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### In Memoriam

Emerson W. Pruett
Dedication

The 1982 Ames Forester dedicated to the alumni whose generous contributions have made this magazine possible.
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# The Cover

A painting by Victor Dowd.
No One Except Foresters

by

JOE BORNONG

James Watt has been attributed with saying that there is no reason to pursue a far-sighted policy of resource conservation because the end of the world is so near at hand that long range planning is a waste of time. The problems with that statement are that, one, he may be right, and two, such a view has pervaded our society for a longer period than just the current Washington administration. One of the first things I learned in elementary economics was that no one plans longer than five years into the future. No one, that is, except foresters.

Considering the range of human history, the short term attitude is a relatively recent phenomenon, initiating in the generation of grandchildren of the industrial revolution. The immediate ancestors are the geometric growth patterns of human population, travel and communication speed, and other technological developments. Long range planning requires prediction, and prediction is risky in a rapidly changing environment. Thus the short term attitude was born.

The evolution can be likened on a small scale to a two hundred acre lake which passes from exclusive use by a few canoes to dominant use by many motorboats. No longer can a trip all the way to the other end of the lake be planned. The immediate concern of missing a collision with the nearest neighbor boats requires the full attention of each pilot.

Students of forestry should be angry. Our own field has developed in nearly a mirror image of the engineering and socio-economic fields. Forestry started in a motor boat of exploitation in the cut and run era. Now, we are canoeists, plying management plan lakes that may take one hundred years or more to cross. However, I have heard very few voices even trying to shout above the roar of the motors to protect themselves from the threat that the motorboaters have the power to sink all the canoes.

My first plans to study forestry had large basis in the fact that I could always climb up on a hilltop somewhere, look out over the land and sky, and satisfy both my conscience and anyone with a strong work ethic by saying, “But this is my work. I’m watching these trees grow.” Of course, I quickly learned that there is more to forestry than that. Still, I clung for a while to my dream of a hilltop and grumbled at obligations that seemed headed in another direction. As a student, the most common detours were the class requirements like economics, sociology, and English. They weren’t forestry, and forestry was what I had paid to learn.

As a practitioner, I could also find it very easy to head for the hilltop. Why should I worry about population control or a national energy program? They aren’t forestry. From a long range point of view, however, such “political” concerns must become concerns of foresters as well. In “Population Stabilization—the Ultimate Conservation Issue,” Robert D. Ray Jr. reiterated the Society of American Foresters’ 1967 policy on population control in the May 1981 Journal of Forestry:

The Society recognizes that forest resources are only one factor in the ratio of man to land. Integrated planning of all natural and human resource programs is important to a total conservation effort. If human populations expand uncontrolled, no program of natural resources conservation can long be successful.

Such a statement I would analogize as one coming from a canoeist who sometimes rides in a political motorboat to try and direct traffic for the safety of canoeists and motorboaters alike. More foresters should venture into similar attempts. All foresters should at least plunge into the study of the economic and political mechanics of motorboats like the one driven by James Watt in order to keep from getting swamped.

As a student of forestry I learned about pathogens, cover types, soil horizons and all the rest. Like most of my peers. I forgot the details shortly after finals week. But I have retained the more important concerns, the long term attitude that a forester must apply to all of his or her decisions and the knowledge of my responsibility to the foresters and all the others who are coming in the generations ahead. I won’t be here to see the stands of lodgepole that I had a hand in thinning as a Forest Service summer employee mature into their future product, and I won’t derive any benefit from that wood’s eventual use. But it was my boss’ job as a forester to plan the thinning, and my job as a student to carry it out, so that those future benefits could be realized. Similarly, it is everyone’s job to plan now for the good of their children, grandchildren, and beyond. Foresters, versed from the beginning on long range planning, have a special responsibility in keeping the decision-making process out of the exclusive control of the James Watts of this country who know nothing more than the five year plan. It is our duty to stand up in our canoes, while they are still afloat, and do some shouting.

Joe Bornong is a 1981 Forestry Graduate from Iowa State University and is now attending the University of Iowa Law School.
Stanton Memorial Carillon on the Iowa State University Campus.
Agriculture Diversity: Forestry in Costa Rica

by

JERRY KEMPERMAN

Although enlightenment may have come to forestry students of the 1980's, my undergraduate days in the late 1960's at the University of Michigan contained little education in tropical forestry. I thought of forestry in Latin America in terms of vast rain forests or "jungles". Disillusionment was rapid during two years as a Peace Corps volunteer in the early 1970's working with a United Nations agricultural diversification project in Costa Rica. While smaller than Iowa, Costa Rica has nineteen vegetation zones based on Holdridge's life zone classification. Within the 90 miles from Pacific to Atlantic Oceans, forest communities change from the very dry savanna conditions, up the mountains to subalpine cloud forests and back down to the Atlantic lowland rain forests with over 20 feet of annual precipitation. With this diversity, general statements about tropical forestry have little significance.

My limited experience in tropical forestry certainly does not qualify me to give a detailed discussion of the subject. The objective of this article is to generally describe some of the difficulties experienced by a United Nations project attempting to diversify agricultural production with tree crops in Costa Rica.

The economy of much of Central America is based on coffee, cattle and sugar cane. Forest land is cleared to plant crops or raise cattle with severe erosion often resulting (a situation common in Iowa also). The limited diversity of agriculture results in severe fluctuations in the local economies as the world prices of these agricultural products change.

To diversify the agricultural economy and improve land use, a pilot United Nations project was started in Turrialba, Costa Rica in the 1960's. Tree species with rapid growth rates were to be planted on marginal crop land. The plantations were to be thinned for fence posts, then telephone poles and finally cut at sawlog size with a rotation age of 10 to 20 years. Within coffee plantations, walnuts were to be interplanted to provide shade and sunlight alternately as needed by the coffee plants. Rotation of veneer size walnut within the coffee fields was to be 15 to 25 years. Plantations of Macadamia nut trees from Hawaii were also to be established for an additional export crop.

Biologically, this was a relatively simple project. Tree species were screened and tested. Caribbean pine, eucalyptus species, and other hardwoods were well suited for local conditions. Eucalyptus plantations were ready for thinning at age 2½ to 3 years with dominant tree heights of 50 feet. Height growth of some trees average 0.6 inches per day over the first three years! Diameter growth was 4 to 8 inches during this period. The Macadamia nut trees also grew well and began to product nuts within a couple years of planting grafted stock.

Some biological problems were encountered. The Carribean pine had a tendency to "gooseneck". Each year the lateral bud development failed on about 10% of the trees resulting in 8 to 14 feet of terminal growth without lateral branches. While a forester's dream tree for producing clear lumber, such trees often could not support themselves as branches later developed about the gooseneck. Another problem was weed control. While trees grew fast, weed initially grew faster. The only form of weed control that appeared to be biologically and economically feasible was the machete. Weeds and vines had to be cut by machete 2 to 4 times during the first year of establishment. An exasperating problem with the Macadamia trees was a leaf eating bee. Control had to be found for this persistend defoliator while not interfering with other bees and insects needed for pollination. Fortunately these bees did not sting, but they certainly did bite.

The major problems encountered with this diversification project, however, were not biological. The difficulty was in the development of entire marketing systems needed for the successful introduction of these new crops. There was reluctance to plant these tree crops without a guaranteed market, but a market could not develop until the tree crops existed. The first step was the establishment of a nursery to sell tree seedlings grafted stock. This required training a local labor force as no other such nurseries existed in the country. A post treatment plant then had to be built. Plantation thinnings would be useless as fence posts in the tropical climate unless treated. These thinnings at age 2½ could pay off the initial investment plus a profit to the landowner. I spent over a half-year just developing treatment schedules of the various species and diameter classes. Once treated, a market had to be developed with ranchers to buy the posts. By the time I left Costa Rica, the various parts of this entire marketing system were beginning to fit together. Once this project becam self-sustaining, the United Nations participation was to stop.

A similar situation occurred with Macadamia nuts. A very good market with high prices exists in the United States for the Hawaiian Macadamia nut, but no system
existed to collect, process and transport the nut from the Costa Rican trees to the United States market. This project had to develop a local processing system so the nuts could be purchased from the landowners. Again a guaranteed local market was needed before landowners were willing to plant commercial acreages of Macadamia trees.

The interplanting of walnut trees in coffee plantations was just beginning while I was in Costa Rica. We felt that gaining acceptance of this practice would be easier than with establishing forest tree plantations or Macadamia orchards. Coffee plants need shade part of the year and full sun the remainder. Being deciduous even as a tropical species, walnut provided shade when needed. Walnut was often interplanted in coffee plantations in Nicaragua where it was native. While inferior to the North American walnut, the Nicaraguan black walnut weneer logs were exported to Germany. Through trials, it was known to grow well in Costa Rica. The initial problem was to obtain sufficient quantities of seed to begin sizeable field plantings. An “expedition” drove to the Nicaraguan Mountains where we spent several weeks collecting truckloads of walnuts. While most people were friendly, all the men were armed with a shotgun, pistol or at least machete in those years prior to the most recent Nicaraguan revolution. Although tense, the collection trip was without major problems and was repeated the next year. Within a few years, trees from these nuts were expecte to provide the seed to sustain the walnut planting program.

Was this agricultural diversification project a success? Over the years, personnel has changed, and I have lost contact. I would consider it successful only if the various tree crops were absorbed by the local economy. Unfortunately, such projects often fail when the outside agency pulls out. This program did stand a better chance of success than many because it tried to adapt to the local conditions and help develop the entire system from seedlings through marketing the products.

