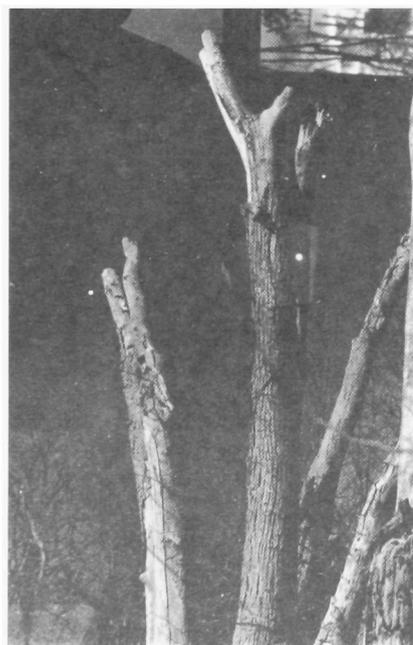
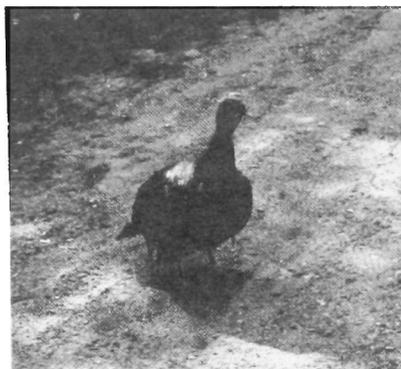


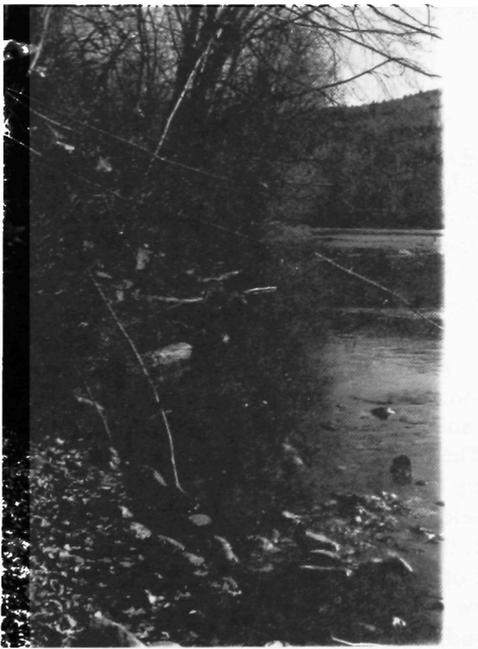
# Feature Articles





*Strange that so few ever come to the woods to see how  
the pine lives and grows and spires, lifting its evergreen  
arms to the light, to see its perfect success.*

*Henry David Thoreau*



# PEACE CORPS AND FORESTRY IN CENTRAL AMERICA

By Roger Cooper

“Yo soy ingeniero forestal,” who was I kidding— Sitting in a small room with other new volunteers, I told everyone in faltering Spanish that I was a forester, but I had my doubts. I had a college degree that said I was a forester, but my only practical experience had been with a fire suppression crew in southern California and here I was in a country whose trees were totally unfamiliar to me. Compounding the problem of practicing forestry was the difficulty with communication. Often my discussions with local people consisted of a confusing jumble of English and Spanish words accompanied with rapid hand and body movements that back in the States would have assured me a spot on Dance Fever.

Slowly over ten weeks of intensive language lessons, I began to pick up Spanish. At the same time I started to develop an understanding of the problems associated with forestry in Central America. Where my studies had stressed the technical attributes of forest management, my new duties had to integrate this background with the needs of Honduran farmers who were much more dependent on forests than their American counterpart.

Each year more and more forest land is lost to human encroachment. As populations swell, people move onto marginal lands where they practice slash and burn agriculture. The number of people forced on to wooded hillsides is enormous. Population in Honduras doubles in about twenty years. This rate of growth is typical of most developing countries. Three quarters of the people are engaged in subsistence agriculture. Since arable land does not increase, the vast majority look to whatever unused land is available, that land is the forest.



Slash and burn agriculture is perhaps the most primitive form of agriculture. When populations are small its overall impact on the environment is also small. With large populations its impact is devastating.

When a farmer locates a piece of forested land he proceeds to cut down all of the small trees and shrubs. After allowing the refuse to dry he burns it off and plants his crops. The ash provides nutrients for a year or two, but as the fertility of the land decreases a new piece of land must be found and the cycle is repeated.

One of my first memories of Honduras was the preplanting season. Every farmer was engaged in burning off his fields and a heavy cloak of smoke covered the entire country. The thick haze was even worse than the Los Angeles smog I had just left behind. Following the burning of the fields, the farmers plant their crops. Using a sharp stick, they make a small hole in the ground and drop a seed or two into the hole. Soon the winter rains fall and new seedlings begin to sprout.

With no ground cover, however, these rains pound the exposed soil and wash it into small streams that feed tropical rivers. There is little to absorb and retain the moisture so the rivers swell toward their flood plains and turn a deep silt rich brown. Tons of top soil wash relentlessly toward the Caribbean. Hillsides seem to



grow stones as the soil disappears. New clearings are relatively stone free while older clearings expose larger and larger rocks, the bones of once beautiful mountain slopes.

Where did this doubtful forester fit into the picture... I worked on a watershed rehabilitation project with the Honduran Forest Service (COHDEFOR) and the United Nations Food and Agriculture Organization (FAO). The city of San Pedro Sula faced a severe water problem. Peasant farmers were invading three primary watersheds of the city. Their activities in the watersheds were reducing the quality of water and affecting supply during the dry months of the year.

One of my first tasks was to examine a set of aerial photographs and produce a land-use map based on slope coefficients and proximity to communities. Certain areas were designated suitable for forest growth only. Other areas were designated for limited use with specific soil conservation techniques.

The areas placed off limits were left to regenerate themselves. Non-agricultural land near communities were to be reforested with fast growing multiple-use trees. Teak seedlings will grow to twenty feet tall and four inches in diameter in a single year. They provide fuel wood and construction materials. They also send up new sprouts when cut. Cordia alliodora has a fine leaf that permits the cultivation of coffee under its canopy. Tabebuia pentaphylla is another native tree

that provides fuel wood and construction materials.

Since there was no commercial nursery to provide the seedlings, I started a ten acre nursery to supply seedlings. A second nursery was established to grow fruit and nut trees.

Slopes of less than a 70 percent could be used for agriculture with hillside ditches, individual basin terraces, and bench terraces. The type used depended on the slope. When I wasn't working at the nursery or making maps, I helped stake out the various terraces.

Many of the tasks were new to me and much of my training was on the job. Forestry was practiced so as to provided for the needs of people, both those living in the mountains and those living in the city. My three years in Honduras didn't bring about any startling developments. The communities where I worked were a little better off than when I started. The technicians with whom I worked, were better qualified. It was a small step toward protecting tropical forests. That small step, however, was one of the most satisfying things I have ever done.

Today, I am grateful to the Peace Corps for giving me the opportunity to experience different aspects of forestry and to grow in my understanding of the problems faced by people who are little known to most Americans. While I am pleased by the professional growth gained in Central America, the greatest lesson was that we the people of the developed world and those of the developing world share the same planet - - and the same future.



