



### The Working Tree. Our Goal Is To Use It All.

Today the challenge to the forest industry is to stretch our resource to fit all of America's needs.

So at Potlatch, when we convert one of our working trees, we try to use every last part of it.

Small logs and tops of trees formerly left in the woods are being processed. We're also using wood strands to create a new kind of plywood. We use sawdust to make pulp. Bark and wood waste is burned for our own energy needs.

We're constantly trying to find more efficient methods of using our timber. The end result: a resource base that is as fully utilized as possible.



cover photo by Ted Clutter

# Editorial

In the last few years, the enrollment in the College of FWR has grown beyond its limits. At the same time, the detailed technical knowledge required for a graduate to compete in the field has increased. Although the potential quality of the education FWR students receive remains high, this potential is often not realized because of overcrowded classes.

Ideally, upper division classes should have no more than 20-25 students. A class size such as this enables the instructor to give students needed individual attention. Class discussion of ideas being presented is more easily controlled and stimulated with a small group. Students are able to express their ideas more freely. This, in turn, creates an environment more inducive to learning and sharing of thoughts.

Many classes, particularly labs, require the use of visual aids to more fully express the instructor's ideas. These aids range from the use of slide projectors, herbarium mounts for plant identification classes, or wood samples and wood working machines for wood utilization classes. Small classes ensure that there will be sufficient materials to accommodate all of the students.

According to the University figures, the student to teacher ratio in the College of FWR is 20:1. This ratio is determined by taking the total number of credits attempted by students in the college and dividing it by 15, which is the number of credits the average full-time student takes. However, this number is inflated because many students enrolled in classes are not taking 15 credits.

The actual student to teacher ratio in the College of FWR is closer to 40:1. Over 50% of the upper division classes in the college are overcrowded. Professors are faced with the problem of trying to turn confused students into competent professionals. This is difficult at best and becomes increasingly worse as class sizes grow over 100.

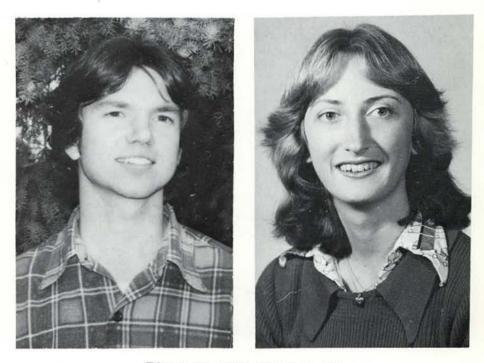
continued on page 47

### Contents

- 2 NEXUS/a synopsis of the college
- 6 The School Forest
- 10 Owls of Idaho A Pictorial Essay Jack Whitman

A\$ 250

- 12 The Threat of Discretionary Power Don Hanson
- 13 Rare II Rod Johnston
- 14 What Would McCall Do Without Us? Kurt Spingath
- 16 Looking Out Kevin Kennedy
- 18 The College Logging Crew Sorrells DeWoody
- 21 Desert Trails Stan Galloway
- 22 Everything You Wanted to Know About Jobs, But Were Afraid to Ask Mike Sullivan
- 24 Women in Natural Resources Debbie Sims
- 29 Current Publications in Natural Resources Michael Hollmann
- 30 Once in a Lifetime Chris Griska
- 32 Summer Camp: Moscow vs. McCall Jim McDonald
- 34 Forest Inventory Using LANDSAT Gary Schulz
- 36 Wood Duck Encounter Steve Babler
- 37 Transporting Lumber by Sea Bob Payton
- 40 Mushrooms A Pictorial Essay



Editors: Tracy Behrens and Jan Bal

### Nexus

### WILDLAND RECREATION ASSOCIATION

This past year was very rewarding for the members of the Wildland Recreation Association. Under the guidance of Dr. William McLaughlin and leadership of Jack Cunniff and Diane Spott, the club was the recipient of many interesting and informative talks.

To start the year off right, Dr. James Fazio, Academic Chairman of the WRMP, whose doctoral work focused on communicating with the backpacker, presented a slide show on low impact camping. In November, the Wildland Recreation Association took its first field trip to Hells Gate and Winchester Lake State Parks. We had the opportunity to view and discuss problems and offer solutions to the park managers. Also in November, we had John Dalle-Molle, from Mount Rainer National Park, come to speak on backcountry management in Mount Rainer. His talk centered on communicating with the behavior of backcountry users.

As the semester wound down, so did the club's activities. But in February we picked right up where we left off and had a joint outing with the Idaho Trails Council. Together we brushed out a nature and cross-country skiing trail behind Laird Park in the St. Joe National Forest. In March, Art Seamans of the Moose Creek Ranger District talked on the complexities of white water river management in wilderness areas.

Other activities the club was involved with included holding a T-shirt slogan contest where "I'm a Wildland wRECk" emerged as the winner. We also painted the mural on the east side basement wall. The most meaningful activity was being awarded a contract from the Nez Perce National Forest to design and build an exhibit on "Low Impact Camping." The Wildland Recreation Association was also involved with the annual meetings of the idaho Parks and Recreation Society and Idaho Trails Council, of which we are members.

### STUDENT CHAPTER – THE WILDLIFE SOCIETY

The University of Idaho Student Chapter of the Wildlife Society is a group of wildlife students dedicated to contributing to an understanding of man's proper relationship with natural resources, and in particular, for determining the role of wildlife in satisfying human needs. This broad responsibility toward management and conservation practices actively concerns about 70 student members in the 1976-77 academic year.

Under the presidential guidance of Barb Schrader, such activities as a pond reclamation for wildlife use, participation in the 13th Annual Western Wildlife Students Conclave, and a trip to eastern Oregon for bird nest box repair were undertaken.

Several new projects were begun in 1976-77, but one in particular will undoubtedly remain a strong tradition in years to come. The members and their guests found that all is not work in the Wildlife Society when the 1st Annual Wild Game Feed became a reality in the spring. Curried *Ondatra* a la



The Wildland Recreation Society's float for the 1977 NRW Parade saved approximately 114,000 watts.

*Erethizon* adorned the plates, cleverly disguising the muskrat legs with porcupine gravy. Seven Devils Delight seemed a more delectible name for mountain goat stew. Char-broiled venison could have been better named whang-leather boot soles. But, with the help of a keg, most agreed that it was truly a culinary delight!



1977-78 Wildlife Society

James Doering



### WILDLIFE CONCLAVE 1977

*Question:* What would you call an overly enthusiastic member of the Castoridae family?

So went the questions at the 1977 Annual Western Students Conclave for wildlife students at Colorado State University. Ten University of Idaho students travelled to Fort Collins, Colorado in April 1977 to defend their title against nine other western colleges and universities. Competing team members included Steve Babler, Lynn Burton, Nancy Jordan, Susan Obenberger, Justin Naderman, Jack Whitman and Kate Wynne. Until the final round, the U of I team had chalked up an impressive undefeated record. But the final round saw the U of I team go down twice in succession to Texas A & M University. The U of I team placed second, with Humboldt State University taking third.

Along with the actual bowl competition, field trips sponsored by Colorado State University to places like Rocky Mountain National Park and the Denver Museum of Natural History were attended by students. Also, student papers were presented by conclave participants in a special technical session. 1977 Natural Resources Week Parade

Jame

Doer

The 1978 conclave will be held at Texas A & M University at College Station, Texas. Several members of the Student Chapter of the Wildlife Society will tentatively represent the U of I and attempt to regain the title lost in 1977. Answer: An eager beaver.

### RANGE CLUB

The Range Club has sponsored several speakers this year at their biweekly meetings, including such people as Joe Zimmer of the BLM, Terry Booth from the Plant Materials Center, Lee Pattison of the SCS, and Alex Irby from the CPTPA in Orofino. We learned that this year the SCS in Washington, D.C. will replace the Civil Service Commission in the grading of applications for federal range jobs.

The club is preparing to send representatives to the National Society for Range Management Convention in Casper, Wyoming next year to participate in the plant ID contest. The Range Club is also in charge of organizing and conducting the ID contest for Natural Resources Week this spring.



1977-78 Range Club

### NATURAL RESOURCES WEEK 1977

Natural Resources Week was broadened to include a wider variety of events in 1977. One new event was the bike marathon. Bob Wilfong, a FWR graduate student, pedaled 409 miles (1638.33 laps) during his 24-hour ride on the University track. Bob and his competitors, FWR students and faculty, gave all of us an idea of the potential use of the bicycle as a method of energy conservation.

During the Ernest Wohletz Scholarship Drive, students raised \$125.00 while the faculty came up with \$118.50. We thank the Student Chapter of the Society of American Foresters and Dr. Joe Hoffman for helping make the scholarship drive a success.

The 1977 Outstanding Student Award went to Justin Naderman. Justin graduated in May 1977 with a degree in wildlife. Throughout his stay in Moscow, Justin served on the Student Affairs Council, was a member of the Wildlife Society and Range Club and represented the college in intercollegiate competition on both wildlife and range plant I.D. teams. The Outstanding Professor Award went to Leonard Johnson.

The 2nd Annual Natural Resources Week Parade started at the SUB and ended near the new logging site, west of campus. Entries included clubs' floats from the College of FWR and the College of Mines, 4-H, Girl Scouts, conservation organizations, Bennett Lumber Company, Moose Lodge and, last but not least, Smokey the Bear and Woodsey the Owl. The Moose Lodge won the award for the best all-around float.

3

### P. PINASS PASSES AWAY

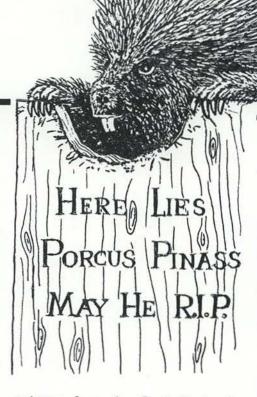
### by Pam Martin

Pam Martin is a senior in Range Resources and Forest Resources Management.

This is in memory of our friend Porcupine who passed away one sunny June day in McCall, Idaho. Porcupine, the victim of fatal misfortune, had resided near summer camp but was found lying beside the highway by two summer camp students. He was brought to camp and displayed on the flag pole for two weeks to be mourned by all.

The funeral, a graveside service, was held the next evening. Hardhats were held over hearts as Porcupine was lowered slowly down the pole, with Margo Conitz playing "Taps" on her French horn and Don Patterson keeping time on a garbage can. Porcupine was dressed in pale grey quills overlying a battered black corpse. Flies buzzed by his head as he was lowered into his coffin, a meticulously constructed cardboard box.

The pallbearers, handkerchiefs pulled tightly over the nose, carried the coffin to the graveside and there Porcupine was lowered into his grave. All wept as the Reverend Steve Heber recited this



scripture from the Good Book of **Forest Ecology**: "The porcupine causes the loss of over \$25,000 damage to timber each year."

Following the burial, the Honorable Fred Johnson ran over the grave with the carryall to prevent coyotes from digging it up. Inscribed on the gravestone, which stands beside the dinner bell on the shores of beautiful Payette Lake, was the affectionate phrase:

> "Here Lies Porcus pinass May He RIP"



### WORDS OF WISDOM

Letters from alumni and subscribers contained this advice to students.

"Just hang tough when you are out... I graduated in May '77, took a seasonal job with the National Park Service and in the meantime, applied all over... It worked! I've got a job I'm real happy with now. The big thing is don't get discouraged. It's not an easy field to enter. Take any job you can find in the field before you find something permanent."

Mary Koch

"Put in a season or two fighting fire then start at the bottom, *the very bottom*. If you are good, you never stay there."

Otto Baltuth

"To assure survival after graduation - work."

Leon R. Nadeau

"My advice for students about how to survive after college is this: prepare for more than one area to work in. I wish that I had prepared myself for the teaching field along with forestry and wildlife. There seems to be a demand for good teachers now."

Everett C. Green

"If you want to get out of school and into the business world and survive, you must: 1) Get career oriented and motivated early on in your studies, 2) Expose yourself during school to the business world through work experience and professional organizations, and 3) Be prepared to play in a fast, hard-knock game and to learn the rules of the key players and their roles."

Eve Johnson

### **XI SIGMA PI**

Throughout the school year, Xi Sigma Pi, FWR's honor society, strove to restore the organization to an effective body which recognized academic achievement and individual contribu-

"I know you're all thinking about forestry. You're all sawing logs." –Joe Ulliman

tions to natural resources. Potential members were invited to barbecues loaded with good food and beverages. New members were initiated at banquets held in the fall and spring semesters. Throughout the year, guest speakers centered their talks on endangered plants, conflicts of mining and forestry, and other land use problems. Officers for the year were: Gene Sandone, Mark Vedder, Bruce Connery and Diane Spott.

### U OF I STUDENT CHAPTER SOCIETY OF AMERICAN FORESTERS

This year, the major emphasis of the S.A.F. student chapter has been on increasing the availability of the College Experimental Forest to undergraduate students. A School Forest Committee was formed early in the fall semester. Student input through the committee resulted in two new Directed Study courses in the undergraduate curriculum – FWR 203 and 499, "School Forest Workshop." The chapter was funded nearly \$600 by the ASUI Recreation Board to buy cruising and traversing equipment to be used on the School Forest.

Other activities included the Second Annual Country Christmas Dance, cosponsored by the Wildlife Society. Many members attended the Inland Empire Section Convention in Spokane March 3-4. S.A.F. was in charge of organizing the spring barbecue during Natural Resources Week in April. The



1977-78 Student Chapter of the Society of American Foresters.

chapter is planning to enter into contracts with Potlatch for thinning small tracts. The contracts will provide an excellent source of revenue for the chapter as well as thinning experience for students.

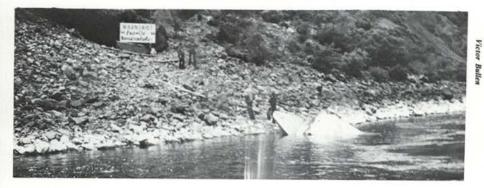
### VIEW FROM A MAIL BOAT

While making its daily run up the Snake River from Lewiston, the "Idaho Queen" mail boat passed four forlorn sailors. Ed Tisdale, Fred Johnson, Doug Henderson and Anita Cholewa were doing some spring research in the river. The day before, they had tied



At the barbecue (1929).

their boat to a navigation sign and ironically, the boat now lay submerged four feet under water on the river bed. Idaho Power, bless their dear little turbines, had dropped the river level four feet then raised it again over night. The mail boat stopped and a chuckling crew welcomed the researchers aboard. The sunken boat was left at the bottom of the river for aquatic habitat.



### **The School Forest**

### Introduction

The purpose of this report is to present the development and use of the Moscow Mountain Experimental Forest. The University of Idaho was fortunate to receive, principally as a gift, forest lands of over 7000 acres. Such a forest resource is vital for the training of professional foresters in the practical and technical phases of forestry and for forest research. The summary which follows will provide the reader with an overview of the Experimental Forest since its origin in 1932.

### Acquisition of lands

University lands were acquired largely through the generosity of Potlatch Forests, Inc. which donated 6,515 acres between September 1932 and January 1936. Several forty-acre tracts were given to the University by other interested parties and one block of 160 acres was purchased in 1936 specifically for a Civilian Conservation Corps camp. An additional 160 acres were acquired by trade. Finally, a three acre donation in 1947 and a 40 acre donation in 1948 rounded out the area to the present total of 7,158 acres. Table 1 contains a tabulation of acreage by unit.

The forest is divided naturally into five main units. Named after the drainages in which they are located, the units are: 1) West Hatter Creek, 2) East Hatter Creek, 3) Flat Creek, 4) Big Meadow Creek, and 5) Flannigan Creek.

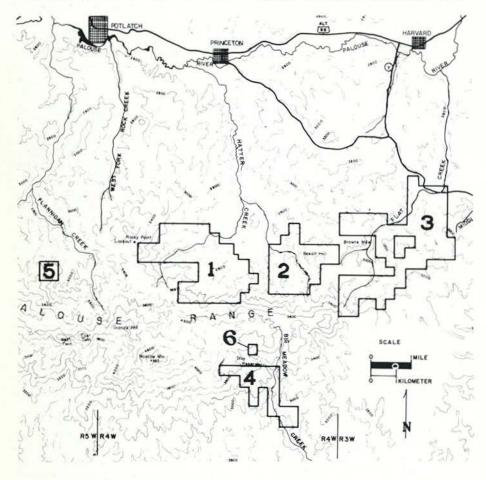


Figure 1. Location of College Forest units.

