resource managers as we are trained today. Advancing technology and a decreasing land base will see to that.

Good luck, and be prepared to do anything!

A man of eighty, planting!
To build at such an age might be no harm,
Argued three youngsters from a neighboring farm,
But to plant trees! the old boy was plainly wanting,
"For what in Heaven's name," said one of them,
"Can possibly reward your pains,
Unless you live to be Methusalem?
Why tax what little of your life remains,
To serve the future you will never see?"

"Is it so?" said he

"My children's children, when my trees are grown,
Will bless me for their kindly shade:
What then? has any law forbade
The Wise to toil for pleasure not his own?
To picture theirs is my reward to-day,
Perhaps tomorrow also: who shall say?"

Jean de la Fontaine (1621-1695)

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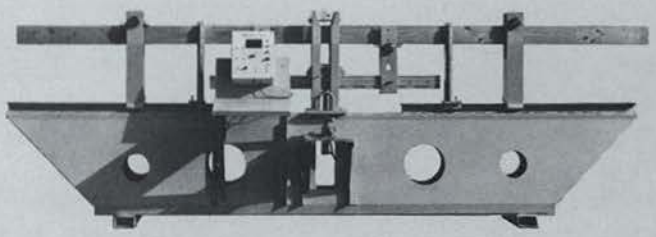

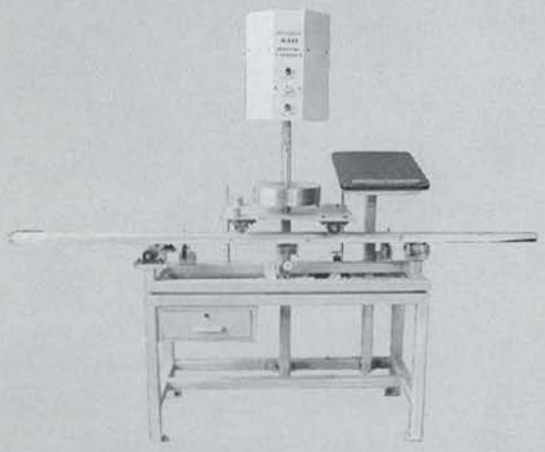

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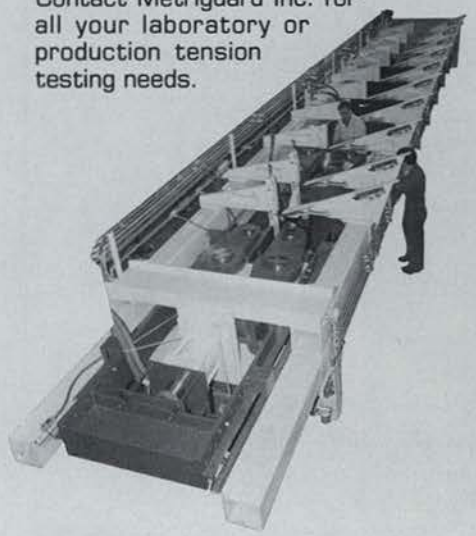

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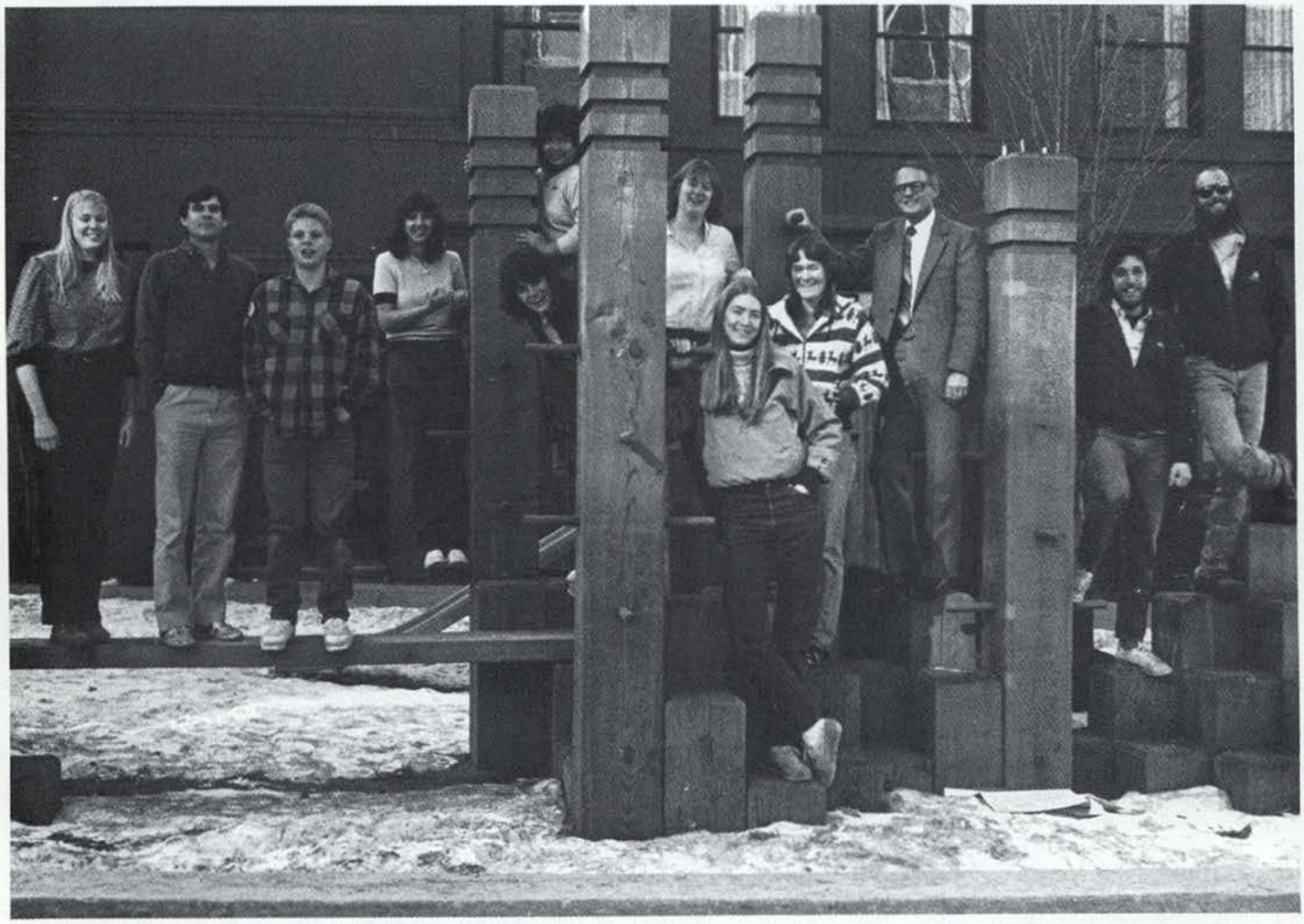

Lynn Kinter, Brian Delbrueck, Ed Ohlweiler, Cathi Bailey, Veronica Fortun, Michaela Touhey, Nancy Ray, Judy Strassman, Jeanne Higgins, Joe Ulliman, Nick Cittadino, Charlie Wells. (missing: Gayle Mansfield, Mike Mortemore)

Front and back cover photos by Jeanette Buffington Weiser. Center photos: mushroom, spider's web and maple leaf—Jeanette Buffington Weiser; butterfly—Doug Smith; flowers in stump—Dr. Fred Johnson

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