# FORESTRY IN CHINA

by  
F. B. Knight

China is a country with a massive human population, thus a primary emphasis on the production of food is a necessity. Yet the people of China and the present government recognize the importance of forests and are striving to increase the porportion of lands in forest. For many years, China was the least-forested major nation in the world. In 1949, when the People's Republic of China was established, only 8.6% of the land was forested. The new government encouraged a nationwide effort to plant trees; this effort in afforestation has been limited to areas not suitable for production of crops.

As of 1981, 30 million hectares ( about 75 million acres) has been afforested and the total acreage of the Country now considered to be forested is over 12.7%. The major zone where trees have been established is in central China where plantations account for 25% of the total forested area in the country. When I visited China in 1981, it was very common to see scotch pine plantations in the northern areas and slash pine in the south. Over 100 trees species have been planted though only a few have been utilized on a large scale.

The steady growth in a total acreage of these large plantations has caused an increase in protection programs to reduce losses caused by humans and natural causes. Until 1980 there were no enforced laws against people collecting firewood. Indiscriminate cutting and considerable damage to the forests were common. The Government's Central Committee on Forestry in 1980 began to regulate practices to prevent these losses and losses from other causes. The main effort in forest

protection is forest insect and disease control. Fire, although not as serious a problem, is also of concern.

The Ministry of Forestry, derives its authority from the State Council and is responsible for all aspects of forestry in the People's Republic of China. The Ministry provides professional guidance to both state and collective-owned forests, making plans for afforestation, reforestation, and harvest. It is involved in short and long-term planning and in the direction of the many institutes and universities where teaching and research in forestry is accomplished. The Ministry contains more than 20 bureaus and the Chinese Academy of Forestry Sciences.

The Chinese Academy of Forestry Sciences provides us an example of the organization within the Ministry of Forestry. There are seven research institutes in the Chinese Academy and a staff of 1,613 people. Three institutes are in Beijing and the remaining four are in four widespread provinces. The Forestry Research Institute in Beijing is the largest and most diversified of the seven. It has a staff of 282 including 19 professors and 150 assistant professors. The mission of the institute is to carry out nationwide projects on basic forestry and to promote research and training of post graduates.

The education and training of forestry personnel resembles that found in may western countries. Students are trained as professional foresters and as technicians. Post graduate studies are available in the large forestry colleges and through the institutes.





The nation has eleven forestry colleges; six are directly operated by the Ministry of Forestry and five are provincial institutions. Technicians receive their education in 32 secondary schools. In 1981 there were about 14,000 students enrolled in the eleven forestry colleges and 11,000 students in the technical schools. Students come from all over China to the three largest colleges of Beijing, Harbin and Nanjing, where entrance is by examination. Graduates are assigned throughout China by the government.

China has a tremendous variety of plants with almost four times as many woody plants species as found in the United States. The forests have many similarities with those of North America. The climate of China is varied ranging from a moist coastal zone to a dry interior. The boreal forests are found in the north and extend south in the mountainous areas of the country. There is also a broad zone of subtropical forests in southern China and a narrow area of tropical monsoon climate that supports a dense, lush evergreen forest with an astounding number of plants and animal species.

The people of China have set goals which they may achieve provided no further disruptions occur. In 1949 the major goal was to have 20% of the country in forest by the year 2000. The terrible years of the cultural revolution slowed the progress, but the goals have been restated and the hard-working Chinese people will probably achieve them.

In general, China is rich in tree species and poor in timber resources. New forests are unevenly distributed with the greatest concentration of natural forests in the remote border areas. The highest volumes are in the northern border areas near Siberia and the southwestern mountains. The new forests are being established in the heavily populated central areas. The people of China need wood for construction, fuel, furniture and paper products. They also need windbreaks, erosion control, and climatic modifications. The establishment of community forests, roadside plantings and shelterbelts has helped transform areas of severe climate and soil conditions into a more favorable human environment. Local people are involved and take great pride in maintaining the planted trees. I was impressed by the determination of the Chinese forestry scientists, by the forest managers and the workers in the field. I expect China will meet their goals.



# SWEDISH FORESTRY — AN IMPRESSIVE ACCOMPLISHMENT

by Charles Gadzik

My decision to spend a year working for the Swedish Forest Service (Domanverket) was motivated by an interest in Scandinavian harvesting systems. I had heard and read a great deal about Swedish equipment and techniques and I was curious to see if such sophistication was actually applied.

Almost five years after my return, it is not simply the creativity in harvesting that I remember, but how forestry and society interact in Sweden and how this experience has influenced my views as a professional.

First, some facts about Sweden. As part of Scandinavia it is located quite far north, so far north actually, as to have the Arctic Circle claim the top sixth of the country. It has 58 million acres of productive forest land (five times that of Maine), a sustainable harvest of 21 million cords per year (3-4 times that of Maine's present harvest), and an ownership pattern similar to that of the U.S., with 50% of the land in small private holdings, 25% held by industry and 25% held by the state. The forest industry is the single most important component of Sweden's economy, with its exports critical to maintaining one of the highest standards of living in the world. (There are about 8 million Swedes.)

The forests of Sweden have had a long history of indiscriminate harvesting. Under such exploitation, they proved to be inadequate at self regenerating and developing, and many acres yielded very little. This degradation of the forest, which reached its peak in the mid-to late-19th century, concurred with an economic collapse that resulted in one out of every three Swedes leaving their country. The land ethic and concern for the future so prevalent today must have been born from such hardships.

The forests themselves seem strikingly simple to someone coming from an area with 30 or more tree species. There are, for all intents and purposes, three tree species in most of Sweden: Norway spruce (*Picea abies*), scotch pine (*Pinus sylvestris*), and a white birch (*Betula alba*). This simple species composition is attributed to the barrier created by the Alps to reseeded after the various ice ages.

The relatively simple forest composition, combined with an historic and pursued even-aged structure, results in a very uniform and straightforward means of silviculture. Stands are regenerated by the seed-tree method (40%) or artificial regeneration (60%). A combined birch release/density control treatment is applied during the sapling stage of development, and one or more commercial thinnings lead up to the final harvest. Rotations are 80 to 100 years in length, with fertilizer often being applied in the latest stand development stages.

The Swedes have been among the world leaders in many research fields. An example is their enormous contributions to the science of artificial regeneration.

Harvesting technology in Sweden is constantly evolving to solve old problems or to take on new challenges. In assessing the Swedish arsenal of equipment and techniques, I found it difficult to believe that the first harvesting mechanization in that country was American

chain saws and skidders some 25 years ago. The Swedes were clearly motivated to modify and improve on that technology. Some of the truly unique ideas had their inception in some Swede's garage and were later used by the major equipment manufacturers. Much of the equipment, which requires a tremendous amount of engineering and design, has only the prospect of serving a very limited market. This, of course, translates to very high costs.

Ninety percent of the wood harvested in Sweden is done by some form of a shortwood harvesting system. This means that the trees are converted to their various products in the woods and then transported roadside. There are a hundred variations of the shortwood system and because it is so accepted, new utilization strategies such as the harvest of forest residues are approached from a modification of the shortwood theme.

Swedish woods labor is recognized around the world as being one of the most talented and skilled. Wood



workers, who are proud professionals in Sweden, have one full year of education and training, both in harvesting techniques and in forestry practices. Planting, density control, and wood harvesting tasks which are taken on by all except those operating expensive equipment which produces year round. In 1975, woods labor was changed from a piece rate to an hourly basis with production bonuses, and with equipment and work apparel being supplied by the employer. All of these changes have resulted in major cost increases in harvesting wood. This expense, combined with a decline in the number of young people attracted to such rigorous work, is creating a strong push to mechanization.