\*Idler's Rest was donated with specific management objectives of ecological preservation and recreation.

The College Forest is in an ideal location for use by the University. Four of the units are within 35 miles of Moscow allowing ease of access for all day field trips (Figure 1). An equally advantageous situation would be difficult to duplicate elsewhere in the Palouse Mountain Range.

### Logging history

Before acquisition by the College, most of the forest was selectively cut for white pine, ponderosa pine, cedar poles and other trees of high quality. Along the main roads, cutting was fairly heavy, but further back more of these species remain. In general, the area is moderately well stocked with three distinct age classes; overmature, mature, and young trees. With the present high value of secondary tree species, there are very significant timber values remaining. Since college ownership, timber sales have been implemented to utilize timber products for which there has been demand. Since 1940 there have been four major sales involving approximately 2,500 cedar poles and 500.000 board feet of lumber. In addition, there have been a number of small fuelwood and fence post sales.

In 1972, the Forest Administration decided that by harvesting the forest with student help, several objectives could be accomplished: improvement of stand quality, instruction in logging techniques, and creation of a partially

Table 1. Units and acreages of the College Forest.

Name

West Hatter Creek

East Hatter Creek

**Big Meadow Creek** 

Idler's Rest Creek\*

Flannigan Creek

Flat Creek

Number

on map

1

2

3

4

5

6

Acreage

2764.81

1231.41

2158.80

840.00

160.00

TOTAL: 7158.02

3.00

"My friends tell me it's not the humor in my jokes, it's the way I tell them that makes them laugh."

-John Howe

self-supporting forest operation. This new policy decision resulted in the creation of the College Logging Crew. Thus far, logging by the crew has been confined to the Flat Creek Unit, where the bulk of the mature timber is located. Profits from timber sales finance research studies on the forest.

### Grazing

Since 1943, the Flat Creek-Hatter Creek Cattleman's Association has used portions of the College Forest for grazing cattle. This privilege allows local cattlemen access to summer range relatively close to their headquarters.

Presently, the Cattleman's Association leases approximately 16,200 acres in the Moscow Mountain area near the College Forest. Of this total acreage, 4,860 acres are on the College Forest. The total estimated carrying capacity is 1,270 animal unit months (AUM's), of which 352 AUM's are furnished by the forest.

Overgrazing has sometimes been a problem on the School Forest lands, but careful management has kept it to a minimum. Plans for the future include two drift fences across the Flat Creek unit, which upon completion should better regulate cattle grazing.

### Forest protection (fire)

Control of fire on the forest has always been a principal concern. Two roads through the Big Meadow Creek unit make it the most accessible of all the units for fire control. Flat Creek, East and West Hatter Creek units have been, until recently, quite inaccessible. In the past three years, however, approximately 15 miles of permanent fire roads have been constructed in the Flat Creek and West Hatter Creek units. East Hatter Creek remains the least accessible because permanent roads have not been constructed into the 800 acre deer enclosure located in this unit.

Kendrick Forest Protection District (KFPD) is responsible for the protection of the forest complex. The College of FWR pays 18 cents per acre per year to



This Civilian Conservation Corps (CCC) camp from the 1930's is currently part of the Big Meadow Creek Recreation Area.

maintain this security. Excellent cooperation in the control of fire on the College Forest exists between the college and the KFPD.

### Abiotic site factors

The land forms of the College Forest offer a variety of aspects, with rounded ridges dissected by numerous draws. The general orientation of the Flat Creek unit is northeast; Big Meadow Creek unit faces predominately south; the Hatter Creek units are basically north facing; and Flannigan Creek unit faces northeast. The year-round streams, from which the names of each unit are derived, have a strong effect on the local climate by collecting water and cold air.

The climate is typical of northern Idaho: winter snow, spring and fall rains, and summer drought of varying intensity and duration.

The seven soil series present are silt loam to loam in texture. They developed mostly from loess deposited on the granitic Thatuna Batholith. Volcanic ash from the former Mt. Mazama (now Crater Lake) influences three of the soil series, increasing fertility, but decreasing soil stability. Dirt roads on these soils are impassable in all but dry or freezing weather because they become a gummy mire and rut easily when wet.

### **Biotic site factors**

The most common habitat type is grand fir/pachistima, with cedar/pachistima next in abundance. The cedar type occurs around draws and on most northerly aspects, with the grand fir type on ridges and most other slopes. The dry south slopes are usually Douglas-fir/ninebark, and cold stream bottoms support subalpine fir/ pachistima, the least common type.

Fire, logging and disease have allowed seral stages to occupy many sites on the forest. Current vegetation ranges from brushfields to stages at or near climax. Open canopies of ponderosa pine, western larch, or Douglas-fir often have tall understories of willow, ninebark and oceanspray. Lodgepole pine, subalpine fir, and/or Engelmann spruce with alder, Pacific yew or other shrubs, are common along streams. The most common cover type seems to be grand fir sawtimber and poles, with some larger western larch, Douglas-fir, western white or ponderosa pine, and occasionally a cedar understory. Sparse pachistima, Oregon grape, and other low growing plants also occur in the understory.

### Inventory

The College Forest was inventoried in 1949 and again in 1974. The 1949 cruise determined a gross merchantable volume of over 22 million board feet of trees 12 inches in diameter at breast height (DBH) and larger. The 1974 cruise recorded a gross merchantable volume of over 66 million board feet of trees 16 inches DBH and larger. Timber volumes obtained are compiled by species in Table 2.

Table	2.	College	Forest	gross	merchantable	
volum	es b	y species				

Species	Volume (MMBF)	Percent Composition
Grand fir	25.67	38
Douglas-fir	16.88	25
Ponderosa pine	8.24	12
Western redcedar	7.47	11
Western larch	5.15	8
Lodgepole pine	.75	1.5
Western white pine	.71	1.5
Other	1.36	3
Total	66.25	100

### FOREST ADMINISTRATION

### Administration

The administrative structure of the College Forest is depicted by the organizational chart in Figure 2 below.

### A note from the Forest Manager

"The College Forest is probably the most valuable outdoor laboratory and student training center maintained by any college of forestry.

The potential for the forest is unlimited, with changes and improvements to be made as soon as additional funds become available. It is not practical in this statement to describe in detail the progress and installations developed on the forest during the past five years or to enumerate all that will be implemented in the near future. However, some of the work planned for the next year is as follows:

- Construct access roads and improve existing roads.
- 2. Install educational demonstration areas.
- 3. Develop a management plan.
- 4. Improve wildlife habitats.
- 5. Install permanent growth plots.
- 6. Obtain habitat maps.
- Continue timber harvesting and student training program.
- Start construction of a log cabin learning center.
- 9. Coordinate research efforts.
- Construct an 849,000 gallon water storage-pond for fire protection.
- 11. Install operational thinning and forest fertilization plots.
- Obtain, if possible, a cable logging system.

I have great dreams and expectations for the College Forest but it is frustrating at times that progress has not developed as rapidly as I would have preferred. However, from a borrowed chain saw in 1972, to a fully equipped operation today, College Forest management has moved in a direction we can all be proud of.

With the programs now under way, the forest will one day be an outstanding educational research and training center. It will be valuable not only for our forestry students and visiting forest managers, but for all public-related interests as well.

The experiences I have had as Forest Manager have been rewarding and I am grateful to have had a part in the development of our forest."

F.H. Pitkin

### INVOLVEMENT OF THE COLLEGES' DISCIPLINES

### Forest Resources

Many courses in the forest resources curriculum utilize the School Forest for field trips and lab work. FWR 499, Directed Study: School Forest and FWR 203, Workshop: School Forest, will inventory the area to be harvested by the summer logging crew. FWR 375,

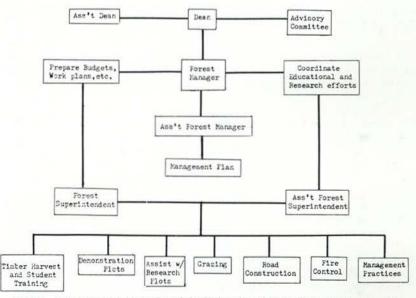


Fig. 2. Administrative hierarchy of the University of Idaho Experimental Forest.



Aerial Photography, uses the aerial photographs of Big Meadow Creek for the lab work in that course. Silviculture, FWR 324, and Advanced Silviculture, FWR 525, classes prepare a management prescription for small areas on the Flat Creek unit. FWR 470, Forest Land Resource Planning, prepares a management plan for the entire forest. Forest Regulation and Finance, FWR 476, uses the School Forest inventory and sales data for laboratory exercises. Many other forest resources classes conduct field trips, laboratory exercises, or utilize data from the College Forest. plans to continue measurements of the silvicultural demonstration areas and the thinning plots. He has another area marked for thinning based on the Stand Prognosis Model of the Intermountain Forest and Range Experiment Station. Professor Stoszek hopes to develop demonstration areas of an uneven-aged management system and silvicultural treatment areas for forest pest problems. Professor Scanlin has established plots to demonstrate the effects of urea fertilizer on forest stands.

As management intensity of the



Tammarak Ski Area, located in the upper left hand corner, borders the Big Meadow Creek unit on the right.

More than 70 research projects in forest resources have been conducted on the College Forest. These are documented in a recent College Forest publication (FWR Experiment Station Publication No. 77, entitled "The College Forest").

Future research projects include updating the School Forest map, obtaining color aerial photography of the forest, and possibly investigating film/ filter combinations for identifying species and habitats (according to Professor Ulliman). Professor Adams College Forest increases, we anticipate more research and further integration of the College Forest into the student's curriculum.

### Wildland Recreation Management

Big Meadow Creek Recreation Area was developed to serve the recreation needs of the Moscow-Troy community; it has also been used for recreation field studies during summer camp (FWR 300 and FWR 301), for recreation planning exercises (FWR 486), and for interpretation exercises (FWR 387). The area was originally a Civilian Conservation Corps (CCC) camp. Over 200 men were stationed there for reforestation, fire fighting, and fire prevention work. The remaining evidence of the camp has historic interpretive potential and is just beginning to be utilized for that purpose.

A Masters thesis (Atkins) on recreation user preferences indicated that May and September were the months with the most intense use. The major recreation activities are picnicking, beer parties, and sports activities. The area also serves as access for hiking, hunting, snowmobiling and cross-country skiing.

In 1969, \$20,000 of federal funding was used to construct 12 picnic sites, two outhouses, a road and a drinking water system. Vandalism and neglect have taken a big toll on the facilities since then.

Future management plans to build a log cabin learning center for summer camp and classroom use may alleviate vandalism and neglect by having a "live-in" manager/caretaker at the center.

Long-term goals of the department include further development of Big Meadow Creek Recreation Area and construction of a trail system with camping facilities on the College Forest.

### Wildlife Resources

Three wildlife courses incorporate the School Forest into their curriculum: FWR 546, Upland Game Ecology: FWR 449, Wildlife Techniques; and FWR 499, Wildlife Ecology Laboratory. Extensive research by the wildlife department has been conducted on the East Hatter Creek and Flat Creek units. The 800 acre deer enclosure on East Hatter Creek was rebuilt last summer and the department plans to continue investigations in that enclosure.

The recent College Forest publication documents 24 wildlife research

continued on page 45

## Owls of Idaho a pictorial essay

### by Jack Whitman

Jack Whitman is a senior in Wildlife Resources.

Owls, those seldom-seen, often-heard denizens of the night, continue to intrigue and mystify mankind. Their nighttime calls impart wildness to some, wickedness to others, and wondering to still others. They have been labeled along with the other birds of prey as something bad – something wicked. Although an owl will occasionally steal a chicken from a farmer's backyard or a quail from a hunter's favorite fencerow, they generally live up to their "flying mousetrap" label.

Mankind continues to be the major killer of owls, either directly through shooting, or indirectly through careless or malicious use of pesticides. One often-heard justification for killing owls is that "they are killers". No one condemns robins for killing worms or swallows for killing mosquitos, yet the idea is the same – predation.

A considerable change in attitude is

Jack Whitma

now becoming realized in most of the United States concerning the birds of prey, including owls. Bounties, once commonplace, are now being replaced by strong federal laws of protection. Most farmers now realize the owl's potential of removing vast numbers of harmful rodents. But still, man is the real predator on the scene.

Man prides himself on being a superior organism. He often sets himself apart from the other creatures on the basis of his intelligence and ability to reason. Likewise, owls and hawks can be separated from other birds on their superiority of vision and hearing senses.

Owls have vision which is at least eight times as acute as man's. The forward eye placement allows binocular vision needed to perceive motion and depth. Studies with barn owls indicate they can locate a dead mouse in ten to one hundred times less light than required by human eyes. The abundance of rods, accompanied by a more spherical lens enables owls to see much better than the typical avian species.

Hearing, more important to the owls

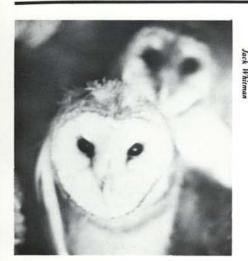


Sawhat



**Pigmy owl** 





Barn owl

than vision, is particularly acute. Morphological adaptations enable some species to capture prey in total darkness. The facial disk of feathers, coupled with internal ear modifications and feathers of a soft, quiet structure, are adaptations not found in other avian species.

Twelve species of owl have been recorded in Idaho. With the exception of the barn owl (family Tytonidae), all Idaho owls are classed in the family Strigidae. Nesting of one or more species of owl can be found in virtually every habitat of the state.



Jack Whitman



Great horned owl 11

### The Threat of Discretionary Power

### by Don A. Hansen

Don A. Hansen is President of REXCON, Inc.

I am an explorationist. My job is to develop and apply new technology to the processes of discovering and developing new mineral and fuel sources. I have been teaching and practicing my profession around the world for nearly 30 years. Much of that time has been spent on those public lands managed by the Forest Service.

About 20 years ago, we began to re-examine our use of public lands, to slowly develop new controls to help protect them, and to use the lands in a way that would maximize the benefits to the public. The result has been to vest the stewardship of our public lands in federal employees armed with regulations that are highly interpretive at best. Interpretation of the regulations has caused a tremendous amount of controversy. The problem, I believe, is caused by the fact that federal employees vested with discretionary powers are required to make decisions for which they have not been prepared by training or experience. Those decisions often affect the local economy where their effect is immediate and measurable. But those decisions also affect the invisible resources - those under the surface for which I explore - and may have even greater consequences on future jobs and our national well-being. The results of poor judgment regarding mineral resources become apparent only after much time has passed and much harm has been done.

In addition to decision making, stewards of public lands are required to arbitrate between groups demanding conflicting controls for a particular parcel of Forest Service land. Every such pressure is a special interest pressure, and should not receive disproportionate weight in the use/nonuse decisions. Dealing with an unknown such as "mineral potential" demands extraordinary objectivity by the decision makers. Tough job? You bet!



Dr. M. Rupert Cutler, Assistant Secretary of Agriculture

### RARE II program

As a result of the combination of unclear regulations, the need to make decisions beyond one's expertise, and dealing with unknowns, federal decisions tend to become autocratic and to exceed the intent of law or public demand. A case in point is the RARE II program instituted last June.

Dr. M. Rupert Cutler, Assistant Secretary of Agriculture, found that the study of potential wilderness (the "roadless" 56 million acres of National Forest lands) had bogged down and had not been completed in the ten years prescribed in the "Wilderness Act of 1964". As a discretionary decision, he designed a system to reactivate the old RARE (roadless area review and evaluation) studies, and dubbed them RARE II. The name, of course, raised the question whether his plan had the sanction of law as did its predecessor. It did not! It was a management tool which, in itself, would not withdraw lands or violate a law. Then he changed the guidelines and definitions under which an area could be considered for wilderness study. Where the original intent was to include only those areas where man had been just a visitor and

had not left his mark on the land, the new definition allowed logged areas, mining camps, and roaded areas used by hunters, ORV enthusiasts, ranchers, miners, farmers, and many others. Mistrust was the natural outcome and a furor resulted.

Although the study itself does not designate land use, it caused land use decisions by the mineral industry to be warped. After all, it makes little sense to invest exploration dollars in an area where mineral extraction may never be permitted. If lands are finally designated for wilderness study, they must be managed as if they were withdrawn under the Wilderness Act. In other words, the discretionary decision to perform a management function within the law and to promote a desirable result has cost millions of dollars and backfired.

