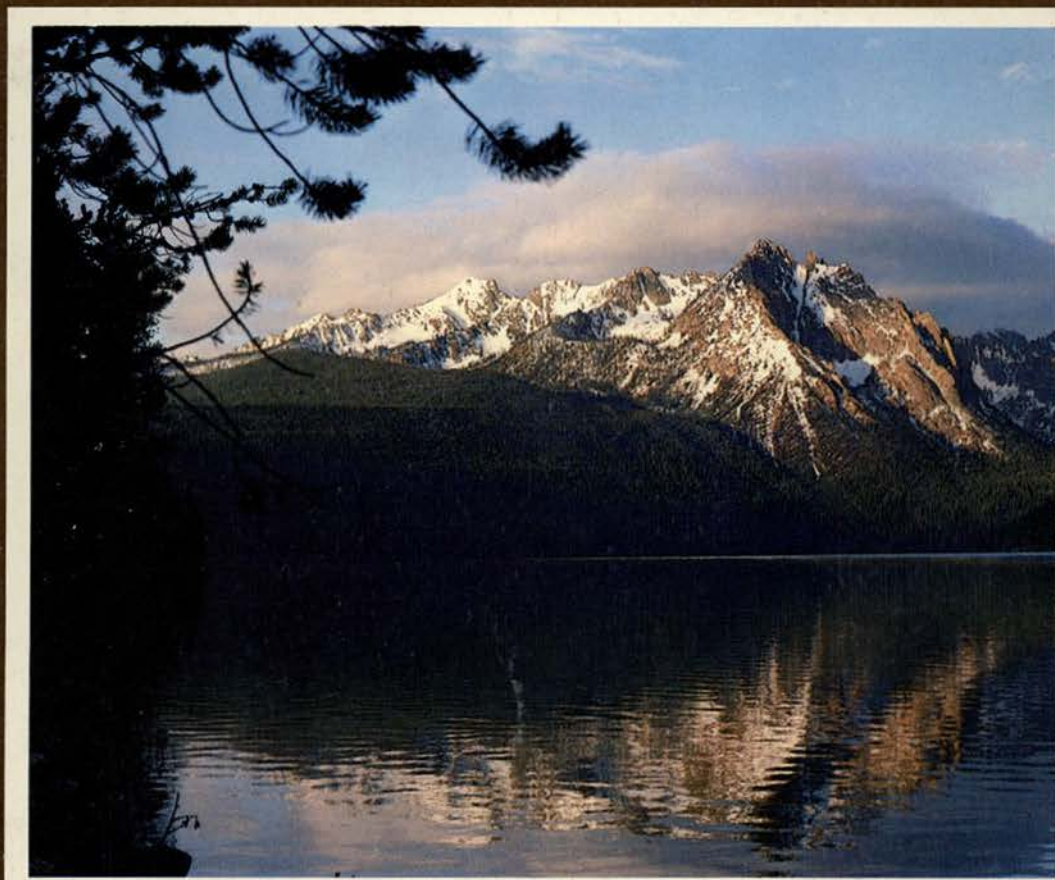


Idaho Forester

A Magazine of Natural Resources



1980

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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

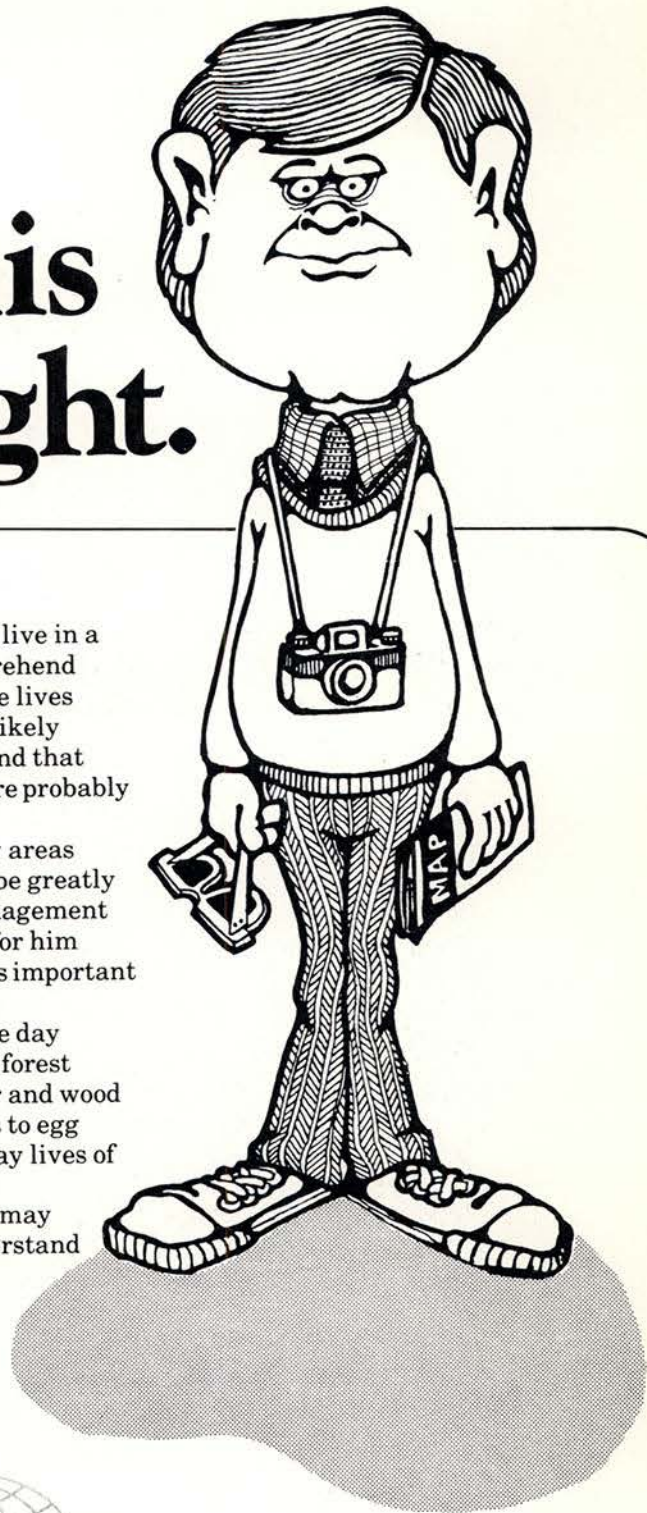


DIAMOND INTERNATIONAL CORPORATION

NORTHWEST LUMBER DIVISION

COEUR D'ALENE, IDAHO 83814

**TO BORROW SEE
OFFICE STAFF
THIS FLOOR**



DEDICATION



*The 1980 Edition of the Idaho Forester is dedicated to **Kevin Leber**, a Wildland Recreation Management student, who died in a plane crash on the Selway River in the summer of 1979.*

Editorial

In the past year the College of FWR has demonstrated that it is a vanguard in the field of natural resources. It has set precedents in the area of international relations. It has anticipated the need for expansion of research and educational programs. And it has recognized that technical expertise must be coupled with communication skills — written, verbal, and interpersonal.

The trend in the eighties is toward international cooperation. The College has responded by developing with the Chinese government a working relationship in which technical information and ideas are exchanged. The first phases of the program have proven extremely successful, and it appears that this type of scientific alliance will enhance efforts to improve international relations.

The College has demonstrated its credibility as an outstanding natural resources school. With this reputation it is inevitable that enrollment will continue to grow. To meet the demand, Dean Ehrenreich has been working toward the construction of another building. Expansion of the existing facilities is necessary to maintain high educational quality and to ensure a strong research base.

As education, research, and international programs expand at the University of Idaho, it will become increasingly important to disseminate information. It is hoped that the *Idaho Forester* will serve as a vehicle for communicating this information.

In 1979, the *Idaho Forester* won first place in a continent-wide contest sponsored by the Society of American Foresters. The award has become an annual event and with such incentive, the quality of many forestry school publications will improve considerably.

Michael Hollmann
Elizabeth Strassheim

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Cover photo: Morning view of the Sawtooths across Redfish Lake by Ed Krumpe.

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A very special thanks to our faculty advisor, Joe Ulliman.

The staff of the *Idaho Forester* has worked hard and learned a great deal about magazine publication. We hope that you will find the 1980 issue informative and enjoyable.

Introduction

by Dr. John Ehrenreich

I was pleased to be asked to contribute to the *Idaho Forester*. It is, after all, a national-award-winning publication. I considered a number of subjects, but finally decided to tackle the eighties, this new decade that, in 1984, will bring the College of Forestry, Wildlife and Range Sciences to its diamond anniversary. For many, the seventies was the decade when the bottom fell out: pollution, inflation, population, "tight" money, scarcer, ever more expensive energy. The golden age had supposedly ended; the "bite the bullet era" had begun.

Yet, in many ways the seventies were good for us—especially for those of us involved in and concerned with renewable natural resources. Out of the environmental and economic problems of those years arose a heightened national awareness of the limitations and possibilities of renewable natural resources. As that decade waned, we were suddenly reading and hearing a great deal about waste recycling, about "super trees," and about energy produced from crops. We learned that lakes and rivers once considered hopelessly "dead" could be revived to vigorous life.

In short, a pessimistic focus on problems began to make way for imaginative approaches to solutions.

The oil crisis, for example, is not likely to go away very soon. But today forest products industries are finding ways to compensate for the expense and uncertain availability of petroleum. An increasing number of mills now use wood residues that once literally went "up in smoke" as a substitute for energy previously produced from petroleum. Soon,

we'll see developing a chemical industry, the raw material of which will be wood rather than petroleum.

We've been told that the world is protein poor, but we are on the threshold of international fisheries resources cooperation that will substantially augment the world's protein supply. Aquaculture specialists throughout the world have been pooling their knowledge and efforts. Now, the U.S. Agency for International Development (AID), as well as other organizations and agencies here and abroad, have begun to invest the funds necessary to turn aquaculture research into food so badly needed by so much of the world.

We've heard the complaint of sportsmen: "Where is the game of yesteryear?" In fact, some species are more populous now than in years past. Through the eighties, wildlife and fisheries research will provide the knowledge necessary to ensure abundance of game to support hunting and sport and commercial fishing. The rewards of such research will be enjoyment for sportsmen, economic benefits for those who support and supply them, and employment and security for those who work in the commercial fisheries. In Idaho and the Northwest, we can look for gains in the salmon fishery that will add substantially to the enjoyment of sports fishermen and to the economic health of the Northwest's commercial fishing industry.

Through the seventies, we saw a virtual explosion in the numbers of people heading for the out-of-doors.



Recreation sites and facilities were often strained to the limits. Current research in wildland recreation management will not only help Idahoans and visitors to Idaho enjoy leisure time more fully, it will also help to ensure that recreation use will be compatible with other uses of the land.

It is precisely this widely shared feeling for the land that makes me most confident, most optimistic about the new decade. When prospective students apply to us to study forestry, forest products, range, recreation, fisheries, or wildlife, we ask them: "Why do you want to become a professional in this area?" They invariably answer, "Because I love the land." Their unmistakable sincerity fuels my faith that the eighties will be good years, challenging and exciting years. I can't help envying a bit the young person embarking on a natural resources career at the beginning of the eighties.

Dr. John Ehrenreich has been Dean of the College of Forestry, Wildlife and Range Sciences since 1971.

Feature Articles



R. Nalley

Federal Priorities for Western Wildlife: *A New Decade*

by John A. Sayre

The last decade has drastically changed the direction of the U.S. Fish and Wildlife Service. Ten years ago the Service was principally known for its migratory bird responsibilities, particularly waterfowl. The passage of unprecedented environmental legislation in the 1970's, especially the Endangered Species Act of 1973, greatly increased the scope and authority of the Service to protect and manage fish and wildlife resources.

Unfortunately, funds and manpower did not increase at the same pace and the Service found itself stretched thin to meet these new challenges.

At the same time, in the western states, a multitude of fish and wildlife crises surfaced that further strained the Service's capabilities. Every state in this region has one or more crucial issues, the outcome of which will profoundly affect the future of fish and wildlife in the West. Court decisions favoring Indian fishing rights in Washington and Oregon have thrown the management of anadromous fish into a state of confusion. Only recently have some signs of progress been noticeable.

Battles over the allocation of the Columbia River's water are raging between special interest groups, with the future of upriver salmon and steelhead runs at stake. Lack of a regional body with clear-cut authority to allocate water makes the prospect of anadromous fish getting their fair share of water rather dim. The same problem is also evident in the Snake River Basin, with some upriver fish runs in Idaho so depleted that certain species are being considered for "endangered" or "threatened" status.

The so-called "sagebrush rebellion" in Nevada challenges federal land ownership and management, including that of national wildlife refuges. Huge California water projects threaten to dry up water flows, not only for anadromous fish, but also for essential waterfowl habitat, in the Central Valley. Several endangered species in the state need immediate protection, with some already in direct conflict with large-scale developments similar to the Tellico Dam controversy. In Hawaii, home of dozens of endangered species, the efforts to save remaining native species and habitat face enormous odds.

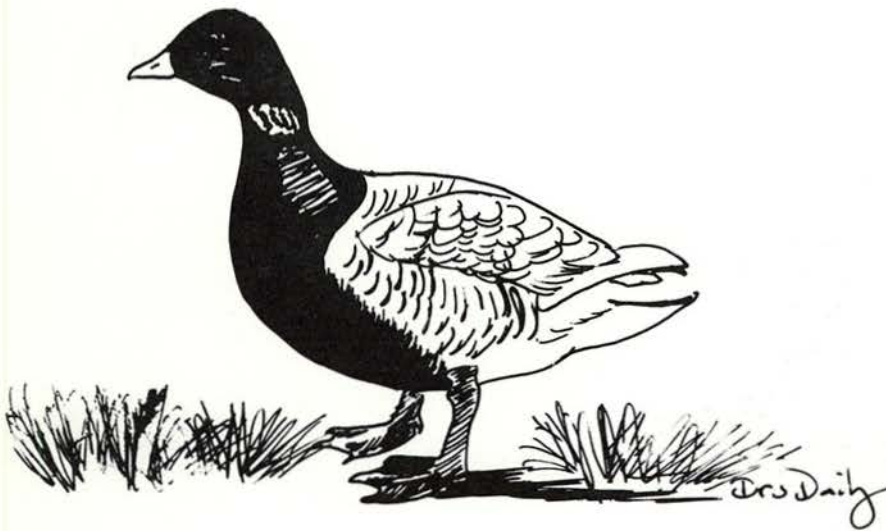
Obviously, the Fish and Wildlife Service cannot solve these issues by itself. Only through the closest cooperation with state agencies, federal agencies and private organizations, can the service hope to influence decisions which will benefit fish and wildlife.

Limits to the Service's resources and the enormity of the challenges have forced a new approach to doing business in the 1980's. Over the last two years the Portland regional office and area offices in Olympia, Boise, Sacramento and Honolulu have been identifying key resource problems. These problems have been prioritized, resulting in a list of fourteen Important Resource Problems (IRP's) in the region. The IRP's will be the guide for Fish and Wildlife Service work in the 1980's. All available money and manpower will be directed primarily to these areas, sometimes at the expense of other programs. This will cause some readjustment within the Service and make some constituents unhappy, but these problems demand action now, before it is too late.

The Important Resource Problems for the West are:

1. **Increase salmon/steelhead runs in the Columbia Basin.** The Service's major emphasis will be to





Black Brant

increase hatchery efficiency and achieve greater smolt survival, thus providing a higher return of adult fish to the sport and commercial fisheries. In addition, law enforcement efforts will be expanded to stop illegal fishing. Service participation in Columbia fishery bodies will continue to press for improved upstream and downstream fish passage facilities at dams, completion of mitigation measures for the lower Snake River dams and greater protection for wild fish spawning habitat. (There will be continued opposition to Ben Franklin Dam on Hanford Reach, the last major spawning ground in the Columbia for native fall chinook and steelhead.)

2. Maintain endangered species and migratory birds on the California coast. The initial emphasis is to develop a plan to protect habitat on the southern coast for endangered species like the least tern and the clapper rail. Proposals include acquisition of key habitat when

necessary. In addition, identification of major fish and wildlife areas in San Francisco Bay have been completed. Strategies are being developed, in conjunction with the state and local governments, to protect these key areas. Techniques to maintain traditional wintering populations of brant on Humboldt Bay are being studied, with emphasis on reducing harassment and disturbance.

3. Maintain migratory birds, anadromous fish and endangered species in the Central Valley. The crucial issue in the Central Valley is water for the "critters". The Service is developing a protection strategy plan for the area. Provisions include getting assurance of adequate water supplies to waterfowl refuges, buying easements on private duck clubs to maintain habitat, providing adequate flows to maintain the Sacramento River's anadromous fish, and protecting habitat for endangered species like the kit fox and blunt-nosed leopard lizard.

4. Prevent extinction of the California condor. California condors number just over 30 today. Drastic measures are required to save them and the Service has lead responsibility for implementing a recovery program. One aspect is a controversial capture plan for captive propagation of condors and eventual release of birds back to the wild.

5. Prevent extinction of Hawaiian forest birds. Hawaii's forests support many native bird species which are at dangerously low levels. Since some birds have already become extinct, the Service is completing surveys of remaining species and developing recovery plans.

6. Prevent extinction of endangered species in Pacific Islands. The Service has responsibilities for fish and wildlife in a multitude of islands that stretch 10,000 miles across the Pacific. The need is to identify what species are endangered, in order to develop protection strategies for them. In addition, the Fish and Wildlife Service needs to develop law enforcement capabilities in these areas and determine what role it will have in new government entities taking shape in the Pacific islands.

7. Reduce lead poisoning in waterfowl. A continuing controversy over the extent of lead poisoning in waterfowl requires further collection of field data. The Service will be working with state agencies to implement steel shot use in identified problem areas and providing information on the issue to waterfowl hunters.

8. Maintain anadromous fish, migratory birds and endangered species in Puget Sound Basin. Identification of key fish and wildlife

continued on page 58

Logging on the West Side

by Jim Pizzadilli

One of highlights of the undergraduate curriculum in Forest Resources at the University of Idaho is the senior field trip to see the forest industries of western Washington and Oregon. When I made that trip in Spring 1975, I was impressed by the rich forest resources and the scope of the industry. A few years after graduation I moved to Vancouver, Washington, and started looking for a professional forestry job in the "big time".

Unfortunately, my job hunting efforts during the winter of 1978 were not very successful. There are many forest industry firms around Vancouver and adjacent Portland, Oregon, but none of them was interested in a recent forestry graduate with a mixture of fire fighting and forest technician experience. During a series of interviews with some top-level industrial forest managers, I realized that there were two deficiencies in my qualifications. First, I had never worked before in the private sector of forest management. Second, I had little perception of business principles or of the value of money. It appeared to me that employers wanted someone who had proved he could make it in a production-oriented job and who understood the economic facts of life that spelled success or failure for the company.

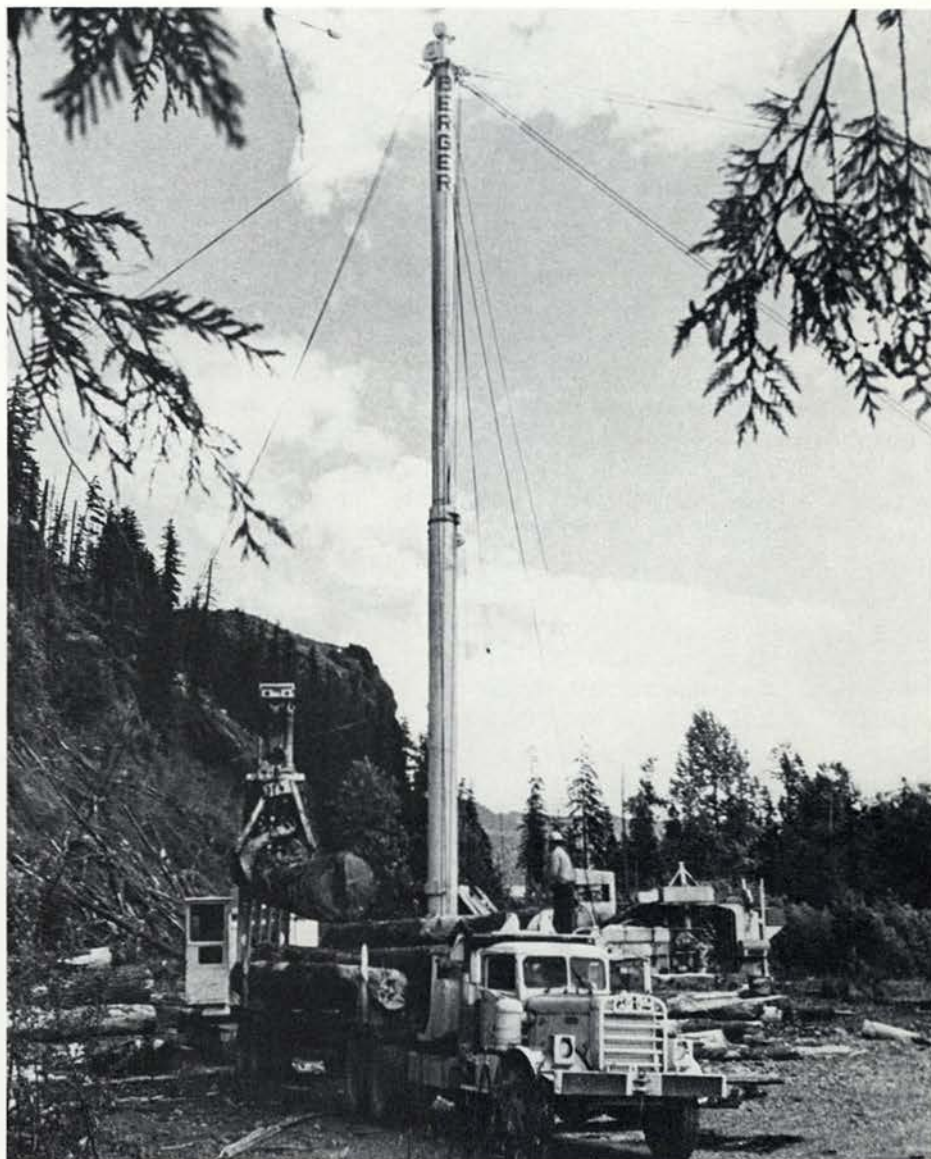
After these enlightening discussions, I formulated a new plan: land whatever logging job was available to obtain the necessary experience, and go back to school to learn some business and economics. I fired off an application for graduate school at the University of Idaho and began scouting for a logging job.