I encountered many Swedes who questioned their long-term competitiveness within the pulp and paper industry of the world. This concern has motivated Sweden to discourage forestry practices that initiated stands where fiber production is the only objective. That is, long term forest goals should be structured for growing

quality as the ultimate product. However, the present importance of the pulp and paper industry cannot be ignored.

Sweden's forested acreage has an age-class structure that contains a hiatus in the intermediate age-classes. The strategy in dealing with this is to rely increasingly on volume produced in thinnings and to hold onto as many older age-class stands as possible. This strategy, along with the reluctance of some small private owners to cut their wood, has resulted in regional wood shortages. The scene of a newly renovated sawmill shut down for lack of wood was a not infrequently story in the newspaper. The presence of Swedes buying pulp chips from eastern Canada and the U.S. is evidence that such shortfalls also affect the pulp mills.

Living near a branch of the forest university system (Skoghogskolan) I had the opportunity to observe some aspects of that institution. The Swedes graduate about 40 foresters from their four-year program annually. They equate this education with a masters degree here in North America, based on their program having an academic year of about 12 months and their requiring a thesis for graduation. Many students have had several years of work experience before entering the program. Acceptance to the Skogshogskolan is as competitive and discriminating as med school or law school in Sweden.

Employment after school, even with a low number of graduates, is very competitive. A student's education at this institution prepares him or her for higher management positions or careers in the developing countries where their expertise is in high demand. In addition to the Skoghogskolan, there is a two year program (Skogsmastareskolan) for the education of field foresters, operations supervisors, and similar positions. One characteristic of these institutions is the strict observation of education position correlation.

Swedes have control of their forest resource and it is impressive to see how they use that control, but the future has many challenges for them. These challenges

include those they can control themselves: the ever increasing threat of labor costs, the need to regenerate and grow the quality of trees they are presently harvesting, recreating public surrounded by a commercial forest. But there are also challenges that come from outside for



the Swedes: the uncertainties of imported energy, the prospect of other forest regions competing more strongly for their traditional markets, and the threat of a forest decline so evident in central Europe. I've promised myself visits back to see how they are doing.



# HUNTING AND WILDLIFE MANAGEMENT IN EUROPE

by Ray B. Owen, Jr.

In the distance the horns sounded twice indicating the beaters and dogs had entered the 4 hectare section of forest that was surrounded by hunters. Shortly there was 1 shot to my left and another group of shots in the distance, then silence. We waited for almost an hour before the horns told us the hunt was over and we should gather at the forest edge. The snow was gently falling when we finally arrived at the rendezvous point. I was following the lead of a doctor friend as this was my first drive hunt and I knew there was a strict protocol associated with the entire episode.

At the forest edge was a "Hirsh", or red deer stag and 3 "Wild-schwein" or wild boar. The animals already had a sprig of fir placed in their mouths signifying the "Letzte Bissen" or last meal, and 2 hunters had similar branches placed in the brim of their hats to be worn for 1 day indicating their prowess as sportsmen. The stag had poorly developed antlers, classed as 2B, and was shot because the forester wanted to cull the herd of inferior animals and antler development was the criterion to identify such animals. We had been specifically instructed to shoot only "Hirsh" of this category and anyone doing otherwise, beware!

The wild boar, on the other hand, were taken to reduce their population as significant damage was being done to root crops adjacent to the forest. The forester was monetarily responsible for the damage his animals did to adjoining agriculture fields and he was anxious to reduce his boar populations.

As we gathered in the fading light I was struck by our appearance. More than 30 hunters were present all

dressed in green suits of varying styles, most with ties and dress shirts. The foresters displayed their rank and were almost military in their bearing. As the horns sounded all conversation ceased and heads were bowed. Individual tunes signifying the last rites for each species were played. The mood was solemn and the animals were treated with deep respect.

It was off to the local gast house for beer, schnaps, pea soup and an experience I will never forget. After a few rounds and a light supper the room was rearranged so that one end became a stage. A mock court was about to begin, the "Jagd Konig", or most successful hunter, was King of the Court, a defense counsel and prosecutor were chosen and the elderly "Ober Forester" selected has Judge. His decision was final.

First a young forester was brought forward, his offense was simply to have uttered the word "Blut" when he saw the blood trail of one of the wild boars. But in "Jaeger Deutsch", a separate hunting vocabulary of almost 500 words, blood is "Schweis". The arguments were well stated but in the end the young forester was required to sing a hunting song before his large audience. Next, an American--his crime--a missed shot which severed a young hardwood sapling. No mercy was shown, an American hunting song for the court. What would you sing\_\_

Oh boy, I was getting worried! the entire day flashed before my eyes. What had I done wrong\_\_ who was watching\_\_ The court was ruthless with the next offender. He had failed to bring his rifle to the playing of the last rites for the stag and boar. This was serious and the unfortunate had to buy a round for the beaters grouped in an adjoining room. A cheer went up from next door when the verdict was announced.

Lying in bed that night I tried to reconstruct the day. I had not been a successful hunter, indeed I hadn't even seen an animal, yet it was probably the finest hunting experience I will ever have. The day was filled with tradition hundreds of years old, and a reverence for the animals rarely observed in America. Jose Ortega said it best when he described the essence of hunting as the preparation, the quest, the ritual, the excitement, the comradery; the kill almost anticlimatic and definitely not necessary to enjoy the sport in its fullest.

In Europe wildlife belongs to the landowner not to the public, as in this country, and animals are sold on the market and game served in restaurants. Hunters are entitled only to the trophy and heart and liver if they dress their game. German foresters manage game species on public lands and have precise management objectives including harvest quotas. It was my impression that state foresters spend as much time in wildlife activities as they do managing trees.

Carrying capacity is an artificial term since winter feeding provides food for more animals than the habitat alone can support. Pheasants, roe deer, boar enjoy a free handout throughout much of the winter in most of Europe.



Harvest quotas are strictly adhered to, and if a private landowner fails to achieve his management objectives, he may lose the right to harvest the game, even on his own land. Large sums of money are expended to obtain harvest or hunting rights on a "Revier" or management unit although the game still belongs to the landowner.

There is no question that sport hunting is for the elite and wealthy, and foresters are certainly a member of the former. Townspeople become the beaters for the drive hunt but never the hunters. A class structure still prevails throughout much of Europe and is perhaps best exemplified in the sport of hunting. South of Sheffield, in what was once Sherwood Forest, coalminers with whom I lived, boasted of their poaching exploits on lands of the nobility. I could only think of Robin Hood with great empathy.

Predators of game are the lowliest of all animals. They are searched out and eliminated with a vengeance even if their role is a merest suspicion. Hawks, owls, and foxes are reduced to feathers and hair with a rapidity that scares and observer. This is perhaps best ex-

emplified on the grouse moors of Scotland. Thousands of hectares of moorland are owned for the express purpose of hunting grouse for a month or two in the fall. Grouse are driven by beaters across the barren land to hunters hiding in butts, or blinds, silhouetted on the ridges. A hunter generally has an assistant to load one or more shotguns when the birds are flying. Predators have no place here as they are competing directly with the owners' objectives. Sound familiar?

None of us wants to see the elitism associated with hunting in Europe prevail in this country, but there are lessons to be learned. Tradition and ritual are important aspects of the sport but require many years to become established. The annual week at a hunting camp, shirt tails removed after missing your first buck, hosting or attending a game banquet or annual trophy are a few traditions already established here. Far more important, though, is respect, almost reverence, for the species being hunted. This is a trait that must be carefully nurtured and I hope, in time, will be part of our American tradition to be passed from generation to generation.