Recent use of discretionary powers by federal employees has demonstrated the magnitude of the threat to resourcebased economic and recreational sectors of the west. Further expansion of these discretionary powers, such as the replacement of mineral claim laws with a leasing law, must cease if Americans are to have a healthy mining industry and attendant freedom from the threat of new foreign mineral cartels.

Jeff Egan



### Rare II

### by Rod Johnston

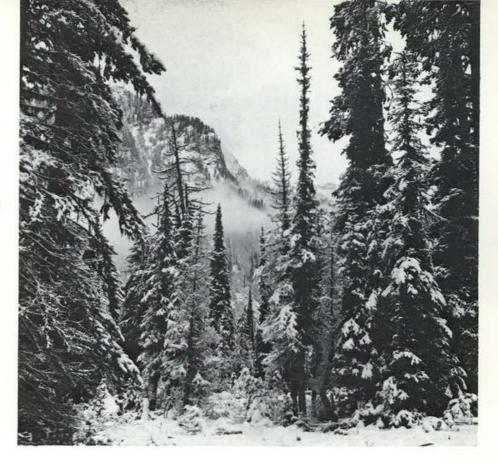
Rod Johnston is a senior in Forest Resources Management.

Rare II stands for the Second Roadless Area Review and Evaluation program and is a takeoff on the Endangered American Wilderness Bill as prepared by Arizona Congressman, Morris Udall. This particular bill was passed on June 23, 1977 by the House Subcommittee on Public Lands. Shortly afterward, Assistant Secretary of Agriculture, M. Rupert Cutler, ordered the enactment of the Rare II program, with the goal of directing Forest Service land planning of wilderness and non-wilderness management areas. The program, initiated during the summer of 1977 and slated for completion within a 15-month period, encompasses a significantly larger area than its predecessor, Rare I. Consequently, the timber and other resources of 44 million acres of roadless areas have been under study through proposed plans and public workshops to determine future classification. At these workshops, the public was informed of the ramifications and intent of Rare II and replied with opinions concerning possible wilderness areas. Furthermore, the public gave suggestions and objections to the study's original plans. Over 200 individual workshops were strategically conducted through the nation until public involvement with the program was completed September 15, 1977.

Total land eligible for wilderness classification by Rare II includes 11 million acres above the current level of Rare I, for a grand total of 67 million acres of National Forest land. If all the lands under study were to be reserved, the total land classification of Rare II would approximate a 3,000 mile long corridor with a width of 35 miles. Linearly, this would be enough to cover from Seattle to Miami and would approximate an area equal to that of Kentucky, Tennessee and West Virginia.

### Eligibility

Assistant Secretary of Agriculture,



M. Rupert Cutler's criteria for wilderness classification make eligible those areas which contain roads not constructed and reinforced for use by heavily weighted, highway-type vehicles. Areas containing heliports, airstrips and small utility dams are also eligible for wilderness classification provided the presence of mechanical equipment is not evident. At least 70 percent of a proposed area must be under federal ownership, and can be any size if markedly distinguished from surrounding lands by topographic or ecologic features such as precipices, canyons or swamps. Logged areas are eligible for wilderness classification if skid trail evidence has withdrawn into the original forest profile and clearcut areas have grown over equal to the surrounding canopy.

### Public responses

Responses favoring 6300 acres to wilderness classification in the Rudd-Moore Lakes area, southeast of Lolo Pass, were ineligible due to their failure to meet official Forest Service guidelines dictating that intermingled ownership be at least 70 percent federal land. Within the Rudd-Moore Lakes area, 40 percent of the land is privately owned.

Additional areas proposed for wilderness classification by the public included: the Elk Summit area, Wepah Creek area, Cook Mountain, Moose Lake, Little Baldy Mountain, East Saddle and the Martin Hill Gravey Creek area. None of these suggestions complied with the roadless area definitions given by Dr. Cutler.

Other responses pertaining to the Clearwater National Forest survey suggested addition of areas already included in the inventory. However, these comments were treated as general opinion in favor of wilderness. The area most suggested as a deletion from the plan was the Mallard-Larkin area due to its rich timber and mining resources.

Of the 2500 north Idaho citizens responding to the Rare II workshops and programs, a majority favored development of energy, minerals and timber resources over wilderness designation. More than 90 percent indicated consideration be given to the development and management of the timber resource for wood fiber. Over 70 percent favored further development of roadless areas for recreation vehicles. Approximately 20 percent expressed a desire for expanding the wilderness system in Idaho's national forests.

### Impact on timber production

Rare II will have a considerable impact on timber harvesting in the Clearwater National Forest. The Forest Service is predicting a 25 percent reduction in timber harvest within three

continued on page 38

### What Would McCall Do Without Us?



### by Kurt Spingath

Kurt Spingath is a senior in Forest Resources Management.

In the past few years, there have been numerous rumors floating around the College concerning the future of the McCall summer camp. Students, faculty, and alumni have anticipated the time when the McCall summer camp no longer meets the needs and goals of the college. The rumors have ranged from dropping summer camp altogether from the program to building anew on the School Forest.

At present, no decisions have been made. Current activities are confined to data gathering providing the background information for future decisions. The decision to be made is not a question of yes or no, but one of where and how. All that has been decided thus far is that there will definately be summer camps in McCall and Moscow this summer.

When the McCall summer camp was started in 1939, McCall was nothing but a small lumber town. The camp was small and simple with only one faculty member necessary to successfully teach and administer the 26 students in attendance. Today the camp has grown through the addition of more students and faculty and many improvements. The mill has seen its last days and the quiet little lumber town has become a much busier lakeside resort.

### Development of McCall area

There are a number of problems to deal with if summer camp is to be continued in McCall. One area of concern is the deteriorating setting around the camp. The land adjacent to the camp is currently under development by Harrah's Club. To the south, Harrah has developed a trailer court called Lakeview Village. In the near future, the camp will be in danger of being sandwiched between condominiums and trailer courts. This danger is enough to cause alarm among those concerned that the woodsy atmosphere will no longer be present to provide an outdoor educational experience.



"I'll wash your back if you wash mine." (McCall oldtimers)

Another problem is the physical condition of the camp. Those who have attended or visited the McCall camp know the sanitary conditions are not up to par. If the camp is to be continued, there are many improvements that must be made and these will be expensive. Improvements include providing more facilities for women and bringing the conditions of the showerhouse and kitchen up to state health standards. Word has been received from higher authority that a sewer system must be constructed to complete the needed improvements. The price tag on this alone is in the neighborhood of \$50,000.

There has been local pressure concerning land use along the lake. The camp occupies lakeshore frontage that is considered prime recreation area. The college is having an increasingly harder time justifying the use of the frontage for only eight weeks of the year and depriving the public of use during the peak of the season.

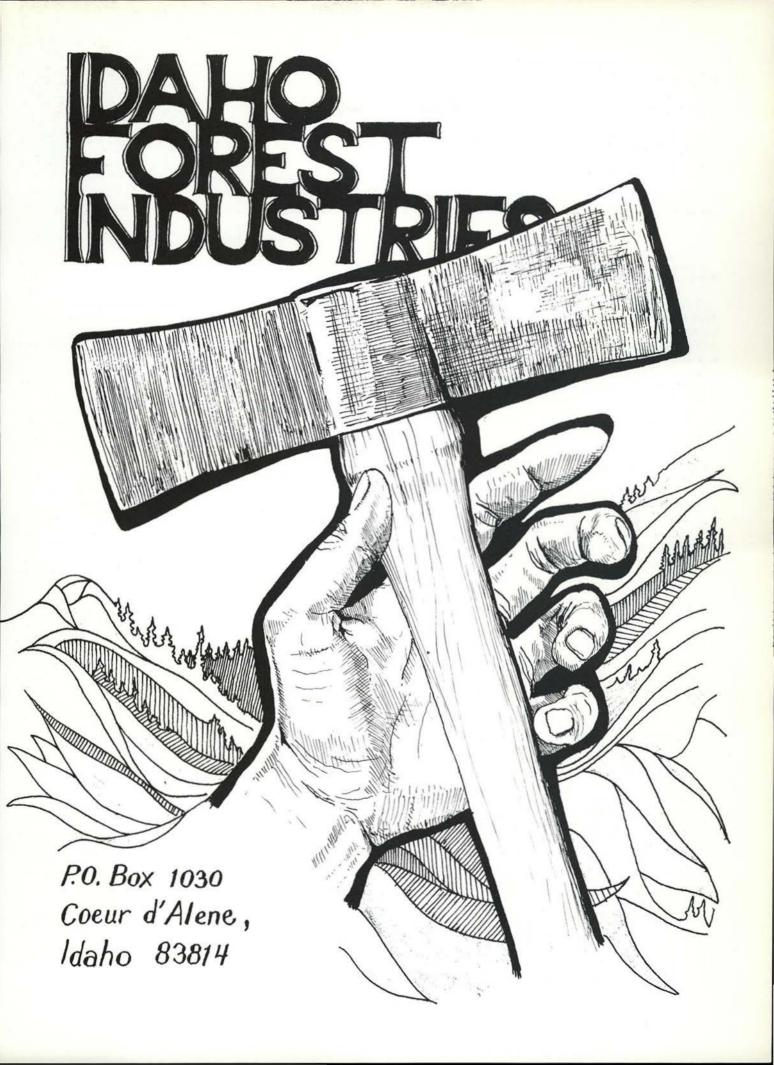
The present economic problems are far greater than most realize. The annual maintenance bill is approximately \$10,000 per year with \$3,000 to \$4,000 of that due to vandalism when the camp is not in use. With expenses such as these, added to the pending improvement costs, the camp can be expected to go in the red deeper than usual if the college is to keep it open much longer.

### Alternatives to McCall camp

There are many alternatives to be considered before any decisions are made. Last year a summer camp in Moscow was introduced on a trial basis. It seemed to work out well, especially for those who were married; the camp did not provide the same outdoor experience that can be found at the McCall summer camp.

Presently, alternatives are being explored in the event of the sale of the McCall site. Attempts will be made to

continued on page 46



## Looking Out

### by Kevin Kennedy

Kevin Kennedy is a junior in paleobotany.

The accumulated sand and dust of yet another winter swirls and blows as the helicopter sets down. Back home again! Back home to Horseshoe Lake Lookout.

I step out onto the mountain top for the first time since I left last September. I look up at the boarded-up glass house on the tower and soak up the incredible surroundings.

I look first to the east to the golden horizon lined by the Bitterroots. I look to the south and to the sparkling Selway Crags in the morning light. I look finally to the north and west at the endless rows of ridges, hills and mountains of north Idaho. Far below, the glistening waters of Cayuse Creek flow from the east. Gravey Creek runs from the south, Monroe from the west, all heading eventually north to join the North Fork of the Clearwater.

The F.C.O. (fire control officer) and

I raise the shutters of the tower, unload my boxes of food, books, clothes, my radio and my flute. We heat up the propane for the stove and refrigerator and finally let the rest of the forest know, via the radio, that Horseshoe is officially 10-8 (in service).

I watch the helicopter lift off and fly away. I realize, once again, a summer of solitude is upon me.

### Mornings are nicer in the mountains

And so the routine begins. 7:00 a.m., routine check-in. Early morning on mountain's edge. The birds sing, the sun's so warm, while the canyons are still in shadows. The deer are out and about and the smells of breakfast mingle with the mountain-sweet air.

The radio chatter of daily Forest Service routine begins. The other lookouts on other districts check in, spike camps and trail crews call in and the business of the day goes on.

It's usually after breakfast and the dishes are washed, that I go "10-7" for water. It's a beautiful hike of a mile and a half to the sweetest water I've



Ted Clutt

ever tasted. It comes from a crystal spring surrounded by pink monkey flowers and shooting stars, colorful mushrooms and soft green moss. Only the little elves hiding under the toadstools are missing.

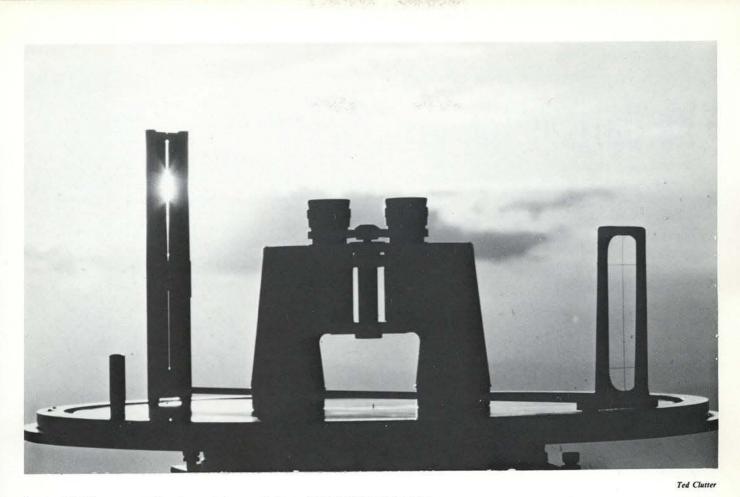
About 200 yards downstream from my spring (when one spends all summer alone on a mountain, he becomes quite possessive of his surroundings – "my spring, my mountains," etc.) lies beautiful Horseshoe Lake. A quick dip in the just-perfect temperature is the best way I could think of to begin any day.

It's usually at the lake that the deer come to watch this crazy, two-legged animal splash and sing and laugh each day. The echo from the middle of a mountain lake is fantastic. I sing harmonies with myself. After the swim, I hoist the 5-gallon water sack to my back and head back to the tower for a day of "looking out".

### The days are never long enough

"So, what do you do all day?" is the big question that every single visitor (few as they are) asks, or "Don't you get lonely?" And as always, I show them my books, flute, kite (you don't have to run to get a kite off the ground when you're already 56 feet up), my cookbook, cameras, and drawing pad and they understand why I never have enough time in a day to get all the things accomplished that I want to.

To spend a day staring at billowy



clouds drift by, to spend a day watching the hawks and lone eagle soar, just to sit and be – no people, no crowds, no one but yourself – you have to become a best friend of yourself. You can only go sane. You have a chance to dream and to dream for hours, days, weeks. A chance to think thoughts clear back to their source, and then even further. A chance to sit down and read a book from cover to cover without getting up. A chance to live the most positive, healthy and spiritual life you could ask for.

I have time ... TIME! I have time to play my flute for hours with the setting sun. I have time to put my heart and soul into every loaf of bread I bake. And of course, I have all day to keep my eyes open for smoke. After all, I'm actually getting paid to live in this heaven. As Edward Abbey said when he was a lookout in Glacier National Park, "The government is paying you just to stay awake."

And so the daily routines continue with all their slight variations; moon changes, occasional meteor showers, exciting radio gossip, mail and food deliveries by helicopter every other week, and sometimes, usually more often than one would think, those incredibly powerful thunder storms. There I sit, a lone lightning rod sticking 56 feet into the air on one of the highest peaks around.

### In the midst of a thunder storm

A storm appears early in the day on the southwest horizon, a barely visible front. By noon a fleet of cumulus clouds drift by, by four o'clock they're setting darker and becoming anvil-shaped. Then the sky grows darker and wind begins to blow; not blow but howl! Lightning begins to flash in the distance and other "looks", already in the storm, are reporting strikes and turning their radios off when the storm gets on top of them. And then it hits. BAM! Sitting in the middle of a thunderhead, I'm blinded by a flash of lightning and before I can jump, my eardrums are shattered by the thunder clap ("clap", hell, thunder applause). The ground wires from the lightning rods buzz and I'm covered with goose bumps. I wonder just how many more of these storms this old tower can weather (let alone me!).

As quickly as it hit, it's gone. More often than not, the sun pops out and then a rainbow appears. Not just a small fraction, but the complete arching rainbow stretches across the eastern sky for miles. The secondary bow appears too, with its reversed color sequence reaching from Kelly Creek across Cayuse Creek clear over to the Lochsa.

It's times like this, when beauty is defined in so many ways, that bring me to my knees in tears.



# The College Logging Crew

### by Sorrells (Ted) DeWoody

### Sorrells DeWoody is a senior in Forest Resources Management.

The college logging crew, which normally comprises six to eight men, conducts most of the timber harvesting on the School Forest. Assistant Forest Manager Bob Reggear has run the logging show as crew chief since its inception in 1971. Bob and one seasoned student train a crew of "green" students in all components of ground logging except loading and hauling.

