Idaho Forester

A Magazine of Natural Resources

1983

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Dedication

The 1983 edition of the ***IDAHO FORESTER*** is dedicated to ***Dr. Philip C. Habib***, fellow alumnus, for his outstanding work in diplomacy and global peace.

Editorial

"The *Idaho Forester* is published annually by the students of the College of Forestry, Wildlife, and Range Sciences." While the statement has appeared on the back cover of the past two issues, it may be misleading. The *Idaho Forester* is not really a publication by *the* students, but by *some* students, or rather, by *few* students. Each year the staff of the *Forester* experiences some shrinkage. The 1983 staff currently has eleven members, but the first half of the year was spent with only six. Because of the limited size of the staff, the *Forester* must count heavily on outside help for a number of things. This has created some problems.

We have received letters from unhappy readers of last year's magazine. They felt that the 1982 edition was biased–pro-conservation and anti-industry. While that was by no means the intention of last year's staff, after receiving the letters, I leafed through the '82 *Forester* and found that I had to agree. Most of the articles we had published seemed slanted.

At the beginning of each year the staff tries to obtain articles on topics that are current and of interest to a number of people. We also get some "volunteers"–articles that people have written, or want to write for the *Forester*. We appreciate and encourage these volunteer articles because they broaden the outlook of the *Forester* beyond the interests of the staff. As always, however, some of the articles we hope to get never materialize and we work with what we have. If any of our readers are dissatisifed with our magazine coverage, we would like for them to submit an article of their interest for inclusion in the 1984 edition.

At a recent meeting, our staff discussed what we felt we have a responsibility to include in the magazine. Some feel only the responsibility to report the opinions that are submitted to us. I don't agree. While the college gives us no direct money, the dean buys a number of magazines annually, we have use of the college typesetter at low cost, and this year we've received computer money to help with our editing. It is for these reasons that I feel the *Idaho Forester* has a responsibility to represent all aspects of the college. If that means actively seeking out those opinions, then that is what should be done.

This year we have tried to balance our magazine to have something of interest for everyone. I hope we have succeeded. Occasionally, someone will disagree with a controversial article, but that should not color their perspective of the entire magazine.

I thank those of you who took the time to write to our staff and express your opinion of our magazine. Feedback from our readers helps us to continually improve the quality of the *Idaho Forester*.

Mimi Hendricks

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Cover photo by Donna Gleisner

Center sketch by Laura Haynes Shimek

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State of the College

By Arland Hofstrand

The past year has seen the continued erosion of state appropriated funds for higher education. We cannot say that the continuing financial short-falls have not had an effect upon the overall efficiency of the faculty and the college in general. This year, we have had to eliminate the bare-root nursery operation which in years past has provided a needed service to the State of Idaho; consolidated the Fisheries and Wildlife Departments into one administrative department; started the phase out of the Forest Entomology program; and of course continued to tighten the belt in all college programs. Looking toward the next year's fiscal appropriations, the picture does not look promising since the state's revenue projections continue to look bleak.

However, no matter how disastrous it appears today, the future holds forth promises. There are signs that the recession has started to "bottom out." Increased housing starts signal the beginning of a recovery in the forest products industry. Also, we are not as dependent upon state appropriated funds as are many academic units on campus. Of all monies coming into the College, over 75 percent are from non-state sources such as grants and contracts or federal funds. Outside funding will become more important in the immediate future and the College will become more dependent upon grants and contracts.

Despite the decline of state appropriated funds, which eventually will affect the quality of our education programs, we cannot afford not to remain optimistic about the future.

Increased fees and the effects of the recession have had an impact on student enrollment. We have experienced a steady decline in both fall and spring student enrollments the past few years. However, it is our hope that the slight increase in our spring enrollment signals an end to our decline and the beginning of a gradual improvement in our enrollment picture.

Our undergraduate student body continues to remain an even mix of transfer students and students who began as freshmen. One quarter of all our undergraduate enrollment is women.

In the Fall of 1982 we had 161 graduate students, 13 more than the previous year. This spring we have 181 graduate students enrolled which is a new high for the College.

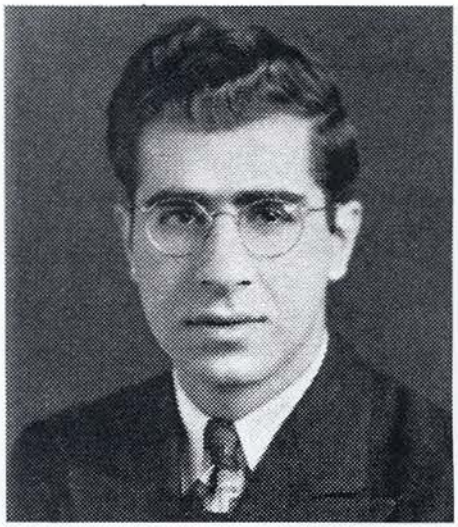
We will continue to provide a broad conceptual base for all of our educational programs. Indications are that future trends in public land management will require the integration of resource values. Trade-offs that result from the decision-making process mean that our graduates must be more knowledgeable in their field and must be able to communicate well and defend any position taken with other resource professionals.

Educational programs are constantly undergoing modification in order to properly prepare our future resource professionals. To keep our students informed and up-to-date, we have modified curricula and course content in a number of our departments. A new program in Forest Resource Management Administration provides an opportunity to combine basic biological skills with the business management and administrative skills necessary for resource decision positions in both public and private forestry. The Forest Products Department has revised its curricula and now offers a program in harvesting technology which is designed to prepare students for positions in logging engineering firms and governmental agencies.

What about the future? It is imperative that we keep abreast of technological changes and be willing to meet the demands of the 80's. The future will present many challenges to the training of young men and women in resource management. Tight budgets and shrinking financial support for higher education mean that we must use our monies wisely. We will perhaps have to depend more upon external support to support our college programs. International activities such as our strengthening grant and cooperative research efforts represent efforts in this direction. Our world is shrinking and the need for natural resource management is taking on a global perspective with each passing year. Management practices of one nation impact upon many others as can be seen in the case of forest products, migratory wildlife, and recreational development. Our faculty must prepare themselves in international resource management so that our students can provide leadership in the decades to come.

Arland Hofstrand is the associate dean of the College of FWR.

Philip Habib— A Distinguished Alumnus



By Steve Abels

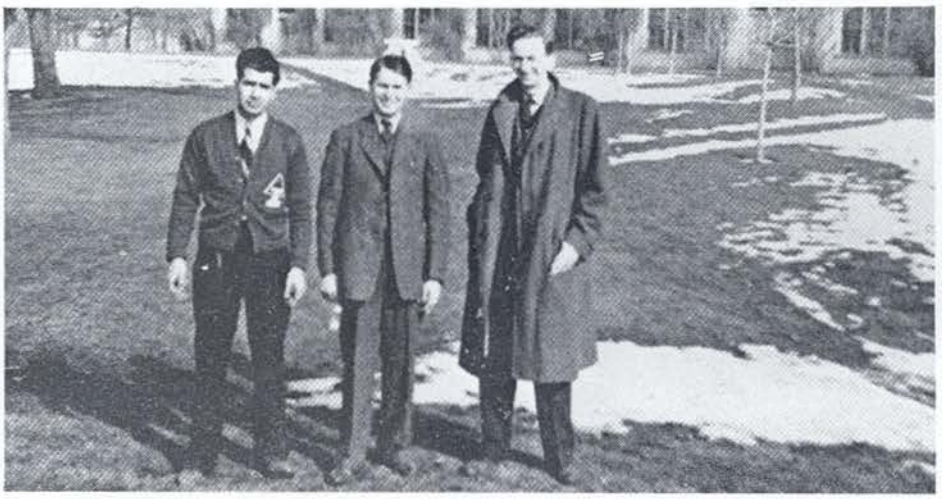
A classic parallel exists between the title of *A Tree Grows in Brooklyn* and how Philip Habib traveled from the streets of New York to the University of Idaho. Habib was born in the Bensonhurst section of Brooklyn, New York on February 20, 1920. The son of Alexander Habib, a Lebanese grocer, and Mary (Spiridon) Habib, he worked as a part time shipping clerk in a sheet metal factory during his youth. Habib was a dedicated worker and once claimed, "If you are working 9 to 5 and if you wife is content, you're not doing your job." This motto seems to have stayed with him throughout his life.

In August, 1939, Habib entered the UI's College of Forestry, Wildlife and Range Sciences to pursue a career in forestry. He lived in the university's "Idaho Club," a cooperative dormitory commonly known as "poverty flats." One of Habib's classmates was Vernon Ravenscroft, a 1939 UI graduate, former Idaho legislator, Republican party Chairman, and Gubernatorial candidate. Ravenscroft, in an *Idaho Statesman* interview recalled, "I met Phil in the registration line in the fall of '39. He and I both followed the same practice of going to school and sitting out for a while. . ." Another colleague was Max Hansen who lived across the hall. Hansen said of Habib, ". . . he never had to study; he had what I'd call a photographic mind." Roger Guernsey, another forestry classmate, remembered Habib as a very bright student. "He was like the rest of us," Guernsey said, "all just working to keep clothes on our backs and food in our stomachs."

When I initially wrote to Dr. Habib asking him who had the greatest impact on his career, he replied that it was Ernie Wohltz, who later became dean of the college. Habib also mentioned his former roommate Roy Kuehner with whom he spent a great deal of time. Dr. Habib continued by describing his academic achievements as, "rather sporatic: some years great, some years disastrous." In his better years he received the College of FWR's Outstanding Academic Award—the only person to do so two years in a row. His name appears on the plaque which hangs on the west side of the college's first floor.

Retired forestry professor Merrill Deters of Moscow recalls Habib from his silviculture and management class. Dr. Deters remembered Habib as a straight "A" student who enjoyed life (and learned to spit into a beer bottle). He was a carefree fellow who liked to chase women. Deters also mentioned that Habib skipped classes, something he did quite often by oversleeping from the previous night's festivities. But he could get his friends' notes and still do well on the exams. "He was one of my best students," Deters said, "an exceptionally bright student."

During the summer of 1941, Habib attended the college's forestry summer camp held in McCall, Idaho. Sykes Gilbert describes this experience, "Phil Habib's motto was 'use your head and save your feet.' But even Phil never solved the mystery of his stolen jakestaff. Phil left the stick stuck in the ground where he finished work for the day, so there would be no chance of forgetting it the next day. But next morning it was gone, with nothing left but the hole in which it stood. Naturally, this was very annoying, and even more so when (equipment manager Loren) Blake came around with the information that there would be a slight charge for the missing stick." During the summer Habib also worked for the Boise-Payette Lumber Company (now Boise Cascade), and for the U.S. Forest Service in the St. Joe National Forest.



Habib also kept himself busy while attending school. During his junior year he worked on the staff of the *Idaho Forester* magazine and was the editor in his senior year. He was a member of the Associated Foresters, Xi Sigma Pi (the forestry honorary), and Alpha Theta Delta. In addition to his college related activities, Habib was known to be an avid poker player. Some of his former classmates related stories of how Phil held a "tight deck" of cards, and some suspected that he paid his way through school from his earnings. Habib's skill with cards was still evident in 1966, where, on a flight to Honolulu with the late President Lyndon Johnson, reporters found Habib engrossed in a ferocious game.

Habib married Marjorie W. Slightam after graduating from the UI in 1942. He then enlisted into the United States Army and earned the rank of Captain. He served with the Airborn Engineers in France and was in charge of 1500 Frenchmen working on various construction projects. He pursued his interest of the French language by studying at Sorbonne University in Paris. After returning from France, Habib entered the University of California and earned his Ph.D. in Agricultural Economics in 1952, writing his thesis on the "Economics of the California Timber Industry."

While completing his doctorate degree at the University of California, Habib was appointed to the Foreign Service Office in 1949, and was assigned to the American Embassy in Ottawa, Canada as an economics officer. During his tenure at this post, Habib had the choice of two job offers. He could either enter the diplomatic service, or accept a job at the headquarters of the U.S. Forest Service in Washington, D.C. as an economist. Habib stated that he wasn't sorry for accepting the position at the State Department because it sounded adventurous. Some of his assignments with the State Department have included serving in the Embassy in Wellington, New Zealand from 1951 to 1954, and the Department of State from 1955 to 1957. He subsequently served as Political Officer at Port-of-Spain in Trinidad and Tobago. From 1962 to 1965 Habib was Counselor for Political Affairs at Seoul, Korea. He was assigned to Saigon, South Vietnam where he served as Political Officer from 1965 to 1967. During the Vietnam conflict,

Habib was Deputy Assistant Secretary for East Asian and Pacific Affairs, and from 1968 to 1971, he served as Senior Advisor to the United States Delegation at the Paris peace meetings, under Henry Kissinger.

In addition to these assignments, Habib served under former President Carter at the historic Camp David meetings between the late Egyptian President Anwar Sadat and Israeli Prime Minister Menachem Begin. He has recently been appointed as United States Special Envoy by President Reagan and is currently involved in the negotiations between Israel, Lebanon, and the Palestinians.

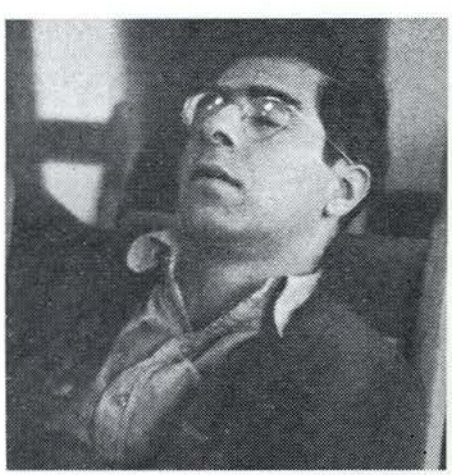
Dr. Habib has been the recipient of many prestigious awards including the 1969 Rockefeller Public Service Award, the National Civil Service Award (1970), the Department of State Distinguished Award (1977), and the Presidential Award for Distinguished Federal Service in 1979. He was nominated by Charles Percy of the Senate Foreign Relations Committee for the Nobel Peace Prize in 1981 for his breakthrough peace efforts in Lebanon. Percy stated in an *Associated Press* article, "Seldom in the annals of history has one man demonstrated as much ingenuity, presistence and perseverance in resolving an intractable, international problem as Ambassador Habib."

In 1974 when Habib returned to the UI to receive an honorary Law Degree he stated, "Although it all sounds like a long way from forestry at Idaho, I have never forgotten the years there, the friendships, the good times, and the beginning of an education."

This year the UI Alumni Association is honoring Philip Habib with the Distinguished Idahoan Award. This award is given to a person who is recognized nationally for service to the country and the world. Habib will be the second person to receive this award since its inception five years ago. He is scheduled to appear for the Silver and Gold Days Banquet to accept the award.

The staff of the *Idaho Forester* is honored to dedicate the 1983 edition to a fellow alumnus and editor of the magazine for his outstanding service.

Steve Abels is a graduate student in Communications.



The Future of Conservation

By Michael Frome

My crystal ball tells me the future of conservation is about as hard to read as the future of civilization. The deeper I look the more diffuse and misty tomorrow's scene becomes.

Who can foretell? In this unparalleled era, change appears to be the only constant. And change itself is scarcely predictable, either in rate or direction.

On one hand, prophecies of ecodisaster may prove valid. Rising populations everywhere are pressing for more and more of the earth's resources. If not next year, or in the next decade, then at some time hence the stockpiles could run out. Meanwhile, air and water, laden with pollutants and toxic chemicals, are apt to render our little planet unpleasant, if not uninhabitable.

On the other hand, technology has brought us this far, hasn't it? Yesterday's science fiction is today's reality. If Jules Verne dared to dream of making it around the world in eighty days, it seems rational to conceive of exploiting raw materials at the bottom of the sea or of dispatching settlements into outer space and calling it the *new* New World.

Still, the very idea of conservation causes me to pause. Conservation means to conserve, or to practice frugality, to avoid throwing away today what may be needed tomorrow. Conservation is compatible with resource use, but in a *conservative* manner, with an eye to future needs.

For all we know, technology can't quite solve everything. Twenty years ago nuclear power promised endless and inexpensive energy. Thus far, at least, the cost has exceeded the benefit and nobody has figured how to dispose safely of the waste.

It might help to review history. I wish we could slow the tempo for a little while to absorb such lessons as the past may yield before plunging into the uncertain future. The conservationist view of the history of mankind was evoked a century ago in the book *Man and Nature* by George Perkins Marsh, a versatile wizard who served as a Vermont Congressman and U.S. diplomat in the Mediterranean.

In his classic work, Marsh painstakingly explained the relationship of soil, water and vegetative cover to civilization; he illustrated with impressive data how cutting of forests, fire, and overgrazing contributed to the decline of agriculture, water supplies, cities, and the prosperity of nations. He cited once-productive lands of China, Mediterranean Europe and North Africa that had turned into desert. Applying these lessons to America, Marsh warned "of the utmost importance that the public, and especially landowners, be roused to a sense of the dangers to which the indiscriminate clearing of the woods may expose not only future generations but the very soil itself."

Marsh inspired others, including Gifford Pinchot, the founder of conservation in our time and close ally of President Theodore Roosevelt. Pinchot was all for use—"preservation through use," as he called it—but was dead set against overuse, misuse and abuse to serve profit and greed without respect or regard for the future.

Marsh and Pinchot were deeply concerned over sustaining a healthy cover of soil as the basis of national prosperity. Today, alas, even without the crystal ball I see the wave of desertification that crippled great nations of the East and the Orient claiming our continent.

The "dust bowl" days of the 1930s have returned without fanfare. In 1982 the Soil Conservation Service reported "high erosion" on 140 million acres of cropland. Iowa alone is losing 260 million

Joe Glatz

tons of soil yearly. Yes, agriculture production is still high, but productivity is declining because of the excess loss of topsoil.

Forests are critical for protection of soil and clean water supplies. "In steep topography, the soil and rock mantle are in precarious balance with the physical factors of the environment." Thus stated a Forest Service report on conditions in the mountains of western Wyoming. Continuing, it noted that studies reveal overwhelmingly that "clearcutting" practices in such settings not only promote erosion, but landsliding.

And yet this type of logging has been sanctioned—on *public* forests, where conservation regulations presumably prevail. As for consequences: "Too often, however, failure to recognize the limits of disturbance allowable beforehand in areas of instability has led to seriously deteriorated water quality."

Americans clearly have taken too much for granted about what the earth can yield. Another study, this dealing with range conditions on the Tonto National Forest in Arizona, includes the following:

"Presently the forest has serious grazing problems that have been compounded through many years of misuse. The Sonoran Desert and associated grasslands are producing at a fraction of their former level of productivity. Areas in the Tonto Basin are described by early settlers as producing native grass to cut for hay. These areas are now dominated by thorny shrubs and annuals. Perennial grasses have been almost completely eliminated over large areas."

Returning to the crystal ball, I find myself mirrored in the future. I can't discern the shape of things, but I will have something to do with shaping them. After all, I have been one of the wasters and over-consumers. Or to put it differently, we must alter the lifestyle that makes us enemies of ourselves. That is conservation where it begins.

Conservation is a science, I suppose, or a management technology, but it begins with a philosophy to have value and meaning. My own philosophy is predicated on idealism, humanism and holism, founded on self respect and respect for the earth, sky and universe, and the assorted and sundry life-forms they embrace.

Maybe I can't solve all the heavy problems, political and otherwise, with which I've been coping for years, but I would like to take control of my own ecosystem and determine my own fitting place on the planet. That is challenge in itself.

Michael Frome is a visiting professor at the Wildland Recreation Department.

Horselogging: A FWR Shortcourse

By Michael R. Fitz

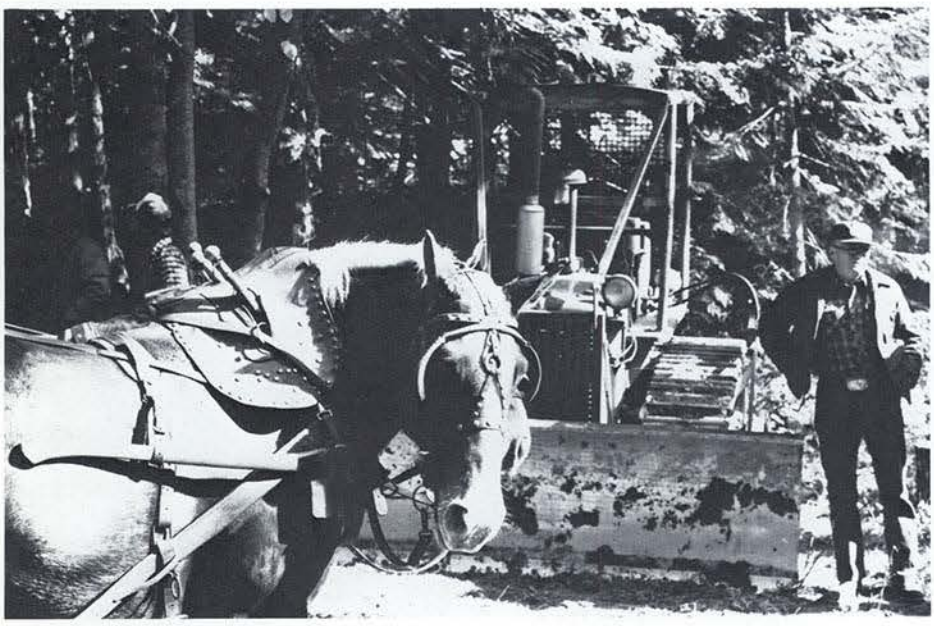
"Whoa, Back . . . Back!" said Rudy, in a surprisingly low tone, to his team of horses.

The muffled clamor of chains and skidding tongs were the sounds heard through the crisp, October morning air on the Big Meadow Creek Management Unit of the University of Idaho Experimental Forest. The Associated Foresters (AF), in cooperation with the Experimental Forest, put together the first horse logging shortcourse in the state, if not the nation.

It was Harold Osborne, Experimental Forest Superintendent and AF's faculty advisor, who suggested the shortcourse. The students took it on. A community service and a learning experience for all involved, the course was aimed at the small woodland owners, to show what horse logging can do for them.

By the beginning of the fall semester, all contacts were made, the brochures were mailed, and plans finalized. By the morning of the course, more than 100 people were registered. Attendance was made up of landowners, horse loggers, U.S. Forest Service and state forestry personnel, and students. The participants came from five states: Idaho, Washington, Oregon, Montana, and Colorado.

Planning for the course was done almost entirely by students. The first day consisted of lectures and forums at the University; the second, a field demonstration by three area horse loggers: Rudy Heiksen, Scott Barber, and Don Nagel. A low thinning would be done on three of the 160 acres in the student management unit, removing about 20 MBF. The stand was chosen for its accessibility, existing old skid trails, and openness.



The students acted as consulting foresters, cruising and marking the stand. Revenues of the sale went to the University Forest, but the AF was paid a management fee. Rudy and Scott, as well as Don, who did the hauling, were also paid from the revenues.