The job market around Vancouver

began to look promising after I redefined my immediate priorities. There were a great number of logging crews in that area, and many choker setters on those crews tended to come and go casually from job to job. With large labor demand and a high turnover rate, there had to be an opening for me somewhere.

In less than a week my opportunity surfaced. The company re-

quired no resume or references, and had no application forms to fill out. The only way to get hired onto this outfit was to talk to the woods boss, which meant waiting for him to return to the company yard in the evening after a day's work. Fortunately, I finally caught up with him on a day he had just fired someone, so an opening was available. Some fast talk about already having a hard hat and caulked boots and being



*It's not that I spend more than I earn,
it's just that I spend it quicker than I
earn it.*

Anonymous

“raring to go” the next day won approval, but the final okay had to come from the hooktender who ran the yarding crew. The hooktender was wary of my lack of experience during a phone call that evening, but some more personal salesmanship about being prepared, eager to work, and willing to learn won me a tryout.

I didn't sleep much that night. When I finally did relax enough to sleep, my dreams were of Ken Kesey's *Sometimes a Great Notion*, along with visions of logs rolling down a steep hillside directly at me. I avoided the humiliation of being late the first day, and arrived at the company yard promptly at 5:15 the next morning. Once there I joined my crew in a very beat-up carryall (referred to as the “crummy”) and we headed for our logging site, about 60 miles away. Our drive followed the Lewis River, a major stream that drains a large area in that part of the Cascade Range. Our logging show was located on the western side of the range, just about 10 miles south of Mount St. Helens.

The crew I joined that day consisted of seven people. The hooktender was overall supervisor of the men and machinery on the site, and he was responsible for seeing that all yarding and loading operations ran quickly and efficiently. The rest of us were roughly designated the landing crew and the rigging crew. On the landing were two machine operators, one to run our Skagit yarder and the other to operate the Link-Belt loader. The third man stationed on the landing was the chaser, who unhooked (or “chased”) each turn of logs as it arrived on the landing. He also cut off limbs and broken ends, stamped log ends with a branding hammer, and

generally assisted the machine operators wherever he was needed.

The remaining three of us were known as the brush crew or rigging men, and we spent relatively little of our time on the landing. There were two choker setters, including me, and a rigging slinger who was in charge of us and directed the yarder engineer with radio signals.

My boss was second in seniority among hooktenders, so we worked with the company's second largest yarder, a self-propelled Skagit. This machine had a 100 foot telescoping tower and three wire rope drums holding the main line, haulback line, and straw line (called “haywire”). The first job on my first day was rigging up this monster at a new setting. The engineer had driven the yarder onto a freshly built landing the day before, and now we had to raise the tower, secure the seven guylines to a ring of guyline stumps, and string our yarding lines out into the clear cut.

Time spent in rigging up is very costly to the company, since we are all collecting wages and not producing any logs. Therefore, the woods boss was always present to direct us and make sure the job was done as quickly as possible. The yarder's diesel engine was always revved up during the operations to provide air pressure for the guyline drums. With the intense pressure to work fast and the deafening roar of the diesel, rigging up was always a noisy, frantic activity.

I cannot really say if the guylines or yarding lines were harder to string. The guylines were as big as main line (1 3/8 inch diameter) and usually had to be pulled through the

brush by hand. My arms were numb a half hour after starting on them, and I wondered how I could make it through the rest of the day. To string the main and haulback lines, we carried 100-pound blocks and straps through the clearcut to hang our tail block and corner block at the edge of the cutting unit. Then we pulled haywire through the blocks and back to the yarder. This stuff was smaller in diameter and much lighter, but there was several hundred more feet of it to be run out by hand. All this required lots of sweat and choice language, but we finally got the haywire strung, pulled the haulback line through the blocks with the haywire, and secured the haulback to the butt rigging on the end of the mainline. We immediately grabbed our chokers and began yarding logs.

Each road was yarded by starting at the landing and working back toward the tail block. The butt rigging with our three chokers attached was run back and forth between us and the landing at the direction of the rigging slinger. At least we got a short break while each turn of the logs was pulled into the landing, unbelled by the chaser, and the rigging run back out to us.

I was introduced to the important safety rules at this point. The key is to always stay alert to the rigging and to logs that might roll or move around when stepped on or bumped by another log. The haulback line is a big hazard. It often gets “siwashed”, or hung up to one side on a stump or log. Increased tension on the line will make it snap free like a bowstring, flying about wildly.

My survival strategy the first few weeks was to follow the rigging slinger into the clear, step-for-step.

For awhile there, I rarely looked anywhere on that show without the back of his hard hat in the foreground. This wasn't really so bad, for instead of the mammoth physical specimen I expected all loggers to be, he was a wiry little fellow a couple of inches shorter than myself. I learned that the best logger is not necessarily a huge man of strength, but rather anyone who can move quickly and is willing to work hard and fast all day. If the right mental attitude is there, the strength will come with the work.

The force of attitude shown by some loggers is amazing. On one occasion a couple of logs broke loose unexpectedly and rolled down on the rigging crew. The other choker setter and I made a narrow escape, but one log rolled right over our rigging slinger. Fortunately, only one of his legs was injured and not badly. Instead of catching a log truck to town to see a doctor, he insisted on working the rest of that day. We finally had to pack him out of the brush at quitting time. The rigging slinger missed the next day, a Friday, and was so mad about missing a day's work that he returned with a vengeance on Monday. He drove the whole crew so hard that we yarded our record day's production and buried the landing with 25 truckloads of logs.

Everything about this job improved steadily. With a little experience I managed to work faster and could judge my own safety routes. As summer approached, the weather improved and we shed the rain gear that had been necessary on four of five days a week. With more available sunlight, we worked an hour of overtime each day and fattened our paychecks. Mountain roads cleared of snow and we moved to timber sales farther into the Cascades where the

complexion of our clearcuts changed.

Our early cutting units were at lower elevations in second and third-growth stands of Douglas-fir and hemlock. Down low the underbrush was often thick as a jungle, and it was an effort just to move around. High in the Cascades we logged virgin old-growth stands of the same species with far less underbrush. Yarding giant 7-foot diameter logs loaded three to a truck was far more satisfying than choking little pecker poles all day. The company owner even did a little horse trading and got us a bigger, more powerful yarder to handle the big wood.

The only disadvantage to logging these distant sites was the daily travel time to the job. For most of the summer, I left home at 3:30 a.m. and got back at 6:30 p.m. The only way to survive this schedule and still have any waking hours at home was to count on two to four hours of sleep while riding in the crummy.

Over my six months of working for this outfit I got to do a couple of different jobs on the show and was gradually given more responsibility. People missed work due to vacations, injuries, and firings, and opportunities arose to work as rigging slinger or chaser, and even do some of the hooktender's jobs. New hands arrived on an irregular schedule and had to be quickly trained on the job. A couple of them stayed, while a startling number of them quit after their first few hours, or even minutes, of work. Now I could understand the boss's reluctance to hire me with no experience, for the time spent training a greenhorn was often wasted on someone who would not even stick it out for a day.

I stayed with this logging job until

August, when it was time to quit and return to the University of Idaho. That short period of experience gave me a much better perspective that will help in whatever job I may have in the future. Some excellent entry-level positions for forestry graduates in the industry are as logging managers or contract supervisors. Other forestry jobs may not directly involve harvesting, but may be accomplished more effectively with some idea of the conditions, problems, and their solutions encountered in timber harvesting.

There are many opportunities for students to get this experience. The size of the industry and the rapid employee turnover rate offer numerous job prospects. Logging activities increase during the summer months and new openings may roughly coincide with college vacations. Large forest industry firms have a more formalized hiring procedure than the firm I worked for, but many small gypos hire people the same way. The critical factor in getting a logging job with no previous experience is convincing the prospective employer of your aggressiveness and commitment to work hard. Personal salesmanship will determine the success of a job seeker when applying to any size logging firm. Getting a job like this will give a student a very good look at the timber industry and may give him a head start on a future career. 🌲

Jim Pizzadili is a graduate student in Forest Resources.

I have never let my schooling interfere with my education.

Mark Twain.

Public Land Management:

The BLM in the 80's

by Dick Lingenfelter
and Fred Cook

The history of the management of public lands has not been a good basis for predicting the direction that the Bureau of Land Management will take.

The forties and the fifties were poor preparation for the sixties. BLM managers in the sixties were finding that management would be more than range adjudications, spring developments and fire protection when, suddenly, the seventies rose up and gave them a good whack! Now, as we enter the eighties, some of our managers are still in sort of a daze. Their education, experience and professionalism were sound, but it wasn't enough to stem the environmental avalanche of the seventies.

We may be able to get a glimmer of what the eighties promise by looking at a few things that have happened to the BLM since 1946, when it was created by a merger of the Grazing Service and the General Land Office. In the fifties livestock was king; there was little else in the way of resource and land management that required the attention of professional employees. Even though BLM managers could see many other problems, there was no manpower available for anything but the livestock and realty businesses.

For example, in February 1950, the roster of the BLM's Burley district in Idaho consisted of only four people: the District Manager, his assistant, a secretary, and a combination work foreman/fire control officer. In February 1980, on the same land with the same basic resources, the district has a staff of 45 people. This is not just a response

to the need for more intensive management; it is a response to citizen concern for more extensive multiple-use management expressed through the federal legislative and funding process. Even after its tenfold growth, the present staff is "on the run" trying to do the work required.

As national interest in the environment began to increase at the approach of the sixties, BLM managers started to receive more money and hire more people. The manpower and money was used to combat some of the persistent land and resource problems, such as noxious weed control and brush control.

The sixties brought unexpected results from the range improvements of the fifties. Brush manipulations and new seeding projects upset wildlife habitat, particularly that of the sage grouse. A new flavor was added to BLM management, as wildlife specialists joined the state

office staffs as early (or late) as 1961.

The agency tried to keep pace with the growing environmental movement in the sixties as it bolstered its staff with recreation, soils and other specialists. Even so, the BLM effort to make do with the resources it had in the face of growing public pressures, fell considerably short.

The environmental avalanche of the seventies that nearly buried the BLM was set in motion in 1969 with the passage of the National Environmental Policy Act. To meet the immediate requirements of NEPA, the BLM prepared a draft programmatic Environmental Impact Statement (EIS) for its grazing program. Before the final statement was circulated in 1975, several environmental groups filed suit against the BLM, claiming that the programmatic EIS did not comply with NEPA. The court ruled in favor of the complainants and ordered the Bureau to complete all of the site-specific



One of the many bands of wild horses in the Challis Planning Unit.

environmental impact statements for its 212 grazing programs by 1988. The first EIS was to be prepared for the Challis Unit of the Salmon BLM District.

Since January 2, 1975, the specter of the court action has overshadowed the work and mission of the Bureau of Land Management. It is reasonably safe to predict that the court order will continue to dominate the Bureau's financial and human resources until all the EIS's have been satisfactorily completed. Despite numerous and discouraging delays and interruptions, it appears that the EIS job is much on schedule.

The year 1971 brought the dedication of the Snake River Birds of Prey Natural Area for the specific purpose of preserving a unique ecosystem. However, results indicated that the original 26,714-acre withdrawal was inadequate to furnish the habitat needs of the raptors. A final EIS, published in February, 1980, recommended the bird's bedroom and nursery facilities be expanded to 515,257 acres, to include kitchen and dining room.

The year 1971 brought passage of the Wild and Free-Roaming Horse and Burro Act. Few pieces of legislation have ever flown through both Houses of Congress with so little dissent and created so many major problems for the Bureau of Land Management. The BLM must walk a tightrope to meet the legitimate needs of all land and resource users. Good, sound management seems to be constantly buffeted by the demands of concerned horse enthusiasts and responsive lawmakers and jurists. This is simply a management reality that the BLM must adjust to and cope with in the eighties.

There is some bad news and good news, however, and the BLM got a fair share of the latter in 1976 with the passage of the Federal Land Policy and Management Act (FLPMA). Termed the BLM's Organic Act, FLPMA repealed over 3,000 land laws, many redundant or contradictory, under which the BLM had been compelled to function. The most significant change resulting from FLPMA was conversion of the Bureau from a land disposal agency to a land retention agency. All lands will be retained now unless it is found that, through the Bureau's planning process, the disposal of a particular parcel of land is in the national interest.

FLPMA also legitimized the Bureau's planning system. This, plus a clear definition of "multiple-use", gave the agency a mandate to manage the federal public lands to meet all legitimate land and resource needs.

Beyond general land policies and planning, FLPMA speaks to many specific issues that had been particularly worrisome to BLM managers over the decades due to the lack of clear direction provided by pre-FLPMA laws. Some of these issues are:

1. Recording of Mining Claims
2. Enforcement Authority
3. Grazing Fees
4. Rights-of-Way
5. Wilderness
6. Grazing Advisory Boards

The Bureau of Land Management is still working out management structures and programs to comply with the Federal Land Policy and Management Act. As these are completed and perfected, the BLM will provide more efficient and responsive service to its constituencies in the eighties.

Another significant law, the Public Rangelands Improvement Act (PRIA), was passed in 1978. PRIA



The Bayhorse Mine, currently being studied for reopening.

One of the rarest things that man ever does is to do the best he can.
Josh Billings.

established a rangeland management policy that is sensitive to range productivity potentials, excessive levels of range deterioration resulting from grazing, and the stability of the livestock industry.

The Public Rangelands Improvement Act reaffirmed the general provisions of the Wild and Free-Roaming Horse and Burro Act; however, Congress recognized there were some weaknesses and inconsistencies in the 1971 law. The most serious of these were corrected with the PRIA. A major revision provides for ownership of adopted wild horses if, after one year, the adopter has demonstrated humaneness in the care of the animal.

Two other provisions of PRIA authorized funding for additional range improvements on federal public lands and set up machinery for an "Experimental Stewardship Program". The Challis Stewardship Committee, established under this authorization, has resolved some of the difficulties in the Challis Grazing Program.

It would appear from the foregoing that interesting times lie ahead for the BLM. Great pressures will be exerted on the agency to aid the development of energy resources found on public lands in the West. There are vast coal deposits, potentially large oil and gas reserves in the Overthrust Belt, mountains of oil shale, significant geothermal energy sources and valuable uranium deposits. Prospects for metallic ores will be probing BLM land in ever-increasing numbers.

With the help of FLPMA and PRIA, the BLM will be able to accelerate recovery of depleted ranges. This will depend upon a fine mixture of good range management

planning and implementation, an adequately funded range improvement program, and a working relationship with the livestock industry.

It will be "business as usual" for the BLM's land offices in spite of all the new management directions. The new laws will not diminish the public's need to conduct land transactions. In the new decade, land office personnel will complete their tasks more efficiently with the help of automatic data processing. This administrative improvement will be reflected in the field.

There are some exciting challenges in Idaho for the BLM in the eighties. The best of these will be the implementation of grazing and other resource management programs following completion of the planning process. To date, the BLM has completed three of nineteen grazing EIS's upon which management decisions have been made. The remaining sixteen will be filed within

the next eight years.

The following issues and problems will continue to occupy the interest and command the attention of Bureau professionals in Idaho:

1. The Snake River Birds of Prey Natural Area
2. Wild Horse management
3. Wild and Scenic Rivers
4. Silver City Land Tenure Situation
5. Various Land Actions Pending with the State of Idaho
6. Bald Eagles of Wolf Lodge Bay
7. Wilderness
8. Recreation

BLM managers will provide every reasonable opportunity for concerned citizens to participate in public land planning and decision making processes. 🌲

Dick Lingenfelter is an Environmental Specialist and Fred Cook is a Public Affairs Officer for the Bureau of Land Management.



Livestock grazing on open range is a major use of Public Lands.

Big Meadow Creek: *Past and Present*

by Amy Gillette

In 1932, the Forest Development Company of Lewiston donated 3600 acres of forest land to the University of Idaho College of Forestry. Since then, additional gifts and acquisitions have expanded holdings to approximately 7160 acres. The donated parcel was designated as the University Experimental Forest. Of that, 840 acres comprise the Big Meadow Creek Unit.

The history of the Big Meadow Creek area is intriguing, as it has weathered natural disasters, logging, and increased impact from man. Throughout the 19th century and until about 1930, white pine timber in this area was horse-logged down to the railway, where it was transported away for the manufacture of large kitchen matches. The dense ponderosa pine stands in this same area were untouched, due to the great demand for white pine. This proved to be a costly mistake, for a devastating forest fire ripped through the secluded area in 1931 leaving only charred snags. The fire of 1931 resulted in an increased awareness for fire protection in the area.

Just about this time, President Franklin D. Roosevelt implemented the Civilian Conservation Corps program (CCC), designated to provide jobs during the Great Depression. One of these CCC camps, Camp S-260, was built in the Big Meadow Creek area in November 1933 to increase fire protection. Over 200 men were assigned to work on two major development projects. The first was a construction project geared toward building roads and trails, establishing the boundaries of the area, and constructing a lookout tower. The second project was culturally oriented and involved extensive thinning in the northeast corner of

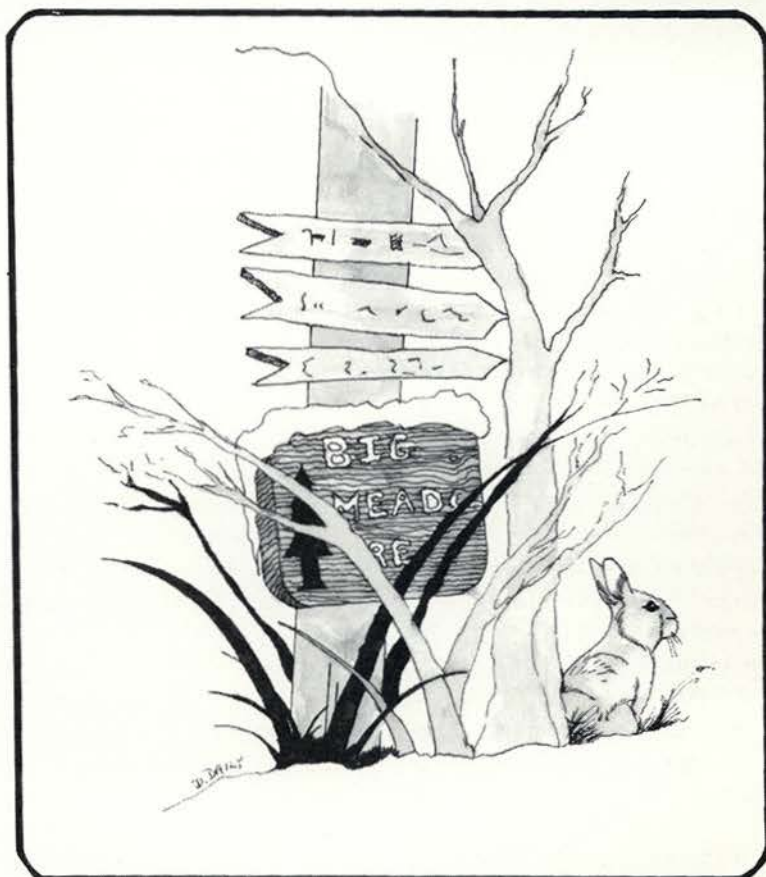
the unit, selective harvesting of white fir and removal of wolf trees in the northwest corner of the unit, and intense planting in the southeast corner of the unit.