The crew meets at six in the morning at the Forest Nursery headquarters on Sweet Street where they set out for the Flat Creek Unit of the College Forest. The day ends at 2:30 p.m. when the crew heads back to Sweet Street. During the hot portion of the summer, these working hours are shifted one hour earlier. Student pay begins at \$3.50 per hour and increases as the art of logging is mastered. The crew members represent many majors within the college.

### Skill development

During the first month or so the crew learns the rudiments of logging. Each phase of the entire operation is explained, demonstrated, practiced, and critiqued. The capabilities and limitations of the skidding machines are carefully learned. The development of the skills required to judge or "read" a tree in order to determine the best way to fell it are mastered by the students through the patient coaching of Bob.

Bob is with the students constantly. He demonstrates the proper way to fell trees, buck logs, set chokers, and skid the tree lengths with the rubber-tired skidder or cat to landings where they are sold. The students learn how to operate and maintain all of the equipment on the College Forest.

An indication of the success of Bob's training methods is the safety record which has been built up over the past six years. Only a few minor injuries have occurred since the logging crew was formed. During the indoctrination period, Bob insured that the crew learns the safe way to perform each task. On this job safety is first and production is second.

Once students are familiar with all aspects of the logging show, the routine of logging truly begins. The crew members switch jobs on a daily or less frequent basis, as agreed upon among themselves.

Table 1. College logging equipment.

### Equipment

Since its beginning, the college has come a long way in obtaining the equipment necessary to manage the forest efficiently. Table 1 lists the equipment the college has acquired. It should be noted that the Clark Equipment Company has agreed to donate a skidder every time a new model comes out. The college pays only for the tires and shipping costs.

6Super X2 Homelite thinning saws191Homelite 650 chainsaw191John Deere 450C caterpiller w/6 way blade191Clark Ranger 666 skidder191Clark Ranger 667 skidder19	Units	Description	Year Obtained
1Homelite 650 chainsaw191John Deere 450C caterpiller w/6 way blade191Clark Ranger 666 skidder191Clark Ranger 667 skidder191International TD24 caterpiller19	6	Homelite 955 chainsaws	(every year)
1John Deere 450C caterpiller w/6 way blade191Clark Ranger 666 skidder191Clark Ranger 667 skidder191International TD24 caterpiller19	6	Super X2 Homelite thinning saws	1976
1Clark Ranger 666 skidder191Clark Ranger 667 skidder191International TD24 caterpiller19	1	Homelite 650 chainsaw	1975
1Clark Ranger 667 skidder191International TD24 caterpiller19	1	John Deere 450C caterpiller w/6 way blade	1973
1 International TD24 caterpiller 19	1	Clark Ranger 666 skidder	1972
1 International TD24 caterpiller 19	1	Clark Ranger 667 skidder	1976
	1		1977
	Assorted		rs

Frank Pitkin



### Fire protection

Last summer a 250 gallon capacity tank was purchased and mounted on an old, but trustworthy, 4x4. This "pumper truck" is located near the logging site during the summer.

The College Forest, being part of the Kendrick Fire District, keeps a small fire cache at the logging site with an assortment of pulaskis, shovels and backpumps. An enlarged road system has greatly enhanced the accessibility of the forest in the event of wildfire.

### Individual involvement

The crew chief encourages the students to apply all of their forestry training to their logging operations. After a student has obtained enough experience, he is allowed to direct all of the harvesting operations in a small (5 to 7 acres) area specified by Bob. The student determines his "cut" and "leave" trees, spacing, and location of skid trails. He then performs all of the felling, building of skid trails, and directing of skidder operations within his area.

The felling of trees places the student sawyer in an excellent posi-





"How do you put this thing in reverse?"

Kathi Thompson

tion to judge how extensive the heart rots are within each tree species. Infected trees and those with frost cracks or forked tops are removed.

The sawyer has a real opportunity to leave high quality, vigorous trees to provide shelter and seed for the new understory. Not only will these trees increase in value, but their presence will add beauty which will grace the forest in future years. The opening of the forest floor will also increase the browse available to big game.

### Silviculture of harvesting

The effect of harvesting activities upon the forest stand composition is often questioned. Most of the forest's merchantable timber is located on the Flat Creek Unit and consists of overmature overstory with a well-stocked understory. The more accessible sites were logged for western white pine and Douglas-fir before the college acquired ownership.

Many of the harvesting methods used on the forest today defy inclusion within any of the basic silvicultural systems. Because each student is able to make his individual mark upon the College Forest, cuttings have the flavor of a selection cut. Theoretically, the silvicultural system used is a modification of the shelterwood system. An even-aged stand is obtained over a 10 to 20 year period in one or two cuttings.

In practice, the harvesting takes the form of an overstory removal. Large

amounts of grand fir and western redcedar with diameters in excess of two feet are removed to open the stands to vigorous poles, saplings, and seedlings. Large western larch less frequently adds to the volume removed.

### Other activities

The logging crew generally operates into January each season. When the fall semester begins, students currently enrolled are allowed to log on days that they have no classes. Because of the wet fall weather around Moscow, the crew performs other forest activities. when the soils become unstable for logging. The crew has conducted thinning operations, sale layout activities, aided in a large fertilization project, helped in prescribed burnings in conjunction with fire ecology classes at the college, and assisted professors and graduate students in their research efforts on the College Forest.

### Educational opportunity

ERSITY OF IDAHO LIBRARY

As an educational tool, the logging crew is one of the best experiences the College of Forestry has to offer. The crew is an invaluable asset, providing students with experience in timber harvesting and applied forest management. Students have an opportunity to look with pride (or disdain) on areas that they have logged. The College Forest administrators have been able to make great strides forward in implementing their objectives for the forest while offering practical skills to student which they will use throughout their careers as foresters.

### 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 Betty Kaufman, Placement Coordinator, College of Forestry, Wildlife and Range Sciences, University of Idaho, Moscow, Idaho 83843.



### **Desert Trails**

"There are some who can live without wild things, and some who cannot." Aldo Leopold, 1948

### by Stan Galloway

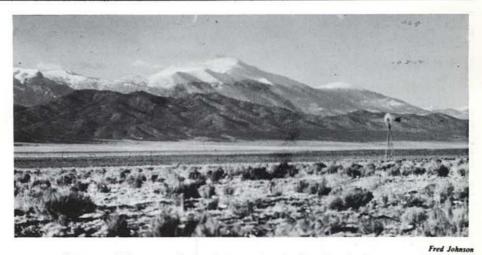
Stan Galloway is a graduate of Northwest Nazarene College and is currently enrolled in Wildland Recreation Management.

There are regions within our nation which have been able, primarily because of a lack of conflicting uses, to retain much of their wildness and beauty. These regions are our western deserts.

Individuals who have seen the need for proper management of portions of these deserts have joined together to form the Desert Trail Association. This organization is "devoted to the establishment of the first national scenic trail, planned from its inception to traverse the entire width of the United States from Canada to Mexico, exploring the western deserts."

Since the organization's beginning in July of 1970, some of its hopes have become reality. There is now a feasibility study being done by the Bureau of Outdoor Recreation. If approved as a national scenic trail, the Desert Trail would pass through some stark yet beautiful areas of the western United States. One need only look closely to observe the beauty of the desert wild flowers blooming in the sand or the wild horses roaming in the high desert.

The length of the proposed trail



assures that any hiker can find what he wants to see or study. From the glacial valley of Kiger Gorge in the Steen's Mountains of Oregon where deer and beaver abound, to the lava flows of Idaho's Craters of the Moon or the alkali flats of Death Valley, one can see a great diversity of habitats as well as natural beauty.

By the time this article is published, there will probably be a definitive trail route through the western deserts. If present ideas prevail, the Desert Trail will be a corridor of travel unlike the single tracks of the Pacific Crest and Appalachian Trail. This corridor would be outlined on maps indicating broad expanses where travel would be easiest.



A single, brushed-out track would create too much impact on some areas. Because of this, use will be concentrated only at destination points, not at the interconnecting areas.

The Desert Trail Association has always been conscious of its responsibility to promote stewardship of the resource which they use. While promoting use, restrictions such as limited numbers of participants on DTA sponsored hikes, newsletters outlining safety and health hazards of desert travel, and information sessions concerning physical and biological entities of the desert have helped command a broad base of support for the DTA.

The DTA has another function. The organization plays an informative and supportive role, aiding the various land agencies with which it comes into contact. It has been called upon to add its collective knowledge in management decisions affecting the desert areas of the western United States. With continued support, the Desert Trail will be established and the DTA will continue to be a positive force in natural resource management.

An Idaho Section of the Desert Trail Association will soon be established. Memberships in the DTA, ranging from individual to sustaining categories, are available by writing to the DTA. Their present address is: Box 589, Burns, Oregon 97720.

# Everything You Wanted to Know About

### by Mike Sullivan

Mike Sullivan is a senior in Forest Resources Management and Wildlife/Fisheries Management.

This is an article about jobs; what ones there are, where they can be found, how they can be obtained, what kind of work you can expect, and who you can or will be working for.

Let's begin by assuming that you are a natural resources person wishing to utilize your newly-acquired knowledge on a part-time basis and get paid for it to boot. One of the first and most likely places to look for employment is the federal government, specifically in any of six different agencies.

### **U.S. Forest Service**

The first of these is the United States Forest Service. You can obtain jobs covering any of the FWR college disciplines, but most likely the job you get will be directly or indirectly related to timber. This is due to the fact that most Forest Service funds are allocated and earmarked for the expressed purpose of wood production. Other jobs not so abundant include being a recreation, watershed, or wildlife-fisheries technician. All one needs to do to apply is to mail a Standard Form 171 to one regional office during a specified time slot, usually between December 1 and January 15. Another way to score a job is to sign up on the student requisitions that can be found on the bulletin board near the FWR computer terminals.

### National Park Service

Employing fewer people, but in more varied work roles, is the National Park Service. Work in this agency is more conservation oriented and deals with recreation, fisheries, wildlife, forestry, and public relations. The Park Service will not accept 171's, except in special cases, and you must send to the Denver, Colorado office for the necessary forms. Applications for two different parks per region are allowed.

### **Bureau of Land Management**

To work for the Bureau of Land Management, you should have expertise in range management, recreation, fire control, timber, and to a lesser extent, wildlife and fisheries management. Federal form 171's are accepted and one may be mailed to each state office, specifying in which two districts you want to work. Student requisitions for BLM work are also available from time to time in the Forestry building.

### U.S. Fish and Wildlife Service

Another federal agency, the United States Fish and Wildlife Service, primarily employs wildlife and fisheries biologists. A bachelor's degree is almost essential, even for seasonal or summer employment. To qualify for consideration, you must take either the Professional Administrative and Career Examination (PACE) or the Civil Service summer test, both of which are usually offered in January and again in April. People are then put on a list and selected for work based on their test scores and current eligibility.



### **Bureau of Outdoor Recreation**

The same procedure outlined above also applies to the Bureau of Outdoor Recreation, except that this agency only accepts applicants who have taken the PACE exam. Work with the BOR deals specifically with recreation planning, research and design. This situation may be changing, however, as more seasonal and permanent jobs could become available within a few years.

### Soil Conservation Service

Applying for work with the Soil Conservation Service follows the same guidelines as work with the Forest Service and the BLM. An SF 171 should be sent to a central area, probably the state office, within a certain time frame in order to be considered for summer work.



### State agencies and private companies

Of course, the federal government is not the only employer available for testing your skills. There are numerous state agencies and private companies that actively seek college students for temporary work. State public land agencies employ people in such fields as forestry, range science, and fire control. Recreation and parks departments in many states seek applicants for work in outdoor recreation and public relations. A state application form and/or a personal interview may be necessary to obtain a job in this category.

There are many private firms that employ people as environmental consultants for work in every resource discipline. Numerous conservation organizations (Sierra Club, Wilderness Society, National Audubon Society, National Wildlife Federation, Ducks

## Jobs, But Were Afraid to Ask

Unlimited) also hire natural resource graduates.

Last, but not least, there are numerous logging and timber firms that employ foresters and wood products people. These companies range from small, local outfits to the likes of corporations such as Potlatch, Boise-Cascade, Diamond International, Louisiana-Pacific and Weyerhaeuser. All private firms usually require both a completed application form and a personal interview from prospective job seekers.



### Where to go for job advice

Don't forget that there are many professors in the FWR college who are willing to help students in their search for employment. Foresters should keep in touch with Dr. Dave Adams and Dr. Leon Neuenschwander for jobs in silviculture, mensuration, and other timber options. Wood products enthusiasts and other timber beasties can talk to Dr. John Howe about jobs with both the government and private firms. Doc Howe also handles a considerable number of student requisitions. In addition, the Dean's Office keeps an updated list of forestry jobs and sends copies to students whose names are kept on a mailing list.

Wildlifers should stay in contact with Dr. James Peek about fish and game prospects and Park Service openings. Fisheries majors wishing to gain experience in hatchery work can talk to Dr. George Klontz. Those involved in fisheries management might be interested in Dr. Michael Falter's projects on the Columbia River Dam system with the U.S. Army Corps of Engineers. Range people who consider themselves to be sharp individuals should talk to a natural resource professor of the same name about BLM job openings. Wildland Recreation majors ought to make Dr. Jim Fazio aware of their occupational aspirations. Keep in mind also that career openings are posted on numerous bulletin boards throughout the College of Forestry, Wildlife and Range Sciences.

### Internships and graduate research

Of course, there are other ways to gain important job experience, one example being through the many job internships being offered by public and private agencies. Pay is minimal at best, but the experience is invaluable. Internships are available through such government agencies as the National Park Service, the Soil Conservation Service, the Bureau of Land Management, the Forest Service, and many state agencies. Internships in private organizations can be found through the National Wildlife Federation, the Wilderness Society, Friends of the Earth, and such corporations as Weyerhaeuser, Potlatch, Boise-Cascade, and Shell.

Another valid option for students seeking employment is to enroll in graduate school for a master's or a doctorate degree. Opportunities are available in every natural resource discipline for cooperative research programs involving work with both public agencies and private firms. One should not neglect to mention the work-study programs available in the FWR college for undergraduates and graduates wanting to gain both practical experience and pay for their efforts.

### Requirements for permanent positions

Concerning professional requirements for permanent employment, the



U.S. Civil Service requires more than just a Standard Form 171. A permanent resume, when register openings permit, must include an SF 171, 3 Job Interest Cards, and a list of College Courses and Certificate of Scholastic Achievement. The three big concerns to be stressed in applying for a rating are grades, college degree(s), and experience.

State public agencies require the same application that is used for temporary employment, with some additions that include grade transcripts, letters of recommendation, and other pertinent data. Private organizations and corporations generally expect the same kind of detailed personal resumes as those outlined above.

Below are listed some suggestions that I have drawn from my personal job experiences as a park ranger, forester, fisheries aid, and biological/watershed technician. My first suggestion is to become actively aware of and involved in as many activities as is practical. This may include, but is not limited to, membership and leadership in conservation groups, college organizations, journalism activities, honor societies, and other extracurricular social and educational endeavors.

Secondly, I believe it is of considerable importance to earn good grades

continued on page 47

### Women in Natural Resources

### by Debbie Sims

Debbie Sims is a senior in Wildland Recreation Management.

Being a woman in the College of Forestry, Wildlife and Range Sciences (FWR) has always been interesting to say the least!! For instance, I had never realized what it felt like to be a minority until my first class here, in Room 10, which consisted of 4 women and about 70 men. In addition, I have sometimes found it hard to cope with various irritating remarks such as, "Why don't you major in something useful such as Home Economics?!" or, "So, you are in Forestry with all those men? You must be trying to obtain your Mrs. degree!!" or, "Forestry?! You must be joking! Are you sure this isn't just some tomboy stage that you are going through?"

Throughout my four years here, I have always been curious to discover if other women in the college have had similar experiences. Why did they choose their major? What did they want to do once they graduated? It is this same curiosity which gave me the incentive to write this article. With the help of Jan Bal, various faculty members, and with valuable input from some of the women in the college, I think we have come up with some very interesting findings.



Nancy Mehaffie's crew on the Salmon National Forest.

Jan and I started by going to Dean Ables' office to discover if the enrollment of women in the college had increased in the past ten years. According to the fall semester statistics, both the numbers of men and women in the college have increased, *but* the percentage increase in undergraduate women from 1967-1976 was 2060 percent versus a 68.31 percent increase in the men. Table 1 below, obtained from the Registrar's Office, gives the number of men and women in the college. The table is broken into 1) graduate plus undergraduate students, and 2) undergraduates only.