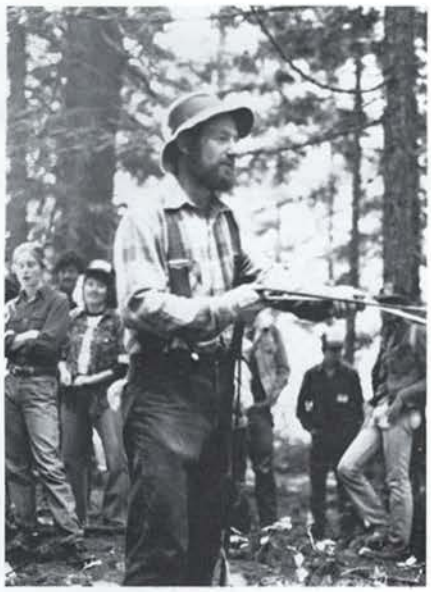
For the demonstration, Rudy brought his team made up of "Big John," a 19-year-old Shire, and "Judge Charlton," a 4-year-old black Percheron. Scott brought "Duke," a 4½-year-old Belgian he purchased last spring. Rudy has been in the business for 10 years and hired Scott as a faller two years ago.

Don Nagel, who would be doing the hauling with his selfloading log truck, also brought his team of Belgians, "Frank" and "Barney." Both men use a tractor to deck logs and build roads to the landings. Nagel said that he would hesitate to take a job where he could not use a tractor, "It would just take too much time with horses alone and wouldn't be worth it."

Toward the end of the day, Rudy singled out "Big John" and allowed students to take turns skidding with him. Rudy feels that if someone is really set on learning this trade he'll do all he can to help out. "I wish that I had someone to learn from when I was starting out," said Rudy.

On the first day of the course, M. L. "Huck" Gaylord, a forester and veteran horse logger from Colorado, pointed out in an historical review that very few draft horses had been imported to the Colonies from England. According to Gaylord, most horses used in the woods before 1950 were mustangs. With only these small horses available, oxen were given preference. Eventually, because of their ability to haul loads faster and further than oxen, and their higher intelligence, horses weighing 1200-1800 pounds became the preferred animals for hauling timber.

Rudy explained the equipment used in skidding and Scott talked about tack (harness). The wooden "horse" they had harnessed up during their talk drew attention during the break. Chains with grab



hooks and tongs were displayed. They are used instead of chokers. Rudy also said it's a good idea to be able to make or modify equipment for use in horse logging, as this specialized equipment is difficult to find.

Three FWR faculty participated in the course. Dr. Harry Lee spoke on skidding and felling patterns used in horse logging. The optimum skidding distances for horses (350 feet) and for tractors (600 feet) were given for optimum production.

Trails need to be marked and cleared before any skidding is done and the faller must work with the teamster, giving extra care to complete bucking and limbing. All this adds up to lower production. Most horse loggers agree that between 2000 and 3000 board feet per day is a good range. According to Harold Osborne and Harry Lee, average daily production for a tractor would be in the area of 3500 board feet.

Dr. Larry Tennyson indicated that, on the whole, horse logging usually causes less impact on the site than tractor skidding. If horse logging were practiced on as large a scale as tractor logging, it would have more impact on the site. This is due to the greater number of skid trails, main roads, and log decks. Tennyson said that a well planned, small scale tractor operation could have the same minimum impact.

Dr. Charlie McKetta pointed out that, when compared with other logging systems, horse logging is more expensive. In the end, with all costs considered, the horse logger can afford to pay less stumpage than the conventional logger. McKetta broke down the economic benefits of hiring a horse logger over a tractor logger into two categories: intangible and financial.

McKetta suggested that the landowner who is thinking of hiring a horse logger hire a consulting forester first. In this way, the landowner can draw up a contract with all the specifications needed to insure proper site protection. Then, when the contract is put up for bid, the logger can decide who will provide the service required at the highest price.

Brad Corkhill, timber buyer for Potlatch Corporation, said that industry is willing to pay the same price for logs to horse loggers that tractor users receive for their product. For industry, the added costs of horses are not justifiable.

The U.S. Forest Service, on the other hand, is using horse logging. According to Joel Holtrop, Timber Management Assistant from the Zig Zag Ranger District in Oregon, horse loggers are being employed to log the summer home lots there. They are also being used on the high risk lands and in buffer strips that otherwise could not be logged. The Forest Service recognizes that the added costs of horse logging are worth it to protect the stand and site. Certain timber sales are set up specifically for horse loggers as a subsidy to small loggers.

"Huck" Gaylord summarized the problems associated with horse logging. Horse use can be limited by deep snow, mud, or slash. They cannot pull very heavy loads for great distances and skids must be short; a break down may require lengthy healing. For these reasons, it is difficult to gain support for the trade.

On the other hand, horses can work in tight places, performing well even with inexperienced teamsters. They are cheaper to maintain during off times than machines, and provide the added benefit of reproducing.

The potential exists for horse logging use in thinnings, "touchy" areas, campgrounds and home sites, small operations, and small volume work.

Gaylord closed the day by saying that what horse loggers are doing is "acceptable to the public." He said that he once received a $10 bill in the mail along with a letter from someone who heard of his work. "He thought I was doing such a good thing and wanted me to buy myself some Christmas cheer."

Michael Fitz is a junior in Forest Resources.

Photos by Michael Fitz

Idaho's Forest Products Industry:

An Economic LifeBlood

A. A. Moslemi

Over the last two and one half years, it seems that a day has not gone by when I would not read or hear of workers being laid off in Idaho's forest products industry. Shipments have been taking a downward slide, factory orders declining, lumber prices plummeting and eventually forcing decisions to shut down operations. This seemingly continuous array of bad news has occupied many of us who are closely watching this industry. To our dismay, at times, it appeared that the solid wood products industry and other credit-sensitive industries (auto, hard goods, etc.) had been singled out as a means to correct the economic ills of this nation. Shipments of softwood lumber along with orders last year were far below "normal" with periods when such data indicated operation at only a fraction of the normal.

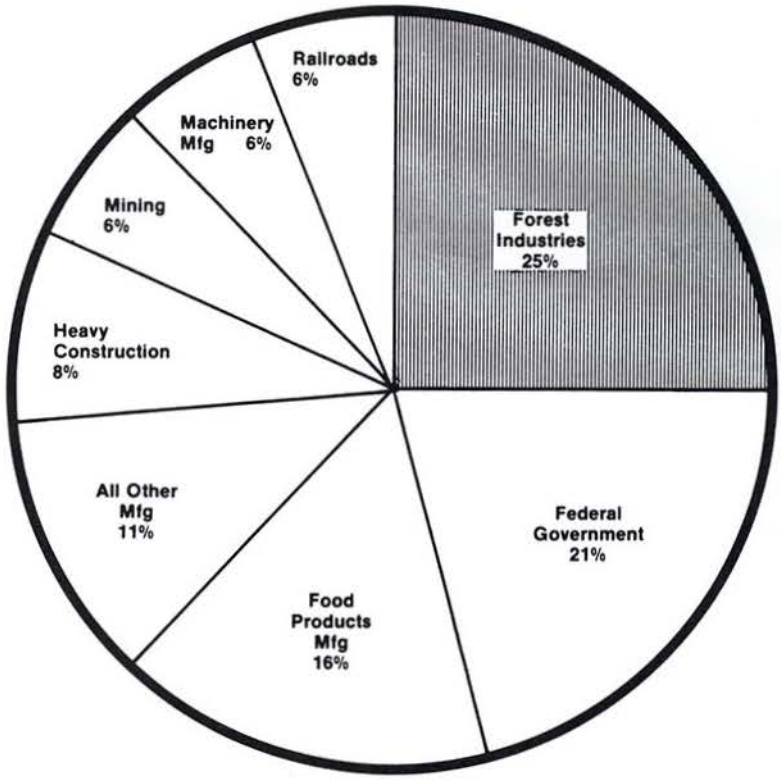
Why does this type of situation happen?

Over half of the softwood solid wood products are used for construction of new houses with an additional 40 percent going into remodeling of existing structures. Purchasing a new home, of course, involves borrowing for most of us. To a lesser extent, remodeling is also financed through credit. When the cost of borrowing exceeds the capacity to make monthly payments, it is obvious what follows. When people become unable to buy a home, demand for wood products drops accordingly. The prohibitive cost of credit resulted in construction of only 45 percent of the houses that the United States needed to meet its housing "demand" for its population. This factor, along with general recession in the total economy, high transportation costs from Idaho to the Eastern and Southern markets, and heavy competition from Canada in softwood lumber has placed a tremendous burden on Idaho's forest products industry.

Why is the forest products industry so important to Idaho? In a normal year, Idaho's forest products industry produces nearly two billion board feet of timber and in addition manufactures an array of wood based industrial and consumer products. These forest products plants include some 135 sawmills, 8 plywood or veneer plants, one particleboard plant, one pulp and paper mill, 26 post plants, 9 utility pole plants, 15 house log operations, 44 cedar products mills and 5 chipping plants. In addition to these "primary" processing operations, there are a number of furniture plants, specialized engineered wood structural components and the like normally referred to as "secondary" operations. In aggregate, the largest single group of operations involves sawmills with over half a billion dollars worth of annual sales and accounting for about 43 percent of the total sales. Pulp and paper is the second largest contributor with 17 percent, plywood and veneer with 7 percent, and other wood using operations account for the remaining 33 percent.

Idaho's forest products industry means very much to the state in terms of employment for its citizens. Again, in a normal year, the industry employs nearly 21,000 persons in direct jobs and is a major facilitator for an estimated 50,500 persons in related jobs (retail sales, construction, transportation, etc.). The annual payroll is about $400 million for those directly employed. The average

wages per worker in this industry in Idaho was $19,400 per year (1979 basis), compared with about $12,460 per year for other non-farm industries. In brief, Idaho's forest products industry accounts for about 30 percent of the non-farm economic base of the state of Idaho. The accompanying chart depicts the proportion of the economic base for the forest products industry accounting only for the primary forest products industry. A proportion of "all other manufacturing" also involves the secondary wood using industries (furniture, engineered structural component manufacture, etc.). There is probably a scattering of the wood using "credit" that is in "heavy construction" industry depicted in the chart. Thus, it should be a surprise to no one to witness severe impacts on Idaho's economy when the forest products industry is significantly hampered by various economic, environmental and social constraints.



Idaho's non-farm economic base. 1979

Issues Facing the Industry

Timber supply, for a long time a continuing concern of the industry, is fast taking a back seat to other issues. Product demand, on the other hand, is becoming a critical concern not just to Idaho but to the entire northwest forest products industry. High transportation costs to the markets of the Lake States, and to the East and South, are becoming a significant barrier to Idaho. Cost-effective competition from Canada, now supplying nearly 30 percent of the annual softwood lumber needs of the United States, is and will continue to be a major factor.

Government regulations affecting the costs of the raw material and conversion of that raw material is a continuing worry to Idaho's industry. These and other issues confront the industry with new and, at times, increasingly difficult challenges. It is a must that Idaho's industry continues to receive timber at reasonable prices and convert that timber in highly efficient plants. It is a must that the industry develops and implements more sophisticated marketing practices. It is a must that the industry develops an international outlook in sales. Both commodity and specialty products must be considered in the "product mix," taking advantage of the raw material and other physical and economic factors.

Over the last two years much has been said on the potential of foreign markets for Idaho's solid wood and wood fiber products. The fact remains that Idaho exports only about one percent of its wood products—mostly in specialty products to Canada with some fiber-base exports to the Far East. This is substantially below a feasible potential of 5-10 percent. Developing this potential will not be easy. Heavy competition from the Coast operators in the Northwest will be a tough challenge. Additionally, developing the export market requires patience, understanding other cultures, and change in manufacturing practices to meet other nation's market requirements. It will also be a mistake to push the export trade only when domestic markets are on the downturn and abandoning the effort when these markets are on the upturn. Export marketing for Idaho's forest products requires an institutional change demanding full cooperation among industry members and the state government.

In Idaho, a gradual diversification of the "product base" from solid wood products to a greater reliance on chip and fiber-base industries and specialty products might need to take place. The gradually changing raw material picture coupled with the less cyclic nature of the fiber products industries would tend to cushion the impact of market downturns in the softwood solid wood products as a whole. Presently, about 75 percent of Idaho's forest products industry is comprised of solid wood products businesses, subject to the cyclicality experienced by this industry over the last three decades. It is true that during the recent recession of the 1980-82 period, the fiber industry markets finally softened along with the

solid wood products. However, the severity of the recent economic recession was such that the general economy was substantially affected, thereby adversely influencing demand in the fiber markets.

University-Industry Partnership

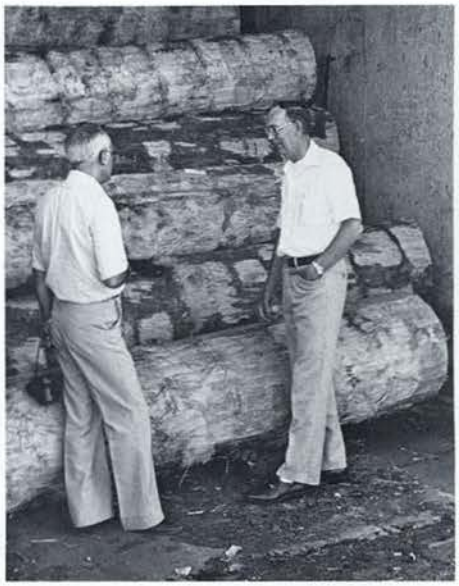
Over the last several years, there has been an increasing interest in the United States and in Idaho that the universities and industry should serve as partners combining the "brain power" of the universities with the financial resources of the industry. This concept is gaining increasing interest. One area in which the United States still enjoys a substantial edge over the competition is in forest products. Both domestic and foreign demand can be supplied by a cost-efficient forest products industry now and into the future if we pool the best talents of our people, including those in the industry and the universities. The future is bright, particularly in the international markets in forest products. Over the last decade, the United States' share of other manufactured products has fallen from 20 to 13 percent. We in this country need to protect this competitive advantage in forest products by a variety of means such as training excellent managers and technologists, continually upgrading the technology of wood and fiber conversion, and using sophisticated marketing practices encompassing the world markets.

We, at the Forest Products Department, are keenly aware of this need for industry-university partnership pertaining to Idaho's forest products industry. In a separate article in this issue, Bob Govett has presented our modernized teaching programs in logging engineering, wood products engineering and forest products marketing. These programs are to train excellent marketing and technology managers for the forest products industry. They are not only designed to "educate" the individual as a whole, they are also intended to instill the best information available on wood as a raw material, computer technology, human relations skills, government policy formulations, engineering, and business skills. Our research will be increasingly governed by industry need, given proper financial support by the industry and government agencies. Some of our current research on forest products marketing, new wood adhesive technology and wood residue retrieval technology (presented elsewhere in this issue by Len Johnson) will provide important information to Idaho's forest products industry.

The service program in Forest Products is in major part focused on the needs of the Idaho industry. Conferences and workshops are designed to be brainstorming sessions on timely topics such as marketing, lumber drying and efficiency in logging systems. We are currently working on a conference to explore the potential of exporting Idaho forest products to Japan and China. A new annual series on logging mountainous terrain will, hopefully, be a reality early next year. A bi-monthly bulletin on forest products marketing was recently initiated to bring the latest items of information to industry leaders in Idaho. A distinguished lecture series brings top forest products industry executives into the classroom, focusing on critical issues facing the industry. These lectures are published and distributed for the benefit of the forest products industry in Idaho. In addition, we continue to meet individual members of the industry for consultations throughout the year.

The state of Idaho mandated us to assist the forest products industry (Idaho Code Section 38-701) in a forward-looking piece of legislation (back in 1939) creating the Forest, Wildlife and Range Experiment Station. This laid grounds for the industry-university partnership in Idaho. The need for such a partnership is stronger now than ever. We are ready for this challenge!

Dr. A. A. Moslemi is professor and Head, Department of Forest Products. He also serves as the Coordinator of Graduate Programs in the College of Forestry.



U of I Registers a New Champ

by George Savage

The University of Idaho is home to a champion; a champion who has never spiked one over the net, never rattled the backboard with a slam dunk, never smacked a homer, never lunged across the line for a touchdown. This champion just hung around for a long, long time and got big. This champion is a tree.

More specifically, this champion is a Pacific willow, *Salix lasiandra* to botanists Generations of UI students have passed by the 75-foot tree growing on a campus lawn just north of the College of Agriculture and west of the College of Forestry. They may have noted its unusual shape and its beauty, but only recently did someone recognize that, for its species, the tree is big—really big.

Steven Brunsfeld, forest resources research associate, and Rex Crawford, forest resources graduate assistant, identified the tree as a champion. One might expect that a tree located so conveniently near two natural resources colleges would have been so identified long ago. "But you don't really realize it until you study the list," said Brunsfeld. "Then you say to yourself: Wow! I know one bigger than that."

The list referred to is the "National Register of Big Trees," published annually by the American Forestry Association. The 1982 "Register" lists state and national champions of over 650 species of native and naturalized trees, including the deposed champion Pacific willow, a 74-footer located near Grants Pass, Ore. The 1983 edition will add UI's willow to eight other Idaho national champions, including an Engelmann spruce, a Douglas-fir, and a whitebark pine.

Brunsfeld and Crawford measured the tree according to a formula established by the American Forestry Association. According to Brunsfeld, height is not necessarily the most important factor. Roughly, a measurement is taken by adding the diameter (in inches) to the height (in feet) to one-quarter of the crown spread (in feet). The UI tree scored 280 points, compared to the Oregon tree's 193 points. An easy winner.

However, Brunsfeld cautioned, there may well be a yet bigger willow lurking out there somewhere. All it takes to find a champion tree is a good memory, sharp eyes, and some basic information.

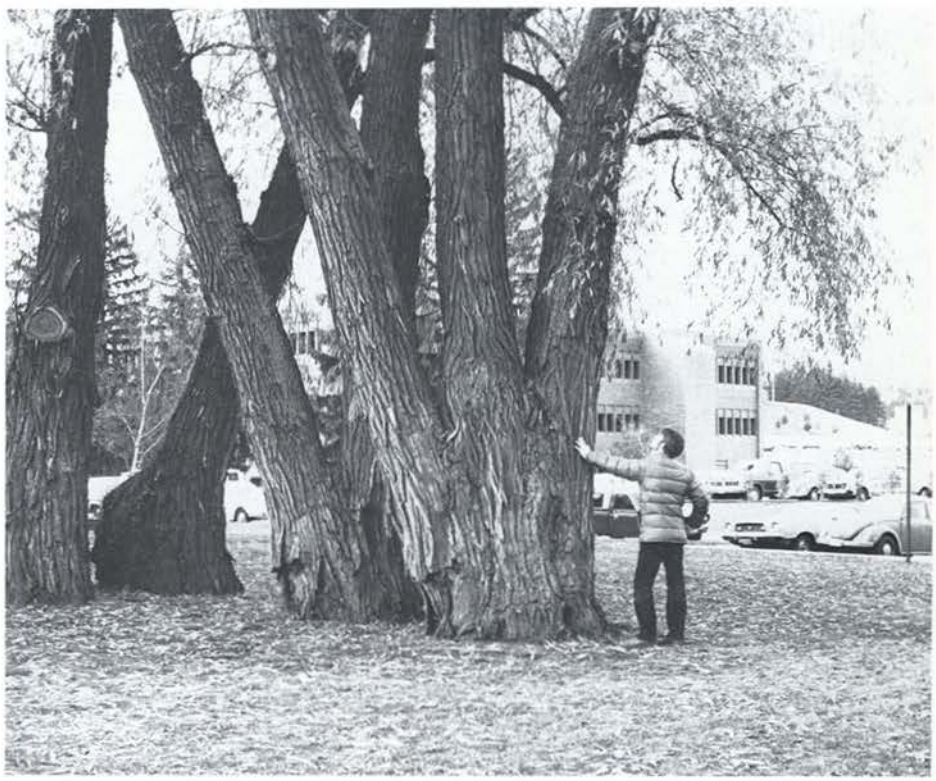
"You don't have to be a forester or scientist to nominate a tree," he said.

Added Forest Resource Professor Fred Johnson, who administers an Idaho big tree program headquartered at the College of Forestry, "If someone thinks he's spotted a possible champ, I urge him to get in touch with us. We'll be glad to supply him with record information and measurement procedures."

If the tree should indeed turn out to be a state or national champ, the nominator will be rewarded by seeing his name in the *Register* and by a certificate from the American Forestry Association commemorating his accomplishment.

In the meantime, the UI champion Pacific willow awaits a worthy contender and is available for public viewing 24 hours a day.

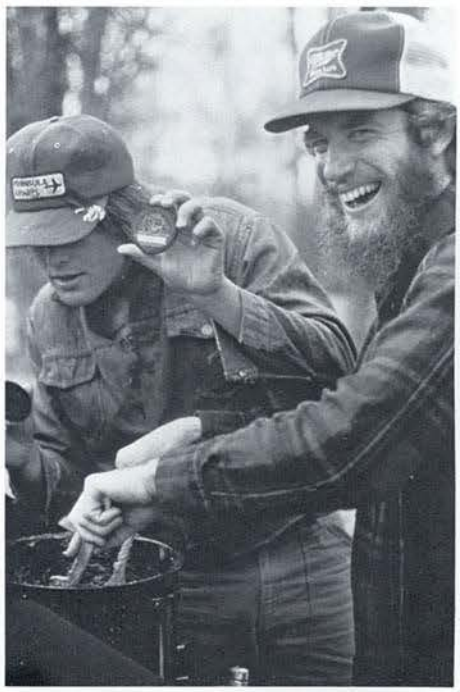
George Savage is an adjunct faculty member in the Department of Wildland Recreation Management.



George Savage

Summer Camp Wreckie Style

by Joe Glatz



The first week of summer camp for wildland recreation management students was held in new surroundings in 1982. For the first time, the UI's Clark Fork facilities were used. They are located a mile from Clark Fork and about twenty-five miles east of Sandpoint, Idaho. The buildings have been converted from an old ranger station and barracks into teaching and research facilities.

Our time at Clark Fork was spent with Photo Joe Ulliman for a combination of aerial photo interpretation and surveying techniques. Actually, it was a great lesson in how to bushwack through underbrush with a 100-foot tape and someone screaming at you, "Go left, left!" while scrambling up a 75% slope! Try doing this sometime, especially when you've eaten over a dozen of Photo Joe's famous sourdough pancakes that morning. Of course, we can't foget the day spent searching for the elusive anomalies. Anomalies, in case you don't know (or care to remember), are things out of the ordinary that you can't positively identify from aerial photos. Our job was to locate and identify a couple of these in the field. I'm still wondering why mine were the ones that ended up being in the swamp, or behind the fence with the sign that read, "Trespassers will be shot, survivors will be prosecuted."

For the next two weeks of summer camp, we traveled in two vans through Idaho, Wyoming, and Montana. This trip was coordinated by Dr. Ed (asleep-at-the-wheel) Krumpe, and offered us a chance to meet with state and national park personnel. The most valuable aspect of this experience was speaking to these people about their own perceptions of their jobs, and not necessarily from the agency standpoint. Our stops included: Ponderosa State Park, Craters of the Moon National Monument, Yellowstone N.P., Grand Teton N.P., and Sawtooth National Recreation Area.

At Yellowstone, we were fortunate to be able to sit in on one day of the park's naturalist training program. It was quite an interesting and enjoyable session, with discussions on bear management, bighorn sheep populations, fishing regulations, fire management, and of course, interpretation. One of our nights camping in the park just happened to be next to a hot spring stream. We were "forced" to check it out and, believe me, it was great!

Two nights at KOA campgrounds were spent to view the free enterprise aspect of recreation. That was what we were led to believe, but I think it really was for the much-needed showers.