It is often too easy for us North Americans to condemn the underdeveloped countries for the apparently slow rate at which they adapt our advanced technologies. We tend to forget that we too have government programs that are not always successful such as those to reduce soil erosion. Iowa farmers still send two bushels of soil down the rivers for each bushel of corn grown. While we lament the fact that large areas of tropical forests are being cleared, Iowa lost over 40% of its forest land in a recent 20 year period. As a forester in Iowa, I sometimes feel as though I am still a Peace Corps volunteer.

Jerry Kemperman is District Forester for the Iowa Conservation Commission in Elkader, Iowa.
Forestry in Taiwan

by

MON-LIN KUO

Taiwan is an island 120 miles east of the Chinese Mainland. It is about 200 miles long and 90 miles wide with a total land area of 13,900 square miles and a population of 18 million. The Tropic of Cancer (23°N latitude) passes through the southern part of the island. The subtropical weather provides as ample 40-inch annual rainfall and mild average temperature of 77°F.

Rugged mountains, sometimes reaching a height of 13,000 feet, cover most of the land area, leaving only a long narrow strip of plain on the west coast (Fig. 1). Rivers begin in the central mountain ranges and flow either westward or eastward into the ocean. Because these rivers descend several thousand feet for a distance of 30 to 40 miles, most of them contain very little water. There are only a few small natural lakes, so many reservoirs have been built for flood control, power generation and water supply.

About 51 percent of the total land area is classified as forest land. Vegetation varies with elevation rather than latitude. In low altitudes, low-quality hard-woods and bamboo dominate tropical rain forests. Subtropical and temperate-zone hardwoods such as oak, ash, maple, and chestnut occur between 1,500 and 5,000 feet elevation. However, these forests are poorly stocked. Coniferous species exist between 4,000 to 8,200 feet. Pines, either in pure stands or mixed with hardwoods, are the major species in the lower portion of this range. Some natural pine and poorly stocked hardwood forests have been replaced by introduced conifers such as Chinese fir (Cunninghamia lanceolata) and Japanese fir (Cryptomeria japonica). Between 5,900 and 7,500 feet, there are hemlock, spruce, and cypress (Chamaecyparis spp.). Beyond 8,000 feet, Taiwanese fir (Abies Kawakami) is the only species there.

The Taiwan Forestry Bureau administers 72 percent of the total forest land. Private forests comprise about 16 percent of the forest area, and the remaining 12 percent is the aborigine reservations.

During the period between the late 1940's and 1960, wood production was the main use of national forests because of its importance in the natural economy. Logging operations were very costly due to rugged terrain hence, the clearcut practice was the only profitable option. Clearcutting and forest fires (a result of population pressure) caused serious soil erosion which in turn greatly reduced the function and service life of reservoirs. Since 1960 rapid economic growth has relieved the burden of national forest for wood production and the emphasis has been shifted to soil and water conservation.

In the past two decades, the Taiwan Forestry Bureau has launched several large afforestation projects, converting more than 10 percent of the low-quality and poorly stocked stand into valuable forests. The major species for afforestation are fortune paulownia (Paulownia fortunei), albizzia (Albizzia falcata), Japanese fir, Chinese fir, Taiwan red pine (P. taiwanesis), and red cypress (Chamaecyparis formosensis).

With the exception of red cypress which was chosen based on a conservation effort, all other species were chosen primarily for their fast growth rates and their wood quality. Efforts have also been made on the tree breeding programs, but these programs are at research stages.

The management of private forests is very sensitive to timber markets. Most of these forests are intensively cultured. At present, fortune paulownia and albizzia are two of the most popular species. Fortune paulownia has a growth rate of about 280 cubic feet per acre per year and can be harvested at 6 to 12 years for furniture and at older ages for veneer.

Albizzia was introduced from Indonesia in the 1940's. It has a growth rate of 680 cubic feet per acre per year. Some fast-growing pine forest (P. lucheolate and P. massoniana) provide pulpslogs for groundwood (newspprint) production.

There are two forestry departments each in the National Taiwan University and the National Chung-Hsing University with a total of 30 faculty members and 400 students. Half of the faculty members have received doctorates from the United States, Japan, and West Germany. Both universities offer B.S. and M.S. degree programs in Forest Management, Forest Biology, and Forest Products. Each department operates a 12,000-acre experiment forest for teaching and research. These two departments can compete with good foreign universities but they are more than 10 years behind the American standards in teaching and research. Employment has been a problem for forestry graduates. Only about one-third of the forestry graduates are absorbed by the profession, and the other two-thirds are either employed by other professions or self-employed.

Major research projects are conducted by the Taiwan Forestry Research Institute. This institute employs about 100 research staffers and operates four 10,000-acre experiment forests. Each forest or area has its own characteristics based on forest types and site qualities. In the past, because of a low budget
appropriation and a lower pay rate (about one-half of that of a school teacher in the 1960's), only a few dedicated researchers stood firm on their profession. After three decades of struggle and hard work, their contributions in forestry research began to be appreciated. At present, the institute is able to generate revenue from experiment forests to upgrade facilities and to expend research.

All experiment forests, including those two operated by universities, are well-managed and have become popular recreation areas. One of them has even been established as a national park. Thus, these experimental forests have achieved the objective of multiple use.

In 1979, the wood industry was ranked 6th in the national economy. The furniture was ranked separately in 11th place. In 1980, there were 80 plywood mills, 130 pulp and paper mills, 4 particle board and 2 fiberboard plants in operation. The total wood consumption in 1979 was 229 million cubic feet. Since the annual allowable cut in Taiwan has been limited to a maximum of 35.3 million cubic feet (1 million cubic meters), about 85% of the total wood consumption has to be imported elsewhere in the world, mainly from Indonesia, Malaysia, and the Philippines. Approximately 60 percent of the imported roundlogs is processed into plywood, and the rest is consumed in pulp and paper and furniture industries. Taiwan also imports large quantities of high-grade pulps and waste-papers from the United States and Canada to support its paper industry.

The governments of Southeastern Asian countries have been gradually restricting the exports of their roundlogs. As a result of this restriction, Taiwan is forced to import more and more manufactured products such as wood chips, veneer, and lumber. The Taiwanese wood industry must produce more highly finished wood products in order to compete in the domestic and international markets.

Mom-Lin Kuo is a Professor of Forest Products at Iowa State University and a native of Taiwan.

Figure 1. Forest types of Taiwan
Recognizing the fact that over 75 percent of Australia's forests are used for wood production, it is hard to fathom how future wood production in that country could be in the doubtful state that it is in. Unfortunately, intensive management practices and public pressures are hindering the industry and considerable declines in production are expected.

To begin with, Australia's forest estate constitutes barely 6 percent of the country's total land area, most of it being composed of the genus Eucalyptus (table 1). Approximately 20 percent of the estate is privately forested land which, for the last 40 years, has provided one-third of sawlog production. Publicly owned forests have provided the remaining two thirds (table 2).

Public ownership is an important determinant of wood supply in Australia. Because of low wood pricing from public forests, non-industrial private forests have remained insignificant in terms of wood production.

There are several significant industrial forests which are private. However, the Australian Forest Services emphasize that most of the sawlog contributions of private lands are the results of land clearing operations. They add that there is no sign of private industries trying to maintain a yield for wood production, and that private contributions cannot be relied upon in the future.

So, the largest and most stable source of wood production in Australia, at the moment, is the publicly owned forest. But this too is changing. Following the trend of the United States, recreational use of forested land in Australia is rapidly increasing. Such outdoor activities as hiking, picnicking, rockclimbing and landscape painting are increasingly popular. Recreation is a welcome addition to the uses of the Australian forest, but with it comes the frequent dispute between nature and industry. Australia's public has begun to look with disfavor at the timber-producing role of the forests. It wants more and more land to be devoted to other uses such as recreation and parks.

Various forestry interest groups in Australia have been working to balance the country's dependence on public and private wood production. Traditionally, the reservation price (the lowest price at which the owner is prepared to sell his timber) of publicly owned land has been considerably lower than that of privately owned land. However, these interest groups have been successful in inducing public forest administrators to assign very high reservation prices to several public forests placing them in a more balance competition with the private lands.

Though wood production from public forests is battling public opposition, Australia's entire wood industry is facing the problems brought with intensive management. Increased fertilizer applications, wide spacing and weed control are leading to faster growth rates of the pines and eucalyptus which inhabit the country. Recent years have brought increasing comments, mainly from industry, on the effects this intensive management is having on conversion processes and end products. Trees are being harvested at younger ages with properties different from the trees used in previous years. Industries claim that conversion processes currently in use are not meant to handle the younger trees and that conversion will be slowed down until processes are changed to accommodate them.

Although fast-grown plantations present problems, it is generally accepted by Australian conservationists and forest planners that such plantations will be a necessary part of future wood production. Conflicts, however, will undoubtedly ensue between the two groups due to the fact that conservationists have reconciled to such a policy under the condition that no more native forests be cleared for conifer plantations. It is unlikely that forest planners will be able to abide due to economics and the unavailability of suitable cleared land.

Australia's wood production policy is now one of near self-sufficiency. Current trade barriers against many countries make it difficult to obtain wood imports and, because of the unstable trade situation, it is doubtful Australia will change its present policy in the near future. This makes expected production declines within the country all the more significant.