# HAITI

by Roland Dupuis

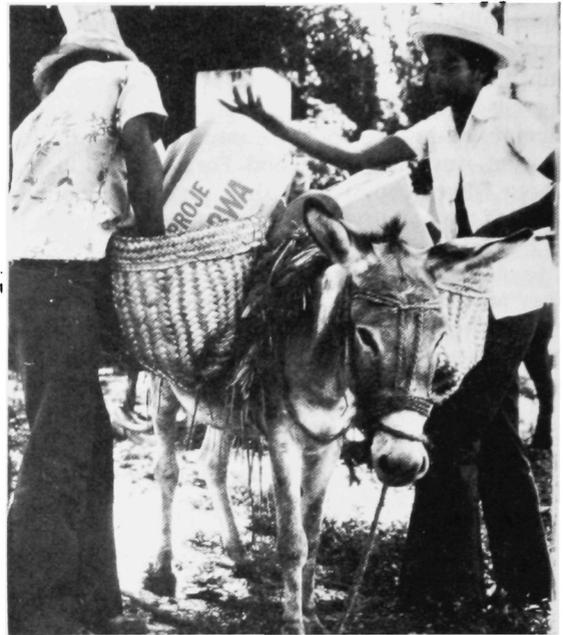
Deforestation is occurring at an alarming rate in the developing countries of the world, and nowhere is it more evident than in the Caribbean island nation of Haiti. During the last 30 years, Haiti has reduced its forest cover from 80 percent to about four percent and thus has gained the status in the world".

Like most other developing countries, the loss of forest cover is attributed to:

- the cutting of trees by rural farmers so that they may cultivate new ground.
- the cutting of trees by rural families to supply their cash needs through the sale of wood products such as posts, charcoal and fuelwood.

The erosion resulting from such activities would be most serious most anywhere, But in Haiti, which is 68 percent mountainous, the results are devastating. With the loss of the vegetative cover, an entire landscape is ravaged by the torrential rains as they cascade unrestricted down the slopes. From a single rainstorm, it is common to have the almost instant formation of huge gullies, the destruction of gardens, roads and houses. During the past 20 years, agricultural productivity has been steadily declining at an annual rate of 2.5 percent. The loss of nutrient-rich topsoil has contributed greatly to this. Since nearly all rural families derive some portion of their income from agricultural products, this can only mean that rural family incomes, presently at 40-150 dollars per year are declining.

In an effort to supplement family incomes, many rural people are becoming involved with the production of charcoal, which further denudes the land. However, the broadening of the charcoal marketing system accompanied by an increased demand for wood products, particularly boards and posts, has given the development agencies the proper setting in which to launch a major reforestation effort.



Past reforestation attempts in Haiti have been undertaken by the Haitian Government and a myriad of development agencies, and private volunteer organizations. In mostly of these projects, the motivation for the peasant farmer was based on patriotic pleas to stop cutting trees and to plant trees for future generations, neither of which fulfill any of the farmer's immediate economic needs. This lack of contribution to the farmer's income has meant that nearly all previous reforestation efforts in Haiti have failed because of farmer disinterest in the projects.

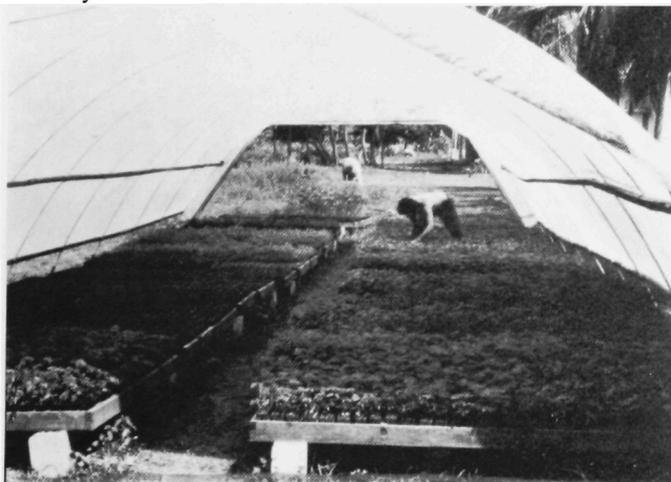
In contrast, a new USAID sponsored reforestation effort entitled "the Haiti Agroforestry Project" is based on more appropriated assumptions and motivations. The project places the peasant farmer at the focal point





of its concern. Since they are driven economically to cut wood on a massive scale to supply the charcoal and wood markets, it is possible that with the proper motivation, they can be motivated to grow and manage the wood to supply these market demands.

To more easily assist the peasant farmer in growing more trees, the project's management made three important technical decisions. The use of fast growing hardwoods was essential so that cash-needy rural families could obtain an economic return from their efforts in three to five years. In short, the project has set forth the idea of using trees as a cash crop. The second decision was that the trees should be intercropped within the peasant's current agricultural production. The third decision was to use small container seedlings. This enabled the project to transport up to 15,000 seedlings to a distribution point with a pickup truck. Most importantly, it enabled the farmer to carry up to 500 trees at one time and plant them on his land in one or two days.



The project has been well received by the Haitian peasant farmer. During the project's three-year existence, about 24,000 farmers have planted over 14,000,000 seedlings. With such progress it may be an ideal time for other private volunteer organizations to become involved in the reforestation effort. New reforestation projects designed to encourage: 1) the cash cropping of trees by the rural peasant, 2) the education and training of nursery personnel and village level workers (animaters) and, 3) the application of successful nursery practices are needed.

Last year, one such project undertaken by the Methodist Church of Haiti, under the guidance of the College of Forest Resources Professor Marshall D. Ashley and Research Assistant Roland A. Dupuis, established a forest tree nursery and a forest agent training program. To date, over 30 forest agents have been trained and approximately 520 farmers from 28 villages have planted a total of 150,000 trees.



# Forest Resources of Oregon

by  
Anne Chamberlain

*"...it was Sunday and it was raining and it was Oregon."  
John Steinbeck  
Travels with Charley*

Perhaps the tales of rain in Oregon aren't all true, but my time there was characterized by a month of November without a single clear day. It amazes me that a state best known for its wet weather has tourism as its third largest industry.

But it is the rain which is responsible for the renowned lush vegetation, the unparalleled growth of trees such as the Douglas fir, and the innumerable cascading waterfalls which bring flocks of visitors each year to gaze in awe. The state offers thousands of attractions for vacationers and foresters alike. There are 78 native tree species in Oregon and numerous plant and animal species. Four hundred miles of intermixed rocky and sandy beaches rise to meet a rain forest of hemlock and cedar. Myrtlewood, a favorite of woodworkers, can be found only in a small section of this rain forest in western Oregon. Between the coastal mountains and the powerful Cascade range can be found fertile valleys filled with vineyards and forests of large, handsome and

incredibly fast growing Douglas fir. The spectacular scenery is enhanced by so many shades of green that it seems it must have come straight from a painter's pallet. It is worth spending many hours in the rain to see the fantastic beauty it produces.

The Cascade Mountains, the highest of which is Mt. Hood, rising to 11,000 feet, divide the fertile western third of the state from the eastern pipe region comprised of ponderosa pine, lodgepole pine and western white pine. Much of the eastern part of the state is characterized by little precipitation and extreme temperatures where few trees are capable of growing.