Table 1. Numbers of men and women in the College of Forestry, Wildlife and Range Sciences.

Year of:	Men	Women	Total
1967-68			
Grads & Undergrads	376	5	381
Undergrads only	325	5	330
1968-69			
Grads & Undergrads	394	5	399
Undergrads only	343	5	348
1969-70			
Grads & Undergrads	374	6	380
Undergrads only	312	6	318
1970-71			100
Grads & Undergrads	451	11	462
Undergrads only	393	10	403
1971-72			-
Grads & Undergrads	500	21	521
Undergrads only	443	19	462
1972-73			
Grads & Undergrads	602	27	629
Undergrads only	548	26	574
1973-74			
Grads & Undergrads	593	38	631
Undergrads only	528	37	565
1974-75			
Grads & Undergrads	628	68	696
Undergrads only	544	62	606
1975-76			
Grads & Undergrads	675	82	757
Undergrads only	572	75	647
1976-77			
Grads & Undergrads	668	123	79
Undergrads only	547	108	65

Table 2 shows that the enrollment distribution (1976-77) of men and women in the different options is as follows:

Table 2. Enrollment distribution.

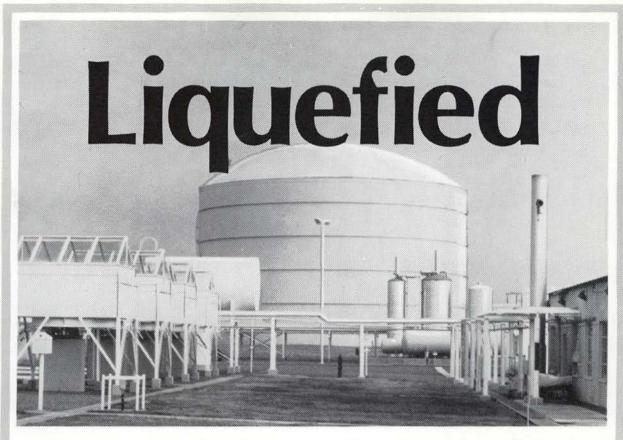
Option degree total	Men	Women	Total
Forest Resources	185	22	207
Range Resources	26	3	29
Wildlife/Fisheries Resources	47	4	51
Wood Utilization	31	3	34
Wildlife Resources	122	39	161
Fisheries Resources	39	4	43
Wildland Recreation Management	70	30	100
B.S. Forestry Undeclared	27	3	30
College Total	547	108	655

The Wildland Recreation Management option has the highest proportion of women with approximately 30 percent of the program being female.

### continued on page 49



Carolyn Sands working at Swallows Park.



# Super cooled, stored, vaporized for your natural gas heating next winter.

New in Northwest natural gas supply facilities is this liquefied natural gas storage plant at Plymouth, Washington. It is operated by the Northwest Pipeline Corporation, our WWP supplier.

It is a \$17 million installation. It works like this: Pipeline gas is fed into the plant where it is liquefied by cooling to minus 268 degrees F. The plant stores, in a liquid state, the equivalent of 1.2 billion cubic feet of natural gas.

When it is time to call on this reserve, the liquid natural gas is vaporized and fed into the pipeline system.

WWP is entitled to 18 mil-

lion cubic feet per day from this liquefication facility, more assurance that our present and future customers can depend on an ample supply of natural gas for their home heating.

And Plymouth is just one of the sources and facilities that enlarges our WWP supply of natural gas.

Others are the Jackson Prairie and Clay Basin underground storage reservoirs.

In addition, more natural gas is coming into the pipeline. Recent drilling successes in Western Canada have added 200 million cubic feet daily to the Northwest supply. Our WWP participation in Rocky Mountain exploration has already brought in nine producing wells.

In the future, "Alaskan gas" will augment the Northwest supply. The President and Congress recently approved an Alaskan natural gas transportation system to deliver North Slope gas to the lower 48 states.

So, you can be confident there is a reliable supply of natural gas for you—far into the future—and at a cost comparable to alternative fuels.

Clean-burning natural gas an excellent value for all your heating needs.

### THE WASHINGTON WATER POWER COMPANY



"Nature's peace will flow int The winds blow their freshn and cares will drop off

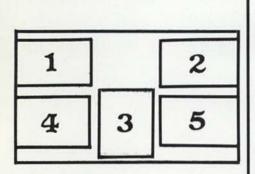




ishine into flowers; and the storms their energy, n leaves." John Muir







The photographs on the preceeding color photo essay are described and credited as follows:

- 1. This Rocky Mountain goat kid was photographed in the high backcountry area of Glacier National Park. It was an overcast day, around noon, when this kid wandered away from the rest of the herd and stopped to pose for this shot. Photograph by Rick Myers.
- 2. A late October afternoon along the St. Joe River and an abandoned barn created this scene. The barn, which collasped a few years ago, was located about 10 miles upriver from St. Maries. Photograph by Ted Clutter.
- 3. Late summer sunset on Huckleberry Mountain along the St. Joe River. Photograph by Ted Clutter.
- 4. Pacific dogwood (*Cornus nuttallii*) along Glade Creek in the Lochsa/ Selway area. This site is within the recently established Lochsa Natural Area which was established to preserve this and other coastal disjunct plants. This area is the only location of this species east of the Cascades. Photograph by Fred Johnson.
- Photographed in mid-summer in Glacier National Park, this spruce grouse chick was found near its mother. Photograph by Rick Myers.

"Never had no need for any military aid. Never was a member of the light brigade. Ain't got no castle to defend or attack. Still I seem to be picking up flak." –Fred Johnson



### FROM FRUIT BOXES TO FORESTS ...

From a door to door fruit box wood business, the Bennetts...Guy, Frank and Dick...have built Bennett Lumber Co. in Princeton, Idaho, into one of the most automated lumber mills in the world.

With a capacity of about 42 million board feet per year, log scale, Bennett Lumber depends upon federal timber for 70% of its resources and sponsors a silvicultural program with private woodlot owners and harvests some state forests for the other 30%.

**The perpetual forest...**one of our most important resources. And it's renewable. Trees go on and on. They will continue to do so; the lumber industry will see to that. Bennett Lumber Co. will satisfy many kinds of needs and luxuries we all share...and then put trees back again.



# **Current Publications in** Natural Resources

### by Michael Hollmann

Michael Hollmann is a graduate student in Wildland Recreation Management.

As students, we are often encouraged to attend class. We also spend numerous hours reading textbooks. From time to time, we wonder what is going on out there in the "real world". Field trips and guest speakers help to increase our awareness of current land management problems and new techniques for meeting increased demands.

Another inexpensive and effective means of keeping up with our respective disciplines and their job markets, is to read the current literature. Fortunately, much of it is free! Several recent publications concerning natural resource management are described below. Most are available from the source indicated.

Tree Planting in the Inland Northwest: Short Course Proceedings. David M. Baumgartner and Raymond J. Boyd, 1977. Cooperative Extension eds. Service, Washington State University, Pullman, WA 99163. (\$6.50)

311 pp.

The objective of the short course is "to present current information to technicians and foresters who plan and reforestation activities." supervise Emphasis is placed on the care and use of bare-rooted seedlings. Seed procurement, site preparation and planting considerations are covered.

Wood in American Life: 1776-2076. W.G. Youngquist and H.O. Fleischer. Forest Products Research 1977. Society, 2801 Marshall Court, Madison, WI 53705.

(\$9.95 non-members)

An historical account of wood products and wood use in America from colonial times to the present. Discusses wood uses from fuel to furniture, construction and art. Considers future possibilities for the wood products industry. Contains over 60 photographs and sketches.

Remote Sensing of Environment. Joseph Lintz, Jr., and David S. Simonett, eds. 1976. Addison-Wesley, Reading, MA 01867. (\$27.50)

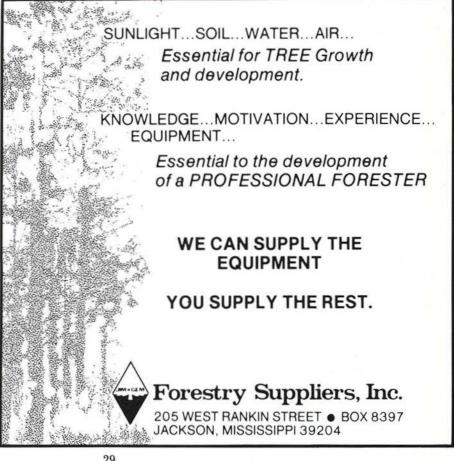
694 pp.

A thorough, yet simple, approach to remote sensing "written for first-year graduates and advanced under-graduates." Contributions by 20 authors covering the applications of aerial photography, as well as the utility of non-photographic systems, microwave systems and geophysical systems. Part one of the text introduces principles and concepts. Instrumentation is discussed in part two, and supporting functions are covered in the third part. Part four encompasses applications, analysis, interpretation and resource management. Last, but not least, is a reference section containing over 900 citations.

The Historical Role of Fire on the Bitterroot National Forest. USDA Forest Service Research Paper INT-187. 1976. Intermountain Forest and Range Experiment Station, 507 25th Street, Ogden, UT 84401. (Free) 29 pp.

Intended to provide information on historical fires in the Northern Rockies. "Presents intensities, frequencies and influences of fire on stand structure and composition on the Bitterroot National Forest." Findings from studies of nearly 900 individual fire scars on living trees are discussed. "Results show that fire was historically a major force in stand development, but that it has been of minor significance during the past 50 years, possibly because of organized fire suppression."

continued on page 42



## Once in a Lifetime

### by Chris Griska

Chris Griska is secretary to Associate Dean Ernest Ables.

From the first moment that Idaho Fish and Game notified me of my luck in drawing a moose permit, I caught nothing but flack from everyone I knew. Not only did I hear, "Now what is a girl going to do with a moose permit," but, "Who is she going to get to shoot it for her?" and last but not least, "Don't bother to come back to work if you don't get one!" The last comment came from Dr. Ables, along with a detailed short course on the proper identification of the animal in question! It was rather evident from the beginning of this venture that I had no choice but to come back with a kill no matter what!

### The stake out

Some friends and I took a summer trip into moose country on the Lochsa River to check out the number of animals, and also to see if elk hunting would be profitable in this particular area. During that week, the elk almost climbed into our sleeping bags and cuddled up to us! One morning I awoke to the sounds of an elk chewing his breakfast not more than 40 feet away! My moose were around also, but the bulls were in hiding during the day – they would only come out at night to play "moose tag" games in the swamp. The week was spent finding appropriate places to camp and also to hunt for the moose – this was to be my big effort for the fall.

Opening day arrived early. September 3, with extremely hot weather and me still in Moscow. It would be a month later before my companions and I left town to go out on the fall hunt - they for elk and I for my bull moose. During this entire month, everyone in the College of FWR was giving me nothing but trouble and were firmly convinced that my chances of shooting a moose were a big joke. Me? I was oddly calm about the whole thing with just a feeling that

all would go well in the Lochsa country.

### The hunt begins

Saturday, October 1, found my two companions and I on the road, and Sunday morning we began our twelvemile pack up on the mountain with our four horses loaded for a week's stay. We arrived early at our main camp site, and through the trees we could see a cow and calf moose feeding in the swamp. After getting settled and having dinner, we plotted our strategy for the next day. My two companions were after elk and my sole function in life that week was to get a bull moose. As had happened during the summer trip, that night the moose stayed up and played "tag" out in the swamp. Once again, I could hear that big bull slogging around in the muck. Temptation, temptation . . .

The next morning we were up before dawn getting my two friends ready to go out for the day, while I stayed in camp and waited for my bull. (Typical hunting strategy of the female – let the males come to you.) After they had left, I started all of the usual camp chores, cleaning up breakfast dishes, feeding and watering the horses, and general clean-up. By ten o'clock I was overdue for a cup of coffee and had just gotten through stirring it when I looked up and saw a cow and calf off to my right, and another animal behind a small snag off to the left. It took only seconds to realize, as he lifted his huge head, that my bull had indeed come right into camp and was standing there staring at me!

### The long-awaited chance

I grabbed my .308 rifle, slammed a cartridge into the chamber and ran to the nearest tree - I knew my nerves were far from steady enough to shoot without a rest. It took a few seconds to calm down sufficiently to put the first shot into the bull's neck, and then the next two shots followed easily - the third catching him in the jugular. At this point the bull looked directly at me and slowly shook his head - this was his only reaction! Mine was almost complete panic and I began to seriously doubt if my rifle could actually put him down. I ran inside the tent, found my extra ammunition belt, reloaded the clip on the .308 and ran back outside, dragging my .357 magnum pistol with me. As I fired the fourth shot, he wheeled and unfortunately, my bullet caught him in the left hip. He managed to walk about twenty feet before going down and I



put two more shots into his neck before he finally stayed down. At this point, I remember going back into the shelter and finishing the cup of coffee before it finally hit me that the goal was accomplished, and that I had done it by myself. The first thing I did was to grab my tag, punch it and get it on the monster – and was he ever big, 1150 pounds total!

My two companions wandered back to camp late in the afternoon and their first reaction was, "Sure, Chris, we know you got your moose, just calm down and get your feet back on the ground." I finally pointed to the huge animal lying in the middle of the swamp (yes, I did make one mistake -I shot him in approximately twelve inches of liquid muck) and then, not only did their eyes pop a bit, but they believed me! First, we tried to hitch one of the horses to the carcass and pull the animal out onto firmer ground. Try as she would, the old girl could only budge the carcass about a foot in all. So, our alternative was to gut and quarter him right in the swamp, which we did after building a platform so that we could have something firm to stand on.

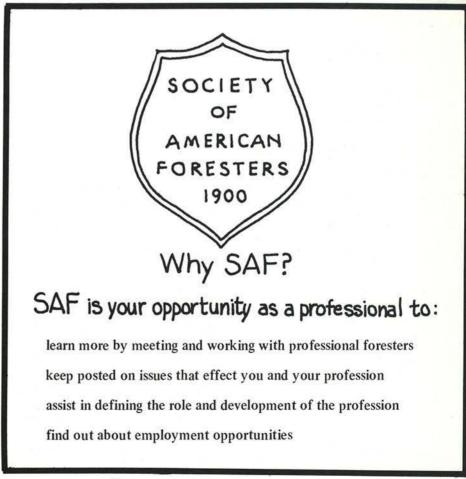
### It was a long haul out

Next morning dawned bright and early and we decided that we had to get back to the truck somehow, at least with the meat. After quite a bit of planning and repacking, we were able to get everything out in one trip. All four horses would be carrying out full loads and we would be forced to walk, but at least we would not have to come back up the mountain again. We first got all of our loads put together and then went out to the moose, skinned it and wrapped it in manny canvasses. From the looks of the final loads on the horses, someone would have sworn we were the lost members of some wandering gypsy caravan! Then began our long walk out - twelve miles, and the last three hours were in the dark, down the steepest part of the mountain. Once we almost lost my pinto's load. With some retying and



extra fastening, the load held all the way to the truck – what a miracle! The only part that frightened me on the trip down was the walk across the swinging bridge over the Lochsa River.

It was near midnight before we got everything unloaded and our exhausted bodies into sleeping bags. My two companions did not appreciate the idea of spending the week being meat packers, especially for a girl! But, I thought that the outcome of the trip was just the way it should have been. After all, you only get this kind of an opportunity once in a lifetime!



### Summer Camp: Moscow vs\_ McCall

### by Jim (J.D.) McDonald

Jim McDonald is a senior in Forest Resources Management.

The 1977 forestry summer camp is over but not forgotten. This past year the students and faculty participated in two summer camps, one in Moscow and one in McCall. The McCall camp was the traditional camp; the Moscow camp was experimental and centered around the university-owned land on Moscow Mountain.

To aid in a comparison of the two camps, three participants in the McCall camp and two participants in the Moscow camp got together and talked over their experiences.

### Composition of the camps

The McCall camp was composed of range and forestry majors in a general age class of 19-25, most of whom were not married. All recreation and forestry majors who did not attend camp at McCall attended camp at Moscow. The age group at Moscow ranged from 19-40, and there was a fairly even split between married and unmarried students. The main reason for married



Fire fighting practice at Moscow camp.

students attending the Moscow camp was the high cost of maintaining two places of residence.