Camp S-260 was dissolved in 1937, and in the Fall of 1940 most of the buildings were sold, except for the officers' barracks. In the early 1940's, the barracks were remodeled into a ski lodge by University of Idaho students, but due to poor skiing conditions, the lodge was soon abandoned. It was sold in 1950 to Mr. Walter West in exchange for a 40-acre tract of land adjoining the West Hatter Creek Unit of the School Forest. All the CCC buildings were purchased primarily for their lumber, which was then used to build foundations for homes and businesses. One restaurant in Moscow, the Chinese Village,

still has its original foundation made of lumber from these CCC buildings.

In September of 1940 Dr. Merrill Deters became manager of the the School Forest, and immediately took over a cedar pole sale that the College of Forestry Dean, Dr. Jeffers, had begun on the Big Meadow Creek Unit. This was a two-year sale, with a total of 1800-2000 poles removed from the unit and sold for 1.5 cents/ft. Other timber harvesting done during Dr. Deters' thirty-year term as manager included some old-growth white pine and ponderosa pine removal, and several salvage sales.

Grazing in the Big Meadow Creek Unit was minimal. In the early 1940's a band of sheep was allowed to graze in the area, but grazing was generally discouraged. The CCC



*"Conversation is cheap; ideas are dear.
They are seldom found in the same
place."*

—The Oregon Desert

camp had built fences around the unit, and while Dr. Deters was manager of the School Forest he maintained those fences to keep livestock from straying into the area. In the early fifties, a small dairy farmer tried to establish himself, but he had to abandon the idea because of the high cost of improvements needed to meet government regulations.

During the forties and fifties, no recreation use other than some individual activities took place on the Big Meadow Creek Unit. With such low participation rates, there was little demand for recreational facilities.

Comparing past timber and grazing practices with present activities at Big Meadow Creek reveals that things have not changed much. There has been no recent large-scale logging in the area, yet salvage sales have continued, with the most recent one in 1978. Currently, grazing is not allowed in the area.

Since the early 1930's, several research projects have been conducted in the Big Meadow Creek area. As early as 1934, work was being done on stand improvement and thinning improvement projects. Other studies included surveying parasites of ruffed grouse, identifying plants of Moscow Mountain, and controlling western white pine blister rust. More recent research has centered around recreational opportunities in the area. In 1965, students in the College of FWR initiated research to determine the feasibility of recreational development. This research, resulting in the *Big Meadow Creek Report* of 1966, proposed the development of a recreational site in the southeast corner of the Big Meadow Creek Unit.

The idea was quickly approv-

ed and the project began in 1967. Much of the work was done by students as a class project, with the federal government providing a \$15,000 grant. When the project was finished in 1969, a 160-acre day-use recreation site, complete with thirteen picnic tables, fire grates, trash cans, two pit toilets, centralized parking, a water system, and three interpretive self-guiding nature trails was ready for use. Much time went into trail construction, and a 17-page pamphlet was published with maps and an interpretive text for each stop on the trails.

All of this development was geared toward using the area as a recreational demonstration facility, but in July 1970, the Idaho Board of Regents approved a set of regulations designating the facility a public use area. This decision caused a major problem, as there was no management plan at that time for using the area as a public day-use area. The results were distressing. The pit toilets were not kept clean, and the Board of Health declared the water supply system unsafe for drinking and shut it off. Sections of the nature trails were not maintained, and there was no means of enforcing the 1970 regulations. It became obvious that a management plan was desperately needed.

Nothing was done about the situation, however, and the area continued to decline. Finally, in 1976, James Atkins wrote a thesis entitled *Recreation Use and User Preferences at Big Meadow Creek Recreation Area*. His conclusion was that there was a conflict of uses at the recreation site. One use was for family and group weekend picnics, while the other was for weekend beer parties. Since 90% of the use was weekend family picnicking from early May to late September, Atkins

recommended:

(1) The area should be open from early May through mid-October, with weekday use allowed only from June through August. Limiting the season of use in this way would decrease administrative costs and, hopefully, reduce vandalism.

(2) Management priorities should be geared to the greatest use, family picnicking. Certain specialized activities deemed as conflicting should be prohibited in the area. These include motorbike riding, hunting and target practice, and snowmobile use.

(3) Development of a functional drinking water system should be given a high priority, with maintenance priorities given to the toilets and fire grates.

Atkins developed some reasonable recommendations, but they have not been implemented. The result is reflected in the condition of the site today. Only six of the original thirteen picnic tables remain, while the trash cans have been removed and will soon be replaced by "Pack it in, pack it out" signs. One of the outhouses has been demolished, and only one nature trail remains for use. This trail encompasses only the area around the old CCC camp, and maintenance of the trail has been minimal. Pamphlets have been printed for the trail, but there are none at the site, due to vandalism of the box designed to hold them.

Why has this area been allowed to slowly degenerate? One reason is the tremendous amount of vandalism occurring at the area. There's no point in spending money to repair a damaged picnic table if one week later that same table is destroyed beyond recognition. Another reason for lack of maintenance in the area is lack of funds. A grant

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Fire Management and the National Forest Today

by Jeff Coupe
and Guy Prouty

One of the issues of greatest concern to people in the West is the role of fire in the National Forests. The following interview is intended to clarify important aspects of the Forest Service's fire policy. Gordon J. Stevens is Branch Chief of Aviation and Fire Management on the Boise National Forest.

Forester: What is the official fire policy of the U.S. Forest Service?

Stevens: Our official policy is that we take fast, aggressive initial attack on fires in areas not covered by a fire management area plan. For areas with a plan, there is a predetermined prescription that states, under certain conditions, that we may allow fire to spread and play its role in nature. When a fire exceeds the limits of the prescription, we take suppressive action.

Should a fire start outside a designated fire management area, the first thing we do is hit it as hard as is reasonable on the initial attack. If it escapes, we prepare an Escaped Fire Analysis. This is a brief plan that takes into account the cost of putting the fire out, using various techniques at different points. Then we match the dollar cost of different types of attack with potential fire damage to the dollar cost of the resource. Some fires have beneficial effects on the land.

Of course, there are other factors to consider. Not only economics, but also social and political effects are taken into account in the Escaped Fire Analysis. After this is prepared, the fire boss and the forest supervisor sign the analysis and it becomes the mandate for the fire boss on the fire suppression approach. It enables us to use common sense in our attack, so

that we do not pour half a million dollars into putting out a fire that may be doing only a thousand dollars worth of damage.

Forester: How long has this been in effect?

Stevens: About two years.

Forester: Why is there a new policy?

Stevens: Partly, it was recognized that fire has a role in nature and in management, and that we can take advantage of fire in its natural role and also use it as a tool. The other thing is that our suppression costs have skyrocketed with improved transportation and more sophisticated suppression methods. A fire boss now has access to a tremendous store of resources with which to attack a fire, and sometimes it doesn't make much sense to use them all. We've been violating our old policy for years simply because it was out-of-date. In a way, the revised policy is an admission that the old policy no longer met our needs. Three factors helped bring about the revised policy:

1. The recognition that fire is a natural force in nature,
2. The use of fire to meet resource objectives, and
3. The exorbitant sums that have been expended on fire suppression.

Forester: How does the new policy relate to fire management in wilderness and primitive areas?

Stevens: The policy is written to accommodate the status of the land. In the case of a wilderness or primitive area, the manager has an opportunity to write a plan that allows fire to play its natural role; unless the management plan spec-

ifies all-out suppression. If we continue to suppress every fire that is ignited in a wilderness setting, we create an extremely artificial situation.

As we follow the new policy, eventually we can restore areas to a natural state instead of leaving them with unnatural fuel beds. For example, last summer we burned 65,000 acres on Mortar Creek, which didn't destroy much commercial timber. But we are building up the same type of situation in our more valuable timber stands.



*I'd rather wake up in the middle of
nowhere than in any city on earth.*

Steve McQueen

Forester: Would you define fire management planning?

Stevens: It is simply preparing a plan showing how we accept fire and how we use it. For example, we could start with land management planning on a ranger district where the plan states the resource management objectives. Then we apply the fire management plan to that land management plan. It may be that an area has been selected with emphasis on timber, or watershed or wildlife; we determine how fire can help us accomplish these objectives. We will go into the area to study the fuel and terrain, and to judge how existing conditions will lend themselves to tolerable fire treatment.

The most important objective to define is that we want the land to produce. Why are we managing it? What benefits do we want from the piece of land?

Forester: Which wilderness areas in southern and central Idaho have approved fire management plans?

Stevens: The Sawtooth Wilderness has a fire management plan covering most of the wilderness, and maybe all of it. They are still in the process of amending it or preparing additional plans for areas adjacent to the wilderness area. The Idaho Primitive Area has a plan which may not have been approved yet.

Forester: What factors are considered in the development of fire management prescriptions for a wilderness area?

Stevens: One factor to consider if a fire occurred in a National Forest Wilderness, is whether the fire is meeting objectives to keep the area natural. Another consideration is that a fire must meet legislative objectives for the wilderness. The objectives

would have to meet constraints relating to political and social impacts of fire.

The prescription itself describes the rate of spread, flame length and probable effect on the land.

Forester: There were extensive fires in Idaho during the summer of 1979. Which of these fires occurred in areas covered by approved fire management plans?

Stevens: The Gallagher Peak fire on the Targhee National Forest was in the High Country Fire Management Area. The Kennelly Creek fire on the Payette Forest occurred in a fire management area, but the Mortar Creek and Ship Island fires did not.

All these areas will be included in fire management plans and incorporated into land management plans by 1983. After 1983, there will be provisions for the use or acceptance of fire in each area.

Forester: Contrast the action taken on fires covered by approved plans with the action taken on fires in areas without such plans.

Stevens: If the fire is within a prescription, we will take the appropriate action. This may be monitoring or limiting the spread of the fire to one direction; whichever the case may be.

Immediate, aggressive attack is the first thing that happens outside a planned area. An escaped fire is one that exceeds ten acres or burns into the next day. If the fire escapes initial attack, we prepare an Escaped Fire Analysis, which is like a "quickie" fire management plan.

It's all subjective, but we try to compare the costs of suppressing the fire with damage the fire is expected to do. What damages will the fire

cause? What will it cost to suppress it at different points? We measure the value of the losses with the cost of suppressing the fire, and select the best alternative.

Every 12 hours, the Escaped Fire Analysis is revised, unless it is still valid. If the fire shifts, for example, and threatens private property, we would call in more men, aircraft, or other resources to stop the fire and protect the private land.

Forester: Would you say that the people of Idaho have an accurate conception of the new fire policy?

Stevens: I think they have received enough information about fires that were burning, but I don't feel they understand everything we discussed today. Since the policy changed, we have attempted to explain what the Forest Service is doing, but I'm not sure we are getting through to them. I think we still have a big job ahead of us to acquaint people with our policy. It's easier to get people interested when something happens like last summer's fires. Maybe it takes some kind of trigger to get more people concerned.

Forester: What fire policy changes do you foresee with respect to National Forest Wilderness during the 1980's?

Stevens: The policy statement could be tightened a little. It is very loose, which we prefer, but I think public sentiment may lead us toward developing slightly tighter constraints. Unless it is tightened up, I don't foresee much change. In a nutshell, it says fires are helpful in some situations, and if they're not, we will spend the amount necessary to control them. 🍄

Guy Prouty is a Sophomore in Wildlife Resources and Jeff Coupe is a Senior in Journalism.

Bureau of Land Management Wilderness Inventory

by Marty Sharp

The Bureau of Land Management (BLM) was formed in 1946 through the merger of the General Land Office and the Grazing Service. Today, the BLM is housed in the Department of the Interior. It administers over 450 million acres of public land, mostly in the western states and Alaska. Approximately 12 million acres of BLM land are located in Idaho. As a multiple-use agency, the BLM oversees a wide variety of ecosystems, ranging from deserts to mountain peaks to canyons.

Currently, the BLM is conducting a wilderness review of all lands under its management, except in Alaska. This review is being conducted in response to legislative guidelines set by Section 603 of the Federal Land Policy and Management Act of 1976. It directs the BLM to identify, through an inventory, areas that have wilderness characteristics. Section 2 (c) of the Wilderness Act of 1964 defines wilderness and provides criteria for deciding which areas possess wilderness characteristics and warrant further study.

With the large area that the BLM manages, there is great potential for a sizable number of acres to become wilderness. The questions of how much acreage and how to select areas for wilderness are very difficult ones. Offering limited guidance, the Wilderness Act is vague and open to various interpretations. Despite this, the BLM is attempting an objective examination of the public lands based on criteria set forth in the *Wilderness Inventory Handbook*.

The BLM Wilderness Review follows on the heels of the Forest Service Roadless Area Review and Evaluation (RARE II). The two

programs may have confused the public to some degree, because many thought that the wilderness question was settled with RARE II. The BLM, a resource agency similar to the Forest Service, recently initiated a wilderness review process of its own. Both agencies are working under the broad guidelines of the Wilderness Act to complete the National Wilderness Preservation System, and both make their recommendations to the President and then to Congress. Other similarities include basic wilderness-nonwilderness issues and resource conflicts related to allocation. Mineral and energy development, ranching and grazing, and timber utilization are resource conflicts often associated with wilderness.

Three phases make up the Wilderness Review process of the Bureau of Land Management: the inventory phase, the study phase, and the report phase. The inventory phase has two parts: the initial and intensive inventories.

The initial inventory is designed to identify all areas that clearly and obviously do not have wilderness characteristics, and to return them to multiple-use management. Areas possibly having wilderness characteristics will be intensively inventoried and either recommended as Wilderness Study Areas (WSA) or eliminated from further consideration.

Wilderness Study Areas enter the second phase, or study phase, as part of the BLM land-use planning process. This phase of the review considers wilderness compared to other resource values, and addresses conflicts and trade-offs. Although this consideration of other multiple-use aspects was not part of the

inventory phase, it is an important aspect of the study phase. The best use of these Wilderness Study Areas, as determined by the BLM planning process, will be identified and reports on these determinations will be prepared for Congressional approval.

Phase three involves the reporting of recommendations for wilderness designation, as determined in the study phase. These recommendations are sent to the Secretary of the Interior, then to the President, and finally to Congress for the ultimate decision. Areas designated by an act of Congress become part of the National Preservation System.

When will the BLM complete the wilderness review? The agency has until 1991, but it intends to move through the process more rapidly. The public is encouraged to participate in the BLM Wilderness Review Process by providing information and comments during formal public review periods.

Wilderness is a new concern to the BLM. In the past, the BLM administratively protected certain tracts as "primitive areas" or as "natural areas." These will be considered in the review as Instant Study Areas and reported on by July 1, 1980.

Idaho BLM lands have undergone the initial inventory. The final decisions as of August 1979 show that 463,966 acres in nine units have been identified as Wilderness Study Areas and 2,598,454 acres in 150 units have been proposed for intensive inventory. The decision has been deferred on 212,615 acres in nine units, with the remaining 8,697,037 acres (73 percent of the total) identified as clearly and obviously lacking wilderness characteristics.

The author, a 1979 summer employee with the Bureau of Land Management, worked as a wilderness evaluator during the inventory. Primary duties included field investigation and documentation for both the initial and intensive inventories.

The intensive inventory primarily involved data collection in the field. Evaluation teams utilized four-wheel drive vehicles, helicopters, fixed-wing aircraft, and foot travel to inventory roadless areas. Evaluators prepared maps and narrative write-ups to document findings. BLM field teams took photos to depict characteristics such as natural features or man-made imprints found in a roadless area, and carefully documented photo points on maps.

The write-ups, maps and photos provided the documentation necessary to determine if an area

possessed wilderness characteristics. Recommendations for or against further study are based on the evaluation of the following wilderness characteristics: (1) naturalness; (2) outstanding opportunities for solitude or a primitive and unconfined type of recreation; (3) sufficient size; (4) supplemental values, and (5) the possibility of returning to a natural condition.

Recommendations are made by wilderness staff personnel to area managers or District Managers. From the District level, recommendations go to the State Director for review. Proposed decisions are published for public review and comment for each phase of the wilderness review.

Public participation is important to the wilderness review and the BLM encourages citizens to become

involved. Interested persons should contact the BLM state office nearest them and request to be placed on a mailing list to receive updates on the wilderness review process. ●

Marty Sharp is a graduate student in Wildland Recreation Management.



The China Exchange

by Bill Loftus

Since initial contacts were made with the People's Republic of China nearly two years ago, the College of Forestry, Wildlife and Range Sciences has established a working relationship which closely mirrors or exceeds the upturn in U.S.-Chinese diplomacy. Included in that relationship is the successful start of a faculty exchange program involving Chinese researchers and college staff members.

Dr. Chi-Wu Wang, emeritus professor of forest resources, pioneered the original contacts with the mainland Chinese government during a tour of China July 23 to August 13, 1978. For Wang, it was a return home. He first left China in 1946 for advanced training in the United States, first at Yale and later at Harvard where he received his doctorate. He had not returned to his birthplace since. Upon his return from China in 1978, Wang commented, "They have done admirable work in the development of improved strains of poplars, pines and another native conifer called sa-mu."

During his trip, Wang accompanied a contingent of Canadian businessmen who discussed wood-using industries and supplies of wood products with their Chinese hosts. In Nanking, representatives of a major university there indicated at a forestry conference that their university would soon assume a major role as a center for forestry and tree-improvement research in China. After four half-days at another conference held in Shanghai, Wang said, "I came away with the strong impression that they are in the process of reorganizing and planning their cur-

riculum of forestry instruction and research because of advances in the West. They're planning to send promising young scientists to schools like the University of Idaho and other places outside China for training in forestry improvement and genetics."

Although Wang said he had been "too busy with technical sessions" during his visit to sightsee much, a number of changes which had occurred during his 30 year absence had impressed him. When he left China, he said Peking had been surrounded by dry and dusty plains. But, "When we approached the city from the new airport 30 miles away, we traveled down long avenues of tall trees. There were belts of very tall trees everywhere." Leaving Peking and during the 18 hour train ride to the northeastern provinces, Wang recalled, "We saw large scale reclamation projects on the flat lands and also the same wide tree belts around the settlements." Extensive systems of reclamation canals divided the plains to provide water for both trees and grainfields, he said.

Later, in preparation for his own visit to the Chinese mainland, Dr. John H. Ehrenreich would remark, "The contacts from the Chinese have been directly with us and it has been up to us to keep U.S. government officials informed. There has been a distinct lack of red tape in our communications. The Chinese became interested in our university and contacted Chi-Wu Wang directly. Chi-Wu has served as our principal contact since. He has been well informed about their interests and has helped to pave the way for the visit (by Dean Ehrenreich and UI President Richard D. Gibb) and perhaps subsequent exchanges. If he

weren't here, we'd probably still be floundering and making mistakes."

Ehrenreich, as the College of Forestry's dean, visited China June 26 to July 6, 1979, to finalize negotiations on student and faculty exchange programs. Together with Dr. Gibb, Dean Ehrenreich would visit principle forestry centers and provide updates on advances in natural resource sciences within the United States as the first U.S. forestry school executive to visit China. "In the areas of forestry and renewable natural resources, they have selected the College of Forestry, Wildlife and Range Sciences as their initial contact," he said. "If negotiations are successful, we will be the first U.S. institution in this area that will be establishing actual exchange programs with them."

At that time, Dean Ehrenreich said the Chinese had placed tree improvement and forest genetics research at the top of their forestry priorities list for exchanges. "We are probably ahead in research and faculty resources in those areas which the Chinese have shown an interest in. The Chinese have put a higher priority on medical and nuclear research but nonetheless, we have been able to move our area ahead quicker than some of the other disciplines," he said. "I think it is very interesting that in other disciplines, Chinese universities have established a one-to-one relationship with American universities, but in this case they've established a three-to-one relationship." The three Chinese universities include Peking, Nanking and Harbin, all of which provide major centers for forestry research and education.

Their trip, sponsored by contributions to the university and by the

Adventure is not outside a man; it is within.

David Grayson

Chinese government, was not to promote a one-way flow of information however. Dean Ehrenreich said, "A lot of the forests there are also roadless, which makes them even more similar to our own. It may be that an exchange program could help us solve some of the problems associated with how we're going to deal with our own forests. During the visit we'll also discuss what other exchanges might follow. We could also exchange faculty members working with remote sensing of natural resources, watershed and forest inventory analysis. While we're there, we'll also be assessing the Chinese areas of expertise that some of our own faculty members might be interested in. We've already had volunteers from among our faculty for such exchanges. We'll be keeping our eyes open for potential Idaho forest industry involvement as well as to inform industry executives of opportunities and try to facilitate their getting together with the Chinese if there are commercial possibilities. I think that in order to really be a university, you have to keep an international perspective because the commodities markets are worldwide."