The everyday affairs of traveling with seventeen people became routine after a few days. The duties of cooking, cleaning up, and repacking were split among the crew. Once camp was established for the night, the hacky sack players would gather and hear that famous Krumpe-ism, "OK folks, speed and control." We usually didn't live up to this, as our record was a mere fifteen in a row at Lolo Pass.

Looking back on the summer camp experience, I feel that the time spent was well worth it. By visiting a wide variety of parks and monuments, were were exposed to the operations and problems of each, depending upon the size and purpose of the organization. Communicating with people in the WRM field provided valuable insight into their jobs. It was only too soon that we were back in Moscow, waiting to head to McCall for Phase II.

Joe Glatz is a junior in Wildland Recreation.

Photos by Joe Glatz

Rumors of Summer Camp

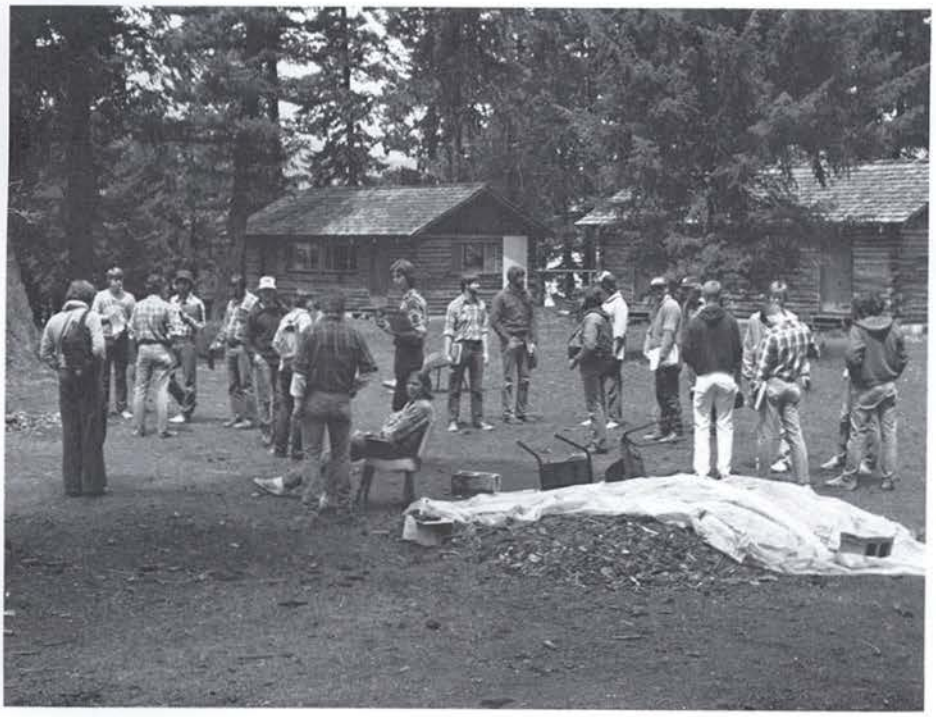
By Jeff Scott

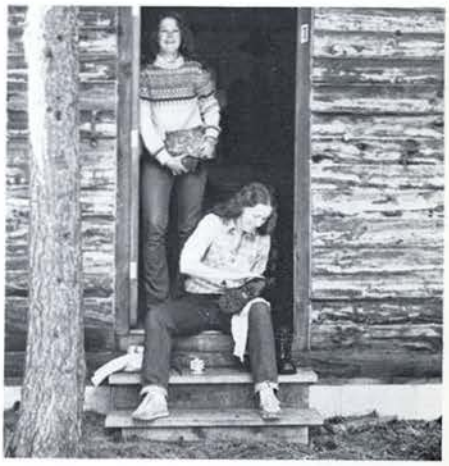
I felt I was misleading friends and relatives by saying my plans for the summer were to attend six weeks of forestry summer camp, and then work some afterwards. The phrase "summer camp," to most people, means a time for repose and relaxation, where the most pressing engagement of the day is the three o'clock basket weaving workshop.

Having heard rumors contrary to the definition of summer camp given above, and heaven forbid having anyone think that I (a known school despisor) would enjoy even a minute of schooling during the summer, I reworded my summer plans. The revised edition went like this: "Well, I've got to take six rigorous credits of technical forestry, then I'll come home and recover for a while."

Forest resource measurements, sometimes known by other names that might make this publication questionable for family reading, was our first course. Our opening few days were spent merrily around camp learning the basic uses of diameter tapes, Speigel relascopes, Wheeler pentaprisms, Biltmore sticks, and an infinite number of other measuring devices.

After learning a few of these basics, we were turned loose in crews on our 160-acre quarter sections. Our mission was to survey and take inventory of this piece of land, and compile a "mile high" cruise report with this data. With calculators at our hips, ready for any sudden calculation, and our bodies engulfed by surveying equipment in official cruising vests





(knapsacks, fishing vests, etc.), we did our best to survey, cruise, keep from freezing, and prevent ourselves from getting lost.

We were very fortunate to have a computer to compile our massive amount of data. At the risk of sounding greedy, though, it sure would have been nice to have a program that would do the work, too! Eventually, we did obtain a program that gave us a condensed version of the data we needed. After many long hours spent mechanically punching endless numbers into the computer, and much consultation with the Good Book (J. R. Dilworth's *Log Scaling and Cruising*), our cruise reports were finally finished, and so was the first course.

Wildland ecology was the name of the game for the next three week course, better known as "Habitat Typing for Fun and Exercise." There was one steep hill to climb before we were ready for habitat typing, and that was plant identification. To cure us of our ignorance as to what we had been putting our Vibram sole prints on most of our lives, we went on little walks known as "walkie talkies." The object of walkie talkies was for the student to take down the Latin name and characteristics of the plants as fast as humanly possible, while the teachers lectured at super-human speeds. I developed a unique shorthand for walkie talkies, but I still couldn't read my notes—then or now.

Surprise habitat type quizzes were rarely a surprise, only the real answers were. Soil texture, lists of shrubs, trees, forbs, and grasses, along with our soundly deduced habitat types were the main

contents of the quiz. Although the quizzes weren't the highlight of the course, they surely kept us on our toes and increased our knowledge of plants.

Overall, we had an excellent set of teachers for the six weeks of classes. All of them contributed to our comprehensive education in their own diverse ways. Although most of our learning took place out of doors, a good number of full days were spent in the classroom.

Extracurricular activities were stressed, even though we sometimes needed two eternities to complete our assignments. The two most popular activities of students and faculty were volleyball, and paying patronage to the Forester (a local bar with a live band and dance floor).

Room and board certainly left some impressions on us. By the end of the six weeks, we had snoose-filled Coke cans, stale socks, wet pants, ancient newspapers and half-eaten peanut butter sandwiches strewn randomly about the cabin. My roommates were real slobs, and I felt right at home with these guys.

We all voluntarily conserved water when taking showers. After all, not many people get to bathe in a shower that spews ice cubes.

I think some of the most enjoyable hours I spent at summer camp were in the mess hall eating. We had an exceptional cook, Della, with young, innovative slaves to help her. Each week a different cabin got the privilege of hashing. Hashing was an education in itself. One morning while my cabin was hashing, someone had the job of refilling the little syrup containers. When he first looked, there was a pot of syrup on the stove, but upon return from an errand, it looked like Della had put the syrup into a large coffee pot for easy pouring into the table containers. Well, he filled each container with the warm, runny syrup and distributed them among the tables. Soon people were mobbing him, telling him how much they liked their pancakes with luke warm coffee on top.

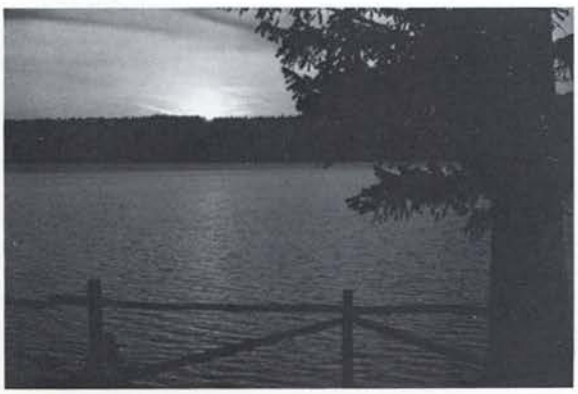
After he washed his coffee-laden face, he found the real syrup, and distributed it. Don't ask me how I know the particulars of that story!

To tell you the truth, I was dreading summer camp before I started. In retrospect, even though we worked like mules for six weeks, I think what we learned about forestry, and maybe more importantly, working with otheres was invaluable.

There isn't a better chance to learn so much, so fast.

Jeff Scott is a junior in Forest Products.

Photos by Jeff Scott



A Control Population for Bobcat Studies

By Craig Gehrke

The Salmon River backcountry is the setting for a three-year study of Idaho's shy and secretive predators.

The predator is the bobcat, and the study area is along the Middle Fork of the Salmon River in the 2.2 million acre River of No Return Wilderness. Biologists from the University of Idaho hope to learn about a bobcat population that has been relatively undisturbed by man.

"There's been lots of bobcat studies, but this one is different," said Gary Koehler, a UI graduate research assistant working on the project. Koehler explained that the other bobcat studies have been done on populations affected by man, either through habitat loss or hunting pressure. "This population is an unharvested one," said Koehler, "and can be used as a comparison to the other studies of harvested bobcats."

Koehler said that in such a comparison, the unharvested population will act as a control. A control would represent what a population is capable of if there are no outside pressures on it. Koehler said, "We hope to get an idea of what the bobcat's habitat, food habits, and productivity would be if the population was not exploited or harvested by man."

The bobcat study was prompted by the increased interest in the cats due to the rising value of their furs, which came about from a depletion of other sources of spotted cat fur. "During the 1970's, there was a great demand for coats made from jaguar, cheetah, leopard, and ocelot furs," said Koehler. This heavy demand caused these cats to become endangered in many areas. As a result, Koehler explained, some countries limited the amount of cat furs that could be exported. The fashion industry, still faced with a demand for spotted cat fur coats, turned to Canadian lynx and bobcats as a source of fur.

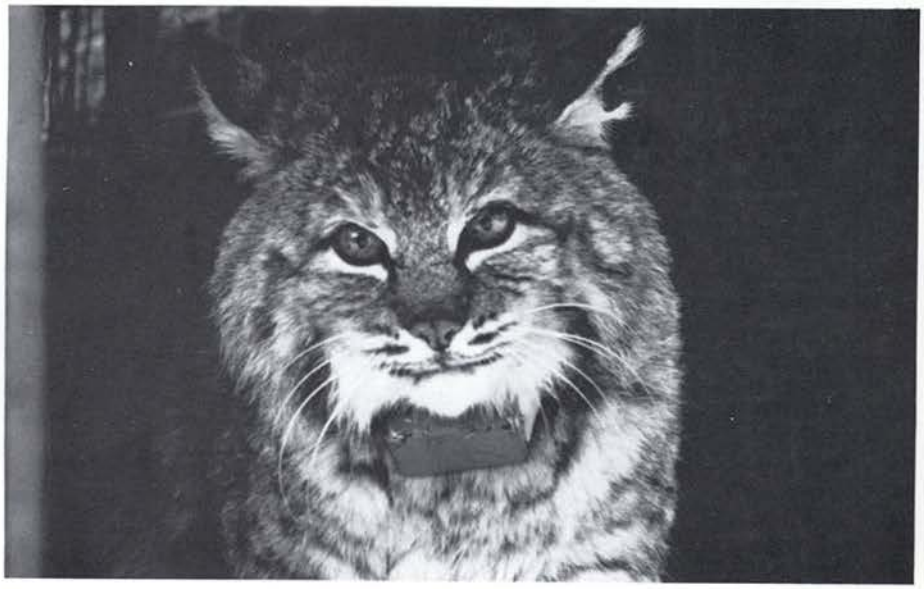
Koehler said that a few years ago bobcat furs sold for about $30 apiece. Today a prime fur can bring as much as $300. The price increase had resulted in a greater harvest of bobcats in the United States. In January of 1982, about 1000 bobcats were taken in Idaho alone. The Idaho Department of Fish and Game has attempted to alleviate the hunting pressure on the bobcat by limiting the hunting season to a one month period in January. Other states, like Montana, set a limit on the number of cats a hunter can take during the year.

The UI study will furnish wildlife managers with a population study of an unharvested population to use as a comparison to their own harvested bobcat populations. Using such a comparison, the managers can estimate the welfare and trend of their own cat populations.

The study, funded by the Idaho Fish and Game department, began last fall with the researchers setting up their base of operations at the UI Wilderness Research Center at the Taylor Ranch along the Middle Fork. Koehler said that last winter twelve bobcats were captured in cage-type traps using dead southern Idaho jackrabbits for bait. After capture, the cats are anesthetized. The biologists check the pelt on the animal, determine its age and general health, and outfit it with a radio collar. These collars help the researchers study the movements of the cats from both the ground and air. The cats are not released from the trap until they've fully recovered from the effects of the drug.

One year into the study, Koehler acknowledges that there is much more to be learned about the bobcat than can be accomplished in three years. "Predators are interesting to study, because man is a predator," said Koehler. "Both want the same things." He continued, "Man often feels that there isn't enough room for both of them, but there is."

Craig Gehrke is a graduate student in Journalism.



Gary Koehler

Palatability of Range Forage

by Jeffrey C. Mosley

The concept of palatability is an abstract, yet important, principle of rangeland animal nutrition. A basic understanding of the factors affecting palatability helps land managers better understand the total rangeland-animal complex. One nagging problem in any discussion of palatatility is that the term is often vaguely defined and assumes a wide variety of meanings in the literature. Originally, palatability meant the avidity with which an animal ate a plant. However, its original meaning has been almost lost, leading some researchers to find the term "preference" more suitable when referring to the taste an animal displays for a plant. Still others choose to separate preference and palatability and define the latter as plant characteristics or conditions which stimulate a selective response by animals.

Whatever one's definition, the key word when discussing palatability is "choice." Palatability is not synonymous with intake; the fact that a plant is ingested does not mean it's palatable. Animals do exhibit selective grazing habits, actively choosing some forages over others. Some of the suggested reasons are differences in palatability.

Numerous factors affect a plant's palatability. Preference varies according to season of use, animal function, plant community structure, and many other plant and animal modifiers. Foremost among animal modifiers are the senses of touch, sight, taste, and smell. All of these are related to preference for some plant species, but taste is most important. Smell is closely related to taste and when both are surgically impaired, definite changes in the relative palatability of forage species can be observed. In one study, the most pronounced effect from a loss of smell was the avoidance of aromatic flowering stems which were jealously eaten by control sheep. The influence of sight is related to a plant's vegetative growth form. A prostrate or low-growing plant will typically be selected less often than a taller growing plant, simply because the low growth form is less conspicuous.

Previous experience of animals is another factor affecting palatability. For instance, animals may gradually acquire a taste for a forage that they initially ignored. Conversely, it has been shown that a once palatable food may become unpalatable after animals have eaten the same food for an extended period. A final indicator that previous experience plays a role in determining palatability is the fact that the young of several animal species, including cattle, have been shown to imitate their parents in forage selection.

The animal's physiological condition can also affect palatability. Pregnant, fat, or lactating animals show different forage preferences. Hungry animals will often eat plants considered unpalatable under normal conditions. Contrary to common belief, there are few, if any, natural preferences exhibited by different animal species. The generalized food habits of sheep and cattle, for instance, vary considerably with location and grazing season (See Tables I and II). The simplified view that sheep prefer forbs and browse, and cattle prefer grass, is extremely shortsighted.

A common mistake concerning palatability is the idea that each plant species has its special measure of acceptability. It is foolhardy to assign a specific palatability rating to a plant that will cover all situations, because preference for different species is highly dependent upon the array of choices available and various environmental conditions. However, many plant characteristics have been shown to be related, at least at times, to relative palatability of forages. Some of these characteristics are chemical composition, morphology, and succulence.

Chemical composition of forages has been much researched. These studies have produced numerous conflicting reports regarding the influence upon preference of sugars, protein, cellulose, crude fiber,

Lee Sharp

A high leaf:stem ratio helps make crested wheatgrass a palatable Spring forage.

and lignin. Conflicting information also exists for such toxic compounds as alkaloids and nitrates. These findings seem to indicate that no consistent correlation exists between a forage's chemical composition and its preference. Any relationships of specific chemical properties to palatability are local and sporadic and cannot be used as reliable indicators.

There is general agreement, however, that plant morphology does influence palatability. Factors such as the presence of awns and spines, hairiness, leaf position, and texture all influence palatability. Leaves are preferred to stems, thus making a plant with a higher leaf:stem ratio, such as crested wheatgrass (*Agropyron cristatum*), more palatable. The morphological characteristics of leaves also seem to affect palatability. Thin, fine leaves are preferred to broad, thick, coarse leaves.

Another major plant palatability factor is succulence or maturity. These are closely related in that moisture content usually declines with maturity. Advanced plant growth stages generally cause a decrease in preference. Consequently, relative palatability of plants in mixed stands will often change, since plants do not grow and mature at the same rate and calendar date.

Perhaps preference and palatability can best be understood by thinking in terms of "avoidance." Animals avoid plants having awns and spines, and thus they prefer plants without such structures. Animals avoid coarse, cured forage, thus preferring moist, succulent forage.

In summary, range forage palatability is a complex interaction of varying plant, animal, and environmental conditions. Animal senses, plant and animal physiology, and plant morphology are the factors most closely tied to palatability. Although an abstract concept, a basic understanding of palatability and its role in grazing selectivity is fundamental to sound rangeland-animal management.

Jeff Mosley is a graduate student in Range Resources.

TABLE I. Cattle diets from various locations and studies.

Grazing Season	Location	% of Diet Grass	Forbs	Browse
summer	California	59	31	10
summer	Utah	77	11	12
fall	Arizona	82	13	5
year-long	Nevada	26	0	74
year-long	Texas	61	10	29

Jeff Mosley

Moist, succulent plants are generally preferred. Yet palatability differences also exist within lush mountain meadow vegetation.

TABLE II. Sheep diets from various locations and studies.

Grazing Season	Location	% of Diet Grass	Forbs	Browse
summer	California	55	30	15
summer	Utah	22	26	52
winter	Utah	29	1	70
winter	Utah	92	0	8
year-long	Texas	29	41	30

The Explorer — Is He Dead?

by Bjorn Kaltenborn

The year is 1898, or at least it could have been. It doesn't really matter, not to me anyway. I am in a timeless place where people, stress, and patterns seem very far removed.

"Watch what you're doing, you fool! Tighten that rope!" I am jerked back to reality as the canoe is quickly pulled into the river current and the rope runs out between my fingers. I tighten it and save the canoe from reaching the two-foot standing waves and filling with water. Coming out of my dream world, I focus on my surroundings again. The angry shouts from my traveling companion successfully prevent another "drying out the gear" day.

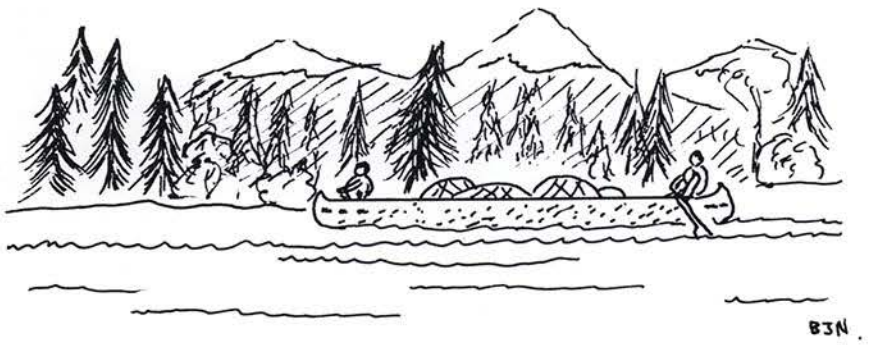
So begins a typical day on the Rat River in the extreme northwest corner of the Canadian arctic. These eleven days of lining the canoe up a fast running, mountain stream to cross the Richardson Mountains, prove to be the toughest part of our five week, six hundred mile trip. The year is 1982, not 1898, but our trip is not very different from the labors of the Klondikers of '98, and not many have done this trip since.

And that is what I want to talk about —wilderness travel. Where to start seems a little unclear to me at the moment; perhaps clarity isn't so important. As we travel through one of North America's most remote corners, I have an unusual opportunity to ponder some of the aspects of adventure and exploration. Each day we are faced with new situations and challenges, stimulating and changing the mind, molding us into a patternless pattern of wilderness existence. T. S. Eliot said:

> We shall not cease from exploration
> And the end of all exploring
> Will be to arrive where we started
> And know the place for the first time.

I wonder, what do we bring back with us when we arrive where we started? We return with many things, it seems to me, and I would like to share them with you.

Geographic exploration is a thing of the past. Yet, we continue to explore and to seek adventure. We make great efforts, work double on long winter nights, save, plan, hassle sponsors, and wait for that big experience next year, or the year after. Why do we do it? There are no more lands to discover. There must be something about exploration that is universal to all groups and time periods. Like others before us, my friend and I have turned down summer employment and financial rewards, to experience that adventure people have been possessed with for centuries. In this regard, we can draw a spectrum from day hikes to expeditions. Degrees of seriousness in recreation might be a useful concept for us here.



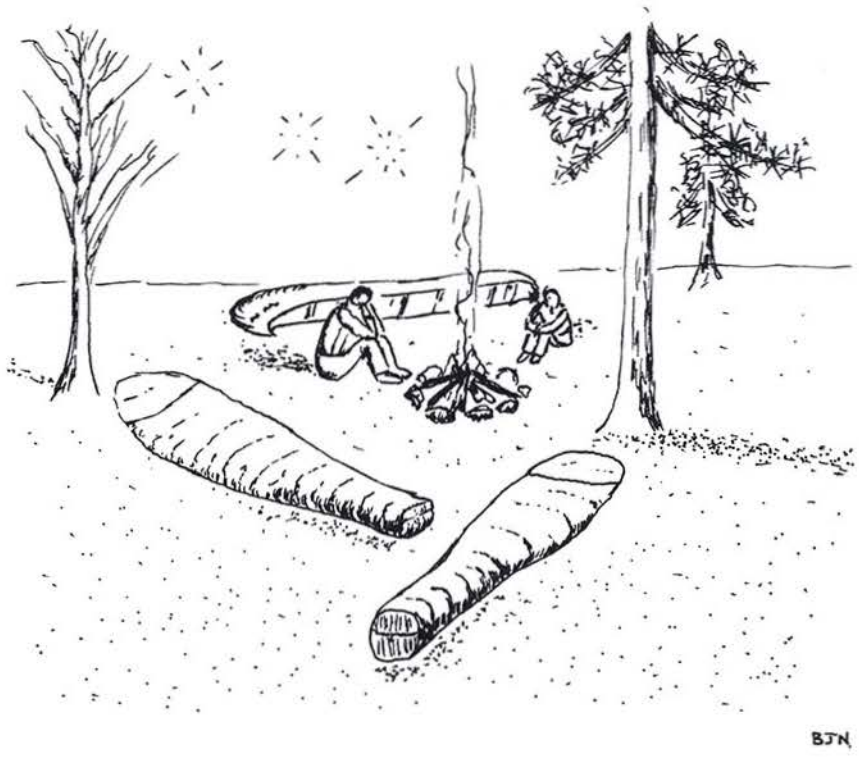
"What are you doing? Wake up!" my partner bellows from the stern. Let it be, we are in an easier stretch of water now anyway.