Commercial forest land in Oregon comprises 25.7 million acres, about 39 percent of the total land area. The U.S. government owns or manages 58 percent, the state owns 4 percent. In addition there are 5 million acres of land set aside for recreation and water production. The remaining 38 percent of commercial forest land is privately owned, mainly by large timber companies.

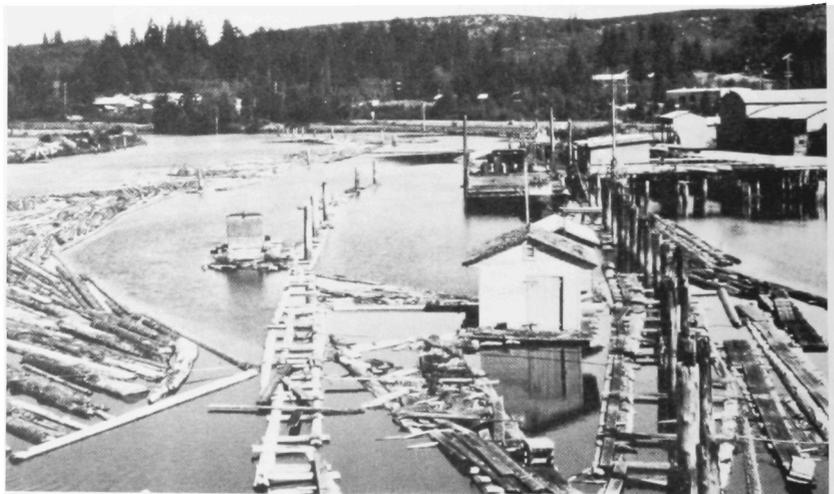
Forest industry is the leading economic industry in Oregon. The state leads all others in lumber production, providing about 20 percent of domestic production: approximately 5.6 billion board feet of Douglas fir and 1.6 billion board feet of ponderosa pine annually. The state also provides 40 percent of the nation's plywood, and manufactures significant amounts of pulp, paper and other forest products.

Logging of Douglas fir is characterized by clearcutting, due to its susceptibility to wind throw and its preference for regenerating in open spaces. The large clearcuts are often viewed by the public as scars on the land, leading to public relations problems for foresters.

Another difficulty for foresters is the necessity of logging on steep slopes. Many of the problems have been solved by using cable logging techniques. Erosion following logging remains a serious problem, however,



*Ponderosa pine is the dominant species in much of eastern Oregon*



*Logs are still transported on many rivers in Oregon, but water quality is of primary concern to forest professionals*

and professionals are continuously looking for ways to prevent the adverse effects of erosion, including sedimentation which seriously harms rivers and lakes.

Leading the country in forestry legislation, the Oregon Forest Practices Act was signed into law in 1971. The law was the nation's first comprehensive forest practices act that included, as one of its major objectives, protection of the state's water resources during forest operations. The rules apply to every phase of field forestry operation, but particularly those which may impact water quality. Multiple use and sustained yield are important objectives of the law.

The Act provides for three forest regions, each with its own committee to decide forest practice rules suitable to the forest conditions of its region. The flexibility of the rules is considered to be one of the major reasons for the law's success.

The law requires landowners to notify the Department of Forestry before starting a forestry operation, so that officers can inspect the site. In this way, potential problems are identified before damage to the environment is done. The rules also provide a place for fishery and wildlife biologists in planning harvest and road operations that threaten water quality or fish habitat. Studies indicate that the forest practice rules have helped reduce nonpoint pollution from silviculture. Fishery biologists especially have noted reduced sedimentation, Oregon's biggest nonpoint pollution problem. In addition, the rules have tended to make landowners and timber operators more aware of the implications of their activities.

Forest fires have long been a serious problem in the lush forests of western Oregon. The famous Tillamook Burn was one of the worst natural tragedies in the United States. Three separate fires, from 1933 to 1945, destroyed 13 billion board feet of old growth timber on a 355,000 acre piece of land. Smaller fires in the same



*Stately Douglas fir trees surround one of Oregon's numerous waterfalls*



*Douglas fir logs at a lumber mill in western Oregon -- the state leads the nation in lumber production*

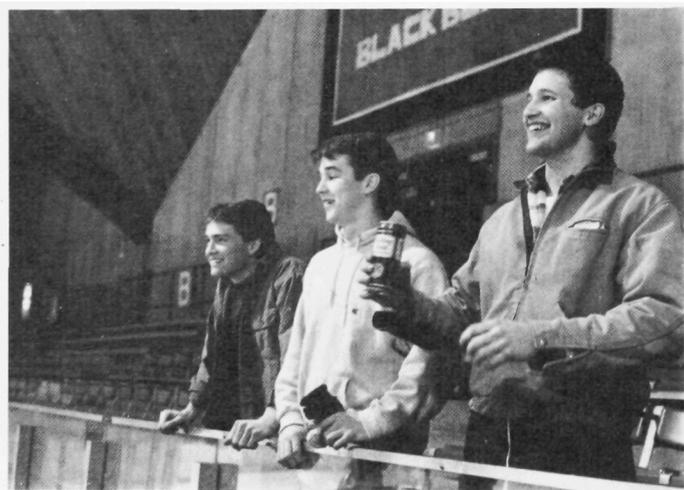
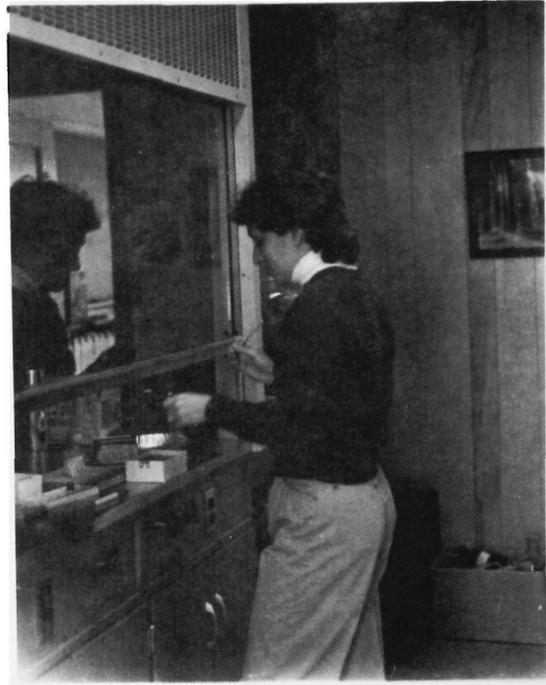
area in 1951 and 1975 were bleak reminders of the past destruction.

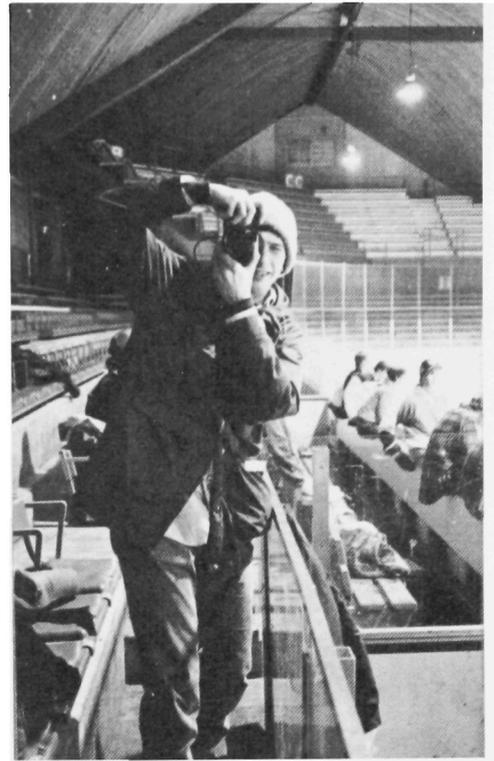
Oregonians proved their loyalty to their natural resources by pledging \$12 million in a statewide referendum to what has been called North America's greatest forest rehabilitation project. Twenty-eight years have been dedicated to re-establishing a forest ecosystem in an area where some of the best soil combines with temperate rainfall and warm sunshine to guarantee the success of such a venture.