Upon their returns, both President Gibb and Dean Ehrenreich remained optimistic about exchange programs which would first bring Chinese students and scientists to the university. President Gibb, who returned first, stated shortly after his arrival, "Most aspects of the exchange program are assured except for the financial aspect. The Chinese very much want an exchange of education and technology, but, the country is poor and it is uncertain how much money can be put into education at this point. During Mao Tse Tung's term in office, many of

the academic disciplines, including forestry, biology and other sciences, were shattered and overlooked. In the case of forestry, lab equipment in the universities was destroyed and not replaced as the state looked toward developing the social sciences instead."

Dean Ehrenreich, who returned over a week later, described his meetings with the Chinese as "cordial, friendly and very, very productive." Negotiations conducted during the visit by the UI executives would ultimately bring four Chinese scientists to campus and one student, Dr. Wang's nephew, would enter the graduate studies program in the mathematics department. Other student exchanges, hashed-out during the negotiations, met delays and eventual cancellation due to procedural difficulties and a cutback in the numbers of Chinese students studying abroad. Although original estimates compiled about the time when the UI executives visited China

had assumed that nearly 500 students would study in the United States during the coming year, the actual number turned out to be far fewer as the Chinese government met setbacks in gathering foreign currency necessary to carry out the exchange program at originally-hoped for levels.

Three of the four visiting Chinese scientists, Dean Ehrenreich announced, would come to the university to further their own expertise in tree improvement and genetics research at the expense of their government. Their visits reflected the intense interest of the Chinese government in reforestation vast acreages and tree-improvement research. "Approximately 17 percent of China is now forested and they would like to bring that total to 30 percent," he said.

"When you're talking about a country as large as the continental United States, that is a tremendous
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Yellowstone in the Future

by John A. Tyers

Present Use

Here we are on the brink of the 1980's—entering a new decade and wondering what the future holds. In light of increased restrictions on energy use, those of us helping to administer the national parks move forward with more than a little apprehension. The National Park System—particularly the big “natural” parks such as Yellowstone—is a rather traditional organization. Our basic philosophy has been to protect the resource and still try to make it available for the visiting public without adverse impact. This mandate has been frustrating and incongruous at times, but we try our best to meet it.

Prior to 1979, Yellowstone National Park travel had reached an all-time high, 2,700,000 visitors per year. Such an influx of people created

numerous problems for us and the public because existing physical facilities were not geared to handle this kind of volume, particularly during the peak part of the season, June through September. As a result, we literally had to process visitors simply to make room for the incoming crowds. We noticed the quality of our services beginning to decline because we could not handle the crowds. As a result, the visitors became disenchanted with the press of people and overcrowded, inadequate facilities, moved through the park hurriedly. In essence, the visitor experience declined. Park administrators agonized over what we would do in future years if the visitation continued to spiral. A reservation system seemed to be the only solution.

Then the energy crunch hit, coupled with higher fuel prices and increased travel expenses. By the close of 1979, park travel to Yellowstone was down almost 30% from the

previous year to two million visitors. It was within the capabilities of this park to accommodate and provide personal services for this number without undue adverse impact on the resource.

What the future holds we do not know, but if travel stays within these limits, we can continue to provide the services at a standard level in keeping with the tradition of our agency—providing, of course, that we retain our existing physical facilities and manpower. Without the press of overwhelming numbers of people, visitors will be able to enjoy a Yellowstone experience at a pace commensurate with the time they would like to spend here and compatible with the facilities available. They will be able to stay longer and become more involved in the park.

Changes Today

Currently, an extensive plan to extend the physical facilities at Grant Village is underway with annual incremental construction programs as money is available. The intent of this expansion is twofold: to provide and concentrate concessions and other physical facilities in this area, and to facilitate the phasing out of the entire Fishing Bridge development complex. Returning the Fishing Bridge area to its natural condition is necessary because it is prime grizzly bear habitat, and as such, should never have been invaded by man's developments. This management decision is an example of how, through systematic, scientific research over a number of years, we have discovered that:

1. Many early development decisions based upon proximity to natural features and park road systems were not always sound; in

National Park Service



Visitors on a guided naturalist hike in the Canyon Area with Lower Mesa Falls in the background. Yellowstone National Park.

fact, they actually interfered with some of the natural processes in the Yellowstone ecosystem. Phasing out the Fishing Bridge development area and enlarging Grant Village to provide for the visitor should correct a few of our past errors.

2. Backcountry use of Yellowstone has increased over the past few years. To control its impact and to regulate the activity, a reservation system involving numbered sites has been implemented. It allows management to know what is happening with backcountry travel at all times.

Outside Developments

Parks can be affected by outside industries and energy development projects. Development projects affecting parks have occurred in the past, and they will continue. Such threats to Yellowstone Park with respect to energy-related projects are issues park management is beginning to face and will have to face in the future. We are committed to maintaining park resources and protecting against degradation of park values. This can be accomplished by an early warning system based on effective monitoring. Ongoing threats to the water, air, visual and solitude quality of Yellowstone continue to exist and probably will increase in the future. Management must be made aware of these threats to the resources of Yellowstone and take action to ensure they do not become flagrant intrusions which would destroy park resources. Future park administrators will face many tough decisions in assessing potential outside threats to Yellowstone's resources.

Recent concern has been stimulated by the possibility of commercial exploitation and development

of the Island Park Geothermal Area southwest of Yellowstone. Some of the land where this geothermal resource lies is in private hands, but most of it is under the jurisdiction of the U.S. Forest Service. Much speculation has been made as to whether any test drilling in this area would adversely affect the geothermal resources within the park. No one knows at this point but, of course, any damage to park geothermal features would be irreparable. The park will continue to face increased threats to its resources as the demand for energy and other resources continues to grow in the U.S. Decisions on national priorities will affect the fate of this park in the future.

Transportation

The park of the future will undoubtedly involve mass transportation. Even today, many of our visitors, 5 percent to be exact, enjoy the park by means of a commercial bus service. We anticipate that this rate will increase. Shuttle bus facilities will also be used to help people see Yellowstone. We are contemplating instituting an elephant train bus system to run the loops and routes on the rim of the Canyon area. Bus systems of this type are already in use in other parks. Of course, visitors would have to leave their vehicles at the parking area near the Canyon Visitor Center in order to use this shuttle system. If buses, instead of individual vehicles, were to be used almost exclusively as a means of touring the park, staging areas would have to be provided in the gateway communities or adjacent to the entrance stations of the park. This overall system would be one way to save energy, control the traffic flow

and reduce the congestion of vehicles.

Management needs to recognize the value of bicycles as an alternate means of transportation within Yellowstone. Bicycles could be a very practical way to see the park. By using segments of old road right-of-ways, coupled with the present road system, a bike trail system could be developed running parallel to the existing road. This would allow visitors to enjoy the park at a leisurely pace.

Anticipating Problems of the Future

There is a transportation problem just around the corner; what happens when everyone has individual flying belts and can lift off anywhere and drop down anywhere? Imagine the impact on Yellowstone wildlife when visitors can hover over elk and bison to shoot pictures and observe them. What happens when someone spooks a bear out of the woods? The bear may literally be run to death. The time is coming when management will have to decide what type of conduct we can demand from a society made mobile by flying belts or some other type of gimmick yet to be invented. Remember how the automobile replaced the horse and buggy? Man is capable of some great things, perhaps ultimately to his own demise.

Many of the public buildings in Yellowstone will probably need to be replaced in the near future. Traditionally, we build them above ground. In some cases, they are monuments to architects. Perhaps we should think more about the practical nature of underground public buildings. They would be less intrusive on the natural landscape, less costly to

continued on page 56

A New Era in Snake River Fisheries

by Martin Cobb

The Snake River begins in the rugged country of the Tetons and ends its journey when it merges with the Columbia River in central Washington. During this trek, the character of the river changes dramatically. The headwaters, cold and clear, support one of the finest cutthroat trout fisheries. Downstream, the high mountains and coniferous trees surrounding the cutthroat's domain yield to the high desert and basalt flows. In this stretch, the water becomes warmer and more turbid. The Snake then flows north through canyonlands, where uplifting of the land and downcutting of the river have formed the deepest gorge on earth, Hell's Canyon. On the final leg of its journey, the river turns westward, from Lewiston, Idaho to the Columbia River.

The once calm pools and surging whitewater of this final stretch are no more. Four dams have raised the pools and smoothed the rapids. The river is now a series of reservoirs. The dams produce inexpensive hydroelectric power. Boaters and water skiers come to enjoy the reservoir in the hot summer months of eastern Washington. Barge traffic on the reservoirs provides cheap transport for Inland Empire forest and agricultural products.

One aspect of the newly-created reservoirs has not been beneficial. The aquatic community of the lower Snake River once supported many cool-water fish such as suckers, sturgeon and squawfish. Backwater embayments provided excellent habitat for these and introduced species such as smallmouth bass, black crappie and carp. The river also provided a migration route for

anadromous fish traveling from the Salmon and Clearwater rivers of Idaho to the Pacific. Returning adult chinook salmon and steelhead number in the thousands, young smolts in the millions. Unfortunately, the dams have proven to be serious obstacles for the migrating fish.

Both adults and smolts suffer increased mortality in their attempts to navigate the dams. Declining runs have necessitated artificial support. Hatcheries, transportation programs for the young around dams, and alteration of operations allow safer passage for the fish.

These problems do not occur with the more sedentary warmwater fish. Warmwater fish do not navigate the dams during their life span and may be able to shoulder the burden of the sport fisheries in this section of the Snake River due to their adaptability to impounded water.

Research is now underway by the University of Idaho to study 140 miles of warmwater fishery from Lewiston to Ice Harbor Dam near the Columbia River. The study is directed by David H. Bennett and Robert G. White, professors in the Department of Fishery Resources. Assisting them are Paul Bratovich, Hal Hansel, William Knox, and Doug Palmer, all Master of Science candidates. The fish community in each of the four reservoirs will be examined. Due to time and monetary constraints, the most intensive efforts will focus on Little Goose Reservoir.

The study will attempt to assess the present status of the warmwater fish and determine the potential for the improvement of the fishery. The fish, the aquatic community, and man will be taken into consideration.

Three graduate students are investigating the fish and habitat. Doug Palmer is studying species composition, relative abundance, fish-habitat associations, movements, and habitat preferences. Palmer uses nets as well as electroshocking gear to collect fish. Five major habitat types exist in the four reservoirs. Collected fish are weighed, measured and released; though some are retained by Hansel and Bratovich for additional study. Many fish are marked with numbered tags.

A recaptured fish yields data about movement and growth. The 1979 field season produced some preliminary results. A total of 24 species of fish were collected. Many of these are members of the minnow, sucker and sunfish families (e.g., the large-scale sucker, white sturgeon, and bridgelip sucker). Introduced species caught included smallmouth bass, white crappie, black crappie, channel catfish and yellow bullhead.

Palmer also found evidence that some fish restrict themselves to certain habitats. Sturgeon were located mainly in the tailrace below the dams where fish can bottom feed in the fast-moving water. Smallmouth bass existed in all five habitat types in the reservoirs. These and other results will lead to an overall estimate of abundance, composition and distribution of fishes in aquatic habitats.

The fish retained for dissection become the concern of Bratovich and Hansel. Bratovich is investigating the reproductive aspects of the reproductive aspects of the fishery. By microscopic observation of the gonads of selected species, the timing and duration of spawning for each species can be determined.

Identification of spawning habitat is made by snorkeling or by slow-moving boats along the shoreline. Bratovich notes whether these habitats are productive, if young or adults are nearby or if they are nonproductive. All species seen are noted along with details on the bottom type.

Bratovich found that most of the fish spawn in the spring and summer when water temperatures exceed 60 degrees F. Unfortunately, this is also a time of significant water level fluctuation in the reservoirs due to hydroelectric generation. Water levels may rise and fall as much as five feet within a day. The study should indicate how this affects fish spawning in shallow water.

Hal Hansel is examining age structure, growth rates and food habits of some of the fish in the reservoirs. From the dissected fish, Hansel collects the stomachs and bony structures such as the scales, spines, and otoliths which are bones associated with the inner ear. The food habits of the fish are determined by counting the food items in the stomach, noting frequency of occurrence and the total volume. Data from 1979 suggest that some fish in the system such as the suckers and bullheads consume mainly algae.

Knowledge of food habits will be essential in future management activities in the reservoirs. If the increase of a predaceous species will be detrimental to another desired species of fish, biologists may alter their plans. More importantly, if the migrating smolts succumb to bass or crappies in large numbers, the decision to improve habitat for either of these fish would have to be carefully considered.

Food habits will also yield infor-

mation necessary to improve habitat to increase the nonfish food base. For example, smallmouth bass also eat crawfish; improvement of crawfish habitat could lead to an increase in bass numbers.

Hansel is aging the fish by examining their bony structures. The most common structure used is the scale, but all bony parts can yield aging information. Each year, scales and other bony parts undergo ring deposits of calcium salts and can be counted much like rings in a tree. By examining scales of different lengths, Hansel will be able to determine growth rates for each species. In addition, he can establish age structures of the different fish in question. This information may answer questions about reproduction and environmental stresses. For example, if an overabundance of older-age fish are observed, some environmental factor may have recently reduced either reproduction of adults or survival of the young; if a year class is missing (e.g., no four-year-old fish), environmental factors that affected the fish in that year could be examined and the limiting factor determined.

Before construction of the dams, the river supported one of the best summer steelhead fisheries in Washington. Salmonids that survived the dams are needed upstream to maintain the run. Seasons have been closed to protect the deplete fishery. With an improvement of the warmwater fishery, anglers might shift their pursuits to bass, crappie, or catfish. William Knox is investigating this possibility.

Ground and aerial surveys provide the information needed to determine relative uses of the reservoirs. An estimate of the total catch

of the angling public and other statistics pertinent to the fishery will be derived. With this information, the researchers can determine what species of fish are most actively sought, where this occurs, and when.

Future biologists working with the fishery could direct their improvement strategies toward the desires of the anglers. For example, many people who visit the reservoir are avid smallmouth bass fishermen. "The more smallmouth the better", as far as bass fishermen are concerned. Attempts in the future could, therefore, be directed toward improving smallmouth bass habitat rather than sucker habitat.

When completed, this research project will reveal important clues about the workings of this warmwater fishery in the lower Snake reservoirs. This fishery offers a bright future for Idaho and Washington anglers. Research that considers all aspects of the fishery — man, the fish and the habitat in which they live and feed — will lead to basic understanding of the potential of warmwater fisheries in the Pacific Northwest. We cannot replace what has been lost, but we can try to regain the opportunity for the angling public to fish the Snake for the bounty of its waters. 🐟

Author and son.



Martin Cobb is a graduate student in Fisheries Resources.



"It's O.K., it's just mistletoe. . ."



"I can't believe I ate the whole thing!"

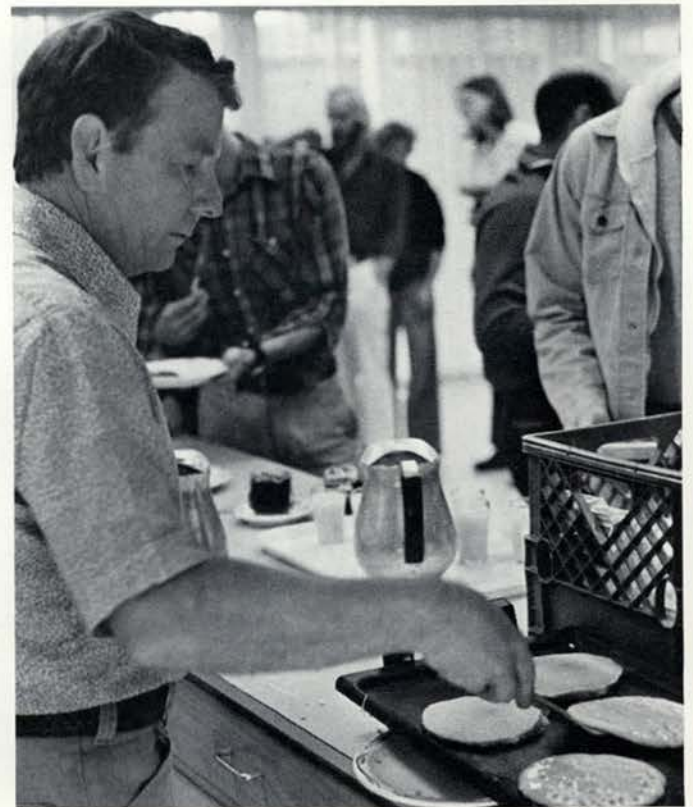


"My group had 33% fewer cavities."



Rodney Waller

"The 1979 Junior Prom Queen and her date."



"It's a living."

Rick Myers

Faculty Follies



Rick Myers

Elmer and Jack

by Guy Prouty

Elmer Canfield

When Elmer Canfield was a boy, he said that he wanted to be a soldier, a forester, and a cattle rancher. As of this date, he has fulfilled his first two wishes and very shortly will be working on his third. Dr. Canfield will be retiring from the Department of Forest Resources at the end of this semester, after years of dedicated service at the University of Idaho.

Before entering college, Dr. Canfield served in the U.S. Air Force for 25 years, including tours of duty in World War II and the Korean War. He worked as an assistant group operator in a tactical missile group in Germany before retiring as an officer in 1960.

Elmer Canfield then came to the University of Idaho to pursue his second goal—becoming a forester. He earned a Ph.D. in 1969 and started his teaching career in 1973. Dr. Canfield is currently teaching courses in forest pathology and advanced forest fungi, and researching the taxonomy of wood-inhabiting fungi (basidiomycetes). He will be publishing his results in *Mycologia*, a national journal of mycology.

Dr. Canfield feels that the end of this academic year is a good time to start his third career, cattle ranching. He intends to move to Nampa in southern Idaho. As he told me, "College professors don't make enough money to go into the cattle business, so my cattle ranching will have to be on a small scale."

His future plans include growing apples, trout fishing, and bird hunting. In addition, he will be

collecting fungi during the summer months and studying them over the winters. Dr. Canfield will donate specimens to our herbarium in the College and to a university in Arizona.

More than likely, Elmer Canfield will fulfill his third boyhood wish and join the ranks of Idaho cattle ranchers. We wish him a happy and productive retirement.



Elmer Canfield



Jack King

Jack King, a watershed specialist, worked only a short time with the College of Forestry, Wildlife and Range Sciences. Before coming here as an instructor, he worked a year for the Forest Service in Washington, D.C. and did graduate work at the University of Minnesota.

As a faculty member Jack did research in forest influences and taught several courses, including wildland conservation and principles of forest land management. He was also involved in summer camp at McCall, Idaho.

Dr. King left the University of Idaho in November of 1979 for two reasons. First, he felt that teaching and conducting research concurrently was not the best combination for him to pursue at the moment. Second, Jack expressed the feeling that, with all his absences, he could not do an effective job teaching his courses. He had to miss his classes frequently, especially in the spring when winter snows melted and he was in the field a great deal of the time. He did point out that he would be happy to return in the future if he could commit enough time to teaching.

Currently, Dr. King is conducting watershed research with the Intermountain Forest and Range Experiment Station facility in Moscow. The Horse Creek study, in progress for thirteen years, is his pet project. Located on the Selway Ranger District of the Nez Perce National Forest, the Horse Creek watershed encompasses 7,700 acres of grand fir, Douglas-fir and western red cedar. Jack is studying the hydrological effects of certain harvest cuts and road construction on soil and water resources. He and other researchers are monitoring water quality, streamflow and sedimentation during each phase of the job. The data collected by Dr. King and other personnel may help improve current forest practices, and will help reduce man's impact on fragile areas.

The students and faculty wish Dr. King success as he continues work on the Horse Creek study with the U.S. Forest Service.

Remarkable Research

by **Martin Cobb**

In 1978, the College of Forestry, Wildlife and Range Sciences Research Committee was in somewhat of a dilemma. Two entries for the Outstanding Research Award were judged to be of exceptional quality. Dr. Steven R. Peterson, professor of wildlife resources, had been nominated for his research involving the effects of pesticides on oldsquaws, diving ducks of the northern latitudes. He had determined that the ducks were good ecological indicators of the different levels of pesticide pollution in Lake Michigan. Peterson also examined other aspects of the oldsquaw's ecology. The second entry, that of Dr. Theodore C. Bjornn of the Department of Fisheries Resources had been nominated for work concerning sediment transport in central Idaho streams. He noted that as sediment load increased, the density of the aquatic insects and fish decreased. Bjornn found that the behavior of fish changed as the sediment increased. Since both research efforts were of the highest order, the research committee decided to recognize both researchers: a first in the history of the award.