It seems there are certain basic, fundamental values to all types of recreation. We just develop them differently according to our interests and desires. So, since we cannot discover Greenland anymore, we look for other things. The "serious" recreationists, the ones who like to think of themselves as explorers born a hundred years too late, and I, belong to this group, are drawn to the remotest areas on the globe. We spend time, money, and experience discomfort in seemingly meaningless ways—being soaked in rivers or eaten alive by mosquitos in the Arctic. There are aspects of the land other than geographic shore lines to discover, and we look for them carefully. Sure, you say, we all know that, we all want to do these things. Why do you write this? Because, it occurs to me as I labor toward the divide in the distant Richardson Mountains, that this type of recreation is more, much more, than just recreation. It is self-fulfillment of a kind that very few people get any longer. Our recreation world does not have room for my type of recreation or exploration today. It takes too much space, is difficult to manage, is elitist, and so on. Who has that kind of time and money anyway? (My trip cost five hundred dollars for six weeks of travel.) But I did not really intend to get into this side of it.

What are we exploring? We seek many things: diversity, simplicity, vastness, history, and ways to satisfy never-ending curiosity. Let us look at them closer.

The more time you spend on a wilderness escapade, the better. So what's new? But this is only if you can cross the threshold to dedication. After a week or so, you again long for the comforts of civilization. Here is where you either turn back, or realize that there are other things that comfort you more. If you go for the latter, you have it made. Then, after crossing this first hurdle, you perceive a new dimension of the land you are in. Get down on your knees and discover the diversity of the tundra; sit around the campfire and hear birds you

have never heard before. You have passed the test and, having committed yourself to the land, the rewards are many. Simplicity and diversity go hand in hand. As the wilderness traveler simplifies his life, the ability to perceive increases and so does the diversity of his impressions. But, you say, this can be found in many places, not only in Canada or Alaska. True, but there are other prerequisites as well. Just like the geographic explorer, we need the element of the unknown. I like to call it "lostness," that incredible feeling the endless vistas can give. It is amazing how this aspect of the land can grip you. One such experience will always remain unforgettable to me. It was on a trip in the Alaskan Arctic, and I was scouting for a trail that did not exist. As it happened, I was in the wrong valley, far off course. My poor map reading had taken me to an area lacking any sign of human tracks. Perhaps this valley had not been visited for several years. Oh, man–did I feel lost. But yet, at the same time, it gave me a strong feeling of sharing in something very unusual.



In the glory of all this there are mixed experiences, of course–good and bad. Can you recall that sickening feeling of almost losing control when you are climbing a difficult mountain or running out of food three days from the nearest supply? That is when you say to yourself, between clenched teeth: Oh God, let me get out of here just one more time.

And there are times when you are dulled by monotony, everlasting rain, and tedious travel. These are the times when your desires and ideals vaporize in the fog hugging the mountainsides, when everything seems almost meaningless. But without these moments of fear and boredom, wilderness would not be adventure. It is when we, in the long run, can appreciate and enjoy all these moods of the land, that we begin to approach the true explorer.

So what is the essence of all this? I don't really know, but it all seems important to me at the moment. Maybe we tend to view exploration in the wrong light, as merely an activity of the past. But can we kill an instinct that drove men to incredible hardships, even death, just because the Northwest Passage has already been found? Certainly not. We all possess the desire to explore in our own ways, whether it is on a weekend backpack or a 600 mile canoe journey in Alaska's interior. With my knack for wilderness travel, I often feel that I was born too late. Jim Bridger was also born too late. So was the arctic explorer, Vilhjalmur Steffansson. We are all born too late for some things and at the right moment for others. The virgin era of travels is over. Few mountains remain unclimbed, but there are other things to be done. I realize this as I tackle the Rat River. People have struggled up it before me, but what does it matter? To me, it is a fast flowing, beautiful river coming from pristine mountains. To me it is new. Let us get away from the insane craving to be first, regardless of cost, but let us not cease to be explorers. If we are willing to set a distant, demanding goal, perhaps we will get at least halfway there.

So then, our challenge as wilderness travelers must be to find our role in the evolution of travels through wildlands. Don't downplay the importance of the adventurist instinct. The moment the mystical flavor of the unknown land is gone, I no longer want to be a wilderness traveler. It would be a lifeless experience. Rather, let us utilize our knowledge and resources of today to make our era an important one. And remember, simplicity in lifestyles and attitudes toward wilderness travels yields a greater diversity in experiences. So in that sense, I think we should all be "serious" recreationists. That is, I believe, what exploring should be all about.

"About time to call it a day, what do you say?" My companion in the rear is obviously more aware of the immediate realities than I am. We are wading knee-deep through a slower section of the river now. It is getting late and the water is icy cold; so let us pull ashore.

By the campfire that night, I wonder what it will be like to end the trip after another three weeks of travel and come back to where we started. Will I, like Eliot said, find the place different? Yes, probably, and I'll carry many new experiences and impressions with me. Of that, I'm sure.

The coals of the dying campfire are faintly glowing in the night. With another day behind us, I stretch out in the sleeping bag, my thoughts and ponderings still fresh in mind. And I wonder–are we, as modern-day recreationists, able to be explorers, to hear new birds sing? Can we really respond to the New Call of the Wild?

Bjorn Kaltenborn is a student in Wildland Recreation Management.

Programs Leading to Careers in the Forest Products Industry

By Robert Govett

Student advising and counseling is a very time consuming job for all faculty members in the Department of Forest Products at the University of Idaho. Time spent in these endeavors is usually rewarding and sometimes frustrating, but rarely dull. Although virtually all students need some clarification and interpretation of what they have read in catalogs and elsewhere, it is virtually impossible to predict what other questions they might have, except for the one question which is in the thoughts of every incoming freshman and transfer student.

The question, which is rarely phrased as a question, goes something like this:

"My (Dad, Uncle, Mom, Grandpa, friend, coach, high school counselor, high school teacher, pet hamster) told me . . . maybe this sounds stupid or I shouldn't ask it,—please don't take this the wrong way, but . . . (he, she, it) said that I had to be completely (crazy, insane, nuts) to want to get a degree in forest products!" (Here there is a short pause while the student catches his or her breath, sizes up the situation and thinks about making a break for the door. The advisor nods knowingly, the student's courage returns, and he or she continues.) "They told me you just **couldn't** get a job if you had a degree in forest products! It's going to take four years of my life and money and a lot of work . . . I mean . . . I don't know if . . . Does this sound like a stupid question?"

The question, or more correctly, the concern, is a valid one. When the advisor tells the student that the question is valid, coupled with the fact that it is being poised at precisely the right time, the student's eyes reflect a look of astonishment. Think about the plight of the poor student. How would you like to have just moved away from home to attend a well-known and respected university and then come to the realization that you've probably picked a dead-end major and have a lunatic for an advisor?

We ask the student one **very** important question: "HOW SMARTLY ARE YOU POSITIONING YOURSELF TO COMPETE FOR PROFESSIONAL EMPLOYMENT AFTER YOU GRADUATE?"

Most students view a "good" major as one which enables them to compete for employment in fields in which they see a great demand for professionals in entry level positions. It's easy for the student to see what employment opportunities exist today. However, the student must guess what employment opportunities will be like several years into the future! In fields where a relatively small number of students have recently faced a large number of attractive level positions, the situation may in many cases be quite the opposite in two to four years. Cycles in industry and the job market are nothing new. The last decade has shown us not only the high but also the lows for the forest products industry. But no matter where we are in the cycle, our commitment is unchanged. We educate students today to assume careers as professionals and leaders in the forest products industry of the future.

Over the past few years a large number of myopic yet well-meaning people have informed me, in a variety of ways, that the forest products industry is a dinosaur headed for extinction. They have told me that "high tech" is the way of the future. Granted, many industries are becoming increasingly technological in nature, the forest products industry among them. However, the forest products industry is by no means on its way towards extinction. If anything, the forest products industry may be expected to continue to experience dynamic change throughout the foreseeable future.

The forest products industry is a dynamic, evolving industry which will constantly need to change to meet the needs of both domestic and international markets. There are those who take issue with such an assertion. I would challenge them to describe material which could replace wood as a raw material now, or even within our lifetime. Portions of the forest products industry are highly sensitive to interest rates while other portions of the industry are sensitive to general economic conditions. Domestic softwood lumber consumption, even during the past few troubled years for the industry, has hovered around 30 BILLION board feet of softwood lumber consumed per year, not to mention significantly larger volumes of wood as a raw material used in the domestic production of pulp and paper. During 1981, one of the worst years in recent history for the forest products industry, U.S. softwood plywood production exceeded 17 BILLION square feet, with considerable volumes of particleboard produced as well. These examples could go on for many pages, but suffice it to say that the demand for wood-based products, even during these worst of times, must be defined with mind boggling numbers.

The challenge for the Forest Products Department is to provide students with the knowledge they need to assume professional line and staff positions within the huge forest products industry, which is expected to continue undergoing dynamic evolution and change. To this end, all programs within the Forest Products Department have undergone substantial upgrading within the past year. Our objective is to produce graduates who are second to none in their fields. These students are expected to enjoy reasonably good success in competing for jobs during even the most difficult times for the industry and/or to have a broad enough background to competively seek employment in a number of related fields as well.

Students within the new Forest Products Business Management curriculum are required to take a strong background of coursework within forest products, from which significant **additional** emphasis in coursework is required within **either** forest engineering and harvesting **or** forest products production and technology. A strong sub-core of business courses including: accounting, finance, marketing, management, business law, etc., coupled with economics, science, mathematics, computer science, statistics, communications and other coursework round out the minimum program requirements. Through judicious use of additional electives, the student may work towards completion of requirements for a second degree in business which could reasonably be obtained with the equivalent of an additional semester of coursework beyond the four year program or to be prepared, in all respects, to commence studies toward an MBA degree.

The Wood Products and Engineering curriculum updates the traditional wood technology curriculum to include a broad base of forest products courses with science, engineering and mathematics in addition to other areas of study. A new program of study in Forest Engineering and Harvesting has been developed in which considerable background coursework in forest engineering is coupled with science, mathematics, engineering, forestry and other related coursework to provide students with the background needed for entry level managerial or staff employment in Forest Engineering and Harvesting.

In addition to traditional opportunities offered for graduate studies at the masters and doctoral levels, a new program has been developed for graduate studies in the department. The Master of Forestry program in Forest Products is a new and unique program in which students holding degrees in fields **other than** Forest Products or Wood Technology undertake a relatively regimented program of coursework within Forest Products, including general background courses and an emphasis in either Forest Products Production and Technology or Forest Engineering and Harvesting. This program is unique in that it is specifically **not** intended as a continuation of general or specific studies in Forest Products except in circumstances where the graduate emphasis is significantly divergent from the undergraduate emphasis. Students within the MF program are strongly encouraged to undertake additional studies within their undergraduate major such as business, foreign studies/language, engineering, forestry, etc. to obtain a well rounded graduate education experience.

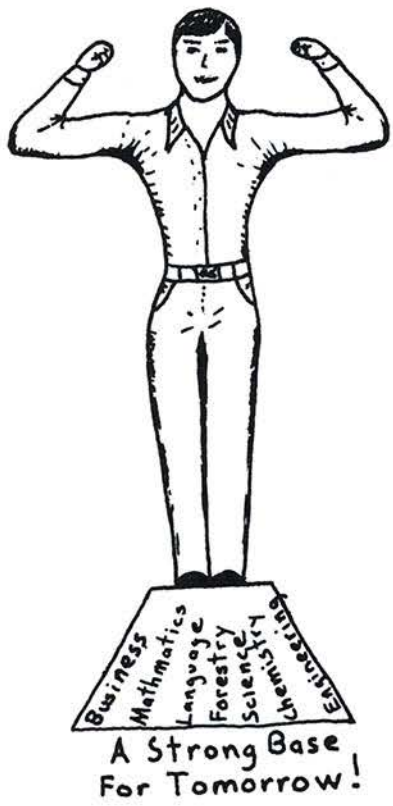
As previously stated, our objective is to produce graduates who are **second to none** in their field. To do so, our programs and course offerings have been updated to consider the needs of the forest products industry of today and tomorrow, **NOT** the industry of yesterday. To this end, we have committed ourselves to do what we know best, in the best fashion possible. Our commitment to a broad based education for our students is a real and honest one. Students within our programs of study are required to take not only background service courses in other colleges, but a substantial number of upper division professional courses as well. More than half of our departmental faculty hold degrees in fields other than forestry and forest products and have pursued considerable graduate studies in these fields as well.

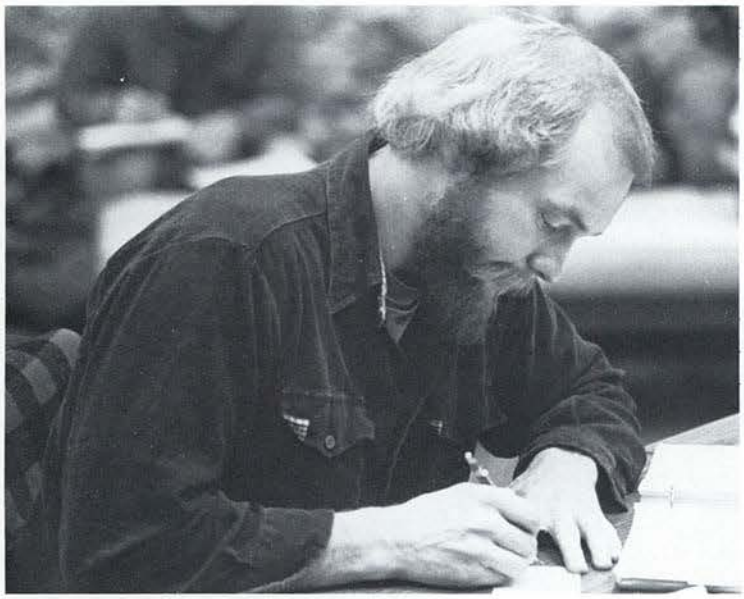
The forest products industry **needs** professionals with a much broader education than a strong background in forest products or forestry. We are committed to providing our students with the education required to match the needs of the industry, not just because we are committed to the needs of industry, but more importantly, because we are committed to the needs of our students. Those students best qualified in the eyes of industry are the most competitive in seeking employment upon graduation, whether there is a glut or paucity of currently available jobs. Due to the cyclical nature of the forest products industries' operations, there is no possible way we can ever ensure that all of our graduates will receive employment offers from within the forest products industry upon graduation. However, we can offer the student a solid broad-based program of studies from which he or she can readily branch into other related fields on a short term or long term basis.

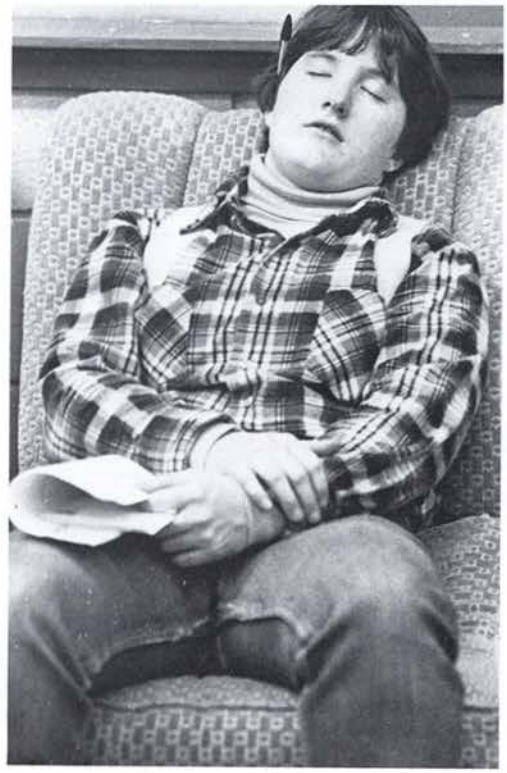
The philosophy is really quite simple. We don't intend for our graduates to be the type of people who are willing to sit back and **take** their chances. We want our students to be the type of people who are willing to work hard to **make** their chances. We see **that** as the first step toward a **career** in the forest products industry or any other industry.

Inquiries for further information from potential students interested in programs leading to careers in the Forest Products Industry are welcome and should be directed to the Department of Forest Products, College of FWR, University of Idaho.

Bob Govett is an assistant professor in Forest Products.







A Place for Birds in Integrated Pest Management

By Lisa Langelier

As a student of avian ecology, I realize the value of understanding the integrated pest management concept in forestry. Having worked for three years in a study of avian predation, I also have some insight into the role of birds in natural regulation of insects. I will briefly describe the components of integrated pest management (IPM) then discuss how birds can contribute to the IPM scheme.

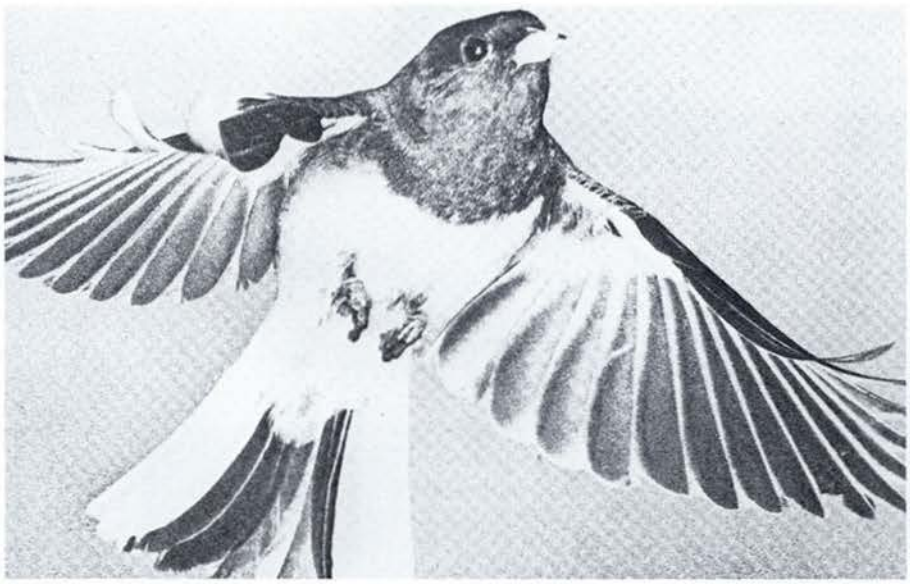
The research and development (R&D) phase of IPM has four major components: 1) pest population dynamics; 2) forest stand dynamics; 3) pest effect assessment; and 4) prevention/suppression measures. Each component is a complex system in itself. This R&D design is closely linked with the operational phase of IPM which integrates the information, using systems analysis, to assist managers in making economically and ecologically sound decisions. Recent government-sponsored programs have been designed to develop integrated control plans for management of the gypsy moth, southern pine beetle, Douglas fir tussock moth, and most recently, western spruce budworm. Despite a tendency to get bogged down in rhetoric, the concepts of IPM are sound and offer a long-term alternative to pesticide dependence.

Monitoring pest population dynamics involves intensive study of population biology, life history and habits, natural enemies, numerical behavior, and mortality agents. Models are used to describe these ecological relationships and predict population changes over time. Modeling is also used to describe and monitor host stand biology and ecology, to predict foliage damage, resultant tree injury, and long range stand response. Other models incorporate the social and economic effects of pest outbreaks.

Active management of pest populations involves implementing either direct or indirect control measures. Direct control methods such as salvage cutting and insecticide application are a crisis-oriented means of reducing pest problems. Indirect control uses preventative silviculture to reduce stand susceptibility to outbreak. The integrated pest management approach synthesizes all component information through the use of interdependent models and submodels and enables managers and landowners to evaluate the total effect that pests have on the stand in question. With this predictive capability, land managers have some information to use in making their decisions.

For the past three years, I have been studying avian predators of western spruce budworm. Through this research I have realized the significant contribution that birds make to the IPM design. Denizens of the forest, they are dependent upon insect and stand dynamics and can be incorporated into management plans.

As insect densities increase, birds respond both numerically, by increasing their numbers, and functionally, by increasing the number of insects eaten. Although this total response requires in-depth study at various pest densities, our research indicates that birds, as part of the predator-parasite complex, contribute to the insect mortality rate significantly. This density-dependent mortality rate, it is hypothesized, is dome-shaped where mortality rate increases with insect density up to some maximum rate and falls off as insect numbers continue to increase. Foliage-dependent birds would contribute most significantly at low or endemic population levels. Late endemic through mid-outbreak mortality, our research indicates, is caused by seed-eating and flocking species which key in on increasing insect numbers and switch their food base. By concentrating in large numbers, flocking species may shorten outbreak duration locally. Beyond mid-



outbreak, insect densities escape avian control. Little research effort has been undertaken to actively manage the forests for avian predators. By taking steps to artifically increase bird numbers, outbreak potentials may be reduced or prevented.

The distribution and physiognamy of forest stands have been shown to be important to bird communities. Some species prefer stands with high vertical diversity while others are favored by optimizing the horizontal distribution of stands. Silvicultural manipulations that alter foliage volume, tree density, and vertical and horizontal stand structure will modify bird communities. Thinning, shrub enhancement, and uneven-aged management systems may increase avial predation on defoliators by maximizing the bird to foliage volume ratio. In areas with chronic pest problems, some of these treatments could be used to encourage avian predators and ultimately reduce insect numbers.

Some direct control methods have negated bird-caused mortality by reducing bird populations as well as other nontarget insects. There is definitely a place for pesticide use in controlling pests but the cost of application must be weighed against the cost of natural control potentially lost through application. Modeling has given us outstanding predictive abilities to grow forests with and without pests. Why not develop a model to growth the forest with and without birds? Chances are that birds prevent insect problems in a significant number of stands. Further study is needed in this area.

There is evidence to support the case for biological control with avian predators. European successes have been documented. As is the case with integrated pest management, the cards have been stacked against us. Operational and attitudenal roadblocks must be lifted before either can become reality. We must develop foresight in our management of the forests. Integrated pest management which includes avian predator enhancement can only be a step forward.

Lisa Langelier is a graduate student in Wildlife Resources.

My Friend Michael

by James R. Fazio

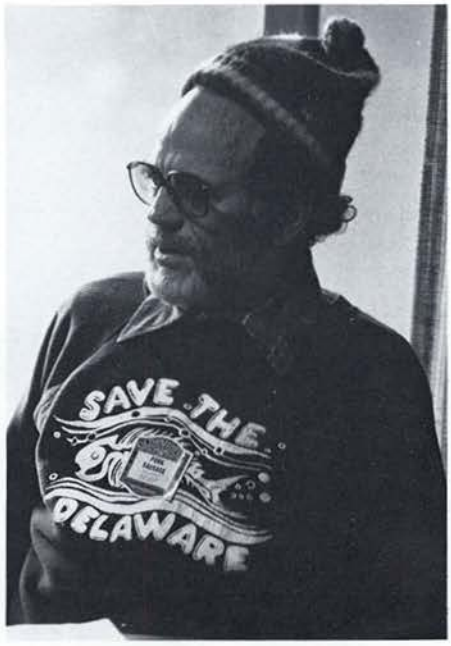
"I've been fired from every job I've ever held," Michael told me with the ring of at least some truth. This is not the sort of thing you usually confess to a prospective employer, but Michael Frome is not known for doing the usual. And since my department is less concerned with conformity than with the challenge of providing quality education, an agreement was made to invite this nationally-renowned writer to be Visiting Associate Professor of Communication and Wildland Recreation Management.