The venture has proved a success in more than just monetary terms. The timber is estimated to be worth at least \$350 million in about 25 years. The area is also used as a teaching tool to help educate the public about the importance of forest management. It stands as a tribute to foresters and to the Oregonians who are willing to pay to ensure the future of their beautiful natural resources.

Oregon is a land of beautiful scenery, rich in natural resources and filled with people dedicated to protect those resources, combining that protection with wise use through expert forest management. Oregon has effectively succeeded in maintaining its strong forest industry while also enjoying wildlife, recreation, and numerous other benefits from the forest land.

# Under-Grads



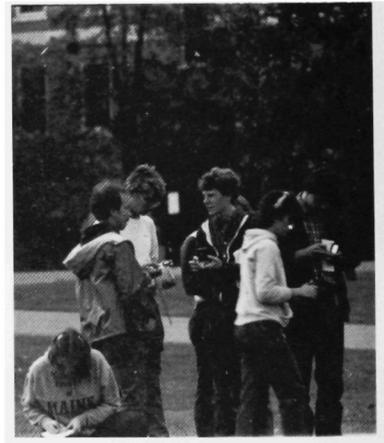
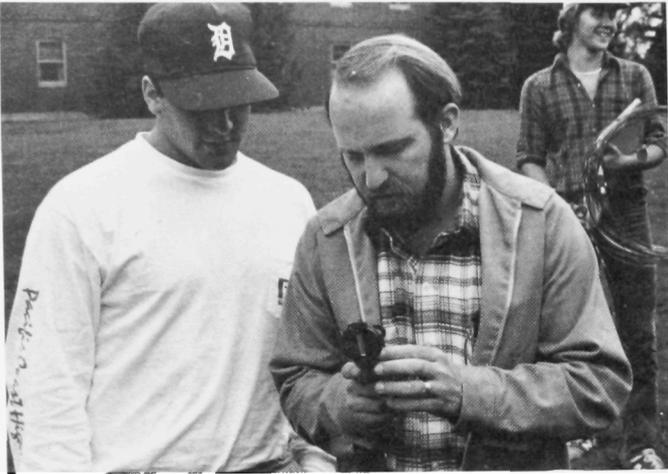


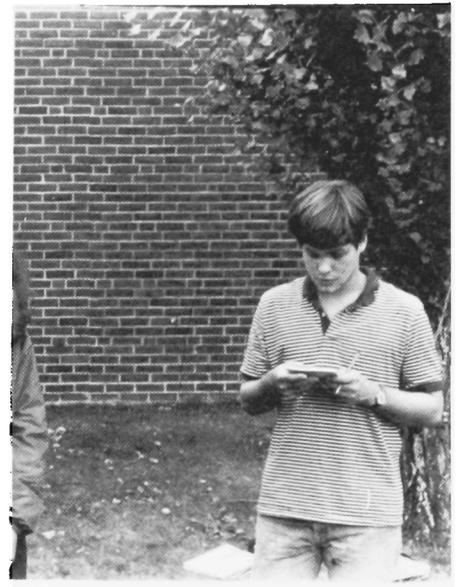
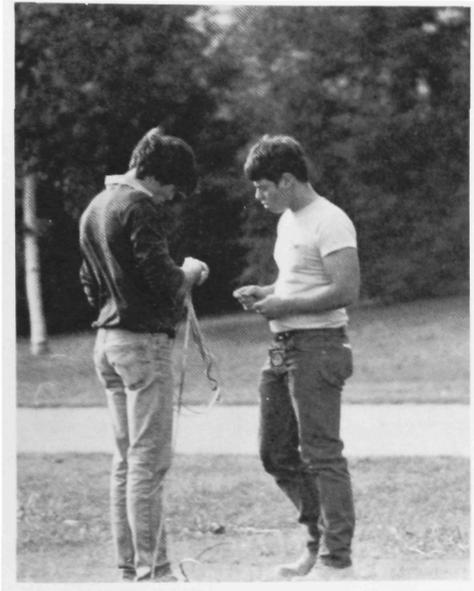
*Since Christ's time--and long before that--God has cared for these trees, saved them from drought, disease, avalanches, and a thousand straining, leveling tempests and floods; but he can not save them from fools--only Uncle Sam can do that.*

John Muir



# Freshmen



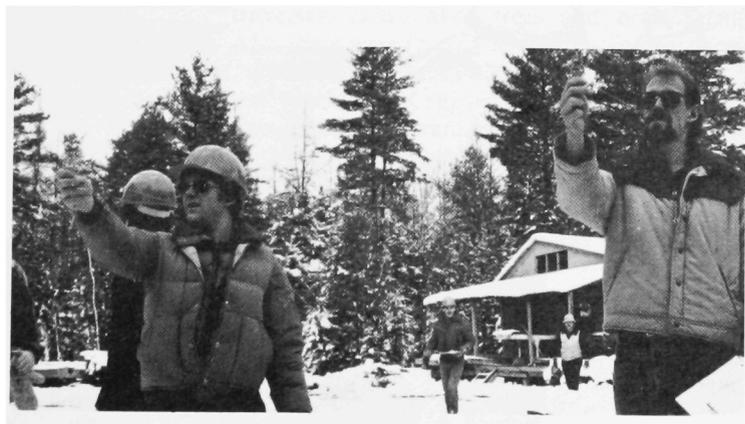
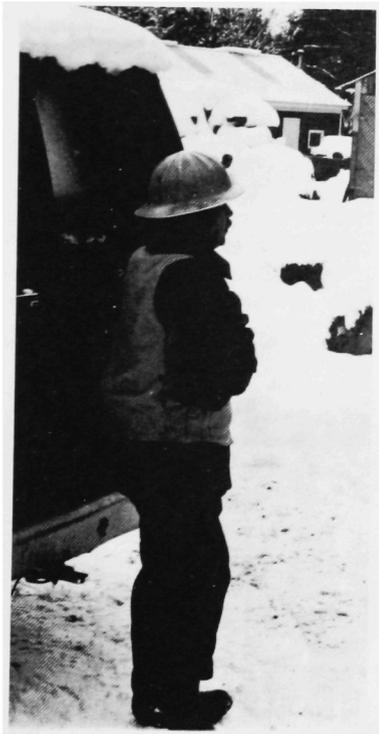


# First-Year Technicians



Back: Keith Pelletier, Scott Bowker, Eddie Gignac, Steve Mehrl, Grant Sorterup, Tom Bradbury  
Front: Chad Munsun, Willard Hannington, Chris Daigneault, Steve Dubinski, Terry Gordon, Wayne Andrews, Vincent Nelson







# Technician Summer Camp

by Matthew Foust

After a wonderful spring semester where most of us gritted our teeth and even prevailed through surveying and drawing, sixteen or so tired, dazed-and drooling, zombi-like students went on a tour of wonderful Washington County, Maine for our spring technician's Road Trip. We saw bits of a couple of Wildlife areas (Everyone enjoyed playing with the coyote scat.) and toured a number of mills. We even saw some trees on the trip...some beautiful spruce-fir stands near the Telos Camp which we witnessed being Koehringed into submission and also some inspiring plantations on G.P. land which the class adopted for our personal "Ultimate Silvicultural Biomass System." As far as we woodchucks are concerned it's jack pine and raspberries forever!!!