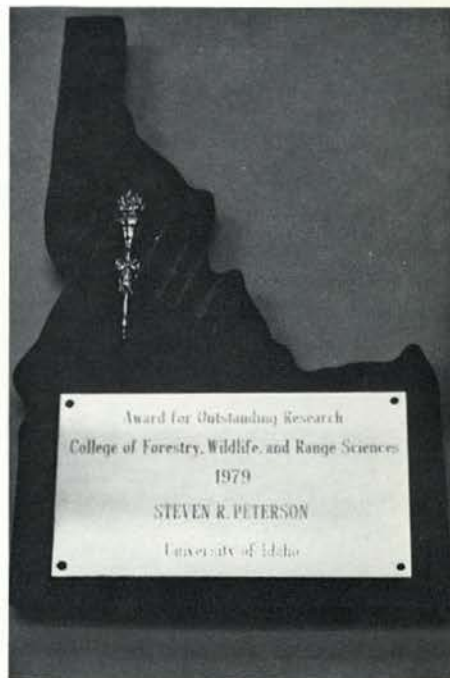
Initiated in 1976, the purpose of the Outstanding Research Award is to recognize distinguished scientific investigation within the FWR College. Nominations for the award are due March 1 of each year. Students, faculty or staff may enter. Nominations with supporting documentation are then reviewed by the FWR Research Committee. This committee is comprised of representatives from the six departments, a graduate and an undergraduate student, and the Associate Dean of Research.

Once the nominations have been received, judgement is based upon four criteria. First, the research must be original and significant. Secondly, the design of the investigation should be well thought out. Accordingly, the research must have been well executed. Finally, the results should have been effectively reported to the public. The committee looks for quality in each area of evaluation. If no submitted entry is deemed worthy, the award for that year is not given.

The award is presented in April. Each recipient receives a plaque and a letter of commendation from the dean of the College. The plaque is shaped like the state of Idaho with the recipient's name inscribed on it. If co-investigators are involved with the research, each receives a letter of commendation from Dean Ehrenreich.



Ted Bjornn



Outstanding Research Award

Martin Cobb is a graduate student in Fisheries Resources.



Steve Peterson

Martin Cobb

Frank Pitkin: A Special Man

"The educator does not advocate any one solution to complex problems, but motivates people to think for themselves and reach their own conclusions."

Harold Wood, Jr.

by Dr. Howard Loewenstein

Those who read the *Idaho Forester* last year learned of the retirement of Frank Pitkin after some 40 years of outstanding service to the College.

"Pit", as he was known to generations of students, died suddenly of a heart attack on November 13, 1979, while on a fishing trip on the Salmon River. His untimely passing, coming just about four months after retirement, shocked and saddened all who knew him.

Frank's interest in the welfare of students was always apparent. A scholarship fund has been established in his honor. Those who wish may contribute to the Frank Pitkin Memorial Scholarship Fund. All contributions should be sent to the College of Forestry, Wildlife and Range Sciences, care of Richard Bottger.



University of Idaho Library



University of Idaho Library



University of Idaho Library

Social Research and the NPS

by Jeff Coupe

In August, 1979, the University of Idaho College of Forestry, Wildlife and Range Sciences and the National Park Service jointly agreed to sponsor a Cooperative Park Studies Unit.

Below is a description of the university's Cooperative Park Studies Unit (CPSU) headed by Dr. Gary E. Machlis.

"My job is a sign of evolution within the National Park Service," Dr. Gary E. Machlis said. "Prior to 1970, the Park Service didn't recognize the importance of social research in the management of natural resources."

Machlis is the head of the University of Idaho's Cooperative Park Studies Unit (CPSU). A CPSU is an agreement between a university and the Park Service to split financial support for biological and social scientists. The scientists are expected to produce information of applied value for the Park Service. The University gains technical research and instruction.

"This is a legal contract between the Park Service and the University," Machlis said. "The Park Service has decided it wants research to be done through the universities." The College of Forestry, Wildlife, and Range Sciences at the U. of I. is the last institution in the Park Service's Northwest region to have a CPSU. The first cooperative unit was established at the University of Washington in 1970.

Machlis has a Ph.D. degree in sociology, with an emphasis on environmental affairs. He graduated from Yale in 1979 and was offered the

CPSU position here shortly afterwards.

But just what is a CPSU? The Cooperative Park Studies Unit is involved in the application of social and biological research to the management of parks, preserves, recreation areas, and wilderness. Machlis explained the concept of a CPSU further. "Our main function is applied research. The Park Service has seen the value of research being done within the universities and communicated to those that need the information in land management."

Current projects in the social sciences include work on tourism, energy issues as they relate to outdoor recreation, interpretation, and recreation planning. Machlis said he has concentrated his research on three areas of sociology with respect to environmental matters. From 1972-75, Machlis concentrated on studying children and their relation to the environment. He has helped to complete a set of environmental books for children as well. After studying children, Machlis switched to families and their relation to the natural environment.

His latest research efforts have dealt primarily with international tourists in the national parks of the United States. Machlis has focused on the Japanese tourist in particular.

"The Park Service has stressed it wants information of applied value. In total numbers, the Japanese are exceeded only by Canadian and Mexican tourists. I want to provide information that will help with language barriers, general safety, how to encourage the Japanese to come here, and how to deal with

things in general when they're here."

In addition to research of applied value, the CPSU has an important role in communication with recreation professionals, scientists, and resource managers. The Unit disseminates the final results of the CPSU research through technical publications, on-site workshops, training sessions, and short courses at the College.

Machlis has gone to the National Park Service's Allbright Training Center, located at the Grand Canyon, five times during the 1979-80 school year. Machlis lectures while at Allbright on his particular discipline of social research, particularly in regard to the Japanese tourist.

The CPSU has primary responsibility to its funding agencies. The U. of I., of course, pays half for the CPSU here. As a result, Machlis teaches two upper-division courses with Bill McLaughlin on applying social sciences to natural resources and research on social sciences. Machlis is also engaged in research concerning the social impact of windmills.

continued on page 54



Rodney Waller

Gary Machlis



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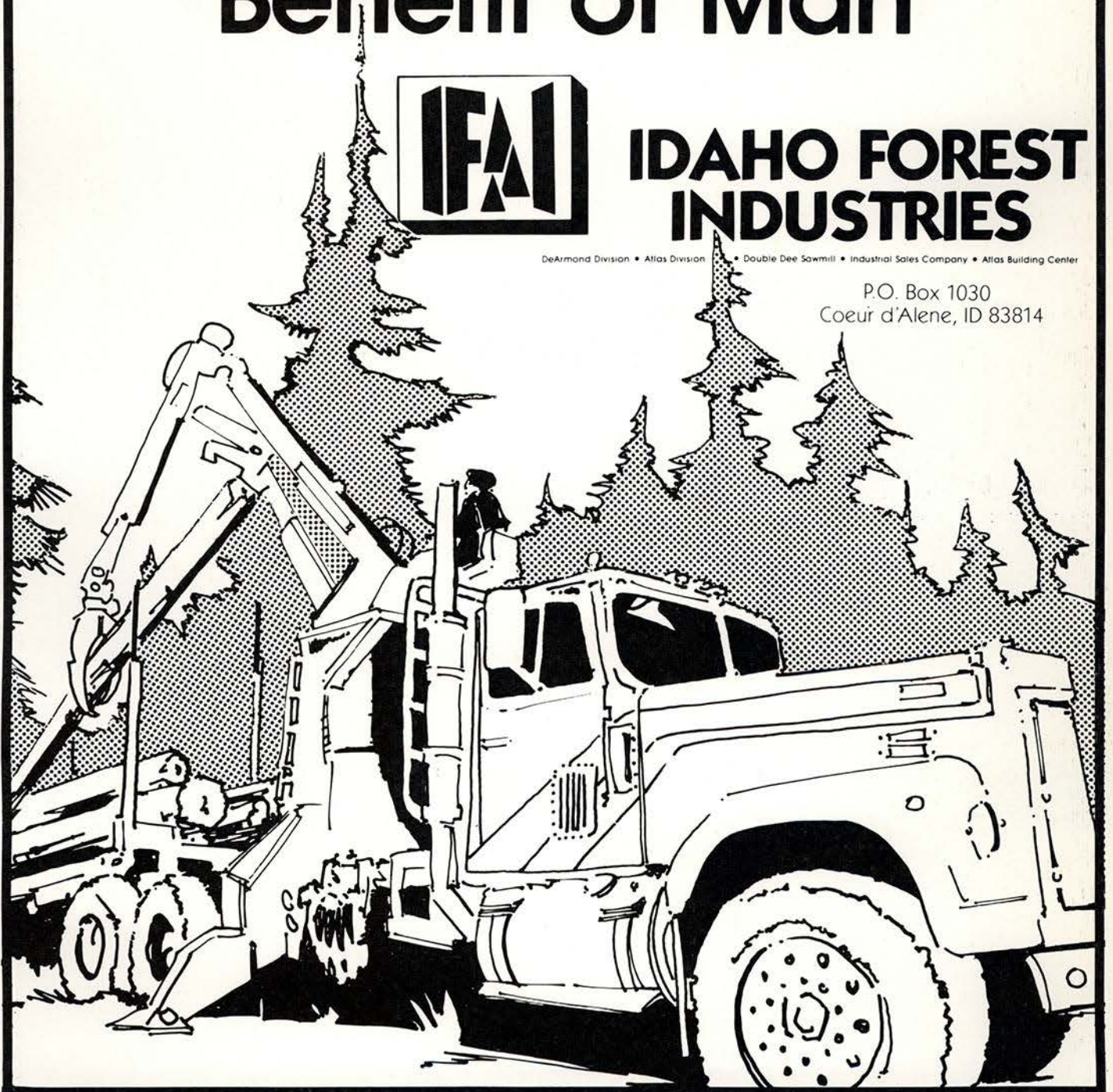
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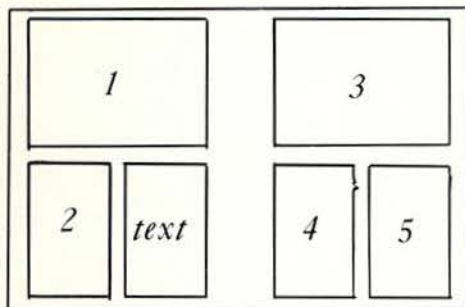




“We should be impressed by the beauty and fragility of the dynamic balance that has been preserved for so many hundreds of millions of years during which life has persisted on earth. And we should especially appreciate the shortness of our tenure on earth and use the powers we have so recently assumed to perpetuate, not destroy, the balance.”

Eliot Porter





The photographs on the preceding pages are described and credited as follows:

1. A Palouse sunset — captured in late spring, by Bruce Anderson.
2. Winter in the mountains of central Idaho, by Joel Tuhy.
3. Mule deer buck in the Wallowa Mountains near Wallowa Lake. Shot in January, 1979, in the afternoon, by Rick Myers.
4. Scott Hueber canoeing on the St. Joe River, by Rick Schneider.
5. A weathered snag along on a ridgetop near Windy Saddle in the Seven Devils Mountains. View is looking east towards the Salmon River drainage, by Tom Quinn.

"In wildness there is a lens to the past, to the present and to the future, offered to us for the looking — a direction, a successful selection, an awareness of values that confronts us with the need for and the means of our salvation. Let us never forget that wildness has developed life, including the human species. By comparison, our own accomplishments are trivial."

Charles A. Lindbergh, Jr.



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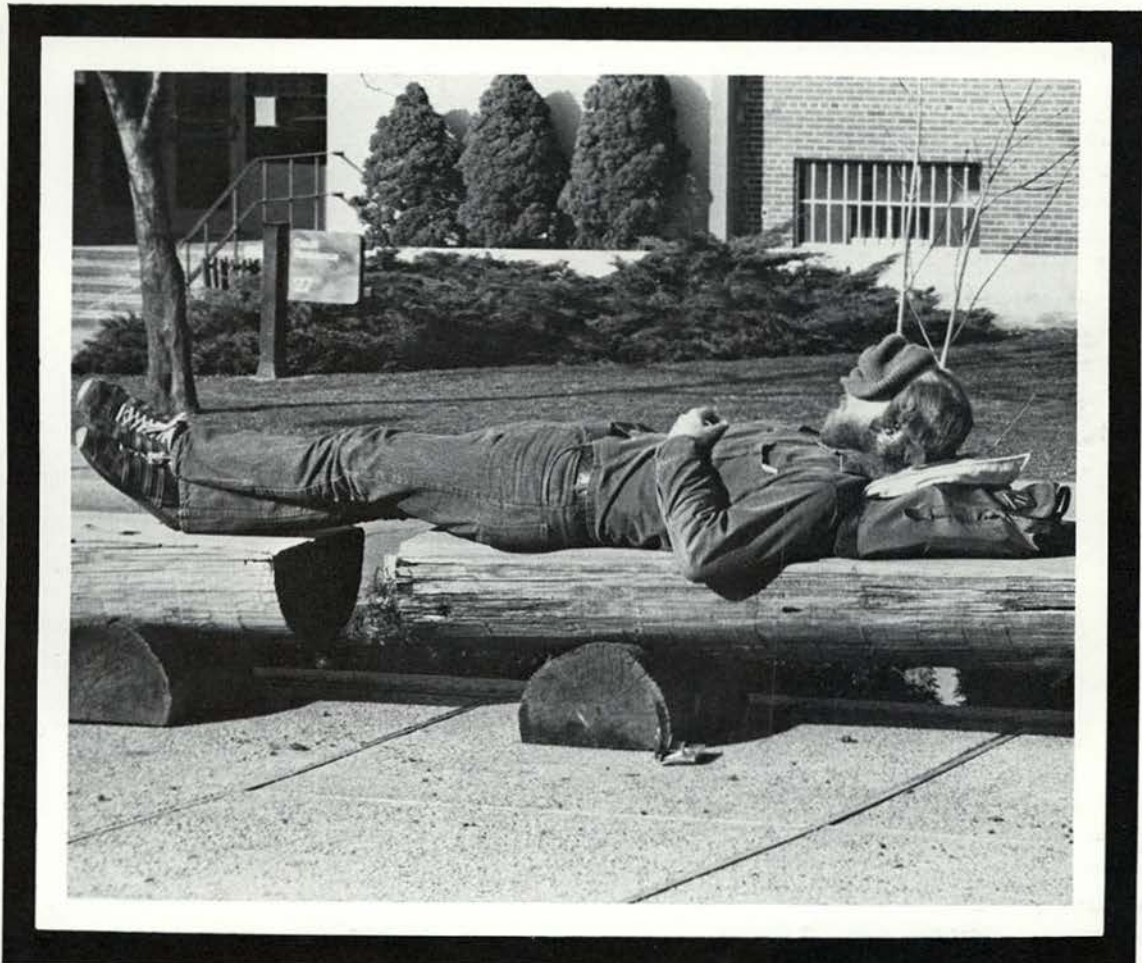


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College Activities



Rodney Waller

Taylor Ranch:

A Unique Research Facility

by Guy Prouty

In the heart of the Idaho Primitive Area lies a small, unique, 65 acre ranch. Located nine miles west of the Middle Fork of the Salmon, it serves as a research facility for the College of Forestry, Wildlife and Range Sciences and other colleges at the University of Idaho. Taylor Ranch is a place where both graduate and undergraduate students from all majors of the College may gain firsthand experience doing research in a wilderness environment.

Taylor Ranch has a colorful history. It all began when a mountain man by the name of Cougar Dave Lewis homesteaded the ranch in 1879. Cougar Dave made a living by raising and selling much-needed vegetables to miners along the Big Creek drainage. He was most famous for his skill in hunting cougars and earned himself a reputation that spread from the backwoods people of Idaho to the newspapers in the East. In 1933 Old Cougar Dave sold the ranch to a hunting companion Jess Taylor.

Jess Taylor was the hard-driving man who made the ranch a great success as a commercial outfitter's base camp for the Chamberlain Basin area. As Jess became older, word reached the outside world that he wanted to sell his ranch. He received many offers, including one from a doctor in Iceland and a substantial one from Harrah's Club of Reno. Not wanting his ranch opened up for development, Jess wisely refused offers from commercial developers. Fortunately, he met Maurice Hornocker, a University of Idaho wildlife biologist conducting mountain lion research in the Big Creek Area. Jess, realizing that his ranch would be used as an educa-

tional and research facility, agreed to sell it to the University of Idaho in 1969.

Students have worked on a variety of research projects at the ranch over the last decade, collecting much information on the fauna and flora. Graduate students have gathered data on rare and endangered species of wildlife, such as the Rocky Mountain bighorn sheep and the mountain lion. Undergraduates have studied beavers, rattlesnakes, grouse, raptors and various other animals.

Undergraduates compete for the

opportunity to study at the ranch by applying for the FWR Undergraduate Research Honorarium, offered by the Taylor Ranch Field Station and the University Wilderness Research Center. Interested students submit proposals for research they wish to conduct in the Taylor Ranch area. After screening the reports and evaluating the students' academics, objectives, and goals, the committee awards the \$700 honorarium, plus credit and expenses. Three to six awards are usually made each year, and the college also accepts project

continued on page 57



Taylor Ranch

Leber Scholarship

by James R. Fazio

It was Monday morning; a bright, clear morning in June. The DC-3 idled by the runway in Grangeville and finally the pilot decided to wait no longer for a straggler. He would pick her up on the next trip. On board with the pilots were 9 others of the Forest Service and a volunteer, most of them members of a unique crew who would spend their summer patrolling the rugged trails of the nation's largest wilderness area — the Selway-Bitterroot. One of them — and possibly the happiest to be there — was Kevin Leber, a third year student in the Department of Wildland Recreation Management.

At the Moose Creek Ranger Station that morning of June 11, District Ranger Art Seamans was in his office working on a welcoming speech. It would open the training session and begin the preparation of his young employees for the work ahead. This work, their mission, was the care of a national treasure. To them would be trusted the job of educating visitors in the careful use of a fragile, limited resource called wilderness.

As the ranger worked, time passed without his realizing it. Then the door opened and his dispatcher gave him the word — the DC-3 was 20 minutes overdue.

Nine miles downstream the banks of the Selway were strewn with debris. Among it were hundreds of water-soaked copies of a little yellow handbook, *The Selway-Bitterroot Wilderness Primer*. Had Kevin lived, it would have been one of his jobs to distribute the booklets to hikers and horsemen. It was to be one of the ways to instill a sense of stewardship for the land, a responsibility for one's actions so that the impact of humans

would not destroy the essence of wilderness.

A small plaque at the Moose Creek Ranger Station will soon bear witness to the ten who were lost that day in the Forest Service's worst air disaster in history. Certainly the tribute is fitting. So is the memorial scholarship fund that is being created through contributions from Forest Service employees, family members, friends and classmates. This year-book, too, will record the event for posterity and serve as a memorial for Kevin. More than all else, however, the most lasting memorial would be to help forward the work to which Kevin and the others on that plane were dedicated.

Happily, the scholarship will be one way to achieve this. Each year a student in Wildland Recreation Management will be selected to receive the scholarship. The selection will be made on the basis of his or her interest in wilderness management, especially user education as a tool for maintaining quality of both the land and the experience of visiting it. Through this financial aid and the annual publicity that will go with it, the memorial will help do the work that Kevin had wanted to do so badly.

The Selway is quiet again. The wreckage is gone, the debris has been gathered, the pines and rocks have long absorbed the sounds of search planes hunting in vain for more than the two survivors. The *Wilderness Primer* has been re-printed. In memory of Kevin and the others, let us learn and heed the message of wilderness stewardship. This will truly be a lasting memorial.

Jim Fazio is Chairman of the Department of Wildland Recreation Management.



Now I see the secret of making the best persons, It is to grow in the open air and to eat and sleep with the earth.

Walt Whitman

Outstanding Seniors

by Vicki Quevedo

The outstanding senior awards are given out each year to the seniors who have excelled during their undergraduate years in the College of Forestry, Wildlife and Range Sciences.

There are presently five honors, all of which are awarded on a departmental basis. Most of the criteria for selection is determined by each department's faculty.

The Range Resources award was initiated three years ago. Selection of candidates is based on scholastic excellence and participation in extracurricular activities. Last year's winners were Mike Cook (May '79) and Mark Vedder (December '78).



Mike Cook



Mark Vedder

Selection of the Outstanding Forest Products senior is handled by the alumni of that department. Grades are a consideration, and each interested senior is required to write an essay about his goals, activities, involvement in professional societies, and relevant work experience. There is no faculty input about the selection. In 1979, the outstanding senior in Forest Products was Kay Greenawalt.



Kay Greenawalt

The Fisheries Resources faculty members base their selection on scholastic excellence and extracurricular activities. Patrick Chapman was chosen as the 1979 outstanding senior in the department.



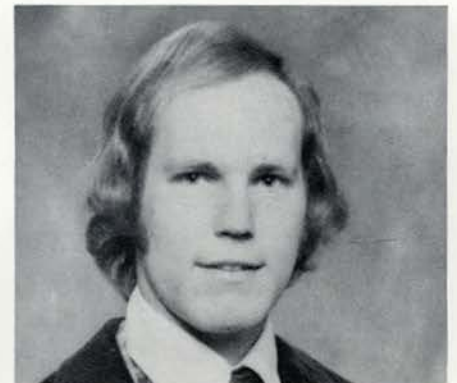
Patrick Chapman

Nominations by the Wildland Recreation Management Department's faculty are based on their leadership capabilities, the activities they were involved in, and their work outside the school. Dan White was the 1979 senior selected by the Wildland Recreation faculty.