### Forest Measurements (FWR 300)

During the first four weeks of the summer camp, students participated in forest measurement. In this part of the camp, the students are expected to learn how to measure a stand, interpret



Kathy McClanahan and Jill Johnson sample vegetation at McCall camp.

aerial photos and survey land. To accomplish this, at both camps the students were split into 4-5 man groups, and each was assigned a one-half section of land on which to work. In McCall the students could choose whether they wanted an easy half section or a difficult half section. One major difference between the camps was the location of the half sections. In McCall it was the second year the area was used; in Moscow it was the first time the area was used. Also the McCall camp had to travel 30 minutes to reach their sections while the Moscow group had to spend one hour each way on the bus, with some students still having to walk one mile after being dropped off to reach their sections. This took much time away from that in which actual work could be done.

During the first four weeks the curriculum of the two camps was basically the same with instructors traveling between Moscow and McCall to partipate in their own special areas. A major difference between the two camps during the four weeks was the availability and attitude of instructors. In Moscow instructors were busy with research projects; consequently, students felt they were second in importance. In McCall the students



and professors were restricted to the camp area and professors were available for help at any time.

Another difference was that mandatory night classes were held in McCall, whereas in Moscow the students were told the building would be open and a professor would be in the building somewhere. Only about three night classes were held in Moscow during the entire eight weeks. One reason for this was that since students and faculty were living at home, they preferred spending their evenings with their families and not in the forestry building.

The attitudes of the students in the two camps were vastly different. In McCall there was a competitive atmosphere because of the pressure put on the students about getting jobs after camp; the better you did in camp, the better the job you would get afterwards. This was announced to the McCall group early in the semester. Moscow received no word about jobs until two weeks before the end of camp. The atmosphere was that of complacency, just show up in the morning, get the work done and get home by 5 o'clock. This was one of the downfalls of the Moscow camp during the first four weeks.

Halfway through the camp, the Moscow group received a break. The Forest Service, State Department of

### Payette Tiki

Lands and the Potlatch Protection Agency trained students for two days in the art of fire fighting. It was good training but of little use during the summer as they were not called into duty. The McCall group was not given any of this training.

In general, the first four weeks went rather smoothly for both camps. However, each group participated in different activities and had different attitudes towards themselves and the instructors.

### Wildland Ecology (FWR 301)

Many people have asked me if I felt that the Moscow camp experienced the same kind of comradeship as the McCall camp. Since the McCall students were confined to the camp compound for eight weeks, it was thought that they would be a much closer group than the group at Moscow. The Moscow students lived in different parts of the

### continued on page 51



Tree height measurement and grading practice of ponderosa pine at McCall camp.

# Forest Inventory Using LANDSAT

### by Gary Schulz

Gary Schulz is a senior in Forest Resources Management.

During the 1977 summer session, I had the opportunity to work for the Idaho Department of Lands. This agency, which is responsible for management of state owned land located throughout Idaho, had recently embarked on an inventory project of state-wide significance. The Forest Resources and Production Inventory Project, which may be conducted throughout all of Idaho, stimulated my interest. A desire to make others aware of its existance resulted in this article.

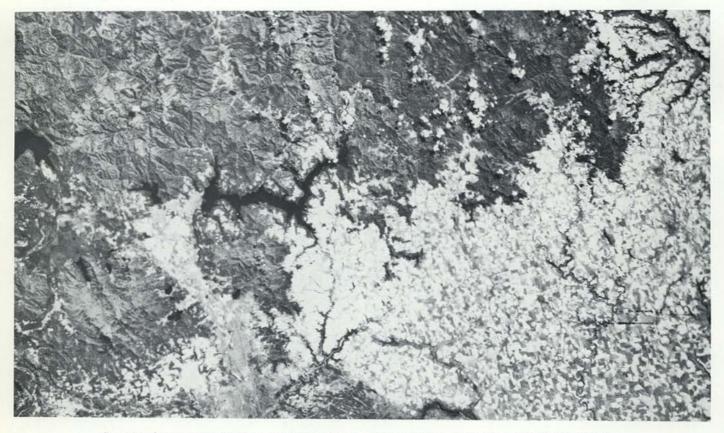
With the launching of LANDSAT

earth-orbiting satellites, a new source of information for earth resources has become available to land management agencies. With funding from the Pacific Northwest Regional Commission tri-state compact with Idaho, (a Washington and Oregon), the Idaho Department of Lands is attempting to utilize LANDSAT generated data to inventory forest resources in an eight million acre area of central Idaho. If this inventory yields useful information and does so efficiently, the rest of Idaho will be inventoried for forest resource information. Success should lead to a decrease in the expenses that are involved in forest inventory.

Project administration for the Department of Lands is being handled by the Department's Technical Services Section aided by the University of Idaho. The U.S. Geologic Survey (USGS) and the National Aeronautics and Space Administration (NASA) are also involved in the operation of the project. Planning and coordination among these agencies resulted in the initiation of a plan for state-wide inventory using multi-stage sampling techniques.

### Three stages of sampling

Multi-stage sampling has three components: LANDSAT digital data collection, aerial photo interpretation, and ground data collection. The LANDSAT satellite senses light reflected from earth in four light wave lengths and records it digitally for computer processing. Different vegetation types reflect the four light bands differently enabling



Sample of a LANDSAT photo of northern Idaho. Coeur d'Alene Lake appears near the center.



each cover type to be identified. "Training" LANDSAT to recognize what it is "seeing" is a problem. Interpretation of LANDSAT photography requires going into the field at chosen plot sites and recording representative cross sections of various forest cover types. Habitat types are used to identify the vegetation potential of the plot sites.

A computer was used to select locations of 500 sample plots in central Idaho and to design a sample scheme to provide a link between cover types and actual timber volume.

Three thousand photo plots were interpreted for tree heights and stand densities during the photo interpretive phase. The data from these measurements was combined with volume estimates which were generated by regression analysis to form volume statistics. The statistics were reinforced through ground measurement of 500 of the LANDSAT plots.

All data was categorized according to five separate ownership classes. These classes were: 1) Idaho state land, 2) U.S. Forest Service land, 3) Bureau of Land Management land, 4) forest industry land, and 5) other private lands.

The ground collection work in which I was involved required hiking, aided by aerial photos, topographic maps, and quad-section maps, to some of the 500 scattered study sites. Camping near some of the more remote plots was required because they fell in roadless areas, such as the Idaho Primitive Area.

#### Hazards of ground work

Much information concerning private lands included in the project was obtained from helpful land owners. However, "other private" was all we field cruisers knew about a particular section of land. There were a few times when land owners discovered us trampling (better known as "Trespassing") on their land for no obvious reason. It was often hard to explain our intent to an angry land owner; to explain in a pressured five minutes or less what the Forest Inventory Project was, what we were doing on his land, and who our boss was. In most cases, the land owners were justified in their investigations, and happily, no "old-west, double-barrelled" persuasions occurred during any of these incidents.

The primary emphasis of the project was on timber volume data generated for forest cover types for each ownership class. Included with this are three species classes, four crown closure classes, 10-foot height classes, 20-year to 200-year age classes, and three site classes and/or habitat classes. Seven of the eight million acres of sampled land was estimated to be actually forested land. The other one million acres was considered as non-stocked forest or simply as no-tree-potential, non-forested land. An inventory of the non-stocked forest lands suitable for reforestation or afforestation was established by photo interpretation.

Other forest conditions (mortality, disease and pest level) were estimated on a per-acre basis. Since the study was designed to meet stringent accuracy requirements and defect is so variable, sampling may not have been adequate to fully and reliably prepare an estimate of these conditions for each ownership class. Growth calculations were determined, with the aid of the inventory results, by photo interpretation.

#### Desired parameters and results

One of the end products will be map overlays. Primary overlays will show timber strata based on cover types, height classes, crown closure and age classes, with acreage summations for each strata. Secondary overlays will show vegetation cover with acreage summations (Fig. 1).

This detailed forest inventory data will be compared with existing parameters. The following list of parameters are desired and will be listed per acre by age and site class: net cubic foot volume, basal area, Scribner board feet, net cubic foot growth, net cubic foot mortality, net cubic foot infestation, and net cubic foot infection.

It is anticipated that results from this project will be used by the Idaho Department of Lands for the following purposes:

- to compare acreage summations by ownership, township and administrative unit to current acreage summations
- to compare forest inventory parameters to the current forest inventory program and determine whether the new system can provide the same or better information at less cost
- to explore the possibility of mapping land and other resources by computer
- to provide estimates of forest productivity, by ownership, of forest land within the project area

The Idaho Forest Inventory and Productivity Project is a hugh undertaking and the first of its kind in Idaho. Similar studies by the Department of Lands are underway in southern Idaho.

#### continued on page 49

Fig. 1. Example of the acreage summation accompanying the land use map (2a):

Vegetative Cover	State	USFS	BLM	Forest Industry	Other	Total	
Conifer forest	3,089	148	2	1,700	26	4,965	
Hardwood forest	7,947	345	197	650	103	9,242	
Brushland	2,650	1,224	37	129	0	4,040	
Rangeland	4,000	3	20	700	70	4,793	
Total	17,686	1,720	256	3,179	199	23,040	- Acres

# Wood Duck Encounter

#### by Steve Babler

Steve Babler is a senior in Wildlife Management.

Two canoers making labored progress against a stiff wind on the lower Coeur d'Alene River simultaneously noted a peculiar object upon the cutbank not more than 15 feet away. Lying stretched out facing the river scene before him was a drake wood duck that hoped his intruders would pass by without notice. But they were aware of him and they were rather interested in what this duck was doing outside of his typical daytime foraging cover. His usual habitat was more like that on the other side of the river in the Coeur d' Alene Wildlife Management Area (CDA WMA). After all, that is where all the local waterfowl hunters were stationed, their eyes scanning every conceivable direction from which he or one of his kind could possibly come.

Nevertheless, the side he lay on was no less dangerous. His side of the river was in the midst of opening day for the not-so-wily game farm pheasant as evidenced by the sound of unloading shotguns piercing the silence.

#### A victim of misfortune?

At first glance I could not be sure of what I had seen. It looked as though some unfortunate duck had been the victim of an over-bag limit. Since northern Idaho has a one wood duck per day limit, (also a limit of one in possession), this possibility was not unlikely and probably a fairly common occurrence. Perhaps, being aware of the hunter check station ahead where a Fish and Game officer was stationed, someone might have decided to leave the evidence on the bank to avoid penalty.

I am certain that if I had not noticed this bird, I would have passed by and not gained any insight into an example of unusual animal behavior. Only the duck would have been reasured about the suitability of a motionless stance. Not expecting this type of behavior, I was certain that he was a cripple or a



dead duck and my obligations were to retrieve and hand him over to the authorities.

The instant my canoe came to rest, there was an explosion of feathers and the "twee, twee, twee" call of a distressed drake woodie as he headed toward a quieter section where he could find a similar retreat.

In analyzing this encounter, I would have liked to have disregarded my intuition that this duck had been stung by the shot of a hunter earlier in the morning and had simply taken refuge in this location to nurse his wounds. This is surely one of the more plausible explanations. I had one encounter similar to this a year previous at the CDA WMA. After jumping a flock of mallards, I noticed that a drake had stayed behind. Upon narrowing the gap between us, I had noticed his agitated behavior and decided he was not playing super duck daring me to shoot him. I studied his actions for a couple of minutes, following him along the narrow drainage ditch. Finally his anxiety overcame his physical disability and he made a take-off attempt similar to that of a coot, running across the surface of the water to get up enough to become airborne. momentum (Mallards usually take flight directly from their original position.) He was obviously in pain as he flew, but to my relief he kept flying and finally disappeared over the horizon.

#### A wise old duck

Since the woodie had made no hesi-

tation in "getting the hell out ...", I like to look upon this incident in the following manner. This duck, obviously a veteran of at least one hunting season (I assumed this because of the brilliancy of his mature plummage), had probably been shot by duck hunters early that morning. Upon discovery that his side of the river held little refuge value, he may have wandered over to the other side only to be the target of a pheasant hunter who had happened to have a duck stamp (which enabled him to legally hunt waterfowl).

Dave

Mattse

The Coeur d'Alene River is rather slow in this part of the country, not far from its confluence with Lake Coeur d'Alene. It is a wide, deep and sterile river lacking the vegetation which dabbling ducks such as the woodie and mallard require to feed on. Because of this, it is a rare occurrence to see ducks on the river and most hunters head inland to the marshes where virtually all the ducks are congregated. Thus, in this situation the river becomes a neutral zone with hunting activity taking place on both sides.

Taking this into consideration, I believe that this duck was probably exhibiting a learned behavior; he most likely switched to nighttime foraging while maintaining a daytime hiding place in an undesirable, yet safe, habitat. I suspect that he and other ducks which practice this adaptation make it through more hunting days than their less experienced cohorts.



36

# Transporting Lumber by Sea

#### by Bob Payton

#### Bob Payton is a senior in Forest Products.

Transportation has always been of major concern to both the resource manager and lumber producer. Historically, as this country became more settled, the need for timber increased and transportation distances for timber products also increased. Suppliers have had to reply on improved means of transportation to meet this demand.

In forestry, improved transportation allows wood to be cut on areas formerly considered inaccessible. Transportation is directly related to the profit a company makes. The demand for wood is greatest in the heavily populated areas and the costs associated with moving wood products to these areas can give one firm an edge over another.

In Vancouver, several companies have found it very profitable to ship lumber to the eastern United States by seagoing vessels. The lumber shipped is green dimension lumber (2 by 4's, 2 by 6's, etc.) used for framing houses. It comes from old growth trees and thus has tight grain with few knots, and good nailing properties. The main species are Douglas-fir and western hemlock.

#### Advantages of ocean transporting

Because freight rates for boats are based on volume, these firms have found that they can cut out drying costs by shipping green lumber. This compares to rail rates which are based upon weight and where it is more economical to ship dry lumber. Another advantage of using ships is that lumber companies can serve worldwide markets. This allows the companies to take advantage of those markets which offer the best price. Also, because there are no duties imposed on lumber imported into this country, Canadian producers can keep their prices competitive with American prices.

At present, Americans are not shipping lumber by sea to the east coast. One reason is the Jones Act which requires that American companies ship domestic trade on American-built and manned vessels. Because of high capital and labor costs, American ships are too expensive to operate. American firms get a better rate of return by using foreign flagships and shipping out of the country.

#### Destinations

Maher Terminals, located at Port Elizabeth, New Jersey is the largest marine lumber terminal on the east coast, processing 270 million board feet of lumber per year for the New York metropolitan area. This amount of lumber could keep a large sawmill operating three years.

The average lumber ship takes 2½ weeks to get from Vancouver to Port Elizabeth and carries 25 million board feet fully laden. Eight to ten million board feet will be unloaded at Port Elizabeth before the ship departs for other ports. After unloading, the lumber is stored in an open yard. The yard is maintained by Maher Terminals

and the lumber, which comes unwrapped in banded units, is stored by species, grade, and size.

The average Canadian lumber firm maintains an inventory of 10 to 15 million board feet in this yard. This large inventory allows it to use changing prices in the local market to maximum advantage. This green dimension lumber is sold directly to wholesalers who in turn sell it to retailers.

Last year there were four Canadian companies who shipped 400 million board feet of lumber by sea to the New York metropolitan area. This, when compared to amounts shipped by other means, is not much. Rail and truck are still the primary methods of shipping lumber to the New York area.

Oceangoing vessels, then, are one method of transporting western lumber to eastern markets. However, because of the high investment and operating costs, it is a method best suited for large corporations.



#### RARE II from page 13

Idaho national forests: northern Panhandle, Clearwater and Nez Perce. Land within the roadless inventory is included in the allowable cut computation but is unavailable until land use planning is completed. The Forest Service estimates the Clearwater National Forest will be able to sustain an annual harvest of 211 million board feet if unconstrained - but 72 percent of the forest is unavailable for harvest. The Clearwater supervisor's office estimates the new five year plan to average an annual 111 million board feet for harvest or 53 percent of what the forest is capable of producing.

#### Local public workshops

The first public involvement workshop conducted by the Clearwater National Forest took place August 3 in Moscow, Idaho. Approximately 80 people representing industry, recreation, mining, land management planning and environmental interests attended. Input

Table 1. Number of responses from each affiliation and residence of respondents.