Production of hardwood sawlogs from native forests is estimated to decline from 6,815,000 m$^3$ in 1976 to 4,301,000 m$^3$ in 2020 (Shepherd 1979). Production forecasts of 1979 predict that, in order to make up for this loss, pine plantations will need to rise to 13,060,000m$^3$ by the year 2020 (table 3). It is also predicted that Australia will need to plant 310,000 ha. of

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Wood Production in Australia

by

JANA McCONOUGHEY

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The 1982
conifer plantations by 1990 to make up for a loss of pulpwood from native forest.

It is evident that Australia will need to rely more on fast-grown plantations in the future as native forests are used increasingly less for wood production. By changing conversion processes to accommodate the younger trees of such plantations, Australia can come to balance its dependence on public and private forests.

Although only 6 percent of Australia's total land area is forest, when one compares the availability of forests in relation to population, it is found that Australians have 10 times as much forest available to them as compared to, say, the Japanese, whose country is 60 percent forest estate. Hopefully, as people come to appreciate their forests for their recreational value, they will also realize the importance in wood production. A more balanced industry between public and private forests is now the concern of many groups throughout the country and it is being realized that current problems must be solved if Australia is to maintain a sufficient wood production industry.

Jana McConoughey is a student at Iowa State University majoring in Biology and minoring in Journalism.

Table 1. Area of forest types
(Carron 1979)

<table>
<thead>
<tr>
<th>Forest Type</th>
<th>Area (million ha)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eucalypt</td>
<td>30</td>
</tr>
<tr>
<td>Tropical eucalypt and paperbark</td>
<td>7</td>
</tr>
<tr>
<td>Cypress pine</td>
<td>4</td>
</tr>
<tr>
<td>Rainforest</td>
<td>2</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>43</strong></td>
</tr>
</tbody>
</table>

Table 2. Area of commercial forests
by production classes
(Carron 1979)

<table>
<thead>
<tr>
<th>Production Class</th>
<th>Area (million ha)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reserved for wood production</td>
<td>12</td>
</tr>
<tr>
<td>Public Not reserved for wood</td>
<td>20</td>
</tr>
<tr>
<td>production but used for it</td>
<td></td>
</tr>
<tr>
<td>Reserved, but wood production</td>
<td></td>
</tr>
<tr>
<td>precluded</td>
<td></td>
</tr>
<tr>
<td>Private leased</td>
<td>9</td>
</tr>
<tr>
<td>Alienated-freehold</td>
<td>9</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>43</strong></td>
</tr>
</tbody>
</table>

Table 3. Estimated use of wood resources in Australia
(Shepherd 1979)

<table>
<thead>
<tr>
<th></th>
<th>1976</th>
<th>2020</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sawlogs from native forests</td>
<td>6,815,000 m³</td>
<td>4,300,000 m³</td>
</tr>
<tr>
<td>Sawlogs from pine</td>
<td>13,060,000 m³</td>
<td></td>
</tr>
<tr>
<td>plantations</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pulpwood from native</td>
<td>Excess</td>
<td>Total required</td>
</tr>
<tr>
<td>forests</td>
<td></td>
<td>locally</td>
</tr>
<tr>
<td>Pulpwood from pine</td>
<td>9,290,000 m³</td>
<td></td>
</tr>
</tbody>
</table>
Reforestation Programs in Developing Countries

by JULIE KENDALL

Deforestation is occurring at a rapid pace in developing countries that desperately need to conserve their forest resources. These resources comprise a major source of fuel, help protect the land from excessive soil and wind erosion, protect watersheds, and cut down on excessive nutrient losses from negligent agricultural practices.

The governments in these countries have, in the last ten years, realized the problems of deforestation and are implementing intensive reforestation programs. There programs have had varying levels of success and face numerous problems.

These countries have several common factors: reforestation is hindered by biological, economic, and socio-political considerations. Lack of mechanized tools means a reliance on manual labor. Little research has been done to indicate which species grow best under what conditions, and what pest problems are likely to occur. The people practice shifting cultivation practices. Many do not realize the value of the forests and how their agricultural practices are destroying the land.

Brazil is the fifth largest country in the world, with a population of more than 108 million in 1975, living on 851 million hectares (ha.). Dense forest makes up 347 million ha., with 240 million ha. in the Amazon basin, 12 million ha. of wooded savannas, and 34 million ha. of dry savanna with scrubby woody vegetation.

Between 1958-1973, 52 million ha. were cleared. Most of the forest is inaccessible and only a fraction of the remainder is usable. Usually logging is confined to seasonally flooded areas along the Amazon.

Brazil has one of the most intensive reforestation programs in the world. Before 1966, 600,000 ha. had been planted. Between 1966-1975, 2,352,000 ha. were planted. Plantations were established at a rate of 250,000 ha. per year. The government plans to plant 500,000 ha. per year through 1985. Conifers make up 30% of the plantations. Mostly exotic pines are planted, Pinus elliottii and Pinus taeda work well. Management practices include complete site preparation, fertilization, weed control, pruning, and periodic thinnings. The final rotation age is 20-25 years for sawlogs.

Eucalyptus plantations compose 60% of all plantings. This is basically the only broadleaved plant used, and management includes complete site preparation, fertilization and weed control. The emphasis here is for pulp, fiberboard, and charcoal wood production. Three crops are obtained over a 21-24 year period, with stump sprout regeneration.

In both plantations a large variance occurs in growth and stem quality, between and among species. Vigorous tree improvement programs are developing in industries and the universities, with work on provenance testing, plus-tree selection, grafting, seed orchard establishment and cold resistance improvement.

Government incentive programs began in the 1960's. There is little state and federal ownership of land, so the Fiscal Incentive Law of 1966 provides incentives for plantation establishment. The Brazilian Institute of Forest Development is requiring industry to plant six trees for every cubic meter of forest harvested, with 1% of all plantings in native species.

Several biological factors must be considered when planting in the tropics. Tropical soils vary a lot in texture and nutrient status making generalizations difficult, but in all soils many nutrients are leached, the level of incorporated organic matter is low, the soils have poor structure, not resilient under cultivation, and are easily eroded by water. Foresters need to examine agricultural practices of the area to avoid mistakes when establishing plantations. Land clearing practices used in this country have a devastating affect on the crop yields in Brazil.

A study compared yields of several crops and cropping techniques on land cleared and burned using tropical hand techniques and land cleared using a medium-sized tractor.

The soils on the tractor sites were one-twentieth as permeable and contained less organic matter. Nutrient levels were less, especially phosphorus. All crops yields were lower and returned only 20% as much yield as those cleared by hand methods. Fertilizers increased yields on both sites, but didn't alleviate the differences.

Yields of agricultural crops on unfertilized lands decreased rapidly. It's a rule of thumb that the second yield will be only one half that of the first, and the third will be even worse. It's not known yet if this loss of yield will occur with trees. If the fallow period is long enough (3-30 years) the basic slash and burn method isn't expected to harm the soil. Since 68-85% of the root system of tropical trees occupies the soil's uppermost 25-30 cm., it is critical that the soil not be disturbed.

The Phillipine Islands have similar climate in some areas to Brazil, but face different situations when attempting to reforest.

The Phillipines have less than 10% of the virgin forest remaining. After WWII logging increased and the forests were cut. About 200,000 families practice
shifting cultivation, called kaingin farming, and take about 200,000 ha. per year of forest out of production. This increases erosion, decreases soil fertility, and converts the land to unproductive grassland.

The Bureau of Forest Development has estimated that over 5 million ha. need reforesting one-quarter of that over 5 million ha. need reforesting (one-quarter of the total land area). Of this, 2 million ha. are critical watershed areas. Lack of potable water and floods occur because of lack of forest cover.

Between 1961-1977, approximately 14,000 ha. were reforested annually. At this pace, it would have taken over 100 years to reforest the country. In 1977 this pace was increased, and in 1979 reforestation passed destruction. The forests are tropical, mixed in competition, with one dominant family, the Phillipine Mahoganies.

President Ferdinand Marcos has established several programs for citizen participation in reforestation:

1. All Filipinos 10 years and older are required to plant 12 trees per year for 5 years.
2. The Program for Forest Ecosystem Management establishes a municipal nursery in each of the more than 1,000 municipalities.
3. The Energy Farm Program plants and maintains approximately 40 ha. as community fuel reserves.
4. The Communal Tree Program assigns Kaingin farmers land to reforest in conjunction with their farming to lessen the impact.

The programs are new and range from somewhat successful to not working, for a variety of reasons. The country consists of 7,000 islands, with many different existing climatic conditions. Fast growing legumes are usually planted for soil stabilization and improvement, and watershed protection.

Many problems plague reforestation. Climatic extremes hinder establishment and early growth of seedlings. Excessive rain, flooding, and even drought occur in different areas. Nearly all areas have a hot, dry season that increases mortality among seedlings. Nursery operations must be planned and coordinated to guarantee that seedlings are hardened and ready to plant at the start of the rainy season.

Soil infertility and acidity in many areas require that most seedlings be containerized. These are grown in nurseries in cellophane bags that are removed when planted.

Forests are grown on marginal lands, since agriculture utilizes nearly all available fertile land. On poor soils, fertilizer and lime must be added to each planting hole.

On grasslands, sites must be cut and burned prior to planting and the grasses controlled after that by cutting or the use of herbicides until the trees reach 2 meters in height. Where rainfall is high, site preparation may include raised mounds or spot terraces to facilitate drainage or reduce erosion.