My first encounter with Michael had come earlier, but in spirit, not in person. As my final days in forestry school drew to a close, I made ready for my first job as forestry aide in the Bitterroot National Forest. Knowing where I was headed, a friend – Ron Mastroguiseppe, now a Ph.D. candidate in Forest Resources – drew my attention to a book he had just read. It was *Whose Woods These Are*, Michael's eloquent story of our national forests. In it were two chapters on Sula, the place of my first assignment. Those chapters, on forest fires and the life of a ranger, were charged with excitement. They reinforced all the ambitions that had seen me through forestry school. They also kindled a lasting admiration for the writer who had visited my district and recorded its life and events with such feeling and skill.

Eighteen years later I met the man. He is a friend now, in a measure far greater than the kinship we enjoy with the author of any good book. Let me tell you about him.

Michael was born in New York City in 1920. His journalism career began as a copy boy for the *Washington Post* but was interrupted by World War II during which he served as editor-in-chief of *Preflight* magazine at Maxwell Air Force Base. After the war, he began his journalism career in earnest, returning to the Post as a reporter. A succession of newspaper jobs followed, then ten years in the public relations department of the American Automobile Association. While there, he was assigned to develop an anti-billboard legislative and publicity program to protect roadsides from blight. He extended this to a pioneering attempt to close down tacky roadside zoos. Importantly, his attention was also drawn to the national parks, which in the 1950's were experiencing soaring popularity and inadequate staffing or protection. During this period, his articles caught the attention of editors of such magazines as *Holiday*, *Women's Day*, *Parade*, and *Changing Times*.

In 1959, Michael took the step that most writers dream about, but few have the skill or fortitude to pursue. He became a full-time freelancer. Looking back on the decision, Michael shows no signs of regret. "I don't think there's anything that wrecks principle more than a steady paycheck," he says. "I can hew to principle and purpose of my own choosing without fear or favor."



More and more he wrote about the nation's parks and forests. This, in turn, led to his being "discovered" by Clint Davis, I & E Chief of the U.S. Forest Service. The Forest Service, with a traditional awareness of the values of good press, invited Michael on a trail ride in the Bridger Wilderness Area. "This experience changed my life," says Michael, and it inspired an idea for the book *Whose Woods These Are*.

In all, Michael has 12 books to his credit with a major revision of one of them, *The Forest Service*, scheduled for 1983 publication. It will be titled *The Forest Service – A Profile of History, Policy, and Performance*. Other books include: his favorite, *Strangers in High Places – The Story of the Great Smoky Mountains*; the best selling on an annual basis, *Rand McNally National Park Guide*; two children's books, *Virginia* and *The Varmits – Our Unwanted Wildlife; Battle for the Wilderness*; and *Hosteling USA*.

Following a major article in *Holiday* titled "The Politics of Conservation," Michael was invited to contribute to *Field and Stream* and soon was named conservation editor. From June 1968 to the appearance of his last column in November 1974, the Frome byline headed 75 monthly columns and 12 major features. These were golden years for the magazine, with hard-hitting articles on pollution, politics, eagle killings and anything else that should be of interest to sports enthusiasts. Eventually, *Time* would quote Joe B. Browder, Director of the Environmental Policy Center, who summed up Michael's years with *Field and Stream*, "Frome has raised the consciousness of millions of readers from bag limits and such to the real question of what's happening to our resources and what can be done to protect them."

But good things seem rarely to last, and at *Field and Stream* a change in ownership led to new management, new policies, and new directions. When the venerable Clare Conley was fired and a

new editor took charge, the magazine stopped making waves. Michael's freedom of expression came to an end, and thus his career with *Field and Stream*.

Sadly, something similar had occurred at *American Forests* where Frome's column offered opinion on the resource scene from 1966 through 1972. It was the clearcutting issue that ultimately led to the demise of those columns. Although not asked to quit, he was directed by the executive vice president "not to write critically about the U.S. Forest Service, the forest industry, the profession or about controversial forestry issues." This, of course, was too much for a man who then Interior Secretary Walter J. Hickel said "tells it like it is, not necessarily like we'd like to think it is."

This is the Michael Frome I know and admire. He is a freelancer in the finest sense of the word. He rises to the challenge of reason and debate, but he cannot be bought, pressured or silenced. He is an articulate watchdog of our national parks and forests. No, he is more than that. He is the watchdog of the watchdogs.

Michael's books, articles, and speeches have won him criticism and praise. At one time or another, we have all felt the barb of his opinion and no one ever agrees with Michael Frome one hundred percent of the time. But he has also won honors ranging from Trout Conservationist of the Year to the Mort Weisinger Award from the American Society of Journalists and Authors for the best magazine article in 1980 – an investigative series of "The Un-Greening of Our National Parks." He has been a guest of presidents and kings, has been elected to the highest offices of the Outdoor Writers Association of America and the Society of American Travel Writers, and has served at home and abroad as a consultant for the Forest Service, Bureau of Land Management, United Nations, and others.

How did such a man find his way to Moscow, Idaho? It happened last summer when I received a phone call from a mutual friend, John Marker, who is the Forest Service group leader in Ogden, Utah for Aviation and Fire Management. John is also chairman of the Communication Committee of the Society of American Foresters and had previously helped me convince the Society to endorse and distribute my book, *Public Relations and Communications for Natural Resource Managers*. John was aware of the communication short courses we have conducted here since 1975, as well as our efforts to make resident students more skilled in public relations.

John had heard that Michael was looking for a home base in the West from which he could write two new books. One will be on contemporary personalities associated with wilderness and the other on the current state of our national parks. John also knew that Colorado State University wanted Michael badly, but thought he should know about our faculty and what Idaho has to offer. The contact was made, our School of Communication agreed to help fund him through instructorships in two courses, and Michael decided this was the place for him.

Michael is now an integral part of our faculty. He is a demanding instructor, a congenial colleague, and ever the critic. He has been a refreshing addition to our staff – more different in background, philosophy and global perspective than anyone we have had in our ranks. In his short time at the University of Idaho, he has given far more than he has received in monetary compensation. As a token of our appreciation, both for his service here but especially for his lifetime of contributions to conservation, the Michael Frome Scholarship for Excellence in Conservation Writing has been established by the Wilderness Research Center.

Even more than being a tribute to our special friend, we hope the Frome Scholarship will perpetuate the spirit of his work. We hope it will encourage students who have the traits Michael says are necessary for environmental writing – a strong stomach, high principle, and a desire to bring forth the truth for discussion.

As for Michael, I think his place in the annals of conservation is assured. Some might argue, as Michael would have them, just where that place might be! But to quote one of his readers who wrote after his dismissal from *Field and Stream*, "History books are records of events and the doings of individuals who didn't go with the flow." And I, for one, am glad that Michael Frome is among them.

James Fazio is head of the Department of Wildland Recreation Management.

WHOSE WOODS THESE ARE

by Michael Frome

Directly below, the Pacific darkened into bluish black. The surfline rose forth into a fine, clear white. Along the curving coast, the concrete freeways were clogged with motorcars by the tens of thousands scurrying homeward to the hills and valleys and beaches. And all across the landscape a million lights erupted into night-shattering colors. They were white lights, red, green, orange and blue, and a variety of combinations. With the last glow of the natural sun, we had reached the parting of the way with all other creatures of the plant and animal kingdoms, who would now follow their own course into the darkness of the planet.

Yet even so, on one visible frontier the lights thinned. Through the pall of smog and incandescent haze within the Los Angeles bowl, I saw the lights weaken, gradually and then more decisively, then stop completely at a border of mountains.

But why? Why should these tiny synthetic sunlights surrender to a natural barrier? When in other directions they climbed to the peaks, crawled across the tops like a conquering army and down to the sea (and even into the sea at Long Beach)? Why, at a time in history when there are takers for the craggiest, remotest corners of southern California and promoters of the driest, unlikliest deserts, should nature cling to this balance?

Here, from this plane window, I thought, was the essence of all that I had been studying, seeing, living and dreaming for a period of time which seemed ever so long and yet ever so short. Here was the coexistence of people with mountains and back country, mountains and back country which could be transformed into subdivisions and cities any time we choose. Yet they are not, because somewhere in our wisdom Americans have determined that our survival depends to a vast extent on the survival of nature and the outdoors.

Our Graduates Are Highly Trained in Renewable Natural Resources

Fishery Resources

The fisheries biologist is knowledgable about aquatic environments and aquatic organisms and can apply this knowledge to managing ponds, lakes, reservoirs and streams. Areas of expertise include aquatic pollution, fisheries management, population dynamics, limnology, and the behavior, culture, diseases, ecology and physiology of fish.

Forest Products

The forest products graduate is well-grounded in all phases of forest business operations, including timber harvesting, logging-engineering, transport of goods to market, processing, computerized sawmill operations, manufacturing, marketing, and research and development for a variety of forest-related industries.

Forest Resources

The modern forester is well versed in economic theory, skilled in computer technology and proficient in public communication, besides being knowledgable in forest biology, natural history, forest protection (entomology, pathology, fire), reforestation, forest ecology, and silviculture.

Range Resources

The range conservation graduate has a strong base in ecology and can assess land capabilities, develop land-use plans, rehabilitate mine spoils, perform soil surveys, administer grazing leases, appraise land values, study nutritive requirements of animals, and participate in research on use of natural resources.

Wildland Recreation Management

The wildland recreation graduate is skilled in parks and recreation resources management, natural sciences, geography, land economics, conservation of natural resources, human behavior, public administration and communication, and has received specialized training in management/administration, interpretation/communication, or planning/design.

Wildlife Resources

The modern wildlife graduate is interested in all species of wild animals and their roles as components of natural systems, and can gather data, conduct censuses, assess productivity, protect and improve habitat, study food habits, establish limits and seasons, control animal damage, protect endangered species, and enforce laws.

If you plan to hire someone in these fields, please contact Placement Coordinator, College of Forestry, Wildlife and Range Sciences, University of Idaho, Moscow, Idaho 83843.

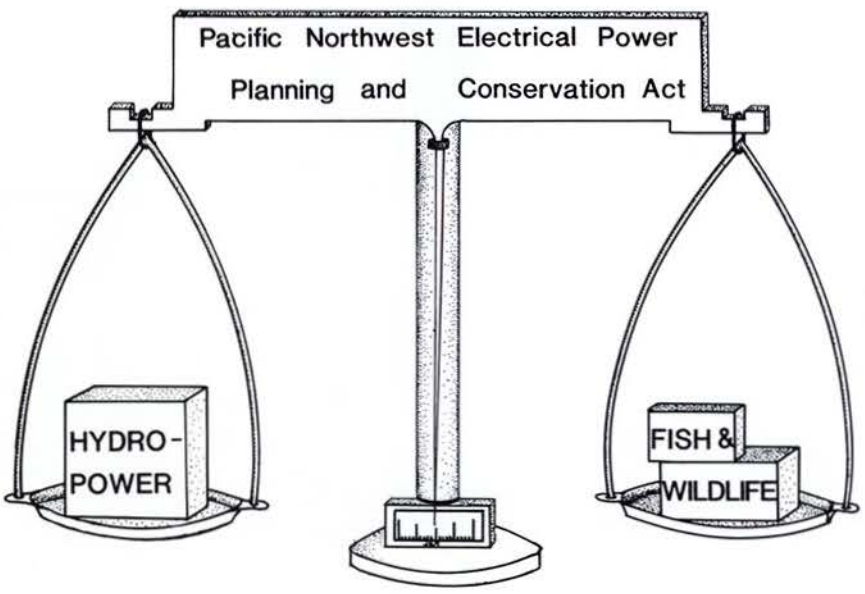

L. H. Shimek

Equal Rights for Fish and Wildlife

By Christine M. Moffitt

The decade of the eighties may be marked by a change in our philosophical outlook toward natural resources. The best evidence of this change in attitude is the Pacific Northwest Electrical Power Planning and Conservation Act of 1980. This congressional mandate declares that fish and wildlife needs shall be managed as co-equal partners with the production of hydropower in the Columbia River Basin. The background for this historical turning point is interesting. The act did not originate from a concern for fish and wildlife, but to insure that the Northwest would have ample electrical power and avoid shortages such as occurred in the late 1970's. Clearly, there was a need for a comprehensive approach to power planning in the Pacific Northwest. The chief architect of the fish and wildlife sections of what originally was a bill to stimulate and coordinate electrical power production, was U.S. representative John Dingell of Michigan. Dingell is well known among fishery biologists as the co-sponsor of the Dingell-Johnson Act (1950) that created a mechanism for state fishery agencies to conduct fish research with funding from federal excise taxes of fishing gear. The basic philosophy behind the Dingell-Johnson Act was that knowledge of the resource would lead to conservation and wise management and ultimately benefit the anglers. The Power Planning Act went further, and gave fish and wildlife rights in the planning for water use. These rights have been expressed by many, but perhaps articulated most clearly thirty-four years ago by the late Aldo Leopold in his essay, "Land Ethic" in *A Sand County Almanac*.

> "The land ethic simply enlarges the boundaries of the community to include soils, waters, plants, and animals, or collectively: the land.
>
> This sounds simple: do we not already sing our love for and obligation to the land of the free and the home of the brave? Yes, but just what and whom do we love? Certainly not the soil, which we are sending helter-skelter downriver. Certainly not the waters, which we assume have no function except to turn turbines, float barges, and carry off sewage. Certainly not the plants, of which we exterminate whole communities without batting an eye.
>
> Certainly not the animals, of which we have already extirpated many of the largest and most beautiful species. A land ethic of course cannot prevent the alteration, management, and use of these 'resources,' but it does affirm their right to continued existence, and at least in spots, their continued existence in a natural state."



The Pacific Northwest Electrical Power Planning and Conservation Act did three things: 1) the act assigned responsibility for developing a fish and wildlife program to a council composed of two representatives from each of the four states in the Columbia River Basin: Idaho, Montana, Oregon, and Washington; 2) it requested that the river and its tributaries be treated as a system to the greatest extent possible; and 3) it gave to BPA (Bonneville Power Administration, the distributor of power from Columbia Basin hydroprojects) the authority and responsibility to use its legal and financial resources to protect, mitigate and enhance fish and wildlife in a manner consistent with the program adopted by the council and the purpose of the act.

Congress gave the council one year to develop a program to address the complex technical, legal, economic and political problems associated with the effects of hydroelectric power development on fish and wildlife in the Columbia River Basin. The council chose to begin the task by soliciting recommendations for a plan from power, and fish and wildlife

user groups. One coalition composed of representatives from the four basin states, the U.S. Fish and Wildlife Service, the National Marine Fisheries Service, and the Columbia River Inter-Tribal Fish Commission was a key contributor. At the close of the recommendation period, four volumes of recommendations, totaling 2200 pages, had been received. Testimony was solicited on these draft recommendations, and all input was compiled by the council in September 1982 into a draft fish and wildlife plan. This draft was circulated for comments and review and the final program was adopted November 15, 1982.

The program is expected to provide a comprehensive, interrelated, systemwide plan for protection, mitigation and enhancement of anadromous fish, resident fish, and wildlife of the Columbia River and its tributaries. The program is limited, however, to mitigating only those impacts from hydroelectric development.

Environmental degradation from other land and water use practices are not addressed. The program goals for restoring anadromous fish numbers have not been finalized. Various levels of salmon and steelhead abundance have been proposed, with particular emphasis on pre-McNary Dam (1953) levels of fish runs. Mitigation goals need not equal historical fish runs or distributions. One species may be substituted for another and certain areas may be enhanced more than others because of current constraints of the system. Preference will be given to protecting wild fish runs.

The program as written directs that for anadromous fish, program goals in terms of numbers will be determined by 1984 after extensive study that will include analysis of past, present and potential fish production. Factors such as disease, genetics, fish harvest, fish stocks, capital costs, operational costs, and the extent and success of past mitigation and enhancement efforts will be considered.

Specific problems associated with anadromous fish survival and enhancement addressed in the plan include adequate flows and passage conditions for migrating juveniles and adults. Hydropower projects have altered the natural flow cycle of the river. Much of the spring flood that used to occur is now stored for later hydropower usage. Anadromous fish migrating downstream require certain river flows to assist in reaching the ocean at the proper time. Snake and Columbia River reservoirs have a larger cross sectional area than the river and thereby reduce the currents that are used by fish while migrating. Juvenile salmon and trout that are delayed in the reservoirs have a greater probability of being eaten by predators or losing the urge to migrate to the sea.

Curtis Taipale

Hatchery spawning of fall chinook salmon, Dworshak National Fish Hatchery. In an attempt to save the stock from extinction, fall chinook salmon from the Snake River are trapped at the lowermost Snake River dam, held to maturity, spawned and the offspring are reared to smolt stage at hatcheries.

Much effort will be directed toward the problems of preserving wild stocks of fish in the basin. This effort must include a careful integration of hatchery produced fish with wild fish. Hatchery fish can often be harvested at higher rates than wild fish. In a hatchery, survival of juveniles is higher than in the wild.

A program for resident fish and wildlife will be developed for areas that have been significantly affected by hydroelectric developments. Some species and habitats have been enhanced, while others have been destroyed or severely reduced. Projects will be undertaken to maintain resident fish populations in areas of particular interest. A detailed study of habitat alterations affecting wildlife at selected hydrosites will be conduc

resident fish populations in areas of particular interest. A detailed study of habitat alterations affecting wildlife at selected hydrosites will be conducted and efforts will be made to develop suitable enhancement either on or off the affected areas.

Who will be paying for these mitigative efforts? The rate payers will. Electrical power users (all of us) will pay for alleviating past damage to fish and wildlife resources through structural modifications at dams, changes in operation of the system, and enhancement programs as needed. Who will reap the rewards? Again, the rate payers or public at large will benefit from a more ecologically diverse environment and viable fish and wildlife resources.

Chris Moffet is an assistant professor in Fishery Resources.

Harvesting Idaho's Steep Slopes

By Leonard R. Johnson

The ability to create and adapt equipment for specific timber harvesting tasks is a skill found in most successful loggers. It is not uncommon for the first stop for a new machine to be a loggers' welding shop rather than the woods. The modifications are designed to increase production in some way and often involve changes dictated by the type of terrain, size of timber, and haul road patterns common to a certain geographical region. An example of these changes can be found by comparing conditions in the Intermountain region of Idaho, eastern Washington and Oregon, and western Montana with those found in western Oregon and Washington. Much equipment designed for use in the coastal region would be costly and inefficient if taken directly to the Intermountain forest. This is especially true of equipment designed to move timber off steep slopes.

The process of moving trees or logs from the tree stump to the landing on steep slopes, commonly called yarding, is accomplished with cables laid or suspended over the harvest area. Cable logging systems usually consist of a stationary yarder with 2-5 drums holding cable, and a tower to give some elevation to the cables. The cable logging systems now used in the Intermountain and Coastal regions have evolved in the years since steam power and railroads were used to log the timber.

Figure 1. Coastal Highlead Logging Pattern

Unique conditions in the two mountainous regions called for unique cable logging systems. Equipment designed for coastal logging works from fairly large landings in a pattern that radiates from a central point (Figure 1). Equipment is sized to handle large timber and thus restrict mobility. Equipment used in Intermountain forests must be mobile and capable of working from a landing the width of the logging road.

Equipment manufacturers met the needs of coastal loggers with yarders and towers that evolved into the present-day highlead systems. Apparently, the market for logging equipment specifically designed for Intermountain conditions was not large enough to encourage equipment manufacturers to devote large efforts to the development of inexpensive, mobile systems, so loggers in the area developed their own version of the highlead system. The involvement of Idaho's loggers in the design and use of the system is still found in the system's common name–the Idaho Jammer.

The term jammer in the general forestry field evokes a variety of images and emotions. In the logging community it is used to define anything from a one-drum crane with tongs that are thrown into the woods (Figure 2), to sophisticated skyline systems that suspend part of the turn of logs. The general forestry community often associated the term jammer with an environmentally unsound logging system.

The problem with early versions of the one- and two-drum jammers was their very limited yarding distance. A maximum yarding distance of 200-400 feet implied a road every 200-400 feet up a hillside. This created an unacceptable road density. Current versions (Figure 3) of most two-drum Idaho Jammers can yard at distances up to 600-800 feet. In addition, they are used as one option in the range of available logging systems; they usually do not dictate the road spacing in a region.

Figure 2. Single Drum Jammer throwing tongs back to the woods.

Early models of the Idaho Jammer generally did not have brakes on the haulback drum of the machine (the line used to pull chokers or tongs back to the woods). This gave the operator little control over the log on the inhaul portion of the turn. Brakes on the haulback drum allow more control over a turn of logs, so jammers can be successfully used in seed tree, shelterwood and other heavy selection cuts (Parmenter 1982). The lack of suspension of logs in jammer logging was once viewed as a problem because of the amount of site disturbance. In some instances this site disturbance is now viewed as a positive site preparation factor. When used in conjunction with the mix of logging systems

Figure 3. Two-drum Idaho Jammer

available to the logging planner, the Idaho Jammer can be effective in many areas. With a crew of 2-3 highly motivated, independent loggers, it can be the most cost effective method of logging steep slopes.

The ingenuity of Idaho loggers contributed to the progressive development of the Idaho Jammer, but this is not the only steep slope logging equipment to come from Idaho. The early 1970's brought a call for skyline logging on steep slopes. The skyline will suspend one end of the log during transportation from the stump to the landing. Yarding distances are longer than those of the jammer. The combination of yarding distance and suspension produces a logging job with little site impact. Early attempts at skyline logging involved systems used on the west coast. The yarders, sometimes reduced in size, often had a straight tower with no capability for decking the logs on narrow logging roads.

Running skylines were introduced that could log in a multitude of settings and could swing the logs into decks on the road. These machines are still used, but are quite expensive. An Intermountain addition to the range of skyline systems bridged the gap between straight-towered yarders and running skylines. Modified construction and loading cranes (Figure 4) provided a system that could yard uphill as effectively as a running skyline and could swing the logs into decks. Modifications consisted of enlarged drum capacities, increased drum speeds, and strengthened towers. This type machine is now one of the standard skyline systems used in the Intermountain region.

Idaho's contribution to skyline logging did not stop with yarders. Effective

Figure 4. Link-belt 98 loading crane modified for use as a live skyline.

operations in selection cuts, particularly thinnings, required a carriage that could be held at a particular position on the skyline while logs were dragged laterally from the woods to the carriage location. The principal alternatives were a variety of European built carriages with sophisticated hydraulic mechanisms for automatically clamping the carriage to the line. These carriages were quite expensive and not generally accepted by the logging community. Two Idaho manufacturers, both from Orofino, Idaho, solved the problem by developing carriages that are now used throughout the United States. The Maki Block and Christy Carriage (Figure 5) both work with a stop on the skyline that locks the carriage in position during lateral skidding operations and automatically releases when the logs are locked into the carriage for the trip to the landing. The carriages are relatively inexpensive, light-weight, and very durable.

One of the manufacturing facilities, Christy Manufacturing, has also contributed a yarder to the steep-slope harvest of small timber. Part of the effort to manage timber more intensively involves thinning at various stages. The material, though merchantable, is too small to be effectively handled by most American built yarders. Yarders imported from Austria, Norway and Scot-

Figure 5. Pictured here is a Christy carriage.

land are available and can be used but they have sometimes been undersized and are costly relative to the power available. The Christy Small Wood Yarder appears to fill a gap between the European yarders and other American versions. It is sized to handle medium sized Intermountain pieces and priced below some smaller European yarders. It is likely to be another Idaho product used throughout the country.