Affiliation	No. of Responses
Conservation or Environmental	
Group	14
Recreation Group	17
Academic	44
Resource Industry Business	92
Government (non-Forest Service)	4
Forest Service Personnel	16
Agriculture	5
Individual Citizen	338
Other	157
Total	655
Residence of Respondents	
Lewiston	209
Moscow	119
Orofino	71
St. Maries	20
Bovill	12
Kamiah	12
Spokane	10

Pierce

Deary Helena, MT Seattle Grangeville

Missoula

Pullman

Coeur d'Alene

Espanola, WA

No residence listed

Craigmont

Headquarters

9

8

55522

2

1

1

1

163

received was tabulated and evaluated with information gathered from other workshops. In addition to individual contacts and media coverage, approximately 650 responses were generated. Tables 1 and 2 graphically portray the Clearwater National Forest's final results of the collected input with the responses for each of the questions asked. Not all respondents rated all the statements.

This data represents only that input submitted to the Clearwater National Forest, but portrays the local frame of mind. These responses have been forwarded to the Washington, D.C. office with other area responses to help in making the final decision on which roadless areas should be included in the National Wilderness Preservation System.

Existing primitive, wilderness, Rare I and new roadless study areas in Idaho encompass a total of 5,072,000 acres. Beyond this figure an additional 5.3 million acres of 26 percent of Idaho's total national forest system has been further inventoried as potential wilderness, half of which is commercial forest

continued on page 48

	Possible Criteria	0	1	2	3	х
A.	Need for more wilderness near population centers.	284	129	92	63	12
В.	Need for more wilderness for scientific or educational endeavors.	266	139	101	58	12
	Need to have representation of many varied ecosystems in the National Wilderness Preservation Systems.	142	100	136	155	28
D.	Need to preserve more habitat for those wildlife species requiring wilderness conditions.	113	119	161	148	12
E.	Need for a variety of landscapes in the National Wilderness Preservation System.	173	148	161	80	21
F.	Need for more wilderness having opportunities for physical or mental challenge.	301	132	75	44	28
G.	Need for a wilderness to be large.	310	122	72	40	14
H.	Need for a wilderness to be scenic.	151	124	146	126	13
	Need for significant commerical timber resources to remain available for harvest.	20	27	65	467	6
J.	Need to make significant energy resources available for extraction.	41	40	95	368	13
K.	Need to make significant mineral resources available for extraction.	45	63	124	329	14
L.	Need to provide areas for motorized or intensive recreational uses.	114	90	161	195	5
M.	Need for establishing wilderness in areas where few others now exist within a day's travel.	248	139	87	87	15
N.	Need for additional wilderness where a significant amount already exists within a day's travel.	385	88	49	30	15
0.	Need to be able to manipulate wildlife habitat for those species that can thus be increased in numbers.	95	117	165	162	29

The following rating system was used:

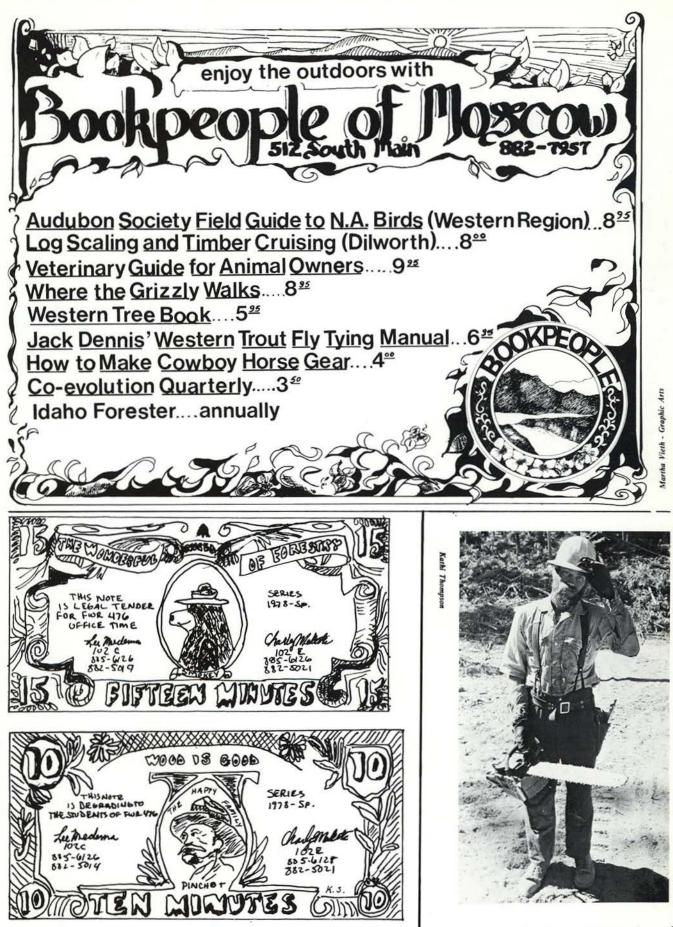
0 - Should not be considered

1 - Should be considered but of slight importance

2 - Should be considered and of moderate importance

3 - Should be considered and of extreme importance

X - Uncertain as to whether or not it should be considered



Funny money for Forest Regulation and Finance class. Students bought instructors time with bills like this.

Ted DeWoody, Outstanding Student of 1978 for the Inland Empire Section of S.A.F.



"Be not angry that you cannot make others as you wish them to be, since you cannot make yourself as you wish to be." —Thomas à Kempis



"The world stands out on either side, No wider than the heart is wide; Above the world is stretched the sky, No higher than the soul is high." -Edna St. Vincent Millay



Mike Sulliva



Mike Sullivan

## Idaho Forester, a matter of taste



#### Publications from page 29

Proposed Critical Habitat Area for Grizzly Bears: Hearing Before a Subcommittee of the Committee on Appropriations. 94th Congress, 2nd Session, 1977. United States Senate, Committee on Appropriations. Rm. 1235, Dirksen Building, Washington, D.C. 20510 (Free)

209 pp.

Record of hearings held in Cody, Wyoming on November 4, 1976. Comments focus on the issue of extending critical habitat boundaries for the bear outside Yellowstone grizzly National Park. Includes statements from state and federal agencies, and numerous special interest groups.

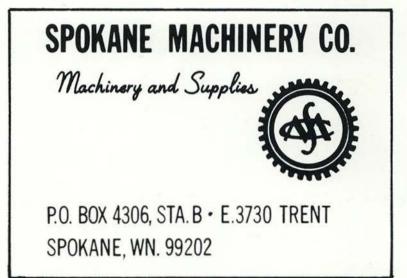
Wilderness Management. John C. Hendee, George H. Stankey, and Robert C. Lucas. Forthcoming 1978. Government Printing Office, Washington, DC 20402.

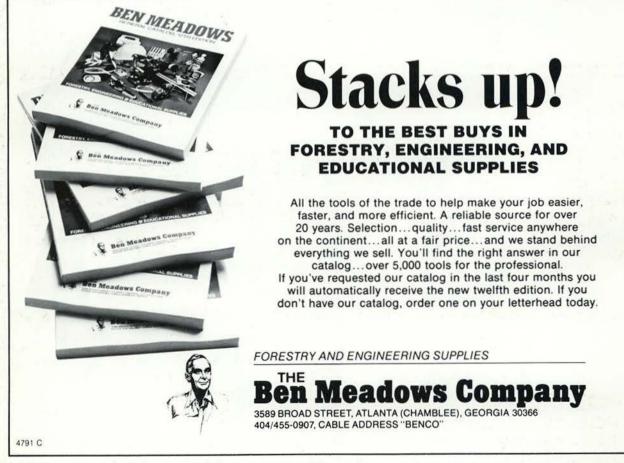
Approximately 600 pp.

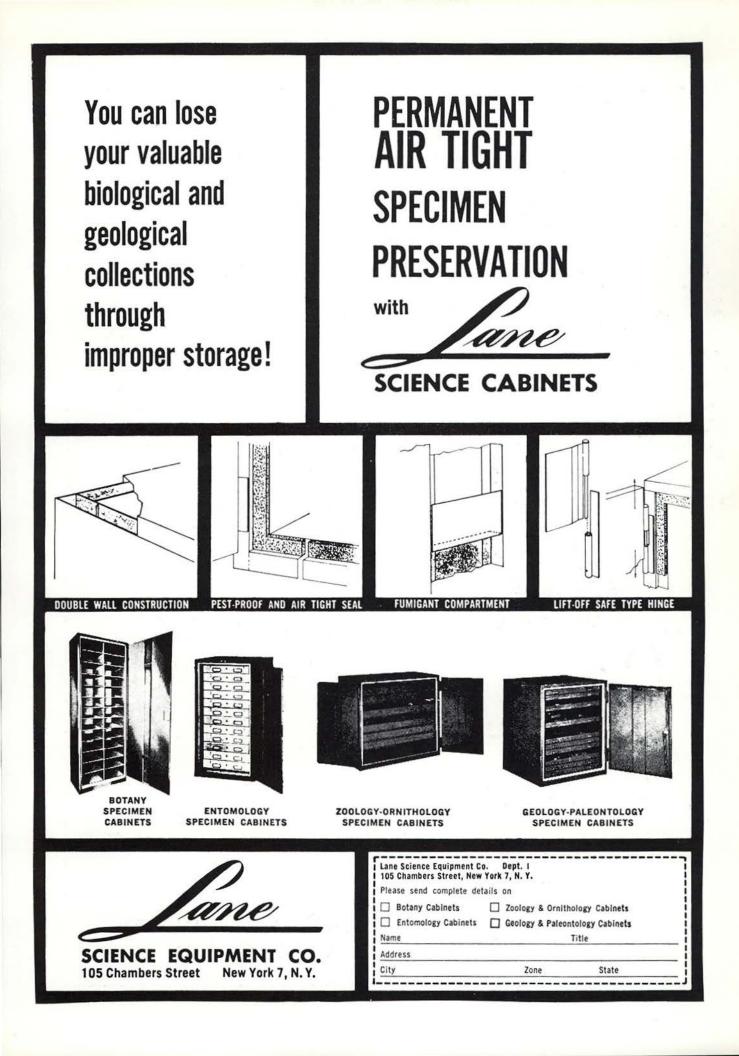
A comprehensive approach to wilderness and wilderness management in the U.S. Historical and legal perspectives are presented in sections I and II. Management concepts and elements are treated in sections III and IV. Wilderness use is discussed in section V. Section VI identifies current issues and challenges in wilderness management.

Rangeland Reference Areas. Rangeland Reference Area Committee. Range Sciences Series No. 3, 1975. Society for Range Management, 2760 West Fifth Avenue, Denver, CO 83204. (\$1.50)66 pp.

continued on page 45







### Towering, majestic, magnificent. And rotten to the core.

Great trees can be so imposing that they inspire awe. Yet inside they can be rottenvictims of insects, disease, or both. Such trees discourage life around them. And little of their fiber can be salvaged.

In Georgia-Pacific's managed forests, we harvest trees at their productive peak, like the vital crops they are.



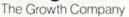
We also develop stronger seedlings more likely to survive, then carefully manage their growth. These become "supertrees" that grow faster and taller than trees that nature seeds, doubling or tripling nature's productivity.

Trees do grow back. If managed and harvested wisely they'll be more than just towering, majestic and magnificent.

They'll be equal to all our needs.

For more information on the managed forest and Georgia-Pacific's supertree program-write "Managed Forest," Dept. YB-78 Georgia-Pacific Corp., 900 S.W. 5th Avenue, Portland, Oregon 97204.

Georgia-Pacific



#### Publications from page 42

Intended "as a source of information for those interested in preservation of reference areas on rangelands." It reviews the literature and summarizes current programs of other groups in the U.S. Chapter Six lists reference area activities in Canada and other countries. Finally, the Committee outlines a program for encouraging preservation of rangeland reference areas.

**Biology and Management of Threatened** and Endangered Western Trouts. USDA Forest Service General Technical Report RM-28, 1976. Rocky Mountain Forest and Range Experiment Station, 240 West Prospect Street, Ft. Collins, CO 80521. (Free)

45 pp.

A report on six closely related trout native to western North America, including the Colorado River cutthroat, Lahontan cutthroat and the Gila trout. "Discusses taxonomy, reasons for decline, life history and ecology, and suggestions for preservation and management."

Forests and Water: Effects of Forest Management on Floods, Sedimentation, and Water Supply. USDA Forest Service General Technical Report PSW-18. 1976. Pacific Southwest Forest and Range Experiment Station, Box 245, Berkeley, CA 94701. (Free)

#### 115 pp.

A review of fundamental hydrologic processes in the forest and examination of the effects of current forestry practices on water resources. Special attention is given to timber harvesting, fire, grazing, and the application of fertilizers and pesticides. Problems of fireprone chaparral and surface-mined sites treated in-depth. Nearly are 600 references are cited



#### School Forest from page 9

projects on the College Forest. A complete list of projects would be too numerous to mention here, but current research projects include one on deer habitat selection patterns and one on bird habitat. hole-nesting The controlled burn that Professor Neuenschwander conducted last fall will be evaluated as to its use by deer.

#### Range Resources

The Range faculty conducts field exercises on the Hatter and Flat Creek units as part of two undergraduate courses: Wildland Ecology (FWR 301), and Range Methods and Techniques (FWR 453). In the Range Ecology section of FWR 301, students are taught ecological principles, methods, and concepts as applied to integrated land resource management. More sophisticated sampling methods, range utilization and condition analysis are covered in FWR 453.

Will Summers, a Range graduate student, is developing an improved



grazing plan for the Hatter-Flat Creek units. This endeavor, which will complete his masters thesis, should alleviate any deficiencies now existing in the college's lease with the Hatter-Flat Creek Cattlemen's Association.

Dr. John Mitchell hopes to utilize the forest in the near future to demonstrate compatibility of livestock grazing on tree plantations, with forest management objectives.

#### The School Forest Committee

The idea of a Society of American Foresters School Forest Committee originated in the spring of 1977, when Ted Dewoody, current vice-chairman of the SAF, expressed the feeling that students should be using the School Forest more as a practical laboratory for integrating their curriculum. The SAF School Forest Committee was formed to investigate how well the College Forest was fulfilling student needs. Since that time, weekly meetings have been held.

The committee developed long and short term goals to serve as guidelines for its activities. The long range objective of the School Forest Committee is to fully integrate the School Forest into the undergraduate program as a practical laboratory tool exemplifying the concepts and theories presented by the undergraduate program. The objective is to be reached primarily by means of four specific goals:

- 1. To compile all existing data concerning the School Forest and place this data into a central and accessible location for undergraduate students.
- 2. To provide a forum for discussion and analysis of current and proposed activities on the School Forest between students, faculty, and the Forest Administration Board.
- 3. To prepare tours of the School Forest for general benefit to students.
- 4. To create a means for student input into the management process of the School Forest.

The first step the SAF School Forest Committee took was to collect existing data on the School Forest. All known thesis work, whether completed or not, was investigated. An abstract or summary was written for each research project. The location of any publication, author, and the unit to which the research applied was recorded with each abstract. This information was placed in the committee's notebook, and is available in the Reading Room as a reference for students. The committee also intends to include data concerning site and stand conditions for each unit in this reference.

Access routes to, between, and within the units of the College Forest are delineated on maps, and directions are listed in the reference notebook.

A member of the committee was selected to serve on the Forest Administration Board. The opportunity for input of student ideas into the management of the School Forest is appreciated.

The School Forest Committee, with the aid of Dean Ehrenreich and Dean Ables, developed two new courses for the 1978 spring semester: FWR 203, Workshop: School Forest; and FWR 499, Directed Study: School Forest. The courses are designed to increase student use of the School Forest. These courses allow the student to develop a project in his or her major field of study. It is hoped that these projects will stimulate student interest early in college careers and offer an opportunity for practical application of forestry skills and knowledge.

#### Acknowledgments

The SAF School Forest Committee would like to thank the following people for their contributions to this article: Professors Loring Jones, Dave Adams, Karel Stoszek, Joe Ulliman, Charley McKetta, David Scanlin, James Peek, John Mitchell, John Schomaker, and Student Recreation Manager Jesse Dobbs.

The committee would especially like to thank Frank Pitkin and Harold Osborne for their enthusiasm and work with the SAF School Forest Committee.