Many social aspects affect the reforestation programs. There is a lack of funding for labor from the government. There is also a lack of labor to do the planting. Some of the public has little regard for the seedlings, which are at times purposely destroyed. The most important problem in reforestation is the keen competition for land in an area the size of Arizona fifty

million people live. The Phillipine forester spends as much time working with people as with the forests. Students at universities are now being trained in extension work as a basic part of the curriculum.

Many lands are privately owned, and the people hesitate to commit themselves to long-term management plans when their families basic food requirements are hard to meet.

In the successful programs, these problems were overcome when local people participated in all stages, from planning, implementation, to the final products of the forest. For example, the Paper Industries Corporation of the Phillipines and local land users established agro-forestry tree farms, with industry assisting with the financing of the program. Industry, university, and civic authorities also supply seeds and seedlings to villagers in some areas. Now 20,000 seedlings annually are planted this way.

India encompasses public participation more completely with several social forestry programs. India's programs have scattered plantings wherever tree-growing is possible. The objectives are to supply fuelwood to replace the use of cow dung, supply small timber, supply fodder, protect agricultural fields from wind and soil erosion, and to create recreational opportunities.

The program is divided into three areas: farm, rural, and urban forestry. In the farm program, trees are planted in association with agriculture. The main objective is to supply fuelwood for the farmer. The fuelwood could replace the estimated 458 million metric tons of wet dung that are used annually in heaths in India. At 5 metric tons per ha., this could fertilize 91 million ha. of land.

The use of trees shouldn't impair field productivity, with the proper species and sound layout of crops. There's a need to educate the people about the usefulness of trees; they think the trees will harm the crops.

The rural program is extension forestry, encompassing forest activity on community and village lands, degraded forests and marginal lands for the benefit of the people. Communal ownership of the land, with the same goals as before, meets the needs of the people. Problems occur with protection and management. The encouragement of cottage industries helps solve the problem.

Generally speaking one ha. of plantation activity generates 150-500 mandays of employment per year in rural areas during the first 3 years.

The urban program seeks to implement trees into the people's lives. Children grow seedlings in schools to later plant, which instills a respect in them for the tree.

In each country discussed, different programs are used, and different problems arise with each. Each country has severe climatic conditions to deal with, lack of mechanization, and public opposition to overcome. All evidence shows that successful reforestation programs over the long run must involve public participation.

Julie Kendall is a Forest Resource Management student at Iowa State University, and she is a member of the Xi Sigma Pi Forestry Honor Society.
From the moment I stepped off the plane in Luxembourg and onto the bus that would take me into West Germany, I knew I was in for the experience of a lifetime. It was May 29 and for the next three months, I was to spend the time working for the Baden-Wuerttemberg State Forest Service in the Black Forest of West Germany. I must admit, it was a dream come true.

It all started with involvement in an organization here on the Iowa State University campus called the Summer Trainee Exchange Program. There were ten ISU students from various academic fields, all wanting job experiences in West Germany. Through an agreement with the German Academic Exchange Service we would be assigned German jobs in our field of study if we could find jobs for German students in Iowa. The preliminary work started in October but it was not until late March that we had received our job offers and knew for sure that we would be spending the summer abroad. From then until the time I left O'Hare Airport, my time was spent busily preparing passport applications, reviewing my German, attending a traveler's courses and getting use to the idea that I was going to be working in an area that I had only dreamed of ever seeing.

Upon arrival in Germany, I realized how rusty my knowledge of their language really was. Although I have had six years of high school German, I have not kept up with it in college, so my rash review was not enough. The first days there were filled with many-now fond memories but at the time frustrating experiences in trying to communicate with people. I was amazed by the large number of people who spoke English and spoke it quite well, but I had promised myself to avoid using it except in emergencies, so I struggled onwards.

My work papers stated that I was to meet my boss in Schopfheim which is in the state of Baden-Wuerttemberg in the very southwestern corner of West Germany. It was at the town's train depot that I was met by a very courteous man in his herman Forester's Uniform consisting of a green coat and knickers. I was so relieved to have finally reached my destination in one piece and although I was still among total strangers, I felt that I was with someone I could trust.

After a very pleasant introduction to the town, we left Schopfheim which is located near the Rhine River valley and traveled up into the hills of the Black Forest. I was struck by the tremendous beauty of the landscape. I guess I would compare it to the Appalachians at least in size but quite different in vegetation. As I was to learn later, the Black Forest received its name from the extremely dense growth of White Fir and Norway Spruce that looks black in appearance. These two species along with European Beech were the main components of the forest in the area in which I was to work.

After a half-hour drive, we reached our destination which was a small agricultural village nestled amongst the hills call Hasel. They had arranged for me to stay with a family in Hasel which is where I would be working. It was with this family that I experienced my closest contact with the German people. There were three children, all about my age, still living at home. They took me in with open arms and through the course of the summer, I felt like I became part of the family. They included me in all their activities and much of what I learned that summer was from the times I spent with them.

I had one evening to get settled in my new home before my first day of work was to begin. I admit it was quite a restless night thinking of what lay ahead but it was not long before the sun rose above the hills of the Black Forest and it was time to get ready. That morning, I was treated to a breakfast of coffee and fresh baked bread with homemade jam. This was to become my regular morning meal for the rest of the summer.

That first day, I was assigned to a five-man logging crew with four forestry apprentices, again all about my age, and one supervisor. The work usually centered right around Hasel, so we did not have to travel too far to the work areas. After a few friendly introductions to the rest of the crew, we were set to begin. The entire first week of work consisted of debarking the White Fir trees that the supervisor felled. In trying to understand the reasoning behind this hard work that was done with a tool that looked like a long-handled spatula, I came to realize that if the bark was left on, insects would attack the downed tree. These pests have a habit of working their way into the wood and decreasing its quality. With debarking, they can reduce the number of insects attacking the log, decreasing the potential economic loss. It was in this first experience that I faced what was to become my greatest frustration of the summer: not having a good enough command of the language to fully understand the technical reasoning behind the things that they did in the forest. This frustration
provided excellent motivation for me to work on my German, and still manage to learn a great deal about their practices.

Throughout the summer, they never let me get bored with any one activity. Almost every week the crew moved on to something new. After the debarking, we started on some thinning work in stands of Norway Spruce. Later activities included such things as competition control in areas that had been clearcut and replanted with White Fir seedlings, log transport of trees that had been damaged or knocked down during heavy snowfalls, road surveying and road maintenance. While doing all these jobs I was able to get a good look at their forests and forestry practices.

I guess what struck as the most interesting was the intensity of their operations. The head forester in the district spent a day with me explaining his part of the Black Forest and what they were trying to do with it. He showed me a map of the entire area with age class and stand descriptions for every hectare of their forest land. The records from which this information comes date all the way back to 1830! With such a small land base, West Germany itself is about the size of Oregon, the Germans have to get as much as possible out of what they have and their forestry practices reflect this philosophy.

It is impossible for me to recount all of my experiences here, as I could go on forever. When the time came, it was extremely difficult for me to leave Hasel and all the wonderful people that I had come to know. Each and every day of the summer had been a tremendous learning experience, and after three months I felt as though I had only touched the surface. In looking back now I realize that I learned a great deal about Germany and its people, but I also learned a lot about my own country in seeing it from a new and totally different perspective. It was an experience that I wish everyone could share.

Jim Schone is a student at Iowa State University and is majoring in both Forest Management and Business Administration.
Forests of the Soviet Union

by

MICK KREIDLER

The Soviet Union is a huge country that covers one-sixth of the world’s land area. It contains 8,650,000 square miles compared to 3,567,000 square miles in the United States.

The timber reserves of the Soviet Union are equally as vast, roughly four times the area of the United States and five times the volume. About 28 percent of the world’s forest area lies within the boundaries of the Soviet Union. It is estimated that 78 percent of those forests are in the Asiatic regions of the Soviet Union.

The forests are divided, by origin, into natural and planted forests. About 709.3 million hectares of natural forests are found there. Planted forests comprise an area of approximately 13 million hectares.

In terms of age, mature and over-mature stands predominate and account for 64 percent of the entire forest area. Other groups are maturing trees - 11.8 percent, middle-aged stands - 13.9 percent, and young trees - 10.3 percent.

Due to the higher northern latitudes of the major portion of the land mass, resulting in a shorter growing season, average annual growth for all productive forest areas in the Soviet Union (USSR) is 15.7 cubic feet per acre, compared to 29.2 cubic feet in the United States. However, total annual growth is 32 billion cubic feet per year compared with 14.2 billion cubic feet in U.S.

The major forest types of the Soviet Union extend in long parallel bands from east to west. The wooded tundra is the band farthest north and is comprised of birch, willow and aspen which is of little commercial value. The next band is the taiga which stretches from the Finnish border to the Pacific Ocean. It consists of the northern conifers spruce, fir, Siberian stone pine, Scotch pine and larch Birch, aspen and alder are the accompanying hardwoods. South of the northern coniferous forests is the forested steppe area composed of oak, elm, ash, basswood, maple and Scotch pine.

The southern borders of the Soviet Union are primarily mountainous forests. The Caucasus region is the only area of economic importance in terms of forestry. At medium elevations of 3,000 to 5,000 feet elm, oak, Nordmann fir, Scotch pine, beech, ash, maple and walnut occur. A Mediterranean flora covers the foothills and lower slopes. This consists of chestnut, Aleppo pine, juniper and boxwood.

Central Asia contains desert forests with riparian areas of elm, willow, poplar and Russian olive.