The problem of cable logging to narrow logging roads has been approached in another manner by Kludt Brothers Logging of Orofino, Idaho. Darrel and David Kludt and Jerry Driver saw the need for keeping the area in front of the yarder clear but did not like the expense associated with machines with swing capability. Their solution was a yarder/loader combination with both the yarder and loader powered from the same engine and mounted on the same carrier (Figure 6). The machine is similar to some European manufactured machines but is sized to Intermountain conditions. The three men often compose the entire yarding crew. When yarding close to the yarder, only one choker setter is needed but someone is needed on the loader continuously. At long yarding distances, a second choker setter is needed but there is enough time for loader functions to be controlled by the yarder operators. The loader operator becomes the second choker setter.

photos by Leonard Johnson

Figure 6. A Yarder/Loader built by the Kludt Brothers and Jerry Driver of Orofino, Idaho.

Although the yarder built by Kludt Brothers Logging is unique, the ingenuity demonstrated is not. Every logging community in Idaho will have its share of unique logging equipment, custom built by the owners for the specific needs of the area. These innovations have allowed Idaho's steep slopes to be logged efficiently and effectively and have often contributed to timber harvesting options throughout the world.

Mention of specific manufacturers does not constitute an endorsement by the author or the University of Idaho.

Leonard Johnson is an associate professor with Forest Products.

Volunteerism

by Craig Gehrke

The public lands are being tended to by people who, by choice or circumstance, are volunteering their time and services in jobs that were once paying positions.

Once a small part of the federal employment picture, the volunteer program has grown rapidly. Faced with budget and personnel cutbacks, the federal agencies are relying more heavily on volunteers in an effort to accomplish more jobs with fewer dollars.

In northern Idaho, the Forest Service is the most visible agency to expand its volunteer program. Professors and students at the University of Idaho are expressing concern over what this expansion may mean.

"When students face the seasonal job market, many from middle and low income families cannot afford to take a volunteer position," said Jim Fazio, UI associate professor of wildland recreation management in the October issue of **Trailhead**

Trailhead. "They must find paying employment to work their way through school and if no jobs are available related to their recreation or forestry major, it means working at McDonalds or some other such place." He continued, "It (the volunteer program) deprives them of pre-professional job experience which has long been a tradition and a means for guaranteeing later professional quality in the natural resource fields."

Positions filled by volunteers are varied. A list of volunteer positions on the Nez Perce National Forest for last summer includes range analysis, wildlife habitat surveys, fire look-out, archaeological surveys, insect data collection, maintenance (trail, building, and fence), and campground hosts.

"What really bothers me," Fazio later said, "is the pre-professional jobs like range analysis and fire look-out that are being filled by volunteers. I worked as a fire look-out, and it was the best experience I could have hoped for. Sitting up in the look-out tower listening to the two-way radio gave me the chance to learn a lot about the Forest Service, especially the organization and the workings of the districts." Fazio said this experience was invaluable in helping him choose his profession after he graduated from college.

"It bothers me, too, that the information and communication positions are often filled with volunteers," said Fazio. "These are the people who represent the image of the agency, and they should be well-trained and well-informed. They should have a certain amount of credibility and a good image, and not be somebody picked up off the street." Fazio tells of one volunteer he knew from Cleveland, Ohio, whose job was to meet wilderness users and explain to them low-impact camping methods, even though he himself had never before been in the wilderness. "It's hard enough for students in the field of natural resource communications to get a job," maintains Fazio. "It's also hard to maintain credibility with wilderness users. The people selected for the jobs should be well-trained in wilderness management."

Fazio said that each spring the recreation department is "beseiged with agency requests to provide volunteers." He said that so far, though, there were still enough paying jobs last year that the department was able to place all their students in paying jobs.

Those students who accepted volunteer positions did so for varying reasons. Most took the positions to gain experience. Joe Glatz, a student in wildland recreation, is one such example. Glatz attended the UI summer forestry camp last year. After it concluded in mid-July, there were few jobs related to natural resource management to be found. Glatz took a volunteer position on the Tongass National Forest in Alaska. Glatz said he accepted the position to "get the experience, and to go to Alaska." Glatz continued, "Since half the summer was already gone, I decided to take the position. If I would have had the whole summer to work, I would have looked much harder for a paying job." Like many other students who work as volunteers through the summer, Glatz has to rely on student loans and grants to make ends meet while he's in college.

Another wildland recreation student, Jo Tynon, believes the volunteer program is exploitive. "If an agency is concerned with quality work, they should be willing to pay for it," she said. "If a person has or is close to getting a B.S. degree, then they should not have to take a volunteer position to prove themselves." Tynon said that no other field outside resource management has a volunteer program. "No company asks a secretary to volunteer for the first few months to see if he or she is qualified." she said.

Most critics of the volunteer program think that the trend will be to increase the program to the point where most summer or temporary positions will be volunteer. Yet local Forest Service officials doubt the program will get much larger than it presently is. Steve Waterman, information officer on the Nez Perce, admits that while the volunteer

program has expanded on that forest over the past few years, he does not expect it to get much bigger. "The volunteer programs work best near urban areas, where there are specific groups looking for projects to work on," he said. "We're in a more rural area with more limited resources."

Most Forest Service employees are satisfied with the program. Ken Neiman of the Intermountain Forestry and Range Experiment Station in Moscow had a volunteer working for him this past summer. The volunteer had a B.S. and one and a half years of graduate work in plant ecology. His job this summer was to refine plant habitat research. Neiman, who was pleased with the volunteer's work, reports that the volunteer later went on to a temporary, though paying, job on the Palouse Ranger District. Neiman hopes to secure another volunteer for next season's work.

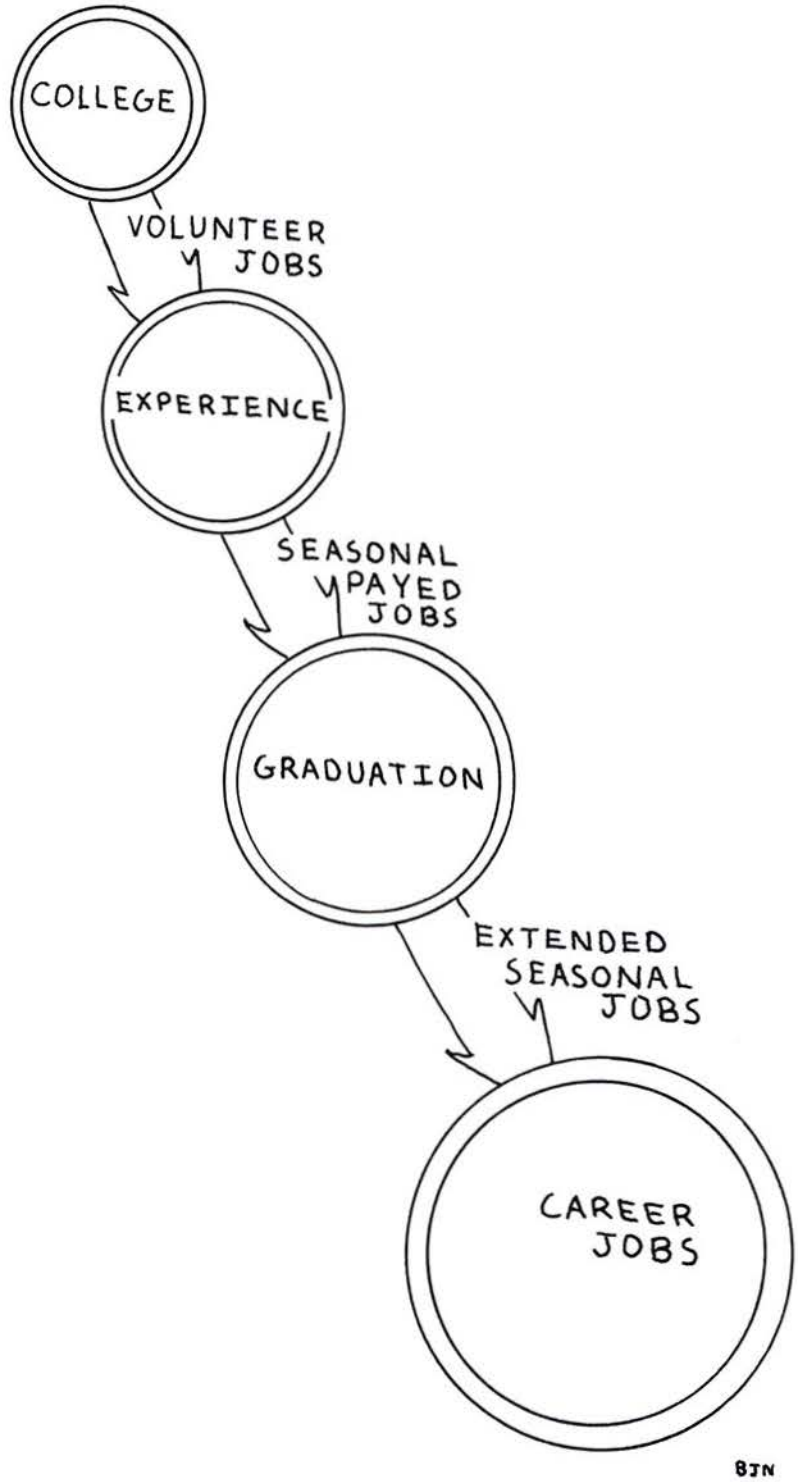
Jim Dewey on the Palouse Ranger District hopes to use the volunteer program next summer for a position which has come about largely as a result of volunteerism. The position is that of campground host. The host stays at one or two campgrounds all summer, performing such duties as light maintenance, recording visitor use, and greeting incoming campers. The Nez Perce forest used a volunteer campground host this summer at O'Hara Campground on the Selway River. Dewey wants to have a volunteer campground host at Laird Park and Giant White Pine campgrounds next summer. "We don't have the dollars to pay for this position," said Dewey. "If someone doesn't volunteer, then the job won't get done."

Getting the job done is the objective of the volunteer program. Faced with smaller budgets each year for many programs, the Forest Service is trying to maintain many programs through the use of volunteers. Yet critics say that by emphasizing the use of volunteers, the Forest Service may be worsening the situation. Jim Fazio worries whether or not agencies will be able to resist continually slighting these budgets as long as they can find volunteers. Requests for these budgets have already been reduced to fractions of their former size. The Forest Service's Intermountain Region trail maintenance budget request for 1982 was $2,859,000. The request for 1984 was only $1,500,000. The 1982 trail construction budget was $1,931,000. No funding for the trail construction budget was requested for 1984.

Fazio mentions that organizations that act as a go-between for people looking for work as volunteers and the agencies are flourishing. "They encourage the 'go west, young man' type of attitude," said Fazio. "What happens then is that students who can afford to volunteer in studies totally unrelated to resource management come from back east and get the jobs. That robs many students of the opportunity to gain some experience."

While no one denies that there is a place for volunteerism in today's federal agencies, the prospects for expansion worry many people. Jim Fazio said, "Once a program in the government gets going, it's hard to turn it around."

Craig Gehrke is a graduate student in Journalism.



Trout of Trouts

By Andy Taylor

A voice from heaven called down to me, "Andy, there is a trout shining on the horizon. It is a Holy Grail of fish meat. Go find this fish, son."

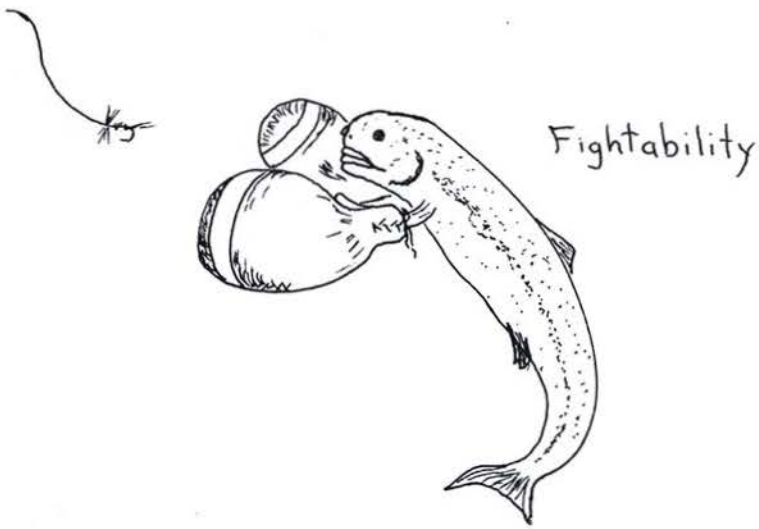
I looked up at the sky and, out of a crimson pool of light formed by the setting sun, a golden trout surrounded by a halo rose and ate the sun in the same manner that an eight-inch trout rises from a pool of water and eats a fly. Thence started my search for the trout of trouts.

Ever since I had this vision, which occurred when I was four years old after I'd had a crunching wreck on my tricycle, I've been consumed by a passion to catch trout. My urge to fish is as strong as the urge to spawn is in salmon. I have learned a lot about trout, searching for the trout of my vision.

I have realized the trout present in my vision rarely exists as a separate entity in nature, though in each trout there exists a degree of troutness. Troutness in a trout can be compared to the soul of a person or a person's holiness. As in the case of a completely holy person such as Jesus, a trout of complete troutness can only materialize with the help of divine intervention. But just as people can be classified in terms of their holiness, trout can be classified in terms of their troutness.

Though no trout fits neatly into one distinct classification, there are four main categories of trout. There are freshly stocked hatchery trout that are tame; stocked hatchery trout that are beginning to be wild; introduced trout that are almost native; and native trout. The former two categories have a low degree of troutness. The troutness of a trout is measured by its physical beauty, its "catchability," its fight once hooked, and its environment.

The environment of a fish is an important consideration when its troutness is being considered. Say, for example, one day Bo Derek or Margaret Thatcher or whoever your fantasy woman is (if you're female, say Burt Reynolds or Woody Allen) stepped out of your fantasy and started kissing you voraciously. Further, imagine that after the fireworks started exploding inside your mind, you opened your eyes and discovered you were kissing in a public restroom. That environment you were kissing in would ruin the experience. In a similar way, a poor fishing environment can ruin fishing and thus mar the troutness barometer. Catching a trout in an isolated, quiet stream with golden eagles flying over and tweety birds cheeping in the bush is entirely different from fishing at a place deluged by people in motorboats, on motorcycles, and in Winnebagos. One place has the atmosphere of a temple, the other has the atmosphere of a county fair.



The first type of trout, the freshly stocked hatchery fish, is an ignoble, pathetic, slimy creature that doesn't deserve the title of trout. On a troutness scale of 1 to 10, with 10 being the epitome of troutness, this trout has a reading from -1 to .02. It has been raised along with thousands of brethren in a cement pond one-third the size of the University of Idaho swimming pool. The water in such an environment would seem to contain one-fourth water and three-fourths fish droppings. The physical beauty of the trout is marred; it is bent out of shape and its fins are beaten, crooked, and worn down. The tone and contrast of this trout's colors, though amazing when compared to a potato, are lackluster when compared to other trout. The rainbow of a rainbow hatchery trout is faded—it isn't a rainbow anymore. Though the saying, "beauty is only skin deep," can apply to trout, too, the looks of a hatchery fish mirror the trout's spirit and internal physical shape.

A trout raised in a cement pond doesn't have a chance to exercise and build muscles. It is weak. When hooked on a fishing line, this trout puts up a poor fight. A planted hatchery fish is also stupid. Imagine if college students were raised in closets and fed only space-food sticks and then were dropped off in the UI campus and expected to be scholars. This is similar to the predicament that hatchery trout face when dropped off in a lake or stream. The fish isn't prepared and is easy prey. Hatchery trout deserve pity, not a fish hook.

They also deserve a nicer environment than where they usually live. Often put in areas that receive the most fishing pressure, hatchery trout are stocked just be-

fore the opening day of fishing season or before holidays when many people are expected to be out fishing. The environment at such times and in such places detracts from fishing and can literally be like a fair. A trout then has the significance of a prize handed out at a fair, except that instead of being handed out by a carnie, it is handed out by the Fish and Game department. Fortunately, hatchery trout adapt readily to their new environments.

The second class of trout, the adjusted hatchery trout, has a troutness rating from .02 to 5.87. Though hatchery trout can never overcome their physical scars, their physical stamina and spirit can grow. They can become hard-fighting, intelligent fish within three months, especially if they travel in schools. These fish may be ugly on the outside, but beautiful on the inside. They are the "Elephant Man" and "Ugly Duckling" trout of the world. Even some of their physical scars can improve. Some of their true color can be restored much in the same manner that good color can return to the cheeks of a formerly pale person after they've exercised. The fish in this class are admirable creatures.

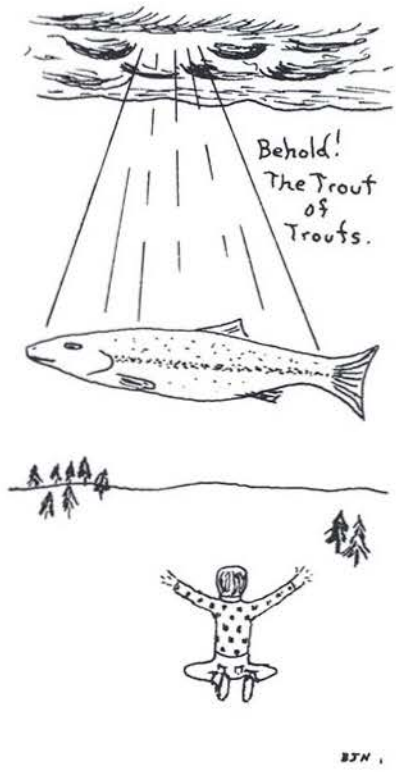
But these trout cannot overcome their environment. Trout stocked in an overfished lake or stream are condemned to spend their entire lives within the water they are stocked in. These trout have no control over the myriad people who come after them, riding to their fishing holes in every mode of transportation man has invented. Nor can these fish control the logging and mining along the banks of their homes that people, not fish, need. A fisherman, such as myself, who worships fish, can only hope that when these trout reincarnate they find themselves born in a protected stream and not a hatchery.

The third group of fish, the introduced fish that are almost native, are the offspring of planted hatchery trout. They are born and raised in the body of water, but not native to it. With a troutness rating from 5.87 to 9.23, this type of fish is wild in all respects except its parentage. Because their color is more spectacular, their fight is mighty, and their bodies are perfectly shaped, these fish are often incorrectly referred to as native by fishermen. These fish are like naturalized Polish immigrants in America. Though immigrants may live in the States long enough to seem like natives, they can never be Apache Indians, just as an introduced trout can never be a native cutthroat. This fish generally exists in wilder streams that aren't overfished. It is nirvanna, unless you've come in contact with native fish.

Native-wild trout, the fourth class of trout, have a troutness reading from 9.23 to infinity. Being native means the trout was born, grew, and evolved in the stream where it is found. A trout is at the top of the food chain of a body of water's ecosystem. If a native trout still exists in a stream, it means the entire ecosystem of the stream has remained as healthy, or nearly as healthy, as it was hundreds of years ago. The environment is pristine: sparkling clean water surrounded by basically undisturbed land. The fish and its environment have escaped the steady encroachment of man, at least so far. The native trout also has superior beauty over other trout. Its colors are many toned and distinct. A west-slope cutthroat trout has three tones of green ranging in color from that of a green olive to three shades darker. In contrast to this, it has bright orange slits painted on its throat, and its olive green side and light belly are one-third covered by a patch of orange in ranges of sunset shades. To me, a fish like this is more beautiful than any work of art man could conceive. And these fish hit and fight like a boxer who's eaten lightning bolts for breakfast.

After reeling in such a fish, waiting to release it, I see the trout as more than a fish. It becomes a symbol of the beauty and wonder found in nature separate from man. A single, twelve-inch trout can be testimony to the power and glory of a creator who can make a perfect, living creature in its form, function, and place. A trout can indeed be special, almost holy, because it points to something greater than ourselves that we might acknowledge, respect, and ponder. There is a trout of trouts. My vision was true.

Andy Taylor is a senior in Journalism.



1982 Natural Resources Week

By J. Casey Meredith

Natural Resources Week is the traditional college-wide event focusing on current issues in natural resources. Following a 43 year old pattern, and as proclaimed by Governor Evans, the third week in April is Natural Resources Week. Our theme last year, "Balanced Resource Management: Use or Abuse," was prompted by constant pressures on natural resources, and issues brought to critical attention by Secretary Watt, John Crowell, Robert Burford and others.

While our title was resource management, our numerous guest speakers described the rippling effects of the opposite—resource mismanagement. The resource ramifications of political decisions were discussed at well attended programs by Governor John Evans and Senator Mike Mitchell. Governor Evans is also co-chairman of the Rangeland Subcommittee of the National Governors' Association and Senator Mitchell formerly was a member of the national Federal Lands Advisory Board. Both displayed a great deal of knowledge and concern for our public lands.

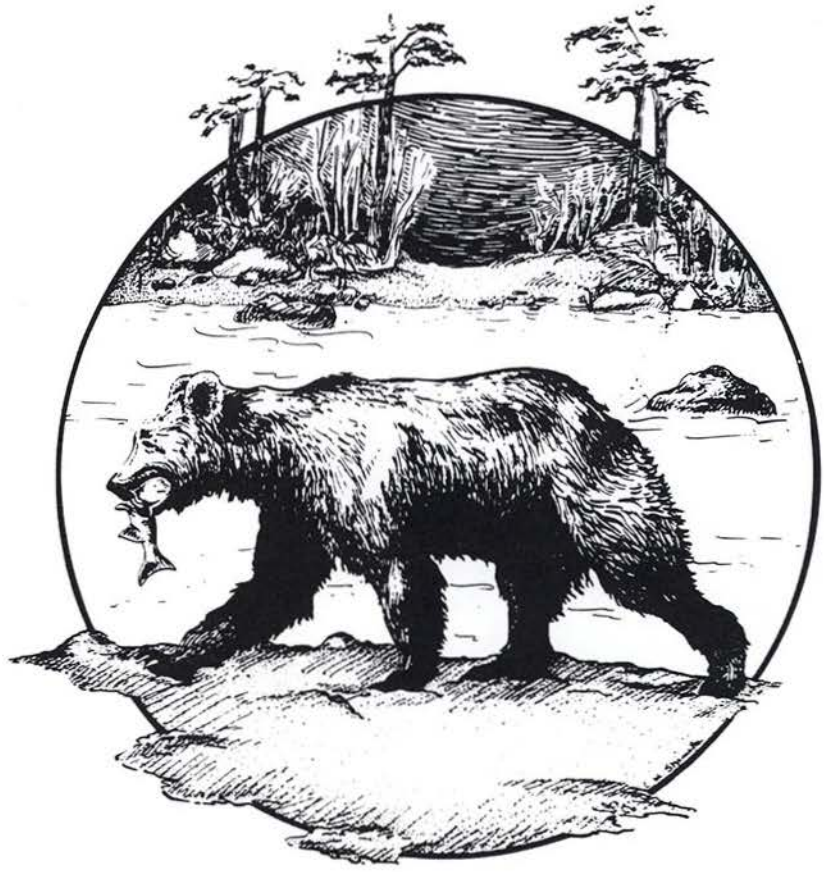
Clair Whitlock, state BLM director, and Monte Richards, the Director of Planning for Idaho Fish and Game Department, discussed the opposite pressures, mainly the political ramifications of resource decisions. Also, E. William Anderson, past state conservationist with the Soil Conservation Service in Oregon, discussed his work developing "coordinated resource management" on land issues in Oregon. His technique involving continual, structured arbitration with responsible representatives of various user groups highlights the dynamics of resource management.