Respectfully submitted by the members of the SAF School Forest Committee:

Ted Dewoody	Diane Becherer
Lyle Powers	Tim McGarry
James Doering	Mark Fleming
Norris Boothe	Barbara Diaz
Bob Soderber	g – Secretary
	- Chairman
1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1	



McCall without us from page 14

provide a quality program within fiscal constraints. This does not necessarily mean an "economics versus education" attitude. Education will be top priority. With backing from industry pledged to the college, there is much economic flexibility. The college is now looking into the possibilities of locating a camp at the Priest River Experimental Forest. The station, capable of accomodating up to 40 students, could be rented from the Forest Service. Other efforts could be to build in the vicinity of Orofino or on the School Forest near Deary. Another alternative would be to limit the enrollment in the college, but this is considered one of the more drastic measures and would not be considered unless all others were exhausted.

The main question raised in connection with relocating the camp is the greater ecological variety the McCall area has than the rest of the state. The answer to this and many other questions must be found before any action can be taken. The future of the McCall summer camp is still in doubt but most likely will not be decided for at least several years.

Whatever the outcome, no decision will be made until all of the alternatives have been explored. Education is top priority and special care will be taken that the excellent educational field experience is not sacrificed. Much student and alumni input has been received so far and future input from all will be appreciated. If you have any input of your own, please write Dean John Ehrenreich and express your opinions.



#### Jobs from page 23

while in school. They count for more points with Civil Service people and give employers an idea of one's abilities and efforts. It is also imperative that you learn how to knock on doors and lots of them. You've got to show people that you want to work. After all, it's your job and your career that are at stake.

#### Broaden your background and interests

I also think that a natural resources student should obtain a broad spectrum of education, at least in his undergraduate curriculum. Just as the science of ecology is a highly-interrelated subject, so also is the job of a natural resource manager highly complex, embracing several different areas of expertise. Along with this philosophy goes the encouragement to get as much onthe-job experience as possible. In addition, you may want to specialize early in your college years, or wait until you attend graduate school.

What should you expect from all of your personal efforts? You should not expect a bed of roses or a yellow brick road to lead the way. You should expect a lot of hard work and a fair amount of searching.

And don't be discouraged if your first job is more of a nightmare than a dream! It may be an ever-important foot-in-the-door or a significant stepping stone to a better job or placement. If you aren't satisfied with one agency or company, diversify! Try other outfits, other types of work. Experiment! Work in different localities and geographic areas.

Sooner or later, you will stumble onto or walk into the kind of career you are looking for. Then all of your time and effort will finally pay off. And good luck! The job you seek may be yours to keep.

#### Editorial from page 1

Professors who must devote a large portion of their time doing research are often not available to all these students outside of the classroom.

Because of financial restrictions, the goal of the College of FWR to provide high quality education cannot be met by building more classrooms or hiring enough instructors to reduce the student to faculty ratio immediately. Solving this problem can be avoided for a few years by offering the same classes both spring and fall semesters. But as enrollment continues to increase, this tactic will no longer be sufficient and a different approach will need to be tried.

Presently, money is allocated to the college according to student enrollment. This policy requires a continuous increase in student numbers. Awarding money to a college according to the competency of its graduates and the research it produces would place more emphasis on the quality of education being presented. Less importance could be placed on numbers, resulting in decreased class sizes and increased opportunity for a better education. In this way, more money would be available to the college. Increased funds would attract people of higher quality and further enhance the reputation of the college.

"Let's divide the class into pairs of threes." —M.A. Fosberg



#### Rare II from page 38

land. It has been argued that Rare II is primarily designed to modify the 1964 Wilderness Act in increasing wilderness acreage. The initial proceedings of Rare II are completed. Although there will be additional opportunity for public opinion, the problems involved in evaluating the wilderness, social and economics values of all Rare II areas involved are expected to be documented within the 15-month target period set by the Forest Service.

Rare II is certain to eliminate a degree of momentary conflict pertaining to natural resource allocation. But as long as separate interests arise from a common hub, the wheel of controversy will inevitably continue to spin.



WE'VE BEEN MAKING QUALITY BOOTS BY HAND FOR OVER 50 YEARS! SMOKE UMPER

PACKER

LOGGER



Hand sewn, stitchdown with Vibram® Montagna® or composition sole. 8" or 10" top. Black.



Hand sewn, stitchdown designed for riding or walking. 8" top. Brown Elk. Leather or composition sole.



Best quality, calked with high supporting arch. 8" or 10" top.



#### Women from page 24

#### Why women choose natural resources

After gathering these figures, I decided to go and talk with some women in the college to find out why they had chosen their major and what they wanted to do after graduation.

Pam Martin, a Range and Forestry major, went into natural resources because, "I don't like anything else." In addition, Pam feels that summer jobs are relatively easy to come by and, "are a lot more interesting then waitressing."

Carolyn Sands, a Wildland Recreation major, originally wanted to "go to Africa and work on a wildlife refuge." Currently, Carolyn is interested in working in land use planning.

Barbara Schrader is majoring in Wildlife primarily because, "biology has always fascinated me and I wanted to learn about wildlife."

In terms of job experiences, most of the women found that they often had to prove to their men co-workers that they could really handle the job. Nancy Mehaffie, a Forest Science major, worked as a crew boss on the Salmon National Forest last summer. Nancy told me that the men on her crew did not seem to mind having a woman boss, perhaps because they were outnumbered. Nancy's crew consisted of four women and two men!

#### Career or marriage

After obtaining feedback from some of the women, Jan and I decided to talk to the professors and get another perspective on the women in the college.

Dr. John Howe, Professor of Forest Products, informed us that the first woman to graduate from the college was his advisee. Her name was Barbara Rupers and she graduated in 1963 in what was then called Wood Chemistry. Barbara is now married and teaching grade school in Salem, Oregon.

Dr. Jim Peek, Associate Professor of Wildlife Management, has advised various women graduates in Wildlife, most of whom are not currently working in their field. For example, Diane Lewicki is now working in Maine for a timber company and Susan Biery, another Wildlife graduate, is currently pursuing a law degree. This pattern was apparent in almost every option within the college. Most women who have graduated from the college have not gone on to pursue a career in their field.

#### Job opportunities for women

I have been told that the job opportunities for women have never been better, what with the impact of the Equal Rights Amendment and policies such as Affirmative Action. Boise-Cascade, for example, has quite an be encouraging policy on the issue of equal opportunity for women. John B. Fery, President and Chief Executive of the company, states in the November 1977 Boise-Cascade Quarterly, "This company must provide an environment which encourages the development of women in roles not traditionally seen as theirs. A learning process is needed on both sides; women have to learn about their own capacities and strive to develop themselves to fit new opportunities; and the managerial group that works with women, which right now is mostly men, has much to learn about selecting, placing and training women." Boise-Cascade is now working on developing recruiting programs to find qualified women as well as programs to identify and develop women employees who have the capacity for further advancement.

If the jobs are there, why aren't the women working in their field of natural resources? Perhaps we are too idealistic and are waiting for the perfect job in the best location. Marriage may play a big role in eliminating a career in natural resources, or perhaps women graduates fear that they may lose their femininity if they are successful in a field once wholly dominated by men. Dr. James Fazio, Associate Professor of Wildland Recreation, gave me some additional insight into this question when asked why such a high proportion of women were enrolled in the Recreation Management Wildland option. Dr. Fazio speculated that perhaps there was not the same strong male identity to contend with in recreation as in other options such as forest resources.

It is apparent that there is no clear cut answer to why more FWR women graduates are not pursuing a career in natural resources. However, I think it is a question which FWR college women, men and faculty members will have to contend with.

In conclusion, the statistics show that the number of women in the college is increasing rapidly and I for one am glad to be a part of this trend. So ladies, good luck to you and keep smiling. I think we are going to make it!!!

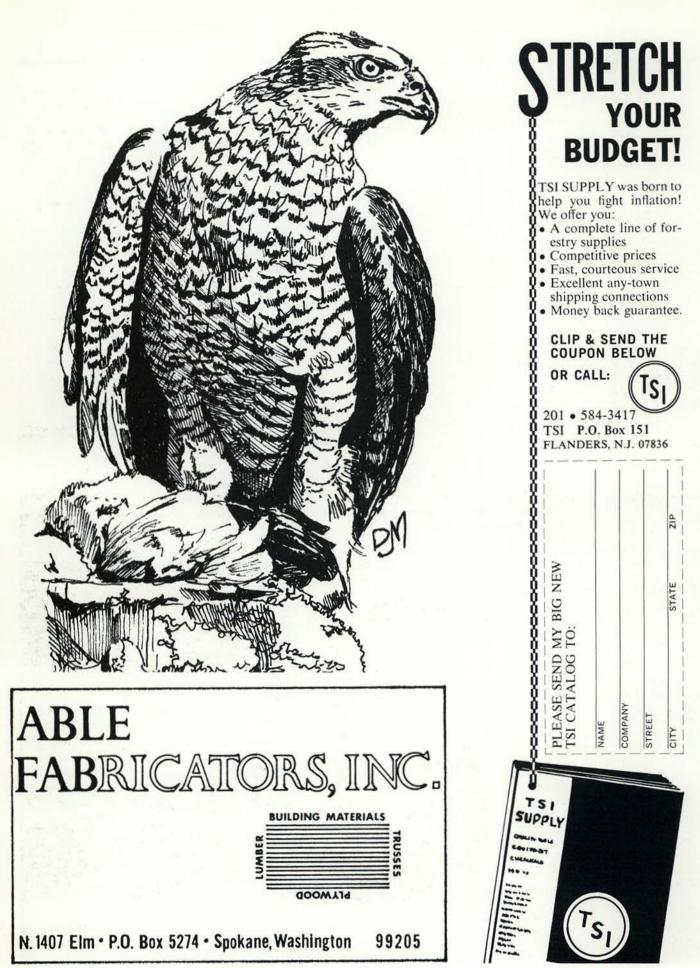


Bob Naughton dreaming of women in forestry.

#### LANDSAT from page 35

The continuation of the project for all of Idaho's forest lands will depend on funding and the results of the central Idaho project inventory.

With all the analysis and planning that accompanied the field work, I felt like a minute cog in a sophisticated piece of machinery. However, a large percentage of the funds were spent on ground visitation and recording of plot data. Field work of good quality should enhance the project's results and override other data sources. If the 500 plots were adequate to sample the eight million acre study area, needed information and correlation to other sampling techniques were provided in the data results.



#### Moscow vs. McCall from page 33

city and only saw one another during the day. But what the McCall people did not know was that Moscow people felt as though they did live with each other. During the last four weeks, Moscow's camp spent more time on the schoolbus than at home. Since we spent so much time together on the bus, we developed some close ties with each other. You really had to, for nobody wanted to sit in the close confines of a bus and not like the person next to him or her.

The Moscow group also depended heavily on each other. Each week a 2 or 3 day field trip was taken to a different location in northern Idaho. Since there was no one to prepare one big meal for all of us, we had to do it ourselves. Most students formed small groups to make meal preparation easier. If one group ran out of something it was no big deal to ask someone from another group if they could lend an item. This practice worked out fairly well for all.

The two camps pretty much paralled each other during the last four weeks. Most of the time was spent learning how to habitat type and identify problems in rangelands, watersheds, and wildlife areas. Since there are few excellent study areas close to Moscow. the Moscow group did a lot of traveling. Each week was spent in a different area around north Idaho. The end of the first week was spent at Alison Creek on the Salmon River. Both groups participated in exercises designed by the instructors. During the time spent together you could definitely distinguish the two camps from one another. Both groups pretty much stayed to themselves and not much fraternizing occurred between the two. That was one of the major downfalls of the encounter. If everyone had gotten along with each other, a better learning environment would have been created. Another big problem was the size of the group. There were over 100 students with 2 professors and 5 teach-ing assistants. This made individual attention difficult. This turned out to be the only encounter between the two groups.

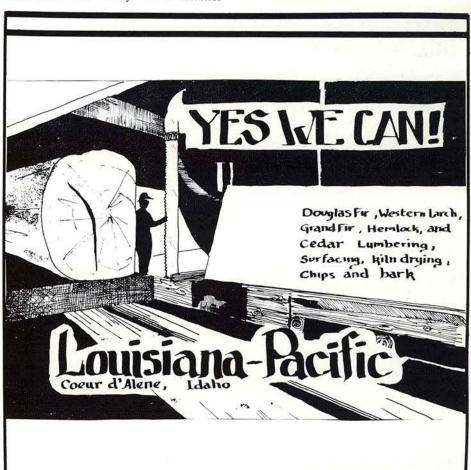
From Alison Creek the Moscow group continued the next week to Fen Ranger Station to study wildlife. The third week was spent in Moscow with Dr. John Mitchell studying rangeland and also in Orofino at Dworshak Dam looking at fishery problems. On the final week the Moscow camp spent two days at Freeze Out Mountain where the group divided up. One group went on a backpack trip and the other stayed with the bus.

On the last day of camp, both groups were tested on their ability to habitat type. After everyone was tested, we were let loose to finish our summer in whatever way we desired. Some people worked, some traveled, and many tried to recuperate from camp so that they were prepared for the next two semesters.

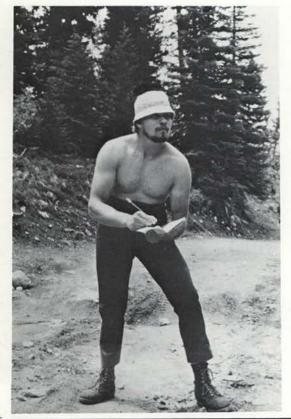
At the moment, there is much concern about what to do about summer camp in the future. Many alternatives have been suggested, but whatever is proposed, one thing must be worked out. All the differences in the camp should be eliminated as much as possible to keep the educational quality of the two camps the same. No matter what the college decides to do, I am sure there will always be a summer camp for the students of the College of FWR. So to all of you getting ready to go to camp, good luck and to all of you who have already gone, be thankful you don't have to go again.

## "Once there was a cautious man who

never romped or played. He never smoked, he never drank or ever kissed a maid. Then one day he passed away and his insurance was denied. For they claimed he had not lived, so how could he have ever died." -Anon.



Kevin Kennedy



#### SONG OF THE FROSH FORESTER

I said, "I'll go to Idaho, Idaho." And when they asked me why I'd go, why I'd go, I said, "Just wait four years and see, When I have studied Forestry."

#### Chorus:

Silviculture I will master, I will put out fires faster, I will learn to use the compass and the calipers, I will learn the names of fish and bugs, of fish and bugs, Of birds and butterflies and slugs, flies and slugs, And the names of trees will never bother me, When I have studied Forestry.

One day I met a lumberjack, lumberjack. He up and slapped me on the back. And he said, "Young man, before you wear my pants, You'll have to have ex-per-e-ance."

Chorus



OUR STAFF: Tracy Behrens, co-editor Jan Bal, co-editor James Doering, photography editor Mark Fleming, literary editor Robert Long, business manager David Mattson, artwork John Andrews Steve Babler Victor Bullen Sorrells DeWoody Stan Galloway Chris Griska Don Hanson Mike Hollmann Rod Johnston Kevin Kennedy Pam Martin James (J.D.) McDonald Robert Payton Gary Schulz Debbie Sims Kent Smith Kurt Spingath Mike Sullivan Richard Wallace Jack Whitman Joe Ulliman, faculty advisor

special thanks to Carole Allen for typesetting, and Annette Voth and Mia Smith for literary assistance.

Month Sold

# Let's set this & fellow straight.

Like most Americans, he loves trees but doesn't live in a forest environment. Neither does he fully comprehend the connection between his everyday life and the lives of people in forest industry communities. He is likely to think that logging is primarily destructive, and that our country is running out of trees. After all, there probably aren't too many where he lives.

Those of us who live and work in forest economy areas should set this fellow straight. His mind would be greatly eased if he knew that, due to modern forest management practices, there will always be thriving forests for him to enjoy. We should explain to him that logging is important in the renewal of timber resources.

Although he may not be aware of it, every single day he both supports, and is supported by, people in forest communities. His enormous demand for lumber and wood fiber products, ranging from building materials to egg cartons, links his daily routine with the everyday lives of forest industry workers.

We have a lot more in common than this fellow may realize, and we really should try harder to understand each other.

Presented in the interest of a healthy, productive, and enjoyable forest environment by



#### DIAMOND INTERNATIONAL CORPORATION

NORTHWEST LUMBER DIVISION

COEUR D'ALENE, IDAHO 83814