The composition of Soviet forests is primarily coniferous. About 78 percent of the forest-covered area is coniferous species with larch the most widely distributed. It covers approximately 40 percent of the forest area with pine a distant second at 16 percent. Spruce, cedar and fir follow in order the two leading species. Birch is the major hardwood species comprising over nine percent of the forest-covered areas. Saksaul (Haloxylon) and aspen are second and third respectively.

The forests of the Soviet Union are under the direction of the Ministry of Agriculture and managed by the Department of Forest Industry (forest production) and the Department of Forests and Shelterbelts (forest management).

The Soviet Union’s forests are divided into three groups according to their importance in the national economy. Group I consists of forest nurseries, soil and field-protecting areas and health resort forests, green zones around factories and plants, pine belt forests in western Siberia and steppe forest groups. Group I contains 6.5 percent of the forest-covered area of the USSR.

Group II is made up of forests with timber reserve conditions that demand a limitation in the extent of felling and an expansion of restoration work, and in densely-populated industrial sites. Group II comprises eight percent of forest-covered areas.

Group III contains forests in densely wooded areas, with large operating reserves of timber. These forests are located primarily in the northern taiga of the European and Siberian regions and the Far East. Group III is by far the largest group consisting of 85.5 percent of the operational forests in the Soviet Union.

The socialist state of the USSR recognizes the sanitary-hygienic and aesthetic roles of forests and has established a system of shelterbelts around many of its towns and cities. Over 4,600 population centers have green zones and forest-park belts with an area of over 11,500,000 hectares.

Goals of Soviet forestry are to increase production for the national economy and to provide areas of aesthetic and recreational value for its people.

Mick Kreidler is an Agriculture Journalism student at Iowa State University.
Activities
The 1981 Game Banquet

Rapid-fire speech, a spectacular voice range, and a gift for encouraging smiles and laughter describe the abilities of Dr. Bill Boon. The Landscape Architecture professor was a refreshing and stimulating conclusion to an excitement-packed 1981 Wild Game Banquet.

The food, as always, was excellent. Donators included Steve Keys, Reinee Eshelman Hildebrandt, and Al Wimmer.

Mike Scanlon and Al Weber performed beautifully in organizing the banquet, and Al Wimmer showed skill as the Master of Ceremonies, creating a smoothly flowing program.

A total of 12 students were presented gifts and scholarships for their scholastic abilities and professional activities. The Most Beloved Instructor award was presented to Dr. Joe Colletti, due to his performance at the 1980 Lubrecht Summer Camp in Montana and competence as a teacher. Of course, laughter and wisecracks were more common than congratulations and handshaking. Gag awards were also presented, highlighted by Dr. Richard Schultz’s bag of pine needles for the memorable biomass experiment he arranged for student enjoyment at Lubrecht the previous summer.

President AI Weber and rest of the Forestry Club Officers turned over their responsibilities as the new officers were announced. Dave Peters took over the gavel as club president and looked forward to leading the ISU forestry students through an exciting, successful year.

The banquet was a time to remember the past. A time to recognize those who will be the foresters of the future. The 1981 Game Banquet was indeed, a memorable experience.

SAF National Convention

The last week in September of 1981 marked the Society of American Foresters National Convention in Orlando, Florida. Dr. and Mrs. Thomson and seven students traveled to the “Sunshine State” to be part of this gathering of professionals. Donna Grosz, Gail Hall, Jody Nelson, Dave Peters, Jim Schone, Claire McDonald, and Frank Lucido listened to seminars and working-group meetings on this year’s theme, “Increasing Forest Productivity”. While these meetings occupied the majority of our time, we were still able to enjoy the alumni breakfast, Walt Disney World, Clearwater Beach, and the immediate Orlando area.

Jody Nelson accepted the Student Publications Award at the final convention banquet. The 1981 Ames Forester, co-edited by Jody, won third place out of about 20 student publications.

For the students that drove to the convention, the trip home was an appropriate way to end the week. They drove through Daytona and St. Augustine, Florida and finished the trip with a friendly chat with an Illinois State Trooper.

Although all of us came back to overdue assignments and delayed tests, we agreed that the SAF convention was well worth the time off from classes.

Inside the convention.

Soakin' up some Florida sun.

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Midwestern Conclave 1981

The 30th Annual Midwestern Foresters' Conclave was hosted by the University of Michigan on October 31, 1981 at the Fresh Air Camp near Hell, Michigan. The colorful fall leaves surrounding Patterson Lake were a welcome sight.

On Friday night foresters from eleven midwestern schools gathered together after registering to meet each other and talk about the next day's competition. Rising early for breakfast, nearly everyone was up with the sun to start Saturday's fun, excitement and hard work. Twelve events including dendrology, traverse, tobacco spit, one-man and one-lady buck, match split, bolt throw, log roll, pulp toss, speed chop, chain throw, two man and two lady buck and the special events (pole climbing, accuracy tree felling, and fire-building) allowed many eager participants a chance to compete.

At each of these events only the competitors who place first, second and third earn points for their respective schools. At every conclave one or two schools somehow manage not to earn any points and end up taking home the old bearskin.

The good news for us was Randy Reutzel, who tied for third in the one-man buck, earned 1.5 points for ISU and prevented the bearskin from coming to Ames. Michigan Tech has the dubious distinction of keeping the skin until next year.

Although the ISU participants scored no other points during the events, everyone had fun. Quotes of "more practice" and "next year" were heard throughout the day.

After all of the events were over prizes were awarded to the host Michigan which captured first place, to various individuals who won prized for their events, and to an all-around individual winner. After the prizes were handed out, foresters gathered together for some brew and dancing, while others visited near a roaring fire. Everyone felt a slight sadness as they realized their new-found friends would be gone for perhaps another year.

During the fall of 1982, the 31st Annual Midwestern foresters' Conclave will be hosted by ISU at the 4-H Camp. Everyone is encouraged to attend and all ISU Forestry students should plan to compete. All former conclave members will testify it's a good time to meet other students in their profession.
Early in September the new Xi Sigma Pi offers—Reinee Hildebrandt, Forester; Chris Schnepf, Associate Forester; Steve Rinella, Ranger; and Rita Sonnelitter, Secretary/Fiscal Agent; along with their advisor Sande McNabb had a cabinet meeting. Together they discussed the purposes of Xi Sigma Pi. Over the years the society has evolved from an active, service-oriented organization whose sole purpose is recognition. The cabinet discussed this change and decided that perhaps it was time to go back to our roots, that is, become a service organization once again.

On September 28, a meeting was held for all Xi Sigma Pi members. The idea of having the incoming initiates do a community service project was adopted by the full membership and several suggestions for possible projects were made.

The initiate’s decision in early October was to winterize a low-income family’s home selected by the local housing agency. Rich Doak was designated as project leader. He coordinated all transportation and equipment needs.

October 25th was selected as the action day. 10 Initiates set out to winterize a home in Huxley. They spent approximately three hours applying weather stripping and caulking around windows and doors. By 6 p.m. the dedicated crew had completed their project and were in the Brown Bottle Restaurant. There they took their initiation oath and became fully fledged members of Xi Sigma Pi.

The Initiation Banquet at the Brown Bottle began with the candle lit initiation oath and ended with a slide presentation by Sande McNabb entitled “the Korean Miracle”. All who came left with a pleasant feeling.

Other Xi Sigma Pi activities during the year included donating $30 to the Hawkeye Science Fair, nominating Jeff Prestemon for a regional scholarship, choosing the Keith Bauer Award recipient and electing next year’s officers.

From July 1, 1982—July 1, 1984, Iowa State University will become the national headquarters for Xi Sigma Pi. To coordinate and fulfill this responsibility national officers were elected from the faculty. The officers are: Sande McNabb-Forester, Fred Hopkins-Associate Forester, Paul Wray-Secretary/Fiscal Agent.
Conclave 1982 at Iowa State

Next fall the Iowa State University Forestry Club will be hosting the 31st Annual Midwestern Forester's Conclave.

Conclave was originated in 1951 by the foresters at the University of Michigan. Since then it has been an annual event with 12 schools involved on a rotating-host basis.

In this, the thirty-first year of competition Iowa State foresters will be hosting approximately 200 foresters from all over the midwest. Schools participating this year are: University of Missouri, University of Minnesota, Southern Illinois University, University of Illinois, University of Wisconsin-Madison, University of Wisconsin-Stevens Point, Purdue University, University of Michigan, Michigan State University, Michigan Technological University, and Ohio State University.

In October of 1981 a committee was formed to organize the upcoming conclave at Iowa State. Some of the decisions already made include scheduling the date, finding a location, and soliciting funds.

The 31st Annual Conclave will begin on Saturday, October 23 at 8 a.m. The events will be held approximately five miles from Luther, Iowa at a 4-H camp near a scenic horseshoe bend in the Des Moines River. Over 200 letters have been sent out to prospective donors. The responses are being eagerly awaited.

The committee also is delegating many specific tasks to subcommittees. Overall the goal is towards greater departmental and community involvement.

Although Iowa State is not known as a powerhouse in Conclave events, the organizers are working hard to insure a first-class experience.

Christmas Tree Sales

With a light snow falling and the freshly-cut scent of red, Scotch, and white pines in the air, an early Christmas spirit set the mood for the Forestry Club's annual Christmas tree sale. With many customers from both the Ames community and the student body, the sale activities ran for less than a week but during this time over 500 trees were sold and more than $1800 was raised for club events.