Dan White

The criteria for selecting the outstanding senior in Forest Resources include scholastic excellence and involvement in extracurricular activities. The outstanding senior in this department was Jerry Lohse.



Jerry Lohse

The 1980 *Idaho Forester* staff felt that these people selected as the '79 outstanding seniors should receive more recognition for all their efforts and hard work.

Weyerhaeuser at the U of I: *Interaction and Education*

by Bill Keller

This spring semester, 35 specially selected students are participating in a unique exchange with executives from one of the nation's largest timber companies.

Since 1973, Weyerhaeuser Company has cooperated in seminar presentations with leading universities involved in forestry education and research. Over a period of five two-day sessions, Weyerhaeuser brings 20 of its top executives to demonstrate and explain the many aspects of corporate activities and structure to potential forestry professionals.

I spoke about the seminar's ideals with Mr. Craig Steggall, series coordinator for the firm. He explained, "I think we are attempting to address the issue of the social forestry concerns we need to have; this seminar becomes a social endeavor."

Weyerhaeuser's main objective in setting up the program is to present aspects of their forest management program and how it relates to overall corporate policy. They also hope to establish business and personal relationships between the forestry schools' faculties and their top management, meet and evaluate students for future employment opportunities, and enhance communication between the university and the company. Mr. Steggall added, "It (the seminar) has been a very positive experience; to allow us to have this exchange to build the interaction with the University, with the student, and from within our own corporation, to allow individuals the opportunity to reflect on what the issues are."

The present seminar blossomed

from an idea of the Laird-Norton Foundation. This lecture series was first presented at UC Berkeley in 1973. From there, it was offered in 1974 at Oregon State, 1975 at University of Michigan, 1976 at Colorado State and at North Carolina State in 1977. This spring semester, the Weyerhaeuser seminar came to the University of Idaho, and projected plans place the seminar at Yale two years from now (in 1982).

The 35 student participants were selected from a group of over 50 who wished to take the seminar series. This series is considered an Honors Course and is intended primarily for seniors and graduate students. Selection is based primarily on grade point average and the individual's interest in participating. Grades are assigned on a basis of attendance, participation and a critique of the overall series. The series consists of approximately 80 hours of lecture and a 3 day tour of the Weyerhaeuser facilities and operations in the vicinity of Tacoma, Washington. A tremendous amount of time is required to fully appreciate the corporate view being presented.

Mr. Steggall is quick to point out that the participants here at Idaho are a very receptive group: "Right up at the top in enthusiasm, in the intellect shown in questions, and the drive and motivation that has been emanated by those individuals. This has created a very healthy environment with which we are very pleased."

I posed the question to Mr. Steggall about why the University of Idaho was considered and selected for the seminar presentation. He replied, "There are three major reasons. One is the role you (the College of FWR) are playing in Land Use Policy, which we feel is an issue

that we will be dealing with more often over time. The second reason is the international picture that is played by this school, whether it be in Central America or China. You have, quite obviously, made a very large move, at this point, in the international sector. We also feel that we need to deal in Oregon, Washington and Idaho more than we have in the past."

When questioned about taking the seminar to other countries, Mr. Steggall countered, "The international picture is truly an opportunity, but at this point in time, the expenses would be truly astronomical." It is important to realize that approximately 95 percent of all the costs incurred in presenting the seminar are borne by Weyerhaeuser.

When the company executives come to the U of I, their presentations are generally given in the FWR building. But during the "free time" between forestry-oriented lecture presentations, a corporate executive may dash off to another building to offer a short presentation to a regularly scheduled class. The enthusiasm of the speakers has benefited the students in the Colleges of Business and Economics, Engineering, Agriculture and Law.

Mr. Steggall summed up, "I think that if anything, we (Weyerhaeuser) have been considered rather radical in some of our changes. Not all of



Weyerhaeuser

The Tree Growing Company

continued on page 55

Wilderness Forum

by Jim Graham

The Wilderness Resource Distinguished Lectureship series has provided the University of Idaho a forum for wilderness discussion for the past three years.

The series, an activity of the Wilderness Research Center, has featured speakers who have made a mark in wilderness circles. In 1977, Senator Frank Church appeared as the first lecturer. Roderick Nash, author and professor of History and Environmental Studies at the University of California, Santa Barbara, was featured in 1978. Last year, Secretary of the Interior and former Idaho governor Cecil D. Andrus was the featured speaker of the annual series.

According to Dr. James R. Fazio, department head of Wildland Recreation Management, the objective of the series is to get different views of wilderness in the open. The audience has been allowed to ask the speaker questions after his presentation.

The Research Center tries "to select people who have been prominent in wilderness" Dr. Fazio said. "We try to stay away from

placard-waving types and get people who have made a contribution to wilderness."

The Center has also avoided controversial subjects and will continue to side step them. "There are plenty of forums for that," Dr. Fazio claimed.

"I think the series has been a valuable aspect of the Center," Dr. Fazio continued. "Its real value will be over the long run. The books published will make an excellent source of information on wilderness by people involved in it. It'll be a good historical view."

For each lecture in the series, a soft-cover book with the lecture content has been published, and has been available free of charge to those requesting a copy.

The lectures are open to the public, but are aimed toward the university community, the students, and faculty. The lectures "reflect our whole mission as a university—it's education," Dr. Fazio said.

The Wilderness Research Center, founded in 1972, is unique among institutions of higher learning, according to Associate Dean Dr.

Ernest Ables. Its resources include: a field station, Taylor Ranch, on Big Creek; a field station on Payette Lake at McCall, Idaho; and Clark Fork Ranger Station in northern Idaho. The Center offers the opportunity to contribute national and international leadership in wilderness research and education.

The purpose of the Wilderness Research Center is to foster research and educational activities that will lead to a broader understanding of the structure and function of natural ecosystems, and man's relationship to them.

The Center is supported by faculty in all disciplines of the College. Along with the lecture series, the Center sponsors undergraduate wilderness-related internships, awards graduate wilderness assistantships, and sponsors short courses. In addition, it offers seminars, workshops and other continuing education activities, and supports many other programs.

Jim Graham is a Sophomore in Forest Resources Management.



Senator Frank Church



Roderick Nash



Cecil D. Andrus

W. Smaling

Student Involvement

by Amy Gillette

The Student Affairs Council (S.A.C.) was approved as a standing committee by the FWR faculty on September 20, 1971. The council members represent all interests within the College of FWR and comprise a membership of close to forty. Members of the council include a representative and a faculty advisor from each of the seven major clubs in the College, editors of *The Snag* (the college newspaper) and *The Idaho Forester: A Magazine of Natural Resources*, and several student representatives to the Executive Council, College faculty Meetings, and departmental faculty meetings. All members, both faculty and students, serve on the council for a term of one year. Officers include two co-chairmen, a secretary, and a treasurer.

The main objectives of S.A.C. are to serve as a channel of communi-

cation for student interests within the College of Forestry, Wildlife and Range Sciences, and to coordinate and promote college-wide activities which will provide interaction and fellowship between departments. Some of the annual college-wide activities coordinated by S.A.C. include Job Opportunities Night, Natural Resources Week, and the Pancake Breakfast.

The primary goal of the Student Affairs Council is quite clear and sound: to achieve "good relations" among organizations, students and faculty. Dealing with a college of approximately 700 students demands much time and effort to accomplish this goal, but the council has a good start on it.

A few obstacles have yet to be overcome, though, and according to Dave Hobbins, present co-chairman of the council, the main problems are lack of awareness of the council's existence, and low student involve-

ment in College activities. Dave believes informing the various organizations in the College of S.A.C.'s existence will help overcome the awareness problem. Once students become aware of S.A.C. and its functions, Dave hopes that they will bring new ideas and suggestions to the council. As for increasing student involvement, S.A.C. is putting a lot of effort into extensive publicity for all activities. This publicity is designed to serve as a means of communication among the varied interests in the College.

As previously mentioned, coordinating activities for all college members occupies much of S.A.C.'s time. The most time-consuming project S.A.C. is involved with is Natural Resources Week. Each Spring semester, work begins early to coordinate the movies, speakers, identification contest, beard-growing contest, Tug-O-War, and barbecue. Almost every member of S.A.C. is involved with organizing the events, and it is through their hard work that Natural Resources Week is such a success.

The Student Affairs Council is definitely a worthwhile organization, and demonstrates its value by promoting communication among students, faculty, and organizations. Without the Student Affairs Council, there would not be as many extra-curricular activities to broaden the education of students in the College of Forestry, Wildlife, and Range Sciences.



Student Affairs Council

Amy Gillette is a Sophomore in Forest Resources Management.

Robyn Willey:

Outstanding Student 1979

by Heather Hoffman

The Outstanding Student Award, initiated in 1974, recognizes and honors undergraduate students in the College of Forestry, Wildlife and Range Sciences for exceptional academic achievement and involvement in student organizations. Any junior or senior enrolled in the college is eligible for nomination. Voting is done by faculty and students during Natural Resources Week. The recipient is recognized in the *Idaho Forester*, and on the Outstanding Student Award plaque in the College of FWR building.

The Outstanding Student for 1979 was Robyn Willey. Robyn graduated last May Summa Cum Laude from the University of Idaho with a major in Forest Resource Science. Robyn was a member of Xi Sigma Pi (the national forestry honor society) and was on the Dean's List every semester at the University. She received the Edwin Rettig Scholarship in 1975-76, the Henry and Ingeberg

Legall Scholarship in 1977-78, and the Hannag Keenan National and the Agnes Kelly Memorial Scholarships in 1978-79. Robyn is now working on a graduate assistantship at Oregon State University in forest soils.

As member of the Alpha Chi Omega sorority, she was a finalist for "Greek Woman of the Year" in 1978.

Robyn was active in student organizations within the College and was elected undergraduate student representative to the Faculty Academic and Research Committees.

As secretary/treasurer of the Student Affairs Council in 1978-79, she was instrumental in the planning of Natural Resources Week, an annual College-wide activity. Her contributions included the formulation of the theme, and development and organization of activities.

As Vice-chairperson of the student chapter of the Society of American Foresters in 1978-79, Robyn was responsible for organizing

various activities, programs and social events. She was an SAF member throughout her stay at the University of Idaho.

Robyn is a very talented individual, and is very deserving of this award. Congratulations from the *Idaho Forester!*



Robyn Willey

Heather Hoffman is a Junior in Forest Resources Management.



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Clubs

Range Club

by Jeff Foss

Range Club members were very active this year participating in fund-raising activities, sponsoring guest speakers, and attending professional meetings.

We held a raffle again this year, in which the winner had the choice of a cross-country ski package, a shotgun, or a rifle. Also several members participated in a fencing project on the Snake River, in which 1.5 miles of barbed wire fence was constructed for a private rancher. This project allowed members to receive on-the-ground experience of fence building and to have a good time.

Dr. Robert Murray, from the U.S. Sheep Experiment Station in Dubois, Idaho, presented an interesting lecture on range forage improvement practices. Also Mr. Andre Molsee, from the Law School on campus, gave a very informative lecture concerning the National Environmental Policy Act and its effect on resource management.

In November several members attended the Idaho Section meeting of the Society for Range Management in Twin Falls, during which numerous topics were presented. The range plant identification team, consisting of Rich Long, Doug Bizeau, Doug Finch, Jeff Foss, and coach Dr. Ken Sanders, attended the 33rd Annual Meeting of The Society for Range Management held in San Diego, California during the second week of February. Besides competing in the plant contest, students attended many lectures and talked with potential employers.



Range Club

Wildlife Society

by Henrienne King

It has been a productive year for The Wildlife Society. An increase in membership and involvement brought forth new ideas and project completions. The large ungulate mounts hanging in the Forest Building's east stairwell were cleaned and repaired. Usage and habitat analysis data were collected from 100 passerine and 25 kestrel nest boxes, which were hung last spring in the countryside east of Moscow. Information concerning non-game species of the area can be evaluated from this ongoing project.

Working in conjunction with University of Idaho Dairy Science Department, the chapter has met with some success in establishing a vegetation buffer strip around the dairy pond. A management plan was written several years ago in an effort to increase usage by migrating waterfowl.

The society was fortunate to have interesting speakers share their research. A presentation by Mike Schlegel of the Idaho Fish and Game Department reviewed the subject of bear predation on elk. Wini Kessler reported on her two-year research project examining the effects of logging practices in southeast Alaska. Harriett Allen, who is doing research on bald eagles in Glacier National Park, gave a tour of their nesting sites to Idaho students on a field trip over Thanksgiving break.

At the monthly business meetings two slide show presentations were given: one by Richard Buckberg on spotted owl habitat in Oregon, and the other by Mike Todd on his badger research in southern Idaho.

A field trip to Wallowa, Oregon is planned for Spring break at the invitation of the Oregon Fish and Game Department. In the past, the annual event has proven helpful in learning bird and nest identifications, and has been an opportunity to view many species of wildlife.



Wildlife Society

As a professional organization, the student chapter of The Wildlife Society at U of I provides a means for establishing career goals, meeting professionals, and becoming knowledgeable of the work being done in the field of wildlife.

The Annual Western Students Wildlife Conclave will be held in Laramie, Wyoming. Presently, a team of eight students is planning to represent the University of Idaho in the highlighted Bowl Competition.



Palouse Unit, American Fisheries Society

American Fisheries Society Palouse Unit

by Rick Konopacky

The Unit is dedicated to the advancement of fisheries science and the conservation of renewable aquatic resources. Fisheries and aquatic resource students (35) and faculty/staff (7) form the nucleus of the Unit which is a subdivision of the Idaho Chapter. Unit officers and standing committee chairpersons are elected during the May meeting.

Unit meetings are generally scheduled for the second Tuesday of each month in Room 10, FWR at 7:30 PM. Meetings are open to the public and include a presentation by an invited guest speaker. Over the last year speaking topics have included: the homing of salmon, killer whales, lake fishery management, micro-habitat selection of stream fish, and the genetic manipulation of fish stocks to aid management objectives.

The Unit has continued to serve as a reviewer for the Clearwater Economic Development Association (CEDA) which evaluates state proposals and grants which could influence state aquatic resources. The Unit also went on public record on various issues concerning the Clearwater-Snake River System, i.e. caustic soda shipping, bridge building, Highway 12 controversy.

Two picnics and the annual fish and wild game potluck were held during the year. The events were attended by an average of 80 individuals who enjoyed the good food and comraderie. Skits were presented, adding to the fun, and the festivities included raffles with the awarding of many fine prizes.

Xi Sigma Pi

by Bill Keller

The intention of Xi Sigma Pi is to honor the student who excels scholastically and who has a personality that would tend to make him successful in forestry work. The Society aims at stimulating competence in natural resources management, and to bring together in good fellowship those students who have shown exceptional ability. The establishment of chapters at various universities and colleges throughout the United States has resulted in linking together students from all parts of the country with common interests.

The Society stands for high scholarship. Its members, both individually and collectively, are encouraged to participate in activities at the institutions they are attending. The Society promotes active participation in the projects of the Chapter and the respective clubs of the college, and

advocates the development of leadership in school activities.

This year, Xi Sigma Pi is constructing a multi-purpose bulletin board which will be placed in the main entrance lobby to the FWR. The 16' long x 6' high structure will be used to inform the students about

what's going on with all the college-wide clubs and organizations.

Recently, 35 new members were inducted into the Society. This new group of initiates is symbolic of the quality of student being graduated from the College of Forestry, Wildlife and Range Sciences.



Xi Sigma Pi

Wildland Recreation Association

by Chris Vetter

School is a pretty formal setting. As a reprieve from the pressures of classes, the Wildland Recreation Association performs a wide variety of activities in an informal setting.

The WRA regularly undertakes service projects. Field trips are made to parks to see management problems firsthand. Bake sale after bake sale, pitcher after pitcher, and fund raiser after fund raiser were held to support the 18 students who attended the Association of Interpretive Naturalists Conference in Juneau, Alaska last fall. A year of



Wildland Recreation Association

work and planning went into the effort and the experience was invaluable to those who attended.

Noontime seminars offer students a chance to share work experiences and hear professionals report on what is happening in the field.

Other WRA activities revolve around getting to know each other and having fun. Backpacking trips in the fall are an invitation to new students to get involved. Ski and bike trips, and an occasional potluck dinner also give members the occasion for fun and good times.

To be informed, and to develop a working relationship with each other is our overall goal.

The Associated Foresters

by Jerry Lohse

The objective of the organization is to provide professional education conducive to sound forestry concepts, policies, and practices to its mem-



The Eagle

*"He clasps the crag with crooked hands;
Close to the sun in lonely lands,
Ringed with the azure world, he stands.*

*The wrinkled sea beneath him crawls;
He watches from his mountain walls,
And like a thunderbolt he falls."*

—Alfred Lord Tennyson

bers, the university and the community. This objective is attained through integration of our logging competition activities, fund-raising projects, social events and professional programs.

In the fall we sponsor a field trip for freshman, transfer students and interested returning students of all disciplines to the 7,100 acre College of Forestry Experimental Forest. The Associated Foresters will also have one intracollege woodsmen competition in the fall, but the majority of the logging competitions are in March and April. Some of the logging competition events are burling, the pole climb and axe throw, cross-cut sawing.

Our major fund-raising activity, firewood and cutting, is also in the fall. This provides an excellent opportunity for students to learn how to operate woodsmen's tools as well as a source of funds.

Professional programs are offered monthly to broaden the scope of the forestry curriculum and are usually presented by speakers from outside the college. Some of the program topics we have sponsored include: Management of White Pine Blister Rust, European Forestry Practices, Tropical Forestry Practices, Weyerhaeuser's Intensive Forest Management. In addition to our sponsored programs we are affiliated with the Society of American Foresters and are invited to their programs and events.

We think the Associated Foresters provide a wide variety of activities to help students round out their education at the University of Idaho. I hope you will accept our invitation to join us at our next activity or meeting.



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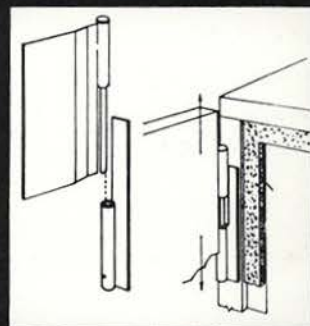
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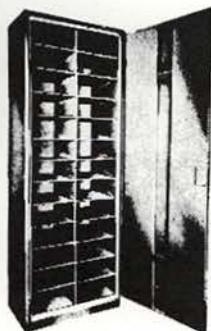
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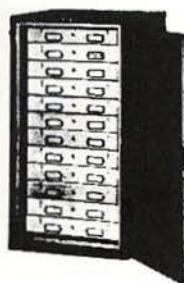
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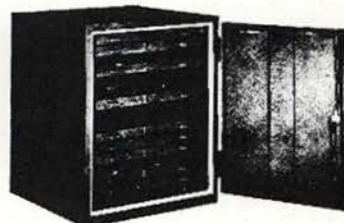
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Alumni News

Dear Editor:

On the attached sheet, you asked for news of accomplishments by alumni.

I am a survivor of the class of 1935 (B.S. For.). I am now president and sole (or soul) member of the Woodpecker Ravine Trout Fishing Assoc. Again this year I am engaged, under license by the State Fish and Game Department, in collecting data on conditions in the stream that flows through the aforementioned defile (and other fictitious streams). Data on species, size, feeding habits and palatability habits are collected. At frequent intervals, I also test water temperature (slip, dip, drip procedure).

Samples are potted (don't change spelling) on a looped line using two variants (Coachman and Brown Hackle). Data are processed statistically to a standard deviation of plus 5 (never minus) for both quantity (number) and quality (length). I do not permit verification by other scientists.

For assistance I have one volunteer secretary (volunteered by me). She has been legally connected with the Association for over 42 years. Though she is unsalaried, I make frequent (on demand) financial grants of considerable size (or else). (She also fills in as cook, etc., etc.)

The results of these studies have proved to be rewarding (sauteed with bacon). Nothing has been published, and as long as I live, nothing will be. I don't want any phony scientists skulking around in my secret fishing spots. I've got a good thing going and I'm going to keep it if I can. (I always carry a wading stick).

*Very truly yours,
Milton B. Edwards*

1917

Russell N. Cunningham

Would be pleased to hear from any members of the Class of 1916 or the Class of 1917 who happen to be readers of the *Idaho Forester*.

1925

Ralph S. Space

I attended the S.A.F. meeting in Boston with my son Jim. We were the only father and son combination there. I am a 53 year member of the S.A.F. I also attended the meeting of Idaho alumni at Boston with Jim. I was the oldest grad (1925) there.

1931

Russell K. LeBarron

Hope to come out to S.A.F.

National Meeting in October 1980.

James E. Sowder

Still enjoying retirement. Good health and getting into mischief occasionally!

1934

Dr. J. Hugo Kraemer

I retired several years ago after over 40 years in forestry. Now I'm managing our own 3600 acre forest property, High Valley Forest. The problems of the individual private forest owner are many, but the most difficult is property taxation. Would be glad to see any Idaho alumni who may visit this part of the country (Peru, NY).