In base camp at Princeton we kicked off our boots and tossed our field books in the corner and relaxed a bit. The girls had their own cabin (Much to Geneva's displeasure). Many people got tired from the late night Scrabble and Parchese tournaments going on in all the cabins. There was one morning Geneva felt the effects of all the chocolate milk she drank the previous evening; I warned her that sugar can mess up one's system, but... Then the night Jeff, Joe and Mike were late coming back from an after dark canoe excursion toward town, and some of us got quite concerned. We never did find out what they had gone out looking for. C'mon guys was it wine or woman\_\_\_\_\_

Another highlight of the spring trip was our overnight stay at Great Northern's Telos camp where we ate real lumberjack food, slept on real lumberjack beds and peeked at real lumberjack smut literature. Poor Geneva and Hillarie spent a good part of the evening figuring out how best to barricade the doorway and windows of their room from the salivating, at-least-a-week-without-a woman camp crew stuck in the camp for the weekend.

On our way back to campus we stopped at The Sherman Lumber Company . . . which we agreed looked sufficiently unsafe and that none of us would care to apply there for a job. Upon our return to Nutting Hall the general consensus of the trip was that we were glad it was over. A delightful time was had by all.

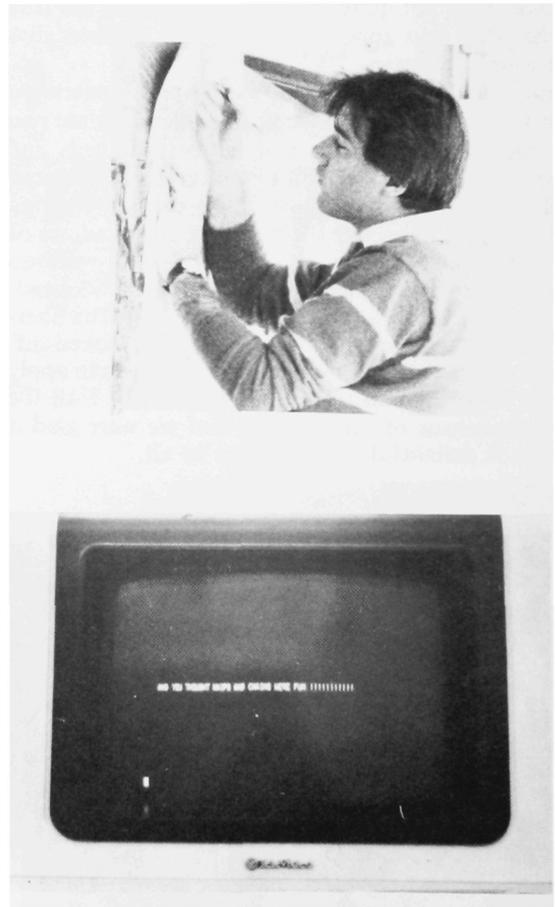
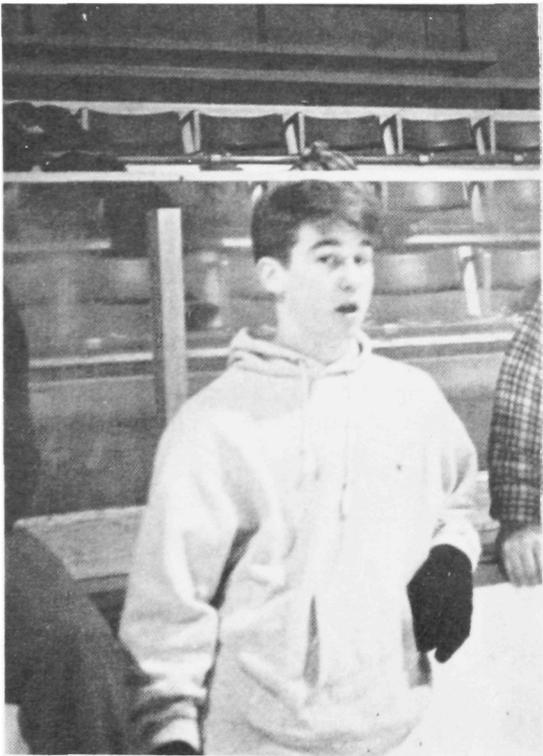
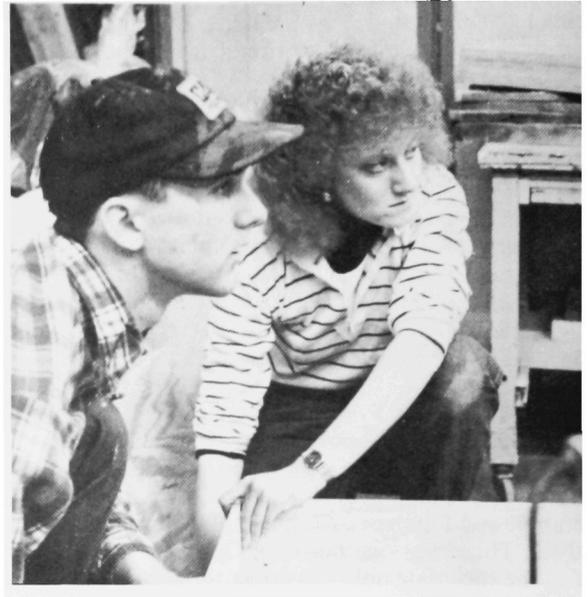
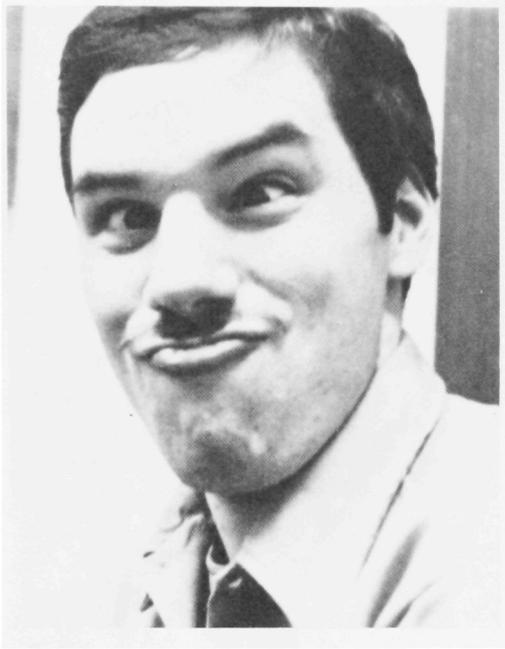