Located in front of the Memorial Union along Lincoln Way, the beginning sales were marked by three curious figures dragging a hefty twelve-foot red pine up towards the Knoll. It may have appeared to some that these three were Christmas tree poachers on their way to fill their freshman initiation rite. In actuality, this was the fulfillment of a longstanding sales tradition with the presentation of a tree to the university's President Parks.

Although the highlight of the event was the sale itself, most of the activity and planning occurred during the six months prior to it. The greatest proportion of time was spent searching for suitable sources of trees. Many of the trees were once again purchased from Muriel and Eldon Weber who operate a Christmas tree farm in Geneseo, Illinois. A hearty thanks must be extended to these folks for their high-quality trees and their warm hospitality. The remaining trees purchased were from Merrillan, Wisconsin.

While the trees from Wisconsin were to be shipped directly to us, it was necessary to transport the Weber's trees from Illinois ourselves. Equipped with only a pickup truck and a horse trailer, we somehow managed to stuff in all 175 trees purchased. When the Wisconsin trees arrived back in Ames, the horse trailer became stuck in the mud. After much head-scratching and perspiration from both faculty and students, the truck finally inch ed its way out of the slippery predicament, but not without first having to move hundreds of trees out of the way to allow for the truck's escape.

The trees were then placed into cool, dark storage, thanks to the benevolence of Jerry Grebasch who gave us ample space at the state nursery facilities.

There had been some concern of whether or not the two to four-foot trees would sell since the "no Christmas tree" policy was enacted in the dorms. However, all the trees seemed to sell quickly, especially at the onset of the final days when people like Al Wimmer revived the "Let's Make A Deal" semblance.

Even with the nearing of the last days of the sale, most of us wondered whether we would make it out of the red. We had only a few positive "guessimates" to base our hopes on. With the number wizardry of our club treasurer, the totals came in and we came out way ahead of what we had imagined. This, along with the worker's banquet, put a final close to this year's episode of the continuing saga of Christmas tree sales.
Fall Forester’s Day

This year we had a very unusual arrangement for Fall Forester’s Day. Forester’s Day was originally planned for Saturday, October 3 at Holst Tract State Forest near Boone, Iowa. Although we had a fantastic turn out that day of nearly 40 people, the weather did not cooperate and all of the events except the match split were rained out. But the rain could not keep us from enjoying bratwurst and beans in a cabin in the state forest.

We rescheduled Fall Forester’s Day for Sunday, October 18. Once again, the weather was not ideal due to 30 mph wind gust and snow flurries. Braving the adverse conditions, 15 determined participants showed up and competed. Three of the 15 competitors were curious Agricultural Business students who tried their hand at the events of the day. Due to the low turnout, the one-man buck, two-lady buck, and the tree felling events were not held.

Placings:

Match split:
1. Curt Bader
2. Mark Hammer

Two-man Buck:
1. Mike Scanlon and Gary Bahr
2. Gary Gooder and Dan Miller

Jack and Jill Buck:
1. Dave Peters and Gail Hall

Speed Chop:
1. John Jennett
2. Mike Scanlon

Pulp Toss:
1. Mike Scanlon and Gary Bahr
2. Gary Gooder and Dan Miller

Bolt Throw:
1. Gary Gooder
2. Mike Rothlane
3. Dan Miller

Tobacco Spit:
1. Mike Scanlon
2. Gary Bahr

Dizzy Izzy:
1. Mike Scanlon
2. John Jennett
3. Gary Gooder

Overall Point Winner:
Mike Scanlon

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1981 Summer Camp

by

SUZIE BERREGAARD

Cloquet, Minnesota; tree city of the U.S., nestled discreetly somewhere southwest of Duluth and the beautiful North Shore of Lake Superior and northeast of Blandin (home of Grand Rapids), smack dab in the middle of some of the best rough grouse and woodtick habitat found, and the home of a McDonalds that offers ice cream delights for only 19¢ every Sunday. Now, could there possibly be a better place for two vans and a grain truck full of ISU forestry students to spend six weeks of their summer? The starving woodticks and mosquitos didn’t think so, and after some convincing and weakening due to the loss of blood, we did not think so either.

Getting to the camp, which is owned and operated by the University of Minnesota and is located approximately three miles from Cloquet, which is settled in the middle of primarily Red Pine-Jack Pine and Aspen stands, was an adventure in itself. Many of us drove our own vehicles, but by the time we arrived weren’t sure if driving or canoeing would have been most appropriate. Unfortunately for those who didn’t have adequate rain protection, the cloudy skies only managed to give us brief periods of relief for the first four weeks of our stay. Thank Good for hot showers, blowdryers, and semi-dry socks.

The facilities left very little to be desired (except maybe a jacuzzi—try to work that out for next year Dr. Hopkins). Three student living cabins, faculty cabins, a modern library and classrooms, a mess hall, and for our recreational enjoyment, foosball, pingpong and pool tables each housed in its own little cabin. Basketball, softball, volleyball, and frisbee areas all made the physical surroundings quite adequate. It is our personal belief that it was for this reason that our instructors felt the need to keep us occupied, and because of this we led a very systematic life of tromp, dry out, eat, and study.

Dr. Hall, motivated gentleman that he is, led us fearlessly day after day through young pine plantations, aspen stands, up and down the most severe topography in Minnesota, through mudholes, bogs, and tick infested swamps to prove his points and familiarize us with the diverse Minnesota landscape and vegetation. Thanks Dr. Hall, your intense field approach to forest biology was intriguing. Good thing for our bodies that you were only around for three weeks.

When the name “Dr. Mize” is mentioned around campus, 1981 summer camp student’s minds recall vivid images of yellow flags tangled in tree branches and bright orange stakes driven in the ground. Mensuration is a truly amazing aspect of the forestry trade and after two days of hand-to-hand combat with thick hazelbrush, bird-size mosquitos, wet fieldbooks, and a week of latitudes and departures, elevation calculations, and plotting road locations and forest types, Dr. Mize’s “it should only take a few hours” boundary traverse project had done a very sufficient job of instilling this thought in or soggy minds. But surely there must have been an easier way.

Breaks in the fieldwork were supplied in part by Dr. Manwiller. His attitude of “what could be more important than wood utilization knowledge” led us to many examples of the industries which forestry supports. We toured flake and hardboard plants, observed different pulping processes, came face to face with several giant fordriniers, learned railroad tie sorting and grading techniques, and memorized the creosote boulting process from start to finish. On top of that, we watched logs getting debarked, veneer being peeled, mulching being processed, studs being cut, and the high “light” of the tours—a trip through Diamond Match plant. Let it be known that each time anyone strikes a wooden Diamond courtesy match that one piece of Cloquet or area aspen has just given up its last life. Detailed “Dear Floyd” reports of these trips were the only drawback the wood utilization course, but we would like to thank Dr. Manwiller for donating the motivating “excused from one report” prize for the McDonalds Sundae eating contest. The lucky winners were Sharna Robinson and Lee Bender consuming 10 and 12 sundaes respectively in eight minutes. As you might have guessed, they weren’t in very good shape to enjoy their extra time off.

The multiple use operations class was under the direction of Dr. Hopkins. Field trips were the emphasis

On the river bank.
of this class, too, much to our enjoyment. Over the course of the six weeks, we had the opportunity to talk with a district forest ranger, rangers in the different branches of the Department of Natural Resources, watershed researchers, state park rangers, Environmental Protection Agency personnel, a USFS state nursery manager, an economist for private industry, and many other specialists dealing with different segments of the diverse forest resource. Dr. Hopkins was also the camp coordinator and he and “Mrs. H.” did a very good job of keeping things running smoothly throughout the course of the six weeks. He also acted as mailman and bank, which made him everyone’s favorite person.

Another of everyone’s favorite people, Dr. Thomson, managed to grace our lives by showing up for a couple of days and he even treated us all to a well-deserved watermelon feast. (You see, we all had to wear shoes to the mess hall during his stay.) Any spare time that we did have was spent doing laundry, traveling, swimming, fishing, relaxing around camp or snipe hunting. One weekend a small canoe trip turned into a large expedition as nearly half of the camp took off for a trip down the whitewaters (calmed by flooding, unfortunately) of the Cloquet River. Jogging past the goshawk, hiking to the fire tower, and making DQ runs were also favorite pastime activities.

After all of the trips were done, the finals were completed, and the vans and truck were all gased and loaded, each of us said our personal goodbyes, some more hastily than others, to the environment which had managed against all odds to be accepted as home. Camp Cloquet was quite an experience, (and expense), but we all felt good deep down. After all--who else would have kept all of those woodticks and mosquitoes alive?
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Weyerhaeuser
Faculty
and
Staff
Perspective

by
GEORGE W. THOMSON

Over the many years that my predecessors and I have written position statements for the Ames Forester a common thread of comment has emerged. It is customary to applaud the efforts of the current student body, to present faculty members as paragons of virtue, to recognize the accomplishments of the department, and to hold forth high hope for the future. Through good times and bad, the formula for foreword writing has been faithfully followed. So let it be for now, as it is both popular and trite to say, whether these are the best of times or the worst of times, it takes but a modest elevation of perspective to see that every bright promise and every dark fear has been with us before.