1935

Dr. T. S. Buchanan

Still retired. Reading and watching Winter Olympics on TV while awaiting the arrival of spring and another shot at gardening — maybe!

1937

John Chohlis

Retired as Director of Communications, Chow Division, Ralston Purina Company December 1978. Now "Guest Columnist" for *The Drivers Journal*. This plus other writing assignments make retirement the ideal career.

Leon R. Nadeau

Congratulations on winning the national award.

1938

Ernest L. Thompson

No change from last report. I am continuing my involvement in resource conservation issues, primarily those of the Bureau of Land Management.

1939

Gilbert B. Doll

Graduated in 1939, BS—Forestry and continued in college receiving my MS—Forestry in 1940 with a minor in Soils. Worked as Idaho Extension Forester 1940 through 1942, and then transferred to Nevada where I was Ext. Forester for one and one-half years. Took a job as District Forester Ranger, Carson District, Toiyabe — Mono Nat'l Forest and continued with the Forest Service for 30 plus years, retiring in 1969. Since this time, I've been traveling a trip each year. To Hawaiian Islands, New Zealand and Australia, Mexico, South Africa, Canada, Florida and SE U.S., and to Arizona and Texas.

Robert H. Forbes

Since 1 April, 1979, Jim Kasper

(Class of 1974 — look it up) and I have been working for a federal-provincial-industry organization called Forintek Canada Corp., which took over the Western Forest Products Lab from the Canadian Forestry Service. Very little has changed except the print on our paychecks. Jim is still a Research Scientist and I'm Editor, mostly of scientific articles written by the staff for dry-as-dust journals like the *Forest Products Journal* published by the Forest Products Research Society.... Readers ought to be able to figure out the name FOR-IN-TEK, even if the last letter is a phonetic "k" instead of a "ch" as in "technology".

Carl C. Wilson

I have been retired from the U.S. Forest Service for two years. Work part-time as Consultant for the California Department of Forestry on fire damage appraisal and a fire engine production rate study. During June 1979 my wife and I took a 12-day cruise up the Nile in Egypt. Saw

many marvelous tombs and temples including King Tut's Tomb.

1940

Barton O. Wetzel
Retired 1973.

1941

Russell Cloninger

Russell T. Cloninger, 60, Big Arm, a retired Forest Service employee, died March 3, 1979. He was employed by the U.S. Forest Service from 1933 until his retirement in 1973. During that time, he served as forest ranger in the Bob Marshall Wilderness Area, on the Sylvanite and Fortine districts. He was on the Forest Supervisor's staff in St. Maries, and later was transferred to the Division of Operations in Missoula. At the time of his retirement, he was branch chief in charge of operations, Division of Administrative Management in Washington, D.C.

T. B. Glazebrook

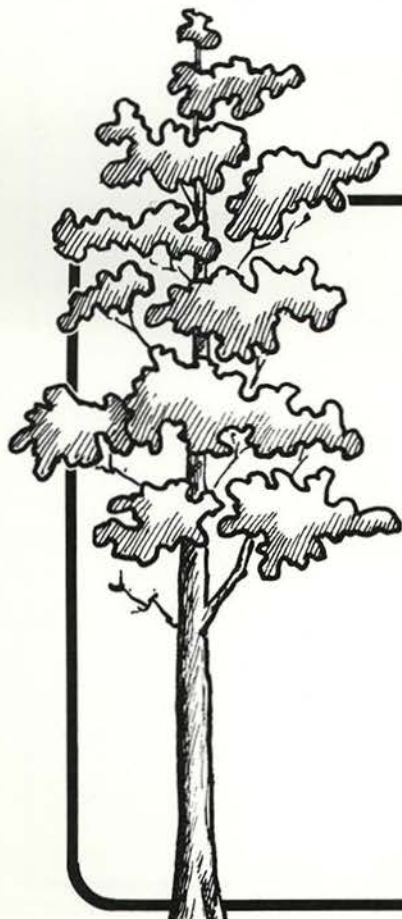
Mr. Glazebrook is a Forest Land Management Consultant in Portland Oregon.

Robert W. Harris

Retired Nov. 4, 1978 in Washington, D.C. as Associate deputy Chief for Research, Forest Service. Currently a consultant to The Conservation Foundation. Traveling to China in March-April, 1980 with the Portland Art Association. Living 20 miles south of Portland, Oregon, just off I-5. Drop in and see us at Charbonneau. Phone 678-2370.

Joseph R. Miles

Married to Beatrice Leaton in 1942. We have 2 girls and a boy, none married. Have a Professional Engineers and a Land Surveyors license in Oregon. Worked for the U.S. Forest Service 5 years; 26 years as a Logging Engineer for Edward Hines Lumber Co., Hines, Oregon. Retired at 62 and the next day started working for Harney County as Road Supervisor and Engineer. My wife has worked as Administrative Secre-



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tary of Hines Elementary School for 19 years.

Waldemar "Wally" Mueller

Retired for U.S.F.S. in 1974 — Targhee National Forest. Now living in Idaho Falls, 710 Linden Drive.

1942

Philip C. Habib

I retired from the Department of State on February 29, 1980 after 31 years as a Foreign Service Officer.

1943

Vernon H. Burlison

I am retired. Retirement date 30 June 1978. Work for retirees' organizations now takes much of my time. I am President-elect and tour director for the University of Idaho Retirees Association and tour director for the Latah County Chapter, National

Association of Retired Persons. I am also a member of the recently organized Latah County Senior Citizens' Council. I conduct services on a regular basis for the Community Church at Juliaetta and I garden some in season. In 1979 I harvested produce from a 45 ft. by 80 ft. garden plot that was worth a little over \$1,000 retail value.

1947

Eldon C. Beus

Retired from the BLM April 1976 after 30 years Federal service, 20 years with the BLM.

1951

David S. Klehm

I have been working for the Glacier Park Co., which is now part of the Burlington Northern, since June

1951.

1953

H. W. Bonnett

Am with the Forest Service, now Staff Assistant to the Deputy Chief for Administration. I am responsible for strategic systems planning.

1954

Arthur A. Andraitis

Have retired from the USAF and now working for Itek as well as some consultant forestry on the side. Have included an extra few dollars — I can remember we were always a bit short in earlier years and I suspect it hasn't changed much since. Good luck. Sincerely, Art Andraitis, Editor 1954.

1955

Sa-Ard Boonkird

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Mr. Vinai Bhandburana is an instructor in the College of Forestry, Kasetsart University. Mr. Sompong Ta-choti-karn is the Director of Personnel Division in the Forest Service. I am still Deputy Managing Director in the Forest Industry Organization, Thailand and will be retired on September 1980.

1956

R. C. Perez

I have been working for the Weyerhaeuser Co. as a salesman (market account executive) on the East Coast selling wood fiber. Married to Catherine Millas; active with the YMCA and the Montclair Historical Society. Good luck.

1958

Roger Hatch

Ruth E. Hatch, wife of Roger C. Hatch, passed away January 21, 1978. Roger is Director of Cooperative Fire Protection, southeastern area, U.S. Forest Service.

1959

Barry L. Westhaver

I am presently Assistant Forester for Crown Zellerbach Canada, in charge of all forestry work on 14 blocks located on 12 different islands and peninsulas. Access to my work is by airplane or boat. I live in Campbell River which is a very active forestry town on Vancouver Island.

1960

Norman Howse

Presently with the USFS as a GS-13 Land Management Planning Officer for the 7 million acre Chatham Area of the Tongass National Forest. Areas involved are included in the Alaska Lands legislation such as: Admiralty National Monument, 6 wilderness proposals, Situk Wild and Scenic River, Federal Land Policy and Management Act withdrawals, and development of the Forest Plan. Also assigned to a National Wildlife Task Force on Land Management Planning under the NFMA.

1962

Richard W. Beier

Last summer I assumed a position as a Forest Products Marketing Specialist with the Wisconsin Department of Natural Resources. I've been employed with them since 1967 as a forester.

1963

Bill Petzak

Now the Area Supervisor, Idaho Dept. of Lands in McCall, Idaho. Seven children. Ordained Deacon, the Catholic Diocese of Idaho on February 18, 1980.

1966

James E. Carmichael

Still working for Weyerhaeuser in Sabah, Malaysia.

1967

Dr. D. S. Shriner

Presently employed as Research Ecologist Environmental Sciences Division, Oak Ridge National Laboratory, Oak Ridge, Tenn. Major area of

research is on the effects of air pollutants on terrestrial ecosystems. Received Ph.D. (Plant Pathology) in 1974 from North Carolina State University. Received M.S. (Plant Pathology) from Penn. State University in 1969. Married since 1968. My wife Carole was a fellow Forest Pathology graduate student at Penn. State.

1968

Michael L. Dewey

I am presently Senior Process Engineer with Masonite Corp. in Ukiah, California. I will be completing degree requirements for an A.A. degree in Accounting and an A.A. degree in Business Administration in June 1980, from Mendocino Community College.

1969

Charles W. Lorenz

As of March 1, 1980 I joined Ecosystems Inc., a natural resource consulting firm, as Vice-President.



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1969

James R. Soeth

I am presently District Recreation Officer on the Arroyo Seco Ranger District, Angeles National Forest. I also teach part-time for Citrus College and I am a graduate student in Public Administration at California Polytechnic University, Pomona.

Norman E. Tomlinson Jr.

I am President of my own corporation, Silvicultural Enterprises Inc. The corporation is involved in all phases of forestry, thinning, logging plans, stand improvement, etc. My wife, Ellen Todd Tomlinson (B.A. in Art Education at the U of I) is Secretary of the Clearwater Chapter of Idaho Women in Timber, and co-author of a children's coloring book called "Woods Work".

1970

O. M. Beach

What I need to know is if there are any more Idaho Foresters in Texas. It's lonely down here!! I am now in charge of all planning and research in our Texas and Ala. Regions. The job keeps me hopping.

James C. Carter

I am currently working with Diamond International Corporations, California Lumber Division, serving as Administration Forester. I've been with the Company for five years.

Mike Cryder

Hi, all you guys. I have seen a few of you in the past 10 years or so — wish I could see more in the future. I am with Boise Cascade now in Billings, Montana, selling lumber wholesale. If you are passing through, stop and say hello. The door

is always open and the pot is on the stove. We would love to see you again. P.S. Linda and I still have a well-tuned five-and-a-half foot Swedish fiddle and are willing to humble (again) all would-be sawyers.

1971

Shih, Ching-Fang

Geneticist and Division Chief of Forest Product, Taiwan University Forest, Chushan, Nantou, Taiwan, R.O.C.

1973

Steve Pintek

I am currently the Sale Preparation Officer on the Tule River District, Sequoia National Forest. Six months ago, I was married to Karen Rainoldi in Merced, California. We plan to move north in a few years.

1974

John W. Dale

Presently Entomologist, USFS, Regional Office, Pacific Southwest Region.

Gregory W. Lynch

After three years with the Section of Predator Management Research, Denver Wildl. Res. Cntr., USFWS, I

have accepted the position of District Biologist, USFS, Bridger-Teton National Forest, Afton, Wyoming. Contacts with people in the Wildlife Field have resulted in my continued respect for the people at U of I and the education I received.

Robert Schwenne

If there is anything I can do for you while I'm here in Germany just let me know. Preparing to conduct unconventional warfare behind enemy lines in the event of war.

Charles O. Winegardner

God has blessed us with a second son, Karl Hans is 3 years old and Erik Owen is 6 months. Chuck is working as a Forestry Technician — YACC work leader at Shoshone Work Center, Wallace, ID.

1975

Thomas W. Moore

Commenced work with the Washington State Department of Ecology as a forester. Promoted in 1979 and reassigned to Resources Management section of the Redmond Regional Office working in Forestry, Water Rights, and Flood Control matters. Incorporated a close-held forestry consultant business in June 1979,

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Idaho Department of Lands

and am presently pursuing the development and growth of that corporation on a part-time basis.

Sherman Swanson

I am now an M.S. student in Geography at Oregon State University.

1976

Arlene Catherine Blade

Arlene is working on Forestry and soil projects in Upper Volta, West Africa, working with French and British funded projects. She was with the Peace Corps.

John R. Clark

Forester — U.S. Forest Service — Shasta Trinity National Forest — Hayfork Ranger District, Hayfork, California.

Craig Steedman

I, my wife Joan, and my son Peter have lived here in Penasco for three and one-half years. I am presently District Silviculturalist on the Penasco District, Carson National Forest.

Kate Sullivan

I've been employed with Weyerhaeuser since graduating in a variety of positions including technician, technical forester and now, scientist in forest hydrology. The work's interesting and the pay's good. It'll be a shame to give it all up when I return to graduate school this fall. So far I can't say I've made water run uphill or the blind to see but I keep plugging away at it. One thing's sure though, middle management doesn't know what hit 'em.

1977

Laurence Crabtree

I spent 1978 working as a Timber Stand Improvement Forester for the Colville Confederate Tribes on the Colville Indian Reservation in North-eastern Washington. I have since returned to the U.S. Forest Service and am working as a Pre-Sale Forester on the Lassen National Forest in California.

Justin Naderman

I completed M.S. work at Texas Tech. University last August (1979) and immediately began work toward a Ph.D. at Oregon State University. My thesis work here will address the effects of rangeland improvement practices on wintering elk and mule in the Blue Mountains of Oregon.

William H. Vaughan

Currently a Lieutenant (junior grade) on active duty with the U.S. Navy. Stationed with Helicopter Mine Countermeasures Squadron 16 (HM-16) homeported in Norfolk, Virginia, flying the RH-53D Sea Stallion. Married to Jill A. Vaughann (nee White), BSEE U of I in 1977, who is also a Lt (jg) and is stationed with the Atlantic Command Operations Support Facility serving as the Automated Data Processing Security Officer.

Greg L. Outcalt

I am currently employed as a cabinet maker in Moscow; I am



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finding my work very rewarding, and am pleased to be a part of a skilled handicraft.

Mike Randall

Hired as a forester for Champion International, Neal Creek, OR operation in May of 1978. Transferred to Mapleton, OR operation in May of 1979. Had first child, Sara Anne, December 20, 1979.

Kenneth Snook

Now working for Salt Lake City Shade Tree Dept.

1978

John C. Andrews

I have been employed in the timber sales program of the Bureau of Indian Affairs for the Mescalero Apache Reservation in south-central New Mexico since November 1979. I worked on the *Idaho Forester* staff for the 1977 and 1978 issues. Enjoy skiing during the winter months at nearby Sierra Blanca as well as southwestern living. I invite old

friends or current students (seeking employment) to correspond: Box 132, Ruidoso, N.M. 88345.

Tracy Behrens

Congratulations on winning the award! I knew it would happen someday. I hope all the planning is going smoothly and the magazine comes out without major troubles. I'll stop by sometime in April to see how things are going. Good Luck — make it a good one!

Lawrence A. Belli

I am now a Park Ranger with the National Park Service at Glen Canyon National Recreation Area.

Sorrells Dewoody

I am doing well at the Entry Forester Level — Weyerhaeuser Co. Eastern Oregon Region. I am mostly involved with regeneration. We plant PP and LPP with a small amount of white fir. I love the work but miss Idaho. I expect to return by 1982.

John K. Treiber

For the winter, our crew is into the firewood business. It beats the hell out of working in the woods in the winter. I'm going to be getting married on May 3rd in Kansas City to Deborah Lord. Then come the beginning of June I'll be ready to get back to skidding in the woods again.

Mark Thompson

Rec. Tech. for Targhee N.F.; presently a carpenter for the winter.

Kate M. Wynne

I am currently a Masters of Science candidate at the University of Maine, studying habitat requirements of Fisher and Marten in northern Maine.

"Ideals are like stars; you will not succeed in touching them with your hands. But like the seafaring man on the desert of waters, you choose them as your guides, and following them you will reach your destiny."

Carl Schurz

WHAT IF WE HARVESTED FOOD LIKE WE HARVEST TIMBER?

Consumers wouldn't stand for it. They would see that heads rolled in Washington.

Why, if we managed our agricultural crops as ineffectively as we manage our national forests, this country would no longer be the world's breadbasket.

Not by a long shot.

It's time we Americans asked our President, senators and congressmen, to take a look at the huge potential of our woodlands. We should point out that the economic and environmental benefits of the forest can be enjoyed at the same time without conflict.

It's time we said — look, there's over six billion board feet of timber

going to rot out there every year.

We could take that material and build 400,000 new homes.

Create \$600,000,000 in local tax revenue.

If we got serious, we could make our national forests far more productive. Already private industry has shown how intensive forest management can double, in some cases even triple, the amount of wood grown on a piece of land.

What the Forest Service needs most is money — the funds to get the job done right. It's up to us to remind congress that every dollar invested in the Forest Service yields a profit to the U.S. Treasury.

We must let it be known that this country deserves a progressive National Forest Management

Act which will see to it that:

1. Timber production goals be established consistent with the nation's anticipated need and with the capability of the national forests to meet that need.

2. Timber be sold in volumes sufficient to meet the established production goals.

3. Funds be provided for intensive management.

4. Over-age timber be harvested before it decays.

Write today. A little yelling could do us all some good.

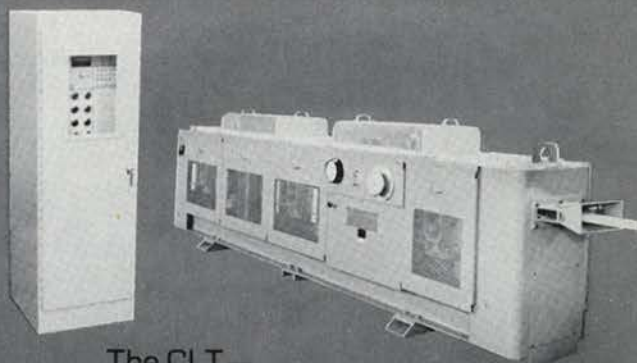
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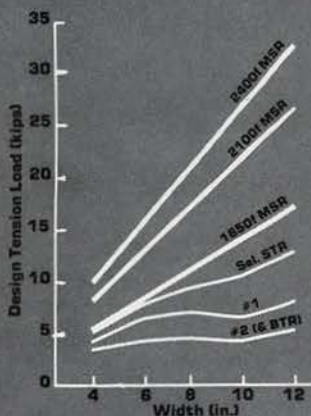
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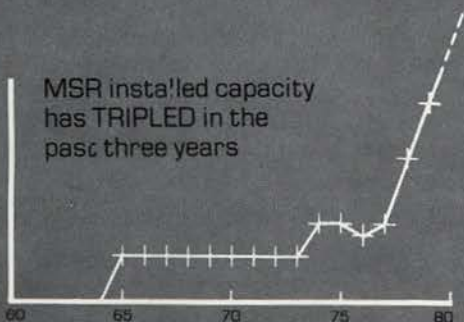
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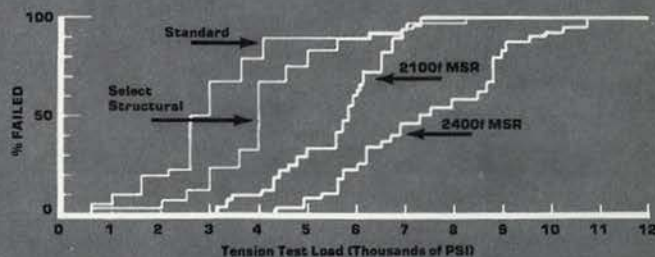


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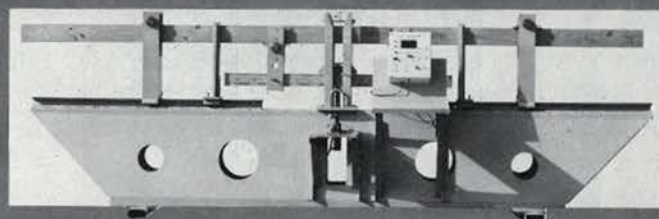
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Graduate students Richard Converse and Robert Deyerberg help Machlis. Converse is working on research concerning energy use and the tourist, and Deyerberg assists with the CPSU extension program. Extension work goes with the concept of communicating research findings to resource managers. The three general topics of the 1980 extension programs are: Understanding Park Visitors, Interpretation of Special Groups, and Energy and Outdoor Recreation.

Interested local, state, or federal agencies can contact Machlis for presentations. Machlis is responsible to the Northwest region of the Park Service and to the Rocky Mountain region as well. When groups need information concerning Machlis's discipline, he delivers it as part of his job.

When questioned about other professionals in the field doing the same job he does now, Machlis explained that his knowledge of the Park Service and the challenges Park Service personnel face put him at an advantage. "It doesn't cost agencies wanting the information. If this type of position were not here, someone would have to pay for the transportation costs, speaking costs and so on. Most professionals within the universities couldn't get away so easily either."