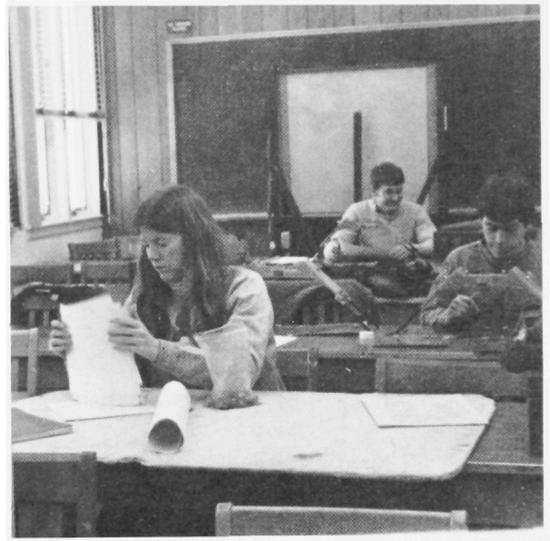
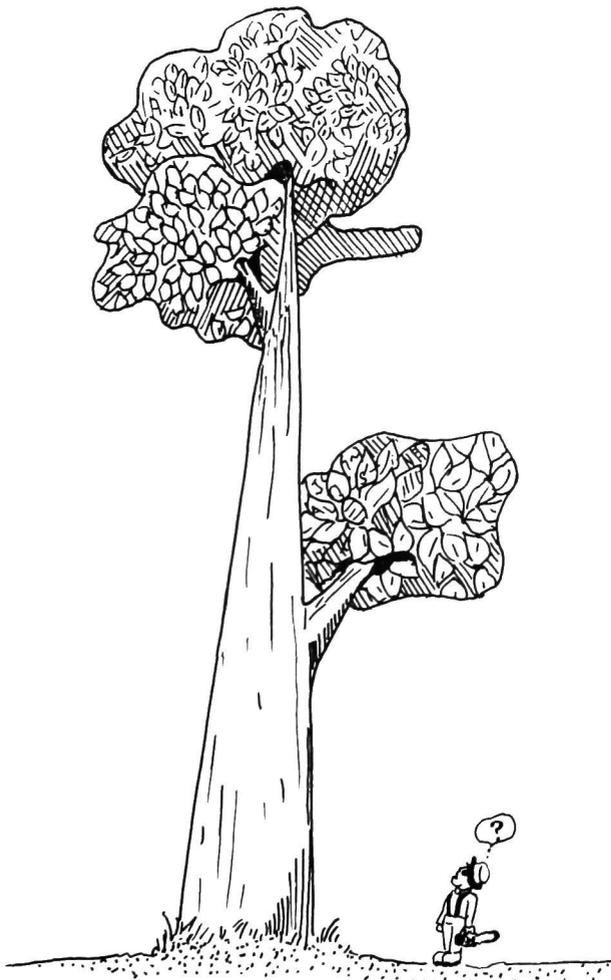
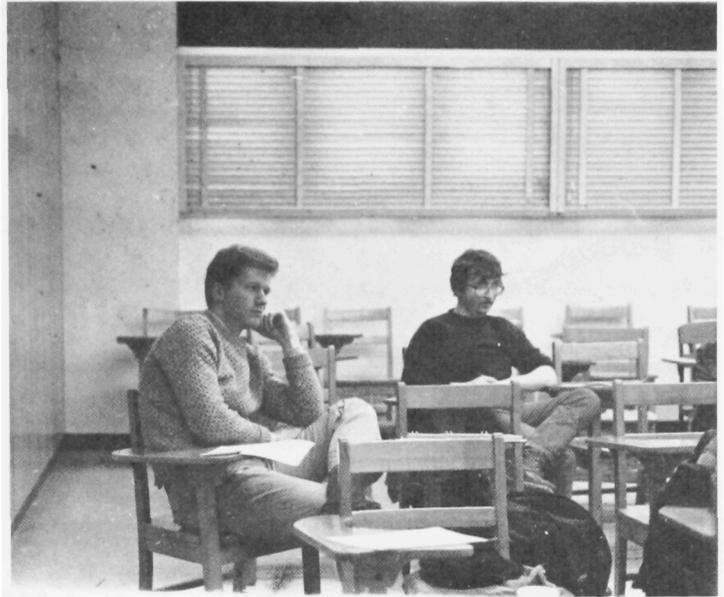
The first five weeks of this past fall we spent discovering and experiencing the rich rewards of our work positions to be. This included an introduction to just how inaccurate an existing map can be, how cold a set of steel calipers can be and how forgiving one can/cannot be of fellow cruisers who act like fools. Some of us experienced the many splendors of the great outdoors like: a refreshing wade or dip in a swamp, raspberry patch traverses, rain-soaked trees and branch snap-backs. Also there were fascinating entomological encounters . . . ground wasp nest discoveries and . . . ahhh . . . feeding the blackflies. Cruising was an educational, if not altogether a pleasant part of field camp. For fun we were allowed to visit a few more mills, write a few more reports about those mills, and spend a day or so dropping trees, playing with a skidder and making timber.

In short a wonderful time was had by all!!!

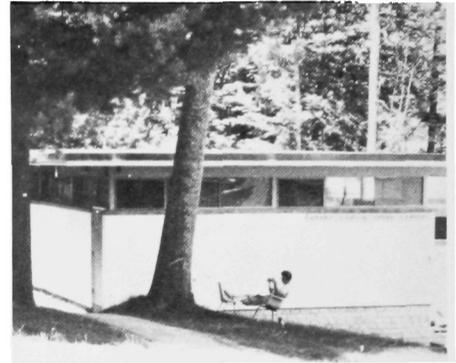


# SOPHOMORES





# Sophomore Forestry Summer Camp



AAAGH TICK !!! . . . I'm only going one way, I can't be mature about this . . . Why uh, it's like livin' in a fish bowl . . . Just a tick between my cheek and gum . . .



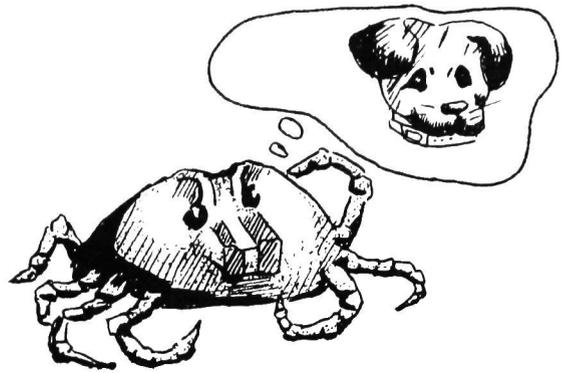
Forestry summer camp this year may well go down as the wettest session on the record books. The weather was not all bad; we did see a few bright days through the church's tall windows while we listened to our statistics, biometry, and surveying sermons. With only a single day's work finished on our surveys the rain began. We soon learned that Abneys lose it, tallies wilt, tempers flare, and that flies can still fly in the rain.

As the rains arrived, so did the wisemen from Orono. Professor Hale showed us through the areas's mills while Prof. Kimball lectured to us about small woodlot management for wildlife. Dr. Knight arrived in Bridgton to show us the Weevil's way. Wayne Jackson accompanied "Doc" Griffin and us through surrounding plantations where we began to learn some of the "science, art, and practice" of silviculture.

Once again softball was the after dinner activity. It helped to keep one away from the blasted tallies and the even more annoying computer. This year brought a mighty array of hacky-sac maniacs who could never succeed in getting Ron to try. Mark Bradstreet's imitation of a spawning salmon put our moods afloat one afternoon when things were beginning to dampen. Tick warfare also provided many with lively entertainment for the bus rides home.

For another reason this year's camp goes on the record books. Just before the last evening's festivities Ron announced that he was to be leaving the university following camp. We wish him the best for his growing family and his new job in Brewer.

By the way, did anyone ever see one of their stock or stand tables\_\_



Butch