Closer to home here in Moscow, George Williams of the College of Mines and Arthur Smith of the College of Law spoke to us from their respective viewpoints. Dr. Williams reminded us otherwise worldly FWR students that minerals are natural resources too, pointing out that our curriculum, while wide-ranging, does **not** address the mineral resource. Dean Smith reviewed the development of federal legislation that most affects natural resources. Particularly, he discussed the recent involvement of the UI Law School over proposed modifications to U.S. Highway 12 up the Clearwater corridor.

The featured speaker of the week was Johanna Wald, an attorney with the San Francisco staff of the Natural Resources Defense Council. Ms. Wald described the NRDC efforts in challenging the BLM to meet FLPMA requirements. Their precedent-establishing case, fought over the Challis grazing district management plan, brought the BLM into a new era of responsibility toward meeting multiple use objectives. Ms. Wald's lively interpretation of the long court case and its current implications were insightful and well received.

Natural Resources Week, 1982, was a fresh look at old problems, problems that are likely to confront us again and again with each redefinition of societal needs and goals with respect to natural resources. What are the best uses of the forests and rangelands? Whose claims to a river are most valid? . . . least desired? As future resource managers, the exposure to this kind of critical thinking by leading figures in resource management is invaluable. Natural Resources Week remains as significant to current events today as it was in the 40's.

Casey Meredith is a student in Range Resources.



A Career Journey

by Sharon Bone

"How did I get where I am today?" asked Dr. M. Rupert Cutler, senior vice president of the National Audubon Society. Dr. Cutler visited the University of Idaho campus early last October, 1982, delivering a noon-time lecture and conducting seminars and meeting with students and faculty throughout the day.

Thirty-two years ago, Rupert Cutler worked at an Audubon camp in Maine as a summer student assistant, meeting Roger Tory Peterson and other top "birders." Today, he heads four of the eight divisions for the National Audubon, one of the largest wildlife organizations in the world. Between these periods, however, he worked at a variety of jobs, prompting him to advise, "If you don't get the job you want right away, it will come to you."

It is in the story of the "side roads" along the way that gives insight into Dr. Cutler's active life and offers encouragement to others forming their own paths in natural resource careers.

Dr. Cutler spoke before Michael Frome's Public Affairs Reporting class, answering the question "How did I get where I am today?" Frome, visiting associate professor in the Department of Wildland Recreation Management, and Cutler have been friends for twenty years. They met during the days preceding passage of the 1964 Wilderness Act; it was Frome who invited the noted conservation leader to speak on campus.

After I, as a student in the reporting class, introduced Mr. Cutler, he addressed the young journalists, smiling as he recounted the years of "meandering" that preceded his first job in his chosen field.

"As I completed my degree in wildlife management," he explained, "I found I enjoyed writing more than biology." So after graduating from the University of Michigan in 1955, he began to search for that elusive opening in wildlife journalism. After summer jobs during school years which included working as a fire lookout on Little Snowy Top in the Selkirk Mountains of Idaho, and as a "steamguard" in Alaska, his first career job was as an instruction book writer for the Argus Camera Company in Ann Arbor, Michigan.

From there, he and his bride moved to the Southwest, where he worked as the editor of a small town newspaper in Arizona near the Hopi Indian reservation. Next, he was employed at a photo lab in Flagstaff, where he recalled, with half a laugh, how he ruined about 25 rolls of customers' film by dipping them in the wrong developing tank!

It was a letter sent by a former wildlife professor, responding to a request for a letter of recommendation, that led to the main road of his career—a career that eventually went far beyond wildlife journalism. The professor sent his former student an offer of a wildlife conservation-related job in Boston. The Massachusetts job led to a trip to the 1958 North American Wildlife Conference. While at the conference Dr. Cutler was offered, and promptly accepted, a position as editor of *Virginia Wildlife*, published by the state resource agency.

From there, he moved steadily upward as a conservation specialist working for the National Wildlife Federation and The Wilderness Society. After gaining invaluable experience in Washington and the field, in 1969 Dr. Cutler returned to college, earning a Ph.D. in resource

development at Michigan State University and staying to teach for five years.

The political world became a part of Dr. Cutler's experience when he returned to Washington as Assistant Secretary of Agriculture in the Carter administration. During this time, he initiated the landmark RARE II (Roadless Area Review and Evaluation) process, designed to take a national view of wilderness opportunities in remaining roadless areas of national forests. Dr. Cutler still testifies for protection of land involved in RARE II cases, such as USFS land in California which still awaits designation. Presently, only about half of the nationwide reviews are completed. He mentioned a concern about the status of these areas, that their future "may be eroded if there's oil and gas at the other end of the road."

Dr. Cutler now combines his talents in writing, teaching, and politics in his top-level position with the Audubon Society. The Society today is committed to much more than preventing the extermination of plumed birds. It combines the work of lawyers, lobbyists, and other specialists on the staff, with grassroots communication among almost half a million members on major natural resource issues.

A concern that especially interests Dr. Cutler is protection of the diminishing Selkirk caribou herd, representing the last such herd in the lower 48 states. According to Dr. Cutler, who traveled to northern Idaho with University of Idaho biology professor Dr. Don Johnson to see the herd, "lack of sensitivity of the Forest Service to the caribou" appears to be threatening the herd which numbers 17-20 animals. Dr. Cutler also believes that some old-growth forests which provide the winter food for the caribou should not be cut, because far from being sterile, the forests support a diversity of life, serving as a "germ plasm" source to preserve many other plant and animal species.

During his noon-time speech in the Law School auditorium, the topic of sale and use of public lands took the forefront among concerns. "In giving away America's public lands, we're giving away our heritage," said Dr. Cutler, describing proposed land sales as a sacrifice and wholesale giveaway. "Mining is a private use of public lands."

"How do we cope?" he questioned the audience. "The same as in the past," pointing out that even in the 97th Congress, in which Audubon and others lobbied, 110,000 acres found preservation in the Mount St. Helens bill. He also spoke of the need to involve concerned citizens and form coalitions among environmental groups. "It's a question of whether we let others make our decisions, or have our say and use our leverage. Only through outspoken local citizen groups and Congress can we capture resource values," he said.

During an interview, the Audubon vice president outlines how he would prepare for a career in resource management today. "Take communication courses and be familiar with economics, computer science, and political science," he advised. "The reason for this is that you can't get somewhere unless you communicate and know how decisions get made in society. And in society, economics and government are involved in decision making."

As we've heard before, but probably need to hear again, Dr. Cutler strongly recommended involvement with organizations: "Don't isolate yourself so you don't see around you. Join the Audubon Society or other conservation organizations and professional societies to play a part in our participatory democracy."

Dr. Cutler's efforts have made significant contributions, promoting awareness and protection of our environment. While each of us will take a different path in our careers, we may be said to have a similiar beginning–the longest journey begins with that first step. Dedication and time play important roles in making progress down that road. Dr. Cutler capped his feelings on his efforts and encouraged others with this remark, "You'd be surprised how much the individual can do. You can change the world if you're dedicated and realize it takes an investment of time."

Sheri Bone is a graduate student in Wildland Recreation Management.

The North Idaho Caribou

by Craig Gehrke

On January 11, 1983, Secretary of the Interior James Watt announced that the mountain caribou which live in the rugged Selkirk Mountains of northern Idaho have been given an emergency listing on the federal endangered species list.

For nearly ten years, conservationists have struggled to have the caribou added to the threatened or endangered species list. The emergency listing will give the animals federal protection for 240 days while the U.S. Fish and Wildlife Service seeks a permanent listing for the herd. It is estimated that fewer than 19 of the animals remain—the last caribou herd living in the lower 48 states.

The request for emergency listing came after biologists, working on the recently initiated federal and state research program of the mountain caribou, found a caribou cow that had been illegally shot to death. They estimate that the slain cow represented 20 to 25 percent of the herd's reproductive females.

The research program was launched shortly after Idaho conservationists and the U.S. Forest Service had resolved a major controversy over the caribou herd and a timber sale announced last fall. The timber sale, called the Red Spruce sale, is on the Bonners Ferry District of the Panhandle National Forest. Designed to slow the spread of a spruce-bark beetle infestation, the Red Spruce sale lies in one of the travel corridors the caribou use when traveling between this country and Canada.

Paul Flinn

"There is no spot on the entire Panhandle Forest nearly so critical to caribou use than this sale area," said Dennis Baird, director of the Idaho Environmental Council, in a letter to District Ranger Jerry Stern. Baird also pointed out that the area has been identified as habitat for the grizzly bear, a threatened species, and the gray wolf, an endangered species. "The number of rare, uncommon, threatened, or endangered species using this precise area is thus unique in Idaho, and indeed, in the lower 48 states," said Baird.

Biologists have long claimed that the Selkirk caribou herd border on extinction. In 1888, hundreds of the animals are believe to have existed in this country.

They were found as far south as north-central Idaho, along the North Fork of the Flathead River in northwest Montana, and west along the Pend Oreille River in northeast Washington. These were in addition to the herds that roamed the forests of Michigan, Maine, and Minnesota.

Throughout the last century, man has encroached on most of that habitat, pushing the caribou herds into Canada. University of Idaho biologists agree that the Idaho herd has remained in the U.S. Because it can still travel back and forth between this country and better habitat in Canada. The UI biologists cite clear-cutting and forest fires for reducing the caribou's habitat in the U.S.

So precarious is the existence of the herd that the Idaho Fish and Game Department has twice declared the animal extinct in the last 50 years, only to have it reappear. In August 1977, the Idaho Fish and Game Commission classified the mountain caribou as threatened and endangered in this state. In 1982, the sister agency in Washington did the same.

Prior to the emergency endangered listing, the U.S. Fish and Wildlife Service had classified the animal as a peripheral species, due to its movements back and forth across the U.S.-Canadian border. Earlier attempts for threatened or endangered status had been opposed by the

Forest Service, which asserted it could adequately manage the caribou without a protection designation. Nearly all of the caribou's habitat is on national forest lands.

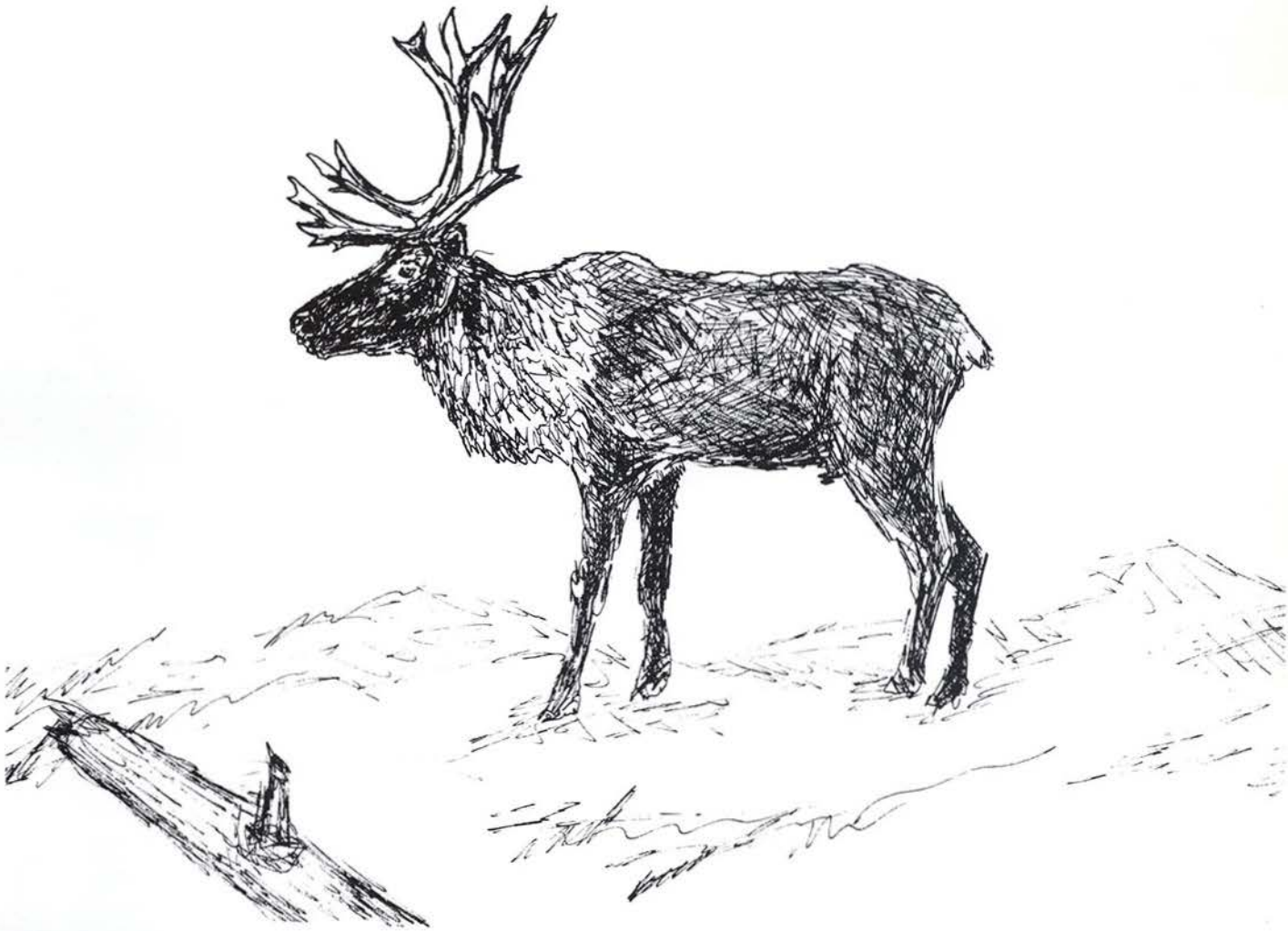
Managing the caribou includes managing its habitat. UI biologist Don Johnson says that maintaining the caribou's habitat will depend on leaving some mature stands of Engelmann spruce, which are necessary for the caribou's survival. These mature trees support plentiful amounts of arboreal lichens, which are the caribou's main source of food during the winter. But these mature stands are susceptible to attack by spruce-bark beetles. These infestations have led the Forest Service to log areas of prime caribou habitat.

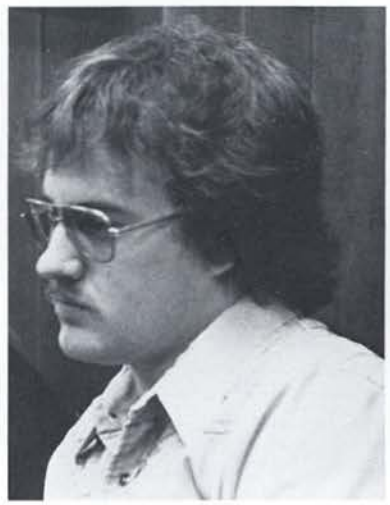
The possibility of building roads into timber sale areas, and thus into the caribou's habitat, was a major point of contention over the Red Spruce timber sale. Don Johnson recommended in a letter to Ranger Stern that "access control should be the overriding consideration in any management decision with caribou range . . . The development of permanent roads invites poaching."

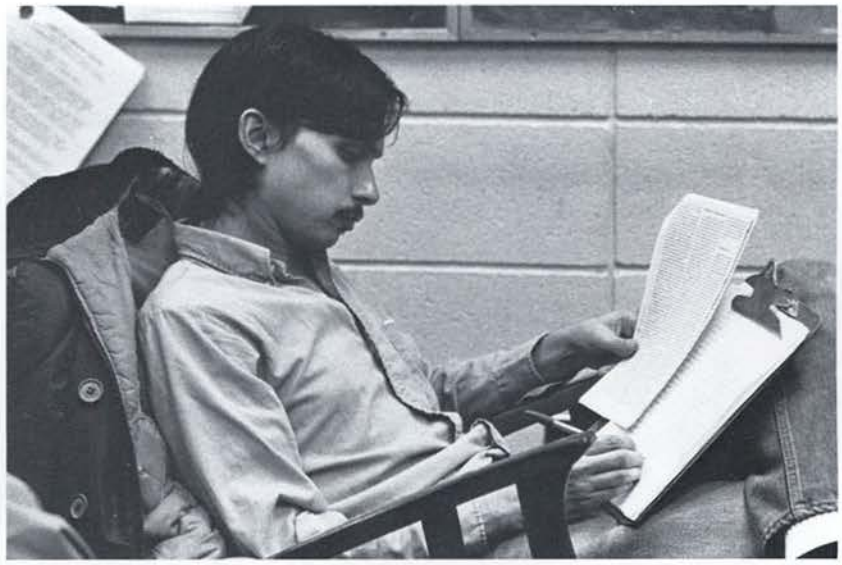
The major cause of mortality of the Selkirk caribou herd has been collisions between the animals and vehicles on mountain roads, and poaching, which is influenced by the access that roads bring to caribou range. Harrassment by snowmobilers using permanent roads is another concern. Biologists at the UI have recommended that all side roads within the caribou's habitat be closed, and prosecution for poaching be more strongly enforced.

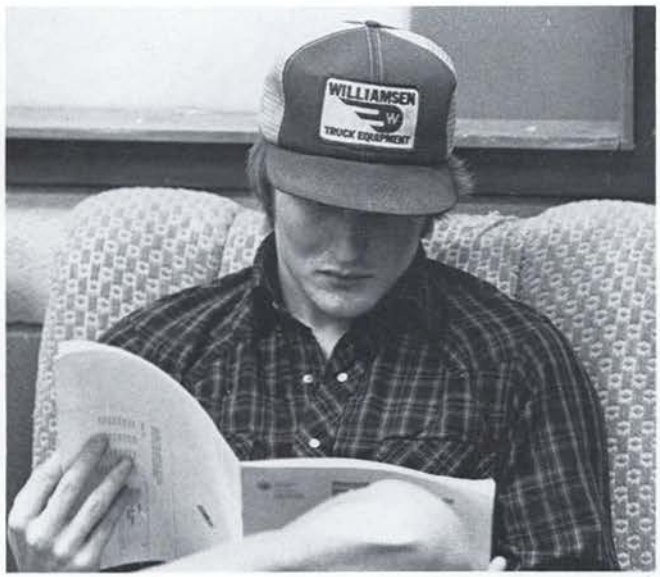
The endangered listing for the caribou may bring about such actions. The listing may bring about public education programs for hunters who might mistake the rare animals for deer or elk. Some Bonners Ferry residents had opposed listing the caribou as an endangered species, fearing that protection for the animal might inhibit economic growth and development of the timber resources on which the town relies. But it is doubtful such curtailments will happen. Jasper Carlton, a biologist who has studied the Selkirk caribou for many years, says that the endangered classification will only establish "a consultation process in which prudent and reasonable alternatives will be sought to safeguard the caribou and its habitat."

Craig Gehrke is a graduate student in Journalism.








WILLIAMSEN
TRUCK EQUIPMENT

Outstanding Students

By Dave Willis

For ten years now, the College of FWR and its departments have recognized their most outstanding seniors. The criteria considered during selections is high academic achievement and contributions to the college's extracurricular activities and organizations. In 1982, seven students were honored as outstanding seniors.

Frank J. Sutman

The Department of Forest Products and the College of FWR each honored Frank Sutman as their outstanding graduating senior for 1982. Throughout his undergraduate studies, Frank participated in numerous FWR and department activities, including Xi Sigma Pi. He was president of the Forest Products Research Society and served as a representative to the Student Affairs Council.

Frank's primary interest has always been in the pulp and paper area, and he was able to carry on his interest by receiving a full scholarship to the Institute of Paper Chemistry, located in Appleton, Wisconsin. The Institute is an independent, privately-supported institution devoted to education and research in the natural sciences and engineering. Its academic programs are at graduate level and are noted particularly for their breadth and their interdisciplinary nature.

Frank extends his thanks to the college for this honor and especially to the Forest Products department for their support of him as an undergraduate.

Greg Neal

Greg Neal was the Department of Wildland Recreation Management co-choice for the 1982 outstanding senior award. Greg is now the park manager of Wawawai County Park in Whitman County, but plans to return to school in a few years.

Greg, whose main interest is interpretation, was involved in the Wildland Recreation Management Association, Xi Sigma Pi, faculty council, and faculty search committee. He also has worked with the Forest Service in Alaska, Utah, and Idaho.

Patricia Hurd

The Department of Wildlife Resources' 1982 outstanding senior was Pat Hurd. Pat, who graduated in December, would like to stay in the West and work, and eventually return for graduate studies. Pat was active while at the UI in the Wildlife Society, Phi Sigma (biological honor society), Phi Kappa Phi (scholastic honorary), and the Dusty Lentils, a women's rugby team on campus.

Jane Mulhall

The WRM department's outstanding senior award was shared by Jane Mulhall. She transferred from State University of New York at Delhi because she wanted a greater depth in the field of recreation and heard that the UI had an excellent program. Jane graduated under the interpretation/communication option and was active in the Wildland Recreation Management Association.

Robert Brammer

The Department of Range Resources' 1982 outstanding senior was Robert Brammer. Robert, now a graduate student, received his BS in Wildlife in 1979. His long term goal is in the specialization of range wildlife.

Robert is an active member in the Range Club, and has done ranch work as part of an internship to help develop a range management plan for a Southern Idaho rancher.

Kevin L. Williams

The Department of Forest Resources' choice for outstanding senior of 1982 was Kevin Williams. Kevin, who transferred from Paul Smith's College in New York, completed graduate work with Professor Jo Ellen Force in forest land use planning, and now has assumed a teaching assistantship relating to land use planning. Kevin is undecided about the specific course of his career, but states that he really enjoys working with people in the natural resources field.

Kevin has worked with the Forest Service in Gunnison, Colorado, and in St. Regis, Montana. He recently married Brenda Bufus, a former graduate student of FWR.

Amy Gillette

Amy Gillette was voted by her fellow students as outstanding student for 1982. Amy is completing a double major in Forest Resources and Wildland Recreation Management; her main interests are silviculture and interpretation. She has been very active in Xi Sigma Pi, the Wildland Recreation Management Association, Associated Foresters (she was president in 1982), and the Student Affairs Council. This past summer, Amy worked for the Forest Service in the office of the supervisor of the Boise National Forest.

David D. Hallock

David Hallock was selected Fishery Resources' outstanding senior. He is currently working on his Masters Degree in limnology and plans to seek employment with either a government or private agency.

David received his BS in physics, and is a veteran of the U.S. Navy. He is very active in the American Fisheries Society and has worked extensively with Professor Mike Falter on assessing the effects of ash on the stream systems in the Mt. St. Helens area.

Dave Willis is a junior in Wildland Recreation Management.

Faculty Changes

by Linda Holt & Jo Tynon

Dr. Dave Bryant is the new department head of range resources, replacing **Dr. Lee Sharp**. Dave has a B.S. from WSU in range management, a M.S. in range science from Texas Tech., and a Ph.D. from the University of Arizona in range management. He was head of the range department at Humbolt, California. His goals include getting the department accredited by the Range Society, and resurrecting the fecal analysis lab for determining wildlife and range diets. Lee is concentrating his efforts in the service areas of the department, doing teaching and extension work.