Machlis explained he hasn't accomplished much in the state of Idaho, "yet." "I really haven't done that much in the state because we don't have many parks in the Idaho region. Of course, by this time next year, I will probably have given a lot of talks and exhibits here."

Machlis has been invited by the University of Nanjing in China to examine natural resources there and

help the Chinese to establish a curriculum for resource managers at their university. He'll leave this summer and stay for six weeks.

Jeff Coupe is a Senior in Journalism.



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them have brought fruit to bear. When some of these things we've been ridiculed on pan out, it creates even more of an opportunity for us to meet further challengers. There is a very strong concern in our company to increase the productivity of the landbase and return the dollars to the landbase, to keep them productive for a long, long time. This isn't something that is going to change; we may see some innovations that may appear totally outrageous, and a lot of them won't work, but it is that stepping out that has allowed us the growth that we have today." The Weyerhaeuser Seminar Program is a new and provocative attempt by the company to invest both time and dollars into future forestry and business professionals. It is an exceptional approach to integrate the needs of a corporation with the requirements of a university.

Bill Keller is a Senior in Forest Management.

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similar to the 1967 grant cannot be acquired for maintenance use because of regulations stating that grants may be used only for develop-

ment.

If a grant cannot be acquired, what does the future hold for the Big Meadow Creek Recreation Area? What is the future of the entire Big Meadow Creek Unit? Harold Osborne, current manager of the School Forest, has proposed these projects for the entire unit: a cable logging operation, a land exchange of a small tract near the Village of Troy Reservoir, and management of 160 acres located on the western side of the unit by the Associated Foresters.

As for the Big Meadow Creek Recreation Area itself, Dr. Joe Hoffman, present manager, admits there is a conflict between family use and kegger use. Dr. Hoffman feels it is time for the University of Idaho to take a serious look at the site and decide if it wants to improve the area for family use with an emphasis on education, or if it wants to develop the area into a kegger facility. One problem with the latter idea is that

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the liquor laws prohibit alcoholic beverages on University property.

If, however, Big Meadows is developed for family use, there is the problem of providing maintenance for the area. According to Dr. Hoffman, one way to solve the maintenance problem would be to enlist the services of a work-study student. The one difficulty is that work-study students request their place of work, and the last time a student chose Big Meadow Creek was the summer of 1978.

In conclusion, the future of the Big Meadow Creek Unit as a whole seems fairly stable; however, the University must soon decide on the future of the Big Meadow Creek Recreation Area. Vandalism in the area has reached the point where some of the facilities need to be replaced. Is the University willing to spend the money to repair and maintain these facilities? Only time will tell.

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build, more energy efficient, and easier to maintain. Visitor centers, for example, contain three major facilities which do not require windows: restrooms, exhibit rooms, and auditoriums.

Society and the Future of Yellowstone

Changes that occur in the mores and social values of our society affect the future of places like Yellowstone. The intrinsic value of Yellowstone to society is intangible, yet it may not always be recognized for what it is, and could be fragmented or destroyed. Society as a whole must continue to appreciate the total value of Yellowstone, not only aesthetically

and spiritually, but as a unique collection of natural features.

If the present value of our society changes, so too may the value and need for the existence of Yellowstone. The survival needs of society may dictate that the resources indigenous to Yellowstone be put to other uses. Increased efforts on the part of those who value Yellowstone may have to be intensified to convince society that it is worth keeping intact as an indicator of how natural processes evolve and how we survive.

On the other hand, if the present appreciation of the Yellowstone of this world continues, tighter restrictions may be placed on their use and more intense monitoring of their condition may provide the safeguards needed to ensure their perpetuity.

The more society realizes that it does not control nature but, rather, that the natural world controls human society, the greater hope there is for the future. Yellowstone is not an exception and should be recognized for what it is—a yardstick to measure the health of the natural processes which regulate the vitality of this planet and how society must respond to them in order to survive.

John Tyers is the Assistant Chief Park Naturalist at Yellowstone National Park.

An administrator of public lands containing remnants of wilderness should be aware of the fact that the richest values of wilderness lie not in the day of Daniel Boone, nor even in the present, but rather in the future. Aldo Leopold



Wheedling The Seedling

If it gets through the first three or four years, it has a pretty good chance—those years when water's so important to "catching on." Then all the seedling has to contend with is disease, insects, several species of rodents, hungry game and fire.

That's why all the wheedling and coaxing is done—the reason for inspections and so much attention by foresters.

Despite these hazards to timberlands, they're kept open to the public for recreation. It's the multiple use concept at its best—something for everyone.

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Boise Cascade Corporation

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proposals from Washington State University, and from more distant universities such as Brigham Young and the University of California.

The selected students are then flown to the ranch, where they enjoy the summer in a land of tall forests, sparkling water and fresh air. The students do their daily summer work of setting live capturing devices, identifying the natural vegetation and making water analyses. Last year, wildlife biologists Oz Garton and Steve Peterson supervised and directed their students' projects. After the students had completed their work, they submitted their data and reports for credit during the fall semester.

For many of the students, especially graduate students, one summer of data collection is often not enough. Some spend two, or even three, field seasons at the ranch. In the past, wildlife students have worked for two years studying bighorn sheep. Studies on mountain lions have spanned several years.

Two graduate students and their two volunteer undergraduate assistants spent this past winter in the Big Creek drainage and Chamberlain Basin using the ranch as a base camp. Greg Hayward, a wildlife graduate student, and his assistant Richard Detrick, worked at Rush Point collecting data on owls. Susan Tank, also a grad wildlife resources major, conducted a bird census with her assistant, Lynn Schultz, in the vicinity of Taylor Ranch. Both Greg and Susan received all their supplies by ski-plane, the best means of getting around in the back country during the harsh winters. For shorter excursions, they carried their supplies by cross-country skis and snowshoes.

Students at Taylor Ranch learn not only the latest techniques of scientific research, but also the methods of ranching used by "old timers." The students carry on the tradition of collecting hay for the horses' winter feed during the haying season. Since the ranch is located in a "primitive area", motor-driven equipment and machinery are pro-

hibited, so all the haying equipment is horse-drawn.

Because of its location and facilities, some professional organizations use the ranch to do their field work. The U.S. Forest Service uses the ranch as a base camp for trail work and the Idaho Fish and Game Department conducts wildlife studies there. Because of the increased demand to use the ranch, the College of FWR is currently utilizing some forest facilities outside the perimeters of the ranch as additional field stations. Areas currently being used are Cabin Creek (with an airstrip), Chamberlain Basin and Cold Meadows.

University of Idaho students are fortunate to have the facilities at Taylor Ranch. As all wildlife students know, gaining field experience is an important step to furthering their careers in natural resource management. Let's hope the Taylor Ranch and the College of FWR can continue to offer these opportunities to students in the future.

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areas in the Puget Sound Basin is completed and protection strategy plans are being developed. Examples of key areas are Padilla and Samish Bays, Protection Island and the Nisqually Delta. One immediate concern is to increase the numbers of wintering brant in northern Puget Sound. The present population decline is caused by excessive disturbance.

9. Increase salmon/steelhead runs in the Klamath River. The Klamath River of northern California is one of the most productive rivers of the West. Indian commercial fishing, dam construction, overfishing by ocean trollers, and decades of poor logging practices have caused serious declines in fish runs. Initial Service emphasis is to cut down illegal fish buying and selling through increased law enforcement. Better methods of predicting the magnitude of fish runs are being tested.

10. Maintain migratory birds and anadromous fish on the Oregon-Washington coast. Identification of key areas and development of protection strategies are proceeding, with special emphasis on the Columbia

River estuary. Again, ways to increase wintering brant numbers are under consideration. The completion of Makah National Fish Hatchery on the Washington coast is a major priority.

11. Maintain migratory birds in the Klamath Basin. One of the most important waterfowl areas in the world, the Klamath Basin held up to five million migratory birds in the past. Recent declines have prompted concern, and the Service is working to maintain the quality of the basin for waterfowl.

12. Maintain migratory birds and endangered species in Stillwater, Truckee-Carson and Pyramid Lake system. One of the most complicated water rights battle in the West is taking place in this area. At stake is the continued productivity of Nevada's Stillwater marshes for migratory birds and the survival of the endangered cui-ui fish and the threatened Lahontan cutthroat trout. The challenge is to obtain water for Stillwater, establish cui-ui spawning in the Truckee River and maintain the cui-ui and Lahontan cutthroat habitat in the Truckee-Carson Rivers.

13. Maintain migratory birds in

Imperial Valley. The continued rise of the Salton Sea threatens to destroy much of the valuable migratory bird habitat in the Imperial Valley. Efforts are underway to maintain all available habitat.

14. Maintain "sensitive" wildlife species to prevent them from becoming threatened or endangered. The Service is developing criteria for listing species that may become threatened, in order to take appropriate steps to prevent such an occurrence.

One common thread runs through most of the problems: that of too little water remaining in the West to meet all demands.

The future of fish and wildlife in the region depends largely on water allocation decisions for the Columbia Basin, the Central Valley of California and for all other remaining rivers. Without guaranteed water for anadromous fish, migratory birds, and a host of other water-dependent species, the battle to maintain wildlife in the West will be lost!

John Sayre is a Public Affairs Officer for the Fish and Wildlife Service in Portland, Oregon.

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Forest Resources

The modern forester is well versed in economic theory, skilled in computer technology and proficient in public communication, besides being knowledgeable 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 Lew Nelson, Placement Coordinator, College of Forestry, Wildlife and Range Sciences, University of Idaho, Moscow, Idaho 83843.



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project." Despite Chinese exports of wood products, he added, their domestic demands for wood-based commodities greatly exceed supplies. "They have to export these products to expand their foreign exchange. They have to gather foreign currency despite their overall status as net importers of forest products because much of the land has been cleared for agricultural production."

The fourth visiting Chinese scientist would study remote sensing techniques while here. His arrival, it was hoped, could be arranged to coincide with an international remote sensing symposium to be held at the university in early September. Unforeseen delays, however, again setback plans for the exchange program and the scientists targeted arrival date of September 1 was extended to September 28.

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THE QUITTER

*When you're lost in the Wild, and you're scared as a child,
And Death looks you bang in the eye,
And you're sore as a boil, it's according to Hoyle
To cock you revolver and . . . die.
But the Code of a Man says: "Fight all you can,"
And self-dissolution is barred.
In hunger and woe, oh, it's easy to blow . . .
It's the hell-served-for-breakfast that's hard.*

*"You're sick of the game!" Well, now, that's a shame.
You're young and you're brave and you're bright.
"You've had a raw deal!" I know—but don't squeal,
Buck up, do your damndest, and fight.
It's the plugging away that will win you the day,
So don't be a piker, old pard!
Just draw on your grit; it's so easy to quit:
It's the keeping-your-chin-up that's hard.*

*It's easy to cry that you're beaten—and die;
It's easy to crawfish and crawl;
But to fight and to fight when hope's out of sight—
Why, that's the best game of them all!
And though you come out of each gruelling bout,
All broken and beaten and scarred,
Just have one more try—it's dead wasy to die,
It's the keeping-on-living that's hard. Robert Service*

Even so, the University of Idaho and the college have assumed a leadership role among U.S. educational institutions as the first to host such an exchange program despite extensive competition from other forestry schools across the nation. Now negotiations are underway which will send UI faculty members to China. Robert Heller, research professor of forest resources and an internationally known remote sensing expert, will visit China as this issue

goes to press. His visit, sponsored by the United Nations Food and Agriculture Organization, will closely coincide with Chinese moves to increasingly use space age technology in their efforts to inventory vast and largely unknown forest reserves. "Science" magazine's February 1 issue reported that the United States will sell the Chinese a \$10 million resources satellite receiving station to allow direct use of data obtained by

continued

Potlatch

the LANDSAT program operated by the National Aeronautics and Space Administration. *Science* also noted the station represents "a facility that probably would not be sold to the Russians."

Details are also being worked out to allow other college scientists to visit China as part of the exchange program. Within the coming year, college officials say faculty members in the wildlife resources and wildland recreation management departments will visit the Chinese mainland.

It is likely that the Idaho-China link will continue to flourish if relations with the People's Republic of China and the United States continue their increasingly friendly path. Vice Chairman of China's communist party, Teng Hsiao-Ping,

remarked at a National Science Conference meeting in Peking in March, 1978, "To catch up and surpass advanced world levels within the century means that we should cover the distance in the next 22 years that took others 40 or 50 years or more."

Another Chinese dignitary, Zhou (Chou) Peiyuan, acting chairman for China's Scientific and Technical Association, in September, 1979, submitted an article to *Science* and in it wrote. "The Chinese and American peoples are linked together by their common wish for good relations and friendship, the differences in the social systems of the two countries notwithstanding. The desire of people in both China and the United States to develop scientific exchanges and friendly intercourse for the

benefit of both countries and for mankind as a whole serves as a bond linking us together. A rainbow linking the peoples of China and the United States has already spanned the Pacific Ocean. In the days to come, scientific and technological circles in both countries will contribute to the construction of the edifice of friendship between China and the United States.

We hope that the peoples of China and the United States will remain friends and that scientific and technological exchanges between the two countries will continue to flourish!"

Bill Loftus works half-time as a news writer for the College of Forestry, Wildlife and Range Sciences.

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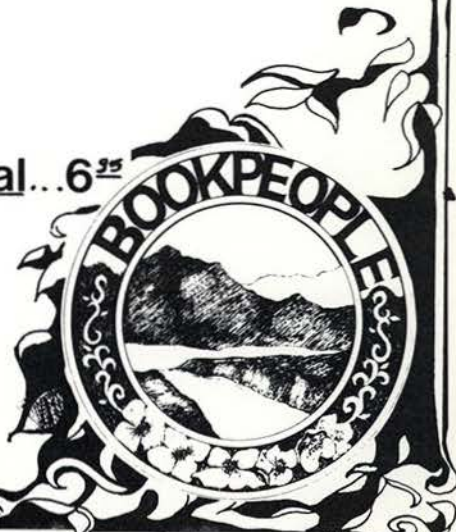
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Good Reading!

Wilderness Management

By John C. Hendee, George H. Stankey, and Robert C. Lucas. 1978. Superintendent of Documents, Washington, D.C. U.S. Dept. of Agriculture, Forest Service Miscellaneous Publication No. 1365. 381 pp. \$10.50.

The authors of *Wilderness Management* have done a masterful job of synthesizing a diverse and growing body of wilderness literature into a comprehensive presentation of wilderness management issues, concerns and concepts. As the first book on this subject, their contribution is both timely and important, since most of the decisions to set aside wilderness areas will be made soon. The long-term protection of those values that originally led to wilderness designation will depend increasingly upon the implementation of sound management practices, the topic of this book.

The principal authors are eminently qualified in that they are three Forest Service recreation research scientists who have conducted wilderness-related research over the past fifteen years. In addition, four chapters are contributed by recognized experts in their respective fields.

The book has been used as a text in our wilderness management class for the last three years, first in a draft review form and now in the published version. The book has been very popular with both the students and faculty who have used it.

The difficult task of organizing such a broad subject has been handled by first presenting a philosophical, historical, and legal background on wilderness, followed by a more detailed examination of increas-

ingly specific management considerations. The sixteen chapters cover six major topics. The first topic is the setting for wilderness management and includes chapters on the need for management, historical roots of wilderness, and international concepts of wilderness preservation.

Following this philosophical treatment of wilderness, the second topic covers the legal basis and subsequent status of American wilderness. Chapters 4, 5 and 6 explain in detail the various wilderness acts, the classification process under these acts, and the current and projected status of the National Wilderness Preservation System.

The next three chapters address some broad management concepts and directions. The first of these presents eleven wilderness management principles that provide a framework for deriving specific management direction and policy. Although brief, this chapter is a keystone on which the remainder of the book builds and elaborates. The other two conceptual chapters explore the importance of management planning and the use of the carrying capacity concept in achieving management objectives.

At this point the authors digress with three chapters on wilderness ecosystems, wildlife in wilderness, and fire in wilderness. While these topics are admittedly too broad to be fully explored in one chapter each, they do serve to emphasize the authors' theme that wilderness requires special management to preserve the opportunity for natural ecosystems to operate unimpaired.

The authors contend that most wilderness management primarily concerns management of users.

Accordingly, the next section of the book is perhaps most directly relevant to actually solving on-the-ground management problems. Three chapters specifically address visitor use of wilderness and the management of this use. Chapter 13 includes trends and projections of wilderness use, and a discussion of visitor characteristics. Chapter 14 deals with approaches to management of overall use and visitor behavior, while Chapter 15 deals with site management of trails, campsites, and visitor impacts. The book concludes with a final chapter identifying future issues and challenges in wilderness management.

One criticism of this section is that it includes very little of the current social-psychological research literature that investigates what people are seeking in wilderness, and how their experiences are affected by their perceptions of the wilderness environment. Since wilderness management is largely "people" management, such research would logically contribute to this section of the book.

Overall, the book is lucidly written, amply illustrated with tables, charts and photographs, and thoroughly referenced throughout. Critics may find fault that over one-third of the book is devoted to the historical and legal aspects of wilderness before actual management strategies are addressed. As the ensuing chapters unfold, however, the authors' philosophy becomes increasingly evident: a thorough understanding of the National Wilderness Preservation System is a prerequisite to formulating management objectives essential in guiding sound management practices.

This reviewer has found that

Thinking is the hardest work there is, which is probably why so few are engaged in it.

Henry Ford.

Wilderness Management appeals to a wide audience, from concerned citizens to students majoring in natural resources, from university faculty to interested graduate students who find it an invaluable source of references. In conclusion, *Wilderness Management* has integrated historical and philosophical concepts, research literature and data, and management experience from all of the federal agencies involved in managing wilderness areas to date. As such, it makes a valuable contribution to the field of recreation resource management.

Dr. Edwin E. Krumpe
Assistant Professor

Wildland Recreation Management

Careers in Conservation

Edited by Henry Clepper. 1979. Second edition. Wiley, New York. 169 pp. \$11.95

This is an extensively revised and updated edition of a book that was first published in 1963. It is sponsored by the Natural Resources Council of America. As stated in the preface, the book was prepared to answer the thousands of questions that young people ask each year about careers in natural resources. The editor, Henry Clepper, is extremely well qualified to supervise such a publication; he was managing editor of the *Journal of Forestry* and executive secretary of the Society of American Foresters for twenty-eight years. There are thirteen contributing authors, most of whom are recognized experts in their respective fields.

Eleven fields of specialization covering the spectrum of renewable natural resources are discussed in

twelve chapters. Among the fields discussed are: soil conservation, outdoor recreation, forestry, freshwater resource management, range management, watershed management, and wildlife biology. There are three appendices that should be very useful to anyone desiring additional sources of information. Appendix A lists colleges and universities offering programs in the various resource fields, while Appendix B lists publications that furnish additional information. The most commonly known organizations associated with the respective disciplines appear in Appendix C.

Each chapter is organized according to the same general format: a brief description of the natural resource field, educational requirements, personal qualifications, and employment, compensation and rewards. Clepper very nicely summarizes general educational requirements in the first chapter. He points out the importance of a sound background in basic sciences, particularly math, economics, chemistry, physics and ecology. He states further that a knowledge of English, especially training in techniques of verbal and written communication, is essential in addition to an education in a professional resource curriculum. This philosophy also summarizes our educational approach in the College of FWR.

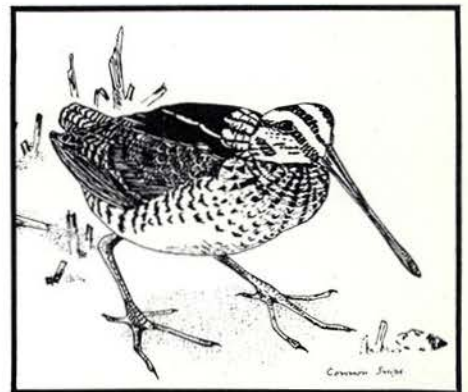
The book is not without its flaws and weaknesses. Some chapters, such as Chapter 6, are broken into sections having as few as two sentences. Such cryptic descriptions provide little useful information. Chapter 5 states that in 1976 over 21,000 students were enrolled in forestry schools, but fails to point out that this figure also included wildlife, recreation and forest products

majors. I doubt seriously that outdoor recreation specialists would agree with recreation being treated as a job within the field of wildlife (Chapter 10)! Sometimes the use of nouns as adjectives creates awkward sentences, but this does not detract from the overall readability of the book.

Dr. Ernest Ables
Associate Dean

"If I were to name the three most precious resources of life, I should say books, friends and nature; and the greatest of these, at least the most constant and always at hand, is nature. Nature we have always with us, an inexhaustible storehouse of that which moves the heart, appeals to the mind, and fires the imagination — health to the body, a stimulus to the intellect and joy to the soul. To the scientist, nature is a storehouse of facts, laws, processes; to the artist she is a storehouse of pictures, to the poet she is a storehouse of images, fancies, a source of inspiration; to the moralist she is a storehouse of precepts and parables; to all she may be a source of knowledge and joy."

John Burroughs



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