First the good news. In the last two years we have been reviewed by the Science and Education Administration in respect to our research program and have been found acceptable and respectable to the tune of ranking third among forestry schools in terms of research publications and graduate student output per full-time equivalent research faculty. We have been given the full ten-year accreditation by the Society of American Foresters for our undergraduate degree programs. Both of these recognitions speak well for the present faculty and, because of clearly evident interest and enthusiasm, for the entire student body. Further, the quality of the last two Ames Foresters was recognized by our peers with suitable presentations made at the Spokane and Orlando national meetings of SAF. Through the gifts of our loyal alumni, students have been supported to attend national and regional meetings of SAF and FPRS—and the best advertisement for our program comes from the participation of bright and interested students. One simply cannot beat having good floor samples at a convention.

Of course students numbers are declining in Forestry at ISU but so are they at every other forestry school and in practically every curriculum nationwide. It is tremendously gratifying to be able to report that as of 1982 the quality of our product—educated men and women and productive research—has seldom been better.

But what of the dark side? Employment prospects in many aspects of forestry in most parts of the United States are gloomy and there is nothing in the world to make one doubt one’s self more than to be unwanted. The bride left at the altar, the jilted lover, the non-tenured Assistant Professor, the abandoned dog, the pinned champion all suffer torment sometimes out of proportion to the degree of bereavement. But it is the strength of mankind that intelligence, fighting spirit and a dawning recognition that one is seldom alone (and never unique) in time of difficulty which soon combine to repair the damage to self-esteem. It is then that the battle for a place in the sun is vigorously rejoined.

In 1917 there was the traumatic upheaval of World War I and right on its heels came the transition from the semester system to the quarter system at Iowa State College. Even worse, this was soon accompanied by the Spanish Flu which made most recent afflictions pale to insignificance.

The Great Depression of the Dust Bowl Thirties looked like it would never end, although out of it came great conservation movements like the CCC and Shelterbelt Projects and acquisition of vast amounts of National Forest land. Each one of these resultant changes put hundreds of foresters to work and led to lifetime careers.

World War II disrupted lives of forestry students and practicing professionals for seven years and put ten million of us under arms, but when it was over there was unprecedented prosperity and hundreds of thousands of ex-service men and women were offered a college education. Forestry schools blossomed and forestry careers were opened to thousands.

Looking back at my own life, it does seem to me that every bad time has been followed by a time unexpectedly good. The trick has always seems to be to persevere and to remember that most ancient of axioms, “This, too, shall pass.”

So I conclude by offering to each of you who come in contact with this department the premise that each will survive and prosper in direct proportion to the confidence you have in yourself. I further offer the promise that this faculty and an alumni body, two thousand strong, will do everything in their combined power to see to it that you reap the rewards that you deserve so that you may accomplish what you must.

George Thomson is Chairman of the Forestry Department at Iowa State University.
1972--BS Forestry/Humboldt State University
1974--MS Forestry/University of Wisconsin-Madison
1978--PhD Forest Economics/University of Wisconsin-Madison
1978--Joined the ISU staff

**Dr. Colletti's** favorite fantasies include being Chief of the Forest Service and growing a thick head of hair—red, of course. He enjoys gardening, growing roses and "vegies", participating in active sports, and would like to write a computer program which runs the first time. He believes that the world's ultimate destiny will include log cabins, VW's and chocolate cream pie, and professes to never be embarrassed. His favorite quote is "So?", and he leaves us with the personal suggestion "let's optimize or we will degenerate!"

Dr. Joe P. Colletti

1969--BS Forest Management/ISU
1968--MS Forest Management/ISU
1973--PhD Forest Management and Planning/
University of Michigan
1975--Joined the ISU staff

**Dr. Countryman's** favorite movie is Paper Chase. In his spare time, he enjoys hunting and fishing, and maple nut is the ice cream flavor that steals his heart (or stomach).

Dr. Richard B. Hall
Dr. E. R. Hart

1946--BS Industrial Forestry/University of Michigan
1947--BBA Business Administration/University of Michigan
1947--MF Marketing/University of Michigan
1959--PhD Forest Economics/Syracuse
1959--Joined the ISU staff

Dr. Hopkins special interests include hiking, mountain climbing, and economics of forest production. He likes peppermint stick ice cream, M*A*S*H, Masterpiece Theater, and feels that the world will make it. His personal word from the wise would be to “give yourself a margin!”

Dr. Fred S. Hopkins

1969--BS Forest Management/ISU
1976--MS Forestry-Biometry/ISU
1978--PhD Forestry-Biometry/ISU
1975--Joined the ISU staff

Dr. Jungst special interest include numbers, computers, and watching students really understand the two for the first time. He admits (possibly because of the chance for free public advertisement) that the most embarrassing thing in his life is having to listen to eight handcrafted mantel clocks chime because he can’t find a buyer for them. He admits that he has two fantasies which recur annually about six months apart. One is to have a ten-point buck dumb enough to stand still while having a black-powder rifle pointed at him, and two is to come across a three-point crappie with an uncontrollable urge to strike at white crappie jigs dangled from blue canoes.
1965--BS Forestry/Chung Hsing National University, Taiwan
1971--MS Wood Science/University of Missouri
1977--PhD Wood Science and Technology/University of California-Berkley
1980--Joined the ISU staff

Dr. Kuo's special interest include wood adhesion, microscopy of wood, and photography, and his favorite ice cream flavor is raspberry, but unfortunately he is allergic to it. The most embarrassing experience that he has encountered happened in May of 1980 when he forgot to pack his suit when coming to Ames for an interview for his staff position. He enjoys western and World War II movies, and would like to be able to go inside of wood and growing trees to find out whatever he would like to know.

Dr. Mon-Lin Kuo

1961--BS Forest Management/ISU
1966--PhD Wood Science and Plant Cytology with minor in Biochemistry/ISU
1978--Joined the ISU staff

Dr. Manwiller enjoys working with wood and eating vanilla ice cream, home-made by Cheryl Jensen's recipe. In his own words he relates his most enjoyable experience. "I joined the department December 1, 1978 and began teaching my first course one week late and without any preparation. It was a cold, snowy winter and my family was in Louisiana waiting for the house to sell. On Valentine's Day, in the middle of these pressures, I received a carnation and thoughtful note from an anonymous student. That perceptive act will be one of the nicest experiences I'll ever have. That person will have graduated by now and I would like to know their identity."

Dr. Floyd G. Manwiller

1949--BS Botany and Chemistry/University of Nebraska
1951--MS Forestry and Plant Science/Yale University
1954--PhD Forest Pathology and Plant Physiology/Yale University
1953--Joined the ISU staff

Recalling previously experienced forms of beauty is Dr. McNabb's favorite fantasy. His special interests include working with youth and international cooperation in forestry research, and believes if humans would base their actions on love and tolerance instead of hate and greed, that the world would have a very optimistic future. He enjoys peppermint stick ice cream and his favorite stage productions are "Hair" and "The Irresistable Rise of Altio Uri". He believes that we should take advantage of opportunities as they present themselves, and says "believe firmly that your life on this earth will make a difference in directing the course of events in the future."

Dr. Harold S. McNabb
1956--BS Forest Wood Utilization/ISU
1957--MS Wood Technology/University of Minnesota
1957--MS Wood Technology/University of Minnesota
1966--PhD Forestry/University of California
1965--Joined the ISU staff

Dr. Mize's interests include backpacking, football, running, ping pong, and parties. He believes that the world is eventually going to "get blown away", and enjoys watching Saturday Night Live, Second City TV, M*A*S*H, and Apocalypse Now. His favorite fantasy, most enjoyable experience, and most embarrassing situation are all censored. His personal quotes are "most things are relative", and "be reasonable".

1939--BS Forestry/ISU
1940--MF Forest Soils/Duke University
1951--PhD Soils/ISU
1946--Joined the ISU staff

Hitting a home run against the Yankees, with the bases loaded is Dr. Scholtes favorite fantasy. He enjoys geochronology, pistachio ice cream, and "you guessed it". His most embarrassing experience is too embarrassing to tell, but he can submit M*A*S*H as his favorite TV program. When asked for his personal word from the wise, his response was, predictably, "holy bald headed cats--it would be to Hand Loose!"
Dr. Schultz enjoys gardening, canoeing, classical music, photography, strawberry ice cream, spending time with his family in the woods, and coming out of class after a good lecture that includes student interaction. His favorite fantasy would be to be self-sufficient on a small acreage nestled in the woods, along a bubbling brook, with small pastures for stock, and feels that the world's ultimate destiny will be whatever we as a group of intelligent organisms want to make of it.

Dr. George W. Thomson

1963--BS Forestry/ISU
1947--MS Forest Management, Plant Physiology/ISU
1956--PhD--Forest Management (Silviculture)/ISU
1947--Joined the ISU staff
1967, 1975--Acting Department Head
1975--Became Department Chairman

Dr. Thomson's special interests include reading, and foreign travel, and his favorite fantasy would be to be a famous author. He enjoys butter pecan ice cream (or anything with hot fudge), hearing from alumni, and having students stop in for a visit at his office. His favorite TV program is Upstairs-Downstairs (Masterpiece Theater) and his least favorite is Championship Bowling. He believes that the world's ultimate destiny will be to continue infinitely with good times mixed with bad, and submits an excerpt from William Faulkner's The Bear. "... of the bitch that, as Sam said, had to be brave once in order to keep on calling herself a dog."