Dr. Ernie Ables, formerly the Associate Dean of Academics, is the department head of the newly combined Department of Fish and Wildlife. His goals include offering a combined fish and wildlife major and adding a law enforcement option. **Dr. George Klontz**, the previous Fisheries Department head, is focusing on research and teaching work. **Dr. Lewis Nelson**, who was the Wildlife Department head and employment coordinator, is now an associate professor and head of continuing education in wildlife. He is pursuing his interests in the service area, heading workshops and doing extension work. **Arland Hofstrand**, a professor in forest products, is the acting associate dean. He wants to see more coordination between departments and higher enrollment in the college.

Louis Nelson has left the UI Wildlife Department as research associate and instructor to work as a research biologist for the Idaho Department of Fish and Game in Boise.

Dr. Wini Kessler, associate wildlife professor, left for Latin America November 15th, along with **Dr. Lew Nelson.** They were in Peru and Honduras for six weeks to study wildlife management problems in relation to social needs. Later, Wini went to Alaska to work with the USFS on wildlife problems related to forestry. Her goal is to develop a long term association between the USFS and UI.

Dr. George Belt, professor in forest resources, is back from India where he spent the past three years working on an AID project in forestry.

Dr. Kurt Pregistzer, assistant professor in forest resources, says he will miss UI when he leaves for Michigan State University. We wish him well in his new position as assistant professor of forest ecology and researcher.

Dr. Robert Govett, new assistant professor in forest products, received his Ph.D. in forestry from the University of Minnesota. As a marketing specialist, he has several projects planned.

Dr. Sam Ham received his Ph.D. in Forestry, Wildlife, and Range Sciences from UI last spring. As an assistant professor in the Department of Wildland Recreation Management and the director of Video Outreach Activities, Sam brings a much needed emphasis on natural resource communication to the college. He also coordinates "resourcepool" and the exhibits in the FWR building.

The Associated Foresters Sponsor Shortcourse

by Amy Gillette

Our 1982-83 school year started with a "bang" and continued to become busier as the year progressed. In addition to our annual activities (the School Forest Tour, firewood sales, square dances, bake sales, and Logger Sports Team events), club members focused much of their attention on the club's Management Unit.

Since the spring of 1981 when the 160-acre tract was presented to the Associated Foresters by the College of FWR Experimental Forest, our School Forest Committee has been meticulously developing a management plan for the area. This committee consists of Associated Foresters and student representatives from the Wildlife Society and the Wildland Recreation Management Association. The committee members supply input on each of the stands being considered. A decision is then made as to the type of management to be implemented and a target date for the implementation. The committee is organized and run in this manner to provide students an opportunity to experience the trials, tribulations, and triumphs to be expected once exposed to the "working world" after graduation. This system has worked well thus far, and all committee members have agreed that their experiences have been very beneficial.

This year the initial planning phase for our Management Unit was finally completed and several activities were begun on the unit. Our most exciting and time-consuming project was a two-day Horse Logging Short Course, co-sponsored with the College of FWR Experimental Forest. Work actually began on this project in the spring of 1982, and continued throughout the summer and early fall. The course involved a day of lectures covering everything from the tack and skidding equipment needed to the applications of horse logging in today's world of forestry. The field day was a demonstration of one horse and two horse-team skidding. Approximately 110 people attended the course representing the Forest Service, Department of Lands, Soil Conservation Service, University personnel and students, and private landowners. Many participants had the opportunity to try their hands at horse logging, and everyone seemed to enjoy the course. News coverage for this event was excellent, with three T.V. stations and several local newspapers providing coverage. We believe that this was a very educational and interesting event, and we thoroughly enjoyed sponsoring it.

When not involved with the Horse Logging Short Course, committee members busied themselves with developing and establishing a permanent inventory system on the Management Unit. The idea behind this project was to establish a data base from which future planning and activities would be built. Much of this data has already been utilized, through the use of the Stand Prognosis Model. This model is a mathematical equation that uses actual stand data to predict future growth and yield for that same stand. Several of the stands in our Management Unit have been run through Prognosis, for the purpose of determining thinning regimes on our unit. Actual thinnings are planned to begin next year.

As for the future of our Management Unit, we are planning to continue our firewood sales from the area, establish wildlife studies, and build hiking trails. In addition, we have high hopes of eventually having all 160 acres under management and producing at their highest potentials. Through the integrated planning and work of our club, the Wildlife Society, and the Wildland Recreation Management Association, we hope to manage our unit in the best biological, economical, and social manner as possible. We know that this will be a time-consuming and difficult task to accomplish, but we are confident that it can be achieved.

Top, left to right: Harold Osborn, Bruce Kessler, Amy Gillette, Jennifer Frohoff, Dick Halsey, Debra Butler, John Pasman, April Anderson, Nancy Craft, Valerie Bittner, Linda Kulig, Margaret Vangilder, Gail Mossmen; second row: Brian Mulvihill, Tom Reiger, Michael Fitz, Mike Heath, Loren Heiner, Dean Morgan, Mark Lesko; Bottom row: Chris Vetter, Jeff Mork, Candy Parr.

The American Fisheries Society Keeps Busy

By Frank Shrier

The Palouse Unit of the Idaho Chapter of the American Fisheries Society is a professional organization of professors, students and fisheries biologists created to monitor local and regional activities involving the fisheries resources and to provide a professional atmosphere that encourages student involvement. Meetings are held on the second Tuesday of each month and consist of a guest speaker plus a short business meeting. Several interesting presentations were given this year including:

1. Tom Reid–a graduate student in Applied Statistics and Entomology at the University of Idaho–gave a presentation on Riparian Habitat Management in Southeastern Alaska.

2. Dr. Dick L. Wallace from the University of Idaho with an interesting look at redband trout.

3. Dr. Robert Wissmer of the Fisheries Research Institute, University of Washington, spent two days with us giving presentations on the Hydrology of the Amazon River and the Limnological Effects of the Mt. St. Helen's eruption.

4. Ray RaLonde–a graduate "exchange" student from Sheldon-Jackson College in Sitka, Alaska–gave a presentation on the private non-profit hatchery system in Alaska.

Anticipated presentations for the remainder of this year include:

1. Jim Johnson–a representative of the Nez Perce tribe and their fisheries biologist–will speak on the current management objectives of the tribe.

2. Dr. C. Michael Falter of the University of Idaho Fish and Wildlife Department will give a recap of his recent trek to Africa.

The fall picnic and the Wildgame Feed proved to be a good time for those who attended. Some very nice prizes, including gift certificates to Sit & Soak and several eating establishments along with a fishing outfit and vest, were awarded via a raffle during the Wildgame Feed. Thanks to Dave Groman, for a wild slide show during the 'Feed.' The major fund raiser for this year is the sale of hats with the AFS Idaho Chapter emblem embroidered on the front. Proceeds are earmarked to bring in more guest lecturers.

In an effort to contribute something more substantial to the Chapter, the Palouse Unit began laying the groundwork last spring to bring a Fish Genetics Workshop to the 1983 Idaho Chapter meeting. Thanks to the efforts of Chris Herr, Christine Moffitt, Gary Thorgaard, and others, the unit was able to put together several key people in the fish genetics field. They are:

1. Dr. Fred Allendorf and Robb Leary of the University of Montana presenting their electrophoretic work.

2. Dr. Ernest Brannon of the University of Washington speaking on the ecological aspects of fish genetics.

3. Dr. Graham Gall from U.C., Davis on the genetic selection of fish stocks.

4. Dr. Gary Thorgaards of WSU speaking on fish chromosome analysis.

5. Dr. Dick L. Wallace of the University of Idaho on morphometric characteristics.

Dr. Ted Bjornn of the University of Idaho Fish Cooperative Unit will act as moderator at the workshop. The Co-op Unit played a key role in helping us put this workshop together and in making the 1982-83 year a success. Thanks are in order.

Top row, left to right: Greg Johnson, Sally Rau, Dave Hallock, Chris Herr, Ed Bowles, Frank Shrier, Pat Connolly, Jeff Ellison; second row: Cindy Roberts, Greg Miller, Scott Beard; first row: Rick Lowell, Bruce Rieman, Tom McArthur.

The Wildlife Society

By Gerry Shimek, Dave Foster,
and Mary Ann High

When the *Idaho Forester* staff asked us to report on a specific club activity for this year's issue, we reviewed all of our current projects: The Mountain Bluebird and Kestrel Nest Box Program, the Dairy Science Pond Project, the Experimental Forest Student Management Unit, and the East Hatter Creek Project. We decided to report on the past year's activites at the East Hatter Creek deer enclosure, since they involved FWR organizations other than the Student Chapter of the Wildlife Society (SCTWS).

Our interest in the East Hatter Creek Unit was sparked by a 1981 *Idaho Forester* article which pointed out that the Unit's future was in question. We decided to have a look at the facility ourselves, and we scheduled a winter activity at the Unit for early in the spring semester of 1982. In February, we held a combination X-C ski trip and spaghetti cookout at the enclosure, with Dr. Jim Peek as our guest speaker. Jim led a tour of the enclosure and summarized its research history. Initially it was set up for long-term white-tailed deer research; however, through the years it has been used for other research purposes as well. Dr. Peek also pointed out that only limited maintenance had been performed on the facility, as was evidenced by the condition of the enclosure fence.

In the Spring of 1982, the SCTWS Executive Board decided to take an active role in the future of the facility by encouraging use of the unit through mileage reimbursement for student projects conducted there. The Board also decided that a fence maintenance project would enhance the value of the facility for future use. We surveyed the perimeter fence for damage in March, and we held a "fencing party" in April. To date, we've held four fencing parties to work on the lower six feet of fence. At one party, Taco Jim whipped up a kettle full of his "Famous Tongue-Tearin' Chili." We've mended holes and cut brush and snags off of more than three miles of fence. We've also rehung the West gate. FWR students fro from four clubs have contributed over 120 workhours to fence maintenance at East Hatter Creek.

What does the future hold for the East Hatter Creek enclosure? It's main value at this time is that it's the only portion of the Experimental Forest essentially unharvested for either timber or forage since 1949, and thus it represents a quality watershed. While the facility provides unique opportunities for research, it also offers many recreational opportunities. Proposed ideas for the Unit are: clearing skiing and hiking trails to provide access to all parts of the enclosure; developing a species-location map of the Unit to enhance nature observation activities; and linking the Unit with the Experimental Forest Trail System—a project of the Wildland Recreation Association.

Members of the Associated Foresters, the Range Club, and the Wildland Recreation Association have helped us with the work at East Hatter Creek, and we extend our thanks to these folks. A special thanks goes to Harold Osborne and the Experimental Forest staff for their advice and for their assistance in the form of tools and materials used for fence repairs.

Top row, left to right: Gerry Shimek, Dave McIntosh, Mike Fitz, Stu Toleman; bottom row: Dave Smith, Anita and Jim Klott, Larry Klimish.

Bike Rally Highlights the Year for the WRMA

By Barb Depue and Jo Tynon

The Wildland Recreation Management Association (WRMA) is a student association dedicated to providing educational and social opportunities to members. All members are encouraged to join the Idaho Recreation and Parks Society (IRPS) as well. Last fall, several members served as student moderators during the IRPS conference at Lewiston.

The WRMA started off the school year with a faculty/student backpack trip to the Eagle Cap area. The weather was good and so was the response. The trip offered us an excellent opportunity to welcome our new visiting faculty member, Michael Frome. The author of many well-known books and articles, Michael is here to teach and to write two new books.

In September, the WRMA sponsored a Mystery Bike Rally in cooperation with radio station KRPL. The aim was to raise money for the Campus Beautification Fund and to promote better community relations. Local merchants contributed over $400 in prizes and gift certificates and were gratefully acknowledged in our media campaign which included radio, TV, and newspaper coverage. The bike rally, a novel idea in the Moscow community, sparked interest among bicyclists and puzzle lovers alike. Teams consisted of two bikers who were given packets of encoded clues to solve. Each clue revealed a destination where a single mystery number could be found. The sequence of clues was scrambled, so that the most direct route would not be obvious. In addition to their other prizes, the first ten teams got a chance to soak their tired muscles in hot tub splendor. Everyone who participated in the rally received a certificate for a T-shirt decal commemorating the event.

Marv Henberg of the philosophy department shared his ideas on "Wilderness as Playground," as WRMA continued its tradition of sponsoring brown bag seminars. These noontime activities serve to broaden our base of awareness, and afford members an opportunity to interact informally with a diverse group of speakers. Former students are asked to return and share their experiences. Greg Neal and Brian Gilles gave us an insider's view of what it's like to work for Whitman County Parks. Randy Welsh returned to talk about his job with the USFS at Powell Ranger Station. A look at freelance interpretation was the subject presented by Scott Bowler, the director of Northwest Nature Experiences. WRMA members Joe Glatz and Bjorn Kaltenborn gave illustrated talks on their Alaskan adventures.

Proceeds from our bake sales helped to offset traveling expenses for the students who attended the Pacific Northwest regional meeting of the Association of Interpretive Naturalists (AIN) in Vancouver, Washington. WRMA students will assist in hosting the next regional meeting here in Moscow.

In December, we said goodbye to our president Bjorn Kaltenborn, who is on his way home to Norway via an extended tour of the U.S. Amy Braithwaite was elected to the office and will serve as president until Spring elections are held. Other officers this year included Joe Glatz, vice-president, Jo Tynon, secretary/treasurer, and Barb Depue, publicity.

Standing, left to right: Willi Salvi, Bjorn Kaltenborn, Joe Glatz, Ed Sellers, Amy Gillette, Terry Thompson, Nancy Ray, Jo Tynon, Laura Grannis, Ed Krumpe, Wende Rosten, Jim Fazio, Barb Depue, Mark Van Every, Drew Herrmann; Middle row: Scott Eckert, Jean Crawford, Tom Averegg, Andy Froelich, Amy Braithwaite, Lori Kuykendall; Front row: Charlie Wells, Bill McLaughlin, Meg Weesner, Chris Vetter, Michael Frome, Murray Feldman.

...And the Products Club is Still Eating Roast Pig

By Terry Harris

The first annual Forest Products pig roast was held in May 1979. It was a farewell party for Professor John Howe who was retiring from the university. The Forest Products Club organized the pig roast, naming it "Howe's Happy Hour" and held it at Jim Spicer's farm. Since then, it has been a major event for our club and department.

Last year, our 4th annual pig roast was held at Harry Lee's place. Chairman Mike Reynolds, Vice-chairman Terry Harris, and Secretary/Treasurer Scott Gerber organized the pig roast with Frank Sutman in charge. Mike, Scott, Frank, Brian Woodard, and Steve Butz spent the night slaving over the hot pig, making sure it would be ready for the next afternoon, when all of the Forest Products faculty, staff, grads, undergrads and family members came to eat roast pig, drink cold beverages, play volleyball, watch Harry's honey bees, eat more roast pig, drink more cold beer and have a great time. During the festivities, Dr. Moslemi awarded Frank Sutman the Outstanding Forest Products Senior Award.

This year's spring semester has been a turning point for our club. Formerly known as the Forest Products Research Society, we are now the Forest Products Club. We feel this new name is more representative of ALL aspects of our department which includes business, harvesting, and wood technology.

Officer elections were held last November and our new officers are Paul Miller, Chairman; Michelle Russell, Secretary/Treasurer; and Jim Kleeburg, SAC Representative. Future plans include monthly business meetings, a monthly guest speaker (open to anyone in the college who wants to attend), a moneymaking project, and of course the 5th annual Howe's Happy Hour Pig Roast!

Standing, left to right: Peter Steinhagen, Froylan Castaneda, Patty Keller, Thomas Tisch, Phil Anderson, Dave Ritter, Mike Baird, Rick Dean, Richard Thomas, Terry Harris, Steve Butz, Jim Kleeburg, Steve Pfister; sitting, left to right: Doug Farris, Chris Danforth, Mike Reynolds, Michelle Russell, Paul Miller.

Education is a companion which no misfortune can decrease, no crime destroy, no enemy alienate, no despotism enslave; at home a friend, abroad an introduction, in solitude a solace, in society an ornament. It chastens vice, guides virtue, and gives grace and government to genius. Education may cost financial sacrifice and mental pain, but in both money and life values it will repay every cost one hundredfold.

Range Club Sends Team to I.D. Contest

For the second consecutive year, the UI Range Club sponsored a range plant identification team. The purpose of the team is to learn 200 assigned plants commonly encountered when the art and science of range management is practiced, then compete against other universities at the annual Society of Range Management Meeting. Team members Dave Foster, Jim Grahmn and Chrys Olson, along with coach Jim Kingery and assistant coach Robin Van Horn, went to Albuquerque, New Mexico for the February 14-17 meeting. After enthusiastic fund raising efforts (raffles, doughnut sales, etc.) and a semester of intense studying, the team was ready.

Three days, and approximately 1300 miles later, the UI van pulled into the Albuquerque Hilton for a few days of meetings, a morning of tense competition, and a few nights of constructive socializing. The plant contest commenced early Tuesday morning, with 125 perplexing, and some not so perplexing, herbarium mounts and 123 nervous contestants from 26 different colleges. The test took two hours to complete, with one minute allotted for each plant. When time ran out and the papers were turned in, a few contestants were relieved, but most were curious for the results. Those results were announced two days later; Idaho finished better than last year, with one member finishing in the top half. All in all it proved to be an educational experience providing those who participated a chance to make new friendships and gain information from others in the Society. Thanks to the Range Department for their support and encouragement.

Standing, left to right: Steve Bunting, Jim Graham, Dianna Todd, Dan Dallas, Margaret Vangilder, Jeff Mosely, Dave Foster, Mike Simpson, Tom Lance; Sitting, left to right: Kevin Madsen, Mike Stoddard, Jay Sila, Robin VanHorn, Tom Reiger, Chrys Olson.

Not very many years ago, most Americans were primarily interested in what purely technological uses might be made of this country's natural resources, how they might be turned to the expedience of man. We have since learned that the natural environment has other things to offer, things that are perhaps more important and at any rate equally necessary to a society that too often threatens to strangle in its own inadequacies: a sense of wonder, of grandeur and free space; an involvement with the beauty of open sky, naked rock, clear water, and trees; a reminder that we are, after all, natural creatures living in a natural world–a world we are frequently too busy controlling to have time to enjoy.

From "Ansel Adams and the National Parks: II" in The American West

Putt's Law: Technology is dominated by two types of people, 1) Those who understand what they do not manage and 2) Those who manage what they do not understand.

Wilderness is a necessity. Mountain parks and reservations are useful not only as fountains of timber and irrigating rivers, but as fountains of life.

John Muir

Student Affairs Council

By Willi Salvi

The Student Affairs Council (SAC) is an organization comprised of members from the various clubs and organizations within the College. The members include student representatives from: Range, Wildlife and Fisheries, Wildland Recreation, Forest Resources, Forest Products, Xi Sigma Pi, Society of Associated Foresters, Executive Council, the "SNAG," and *The Idaho Forester*. In addition, several faculty members serve as advisors to SAC.

The goals of SAC are two-fold. First, SAC is set up to serve as a channel of communication for student interests within the College. This involves weekly meetings with all of the representatives. And second, SAC is involved in promoting and coordinating several College-wide activities. These include: the Fall Fling, the Pancake Breakfast, the Outstanding Student Award, and Natural Resources Week. In the fall, the world famous "Sourdough Joe" Pancake Breakfast takes place. The faculty members serve as the "hired help" for the event (waiters and cooks), providing a great opportunity for students to "get to know" the faculty a little better. In the spring, the students and faculty are involved in Natural Resources Week, held the last week in April. The festivities include several days of presentations, films and demonstrations. In addition, the many contests, games, and famous barbecue and "mud run" give all involved the chance to get together on a different level.

Front row, left to right: Jeff Scott (kneeling), Deb Butler, Sue Tank, Chris Vetter; second row: Linda Holt, Eric Verner, Tom Lance, Tim Kleeburg; back row: Cindy Wargo, Amy Braithwaite, Neil Kramer, Willi Salvi, John Ehrenreich, Dan LaBossiere.

Education does not mean teaching people to know what they do not know; it means teaching them to behave as they do not behave.

Xi Sigma Pi

By Dan LaBossiere

As a nationally recognized honor society, Xi Sigma Pi serves to acknowledge the individual achievements of students in the field of natural resources. Although founded as a forestry fraternity, the Epsilon Chapter at the University of Idaho has expanded to encompass all disciplines within the College of FWR. With the current emphasis on coordinated resource management, the Society performs an important function in exposing future resource managers to various points of view. This year a special effort has been made to initiate professors from all of the departments into the organization.

Traditional events sponsored by Xi Sigma Pi such as the Prof and Stein and the Awards Banquet were well attended this year and with a great deal of enthusiasm. The Prof and Stein was held in September to serve as a "warm up" social function for all students and professors. It provided for a relaxed, informal atmosphere between instructors and students and served as an opportunity for new members of the college to become acquainted with their peers as well. This year's Prof and Stein was held outdoors around a campfire under the stars on Brian Dennis' property in Moscow. We gratefully acknowledge Brian's help in sponsoring the event.

The annual Invitation Banquet was held at Chinese Village, and was the culmination of a lengthy invitation process for many of the upperclassmen and graduate students. Initiates were chosen using various criteria such as scholastic achievement, leadership qualities, involvement in college affairs, and personal instructors' recommendations. Initiates were required to construct a plaque with a design of their choosing. Many interesting and creative plaques were developed, often expressive of the particular student's field of interest. New members were also urged to get involved with some type of service project for the college or local community. Many chose to volunteer at the Moscow Recycling Center, others offered to give tours or speeches to local high school students. As politics become ever more a driving force in resource management, it is of vital importance that we are able and willing to communicate with the public. Xi Sigma Pi seeks to give the College, and its goals, some exposure within the community. To facilitate this, students from local schools in Moscow and Lewiston will be able to take guided tours of the FWR college courtesy of Xi Sigma Pi during Natural Resources Week.

Through student cooperation the society continues to function as a multidiscipline organizatin actively involved in college and community affairs. Active participation at the grass roots level can result in the kind of positive changes and images that can benefit natural resources management.

Top, left to right: Mary Ann Kolasinski, Jeff Mork, Jo Tynon, Mike Gondek, Terry Harris, Neal Kramer, Gerry Shimek, Dan LaBossiere; bottom, left to right: Amy Gillette, Joe Glatz, Chris Vetter, Laura Grannis, Tom McArthur.

Perhaps the most valuable result of all education is the ability to make ourselves do the thing we have to do when it ought to be done, whether we like it or not.

Index to Advertisers

Special Thanks

Brent Nixon

Laura Haynes Shimeck

Cindi Johnson

Jennifer Hall

Linda Bennett

The Forester Staff

Back row, left to right: Steve Abels, Joe Glatz, Amy Braithwaite, Dave Willis, Ken Johnston; Front row, left to right: Linda Holt, Mimi Hendricks, Joe Ulliman, Sally Rau, Jo Tynon, Dan Pfiefer.

AN ANNUAL PUBLICATION BY THE STUDENTS OF THE COLLEGE OF FORESTRY, WILDLIFE, AND RANGE SCIENCES AT THE UNIVERSITY OF IDAHO