1968--Forest Management/ISU
1974--PhD Forest Biology/ISU
1975--Joined the ISU staff

Dr. Wray's special interests include small woodlot management, crappie fishing, and wood crafts. He enjoys all flavors of ice cream but is somewhat partial to chocolate chip. He likes to watch M*A*S*H and Hill Street Blues, but dislikes most other TV shows.
Mr. Faltonson received his Bachelor’s degree in Horticulture from ISU in 1977. Before joining the staff in 1970, he worked for the United States Forest Service at the North Central Forest Experiment Station. Usually, as a professional/scientific staff member, Mr. Faltonson does not have a teaching assignment, but he does occasionally assist in some forestry labs. Richard’s specific areas of interest are concentrated on concepts of vegetative propagation and forest tree regeneration, particularly as it applies to intensive culture concepts of forest biology. His outside leisure activities include travel, landscape gardening, running, hiking, cross country skiing, snow shoeing, reading, and photography.

Tom Hillson earned his Bachelor’s and Master’s degrees in Botany from ISU. Mr. Hillson has been a Research Assistant at Iowa State for three years. Before coming to ISU he taught Biology at Des Moines Area Community College for one year. As a research assistant, Mr. Hillson assists Dr. Hall and Dr. Schultz in their research, and graduate students in their projects. Mr. Hillson familiarizes the graduate students with the equipment that is available to them. His own interests lay in tissue culture.

Dr. Hinz received his Bachelor’s in Wood Utilization from Pennsylvania State, a Master’s in Wood Technology from North Carolina State, and a Master’s and PhD in Statistics from Wisconsin. Dr. Hinz has been teaching at Iowa State for 13 years. Before coming to Iowa State, he worked for 9 years at the U.S. Forest Products Laboratory. Dr. Hinz has a double appointment in Statistics and Forestry.
Efficiency and professionalism describe the ISU Forestry Department secretaries. From left is Debbie Pederson, Department Head Secretary for eight years; Holly Anderson, Undergraduate Advising Secretary for one year; Rose Turner, Department Receptionist-Graduate Secretary for five years.

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The 1982
1982

Graduating

Seniors
Lon Accola will graduate summer 1982 in Resource Management, with a minor in Multiple-Use Forestry. He worked in urban-forestry for his summer internship. Lon attended summer camp in Montana in 1980. He's been a member for Forestry Club, and has been active in Veishea and intramural broomball. He is originally from Davenport, Iowa.

Barb will graduate in May of 1982 with a degree in Forest Management and a minor in Multiple-Use Forestry. She attended summer camp in 1979 at Lubrecht, Montana. Barb has worked for the Forest Service for three years. In 1979 she worked for tree betterment in Montana, and in 1980 she worked on a bush crew at Idaho Red Ives Range District. In 1981 she was a cruiser at Spearfish Range, South Dakota. Barb has been a member of the Ames Forester staff and was secretary of the Forestry Club for one year. She also enjoys intramural broomball. Barb's hometown is Ute, Iowa. Her post-graduation plans include marriage in November, and then possible graduate study. In her spare time, Barb enjoys private flying, playing the guitar and piano, reading, and photogrametry.

Bill went to summer camp in Missoula, Montana in 1979. He will graduate in May, 1982 with a degree in Resource Management and a minor in Soil and Water Management. For three years he worked as a laborer in concrete and masonry construction in his hometown of Glenwood, Iowa. Then, in 1981 Bill worked at the Red Ives Ranger Station in Avery, Iowa on a brush disposal and fire crew. His college activities include Forestry Club, the 1981 Mid-Western Foresters Conclave, and being vice-president and house manager of Phi Kappa Tau Fraternity. After graduation Bill will probably return to Red Ives to be a member of a timber crew. After that he hopes to find a permanent position in forest resource management.

Annette is from Cedar Rapids, Iowa. She will graduate in May, 1982 with a degree in Forest Products and a minor in Industrial Engineering. She attended summer camp in 1980 in Montana. During her years at college Annette was on the RHW Committee, she is a little-sis at Theta Xi, a member of FPRS and Forestry Club, and is a resident assistant for the TRA. After graduation she hopes to work in the forest products industry.

Dan graduated in December, 1981, with a double major in Forestry and Pest Management. He attended summer camp in Missoula, Montana, in 1979. In 1980 he worked as a tree inspector in Minneapolis, Minnesota. His hometown is Roanoke, Virginia. Dan was a member of the hockey team for four years here at Iowa State. He now looks forward to a career with Elanco Chemical Company, where he will work in the marketing of their range management products.
Linda attended Lubrecht Forestry Camp in 1980. She worked at the Toketes Ranger Station near Crater Lake Oregon for four summers from 1978 to 1981. She will graduate fall of 1982 with a degree in Forest Management and a minor in Forest Biology. Linda’s college activities include intramural softball and volleyball, the forestry Veishea display, the forester’s conclaves in 1980 and 1981 and Christmas tree sales in 1980 and 1981. She was also secretary and vice-president of the Forestry Club and a member of the Ames Forester staff. After graduation she would like to start working in the silviculture department for the Forest Service. A job in private industry is also a possibility. Linda is originally from Des Moines, Iowa.

Jim attended summer camp at Greenough, Montana in 1960. He worked for the Braden Forestry Service in South Dakota in 1961. He has also worked on thinning and inventory contracts for the U.S. Forest Service and private landowners. Jim will graduate in May of 1982 in Forest Products with a minor in Agricultural Mechanization. His hometown is Toms River, New Jersey. His college activities include being past treasurer and president of the Iowa State LaCroise Club and being a member of the Sports Club Council. He also enjoys intramural sports. After graduation he will seek a career in composite products and the utilization of low grade hardwoods. Graduate school is also a possibility.

Chun-Hong will graduate May, 1982, in Wood Products. He attended summer camp in Taiwan in 1978. In 1977 he worked at a furniture manufacturing plant in Taiwan where he adjusted and maintained woodworking machines. During his college career he has participated in collegiate photography and the fishing association. He is also a member of the coin collectors club. After graduation Chun-Hong will either continue his education at graduate school, or he will return to Taiwan and join a wood industry. He is originally from Taichung, Taiwan. He says he has enjoyed Iowa State and will remember his fellow classmates in forestry.

Shelly attended summer camp in Montana in 1978. She will graduate in May of 1982 in Forest Management with a minor in Biology/Silviculture. She is originally from Dubuque, Iowa. Shelly worked for the Forest Service at Tahoe National Forest in California in 1979 and 1980. She then worked as a Weyerhaeuser intern in Oklahoma in 1981. There she studied seedling survival related to Velpar grass control spray. During the college career Shelly has been a three-year member of the Forestry Club. She received the Keith Bower Award in 1979 and has also been a member of Si Sigma Pi. She is active in the Karate Club and has done tissue culture work here at the University. After graduation Shelly hopes to work for a private consultant, and industry, or the Forest Service in forest management. Her favorite pastimes include horseback riding, skiing and wood carving. She is also an orange belt in Ti Kwon Do.

John is from Apple Valley, Minnesota. He attended Lubrecht Forestry Camp in 1980. John will graduate in May of 1982 with a degree in Forest Products and a minor in Industrial Engineering. John has worked at Sutherland Lumber Company since December 1981. He worked in the building products department waiting on customers, answering their questions, and advising them on the best way to accomplish their objectives. After graduation, John would like to get a job dealing with quality control, production supervision, or drying at either a sawmill or composite plant.
Eric attended summer camp at Greenough, Montana in 1979. In 1980 he worked at the Idaho Panhandle National Forest where he was a member of a resource crew. Here he prepared areas of seed-tree harvests for prescribed burns, built fire lines, burned brush and cleared streams. He is a member of both Xi Sigma Pi and the Society of American Foresters. Eric will graduate May, 1982, in Resource Management with a minor in Agronomy. After graduation he and his wife would like to work in the west, but they hope to eventually settle in the midwest. Eric is originally from Bettendorf, Iowa. His hobbies include playing the banjo, backpacking, hunting and canoeing.

Becky is from Perry, Iowa. She will graduate in spring of 1982 in Forest Management with a minor in Occupational Safety. She attended summer camp in Montana in 1977. In 1978 she was a YCC crew leader in Missouri. After graduation Becky plans to work at a forestry related job in occupational safety. Throughout college she has been active in intramural sports. She also enjoys running, reading and swimming.

Michael, an Ames resident, will graduate in May, 1982 with a degree in Forest Recreation. He attended summer camp at Montana in 1978. In 1978 and 1980 Michael worked on fire and trail crews for the Forest Service in Montana. Also, in 1980 and 1981 he worked with the Army Corps of Engineers at Saylorville Lake here in Iowa. Michael enjoys hunting, fishing, and backpacking. After graduation he will work as a park technician for the Iowa Corps of Engineers.

Jim attended summer camp at Greenough, Montana in 1979. In 1980 and 1981 he worked as a salesman for Jewett Lumber Company in Des Moines, where he was involved in customer/contractor sales and estimating. Jim will graduate May of 1982 in Forest Products with a minor in Business Administration. His post graduation plans include employment in the products field. He has accepted a job offer from Payless Cashways for a manager trainee position in Des Moines. During college Jim was actively involved in intramural sports. His hometown is Des Moines, Iowa.

Frank will graduate summer of 1982 with a degree in Wood Products and a minor in Business Administration. He attended summer camp at Missoula, Montana in 1980. His summer work experience consisted of a roofing and construction job in Cedar Rapids, Iowa. Frank is from Philadelphia, Pennsylvania. After graduation he plans to work in the west, preferably at a job in sales. His favorite pastimes include playing the guitar and hiking. He also enjoys motorcycles.
Pam will graduate during the summer of 1982 with a degree in Forest Recreation. She attended summer camp at Montana in 1980. In 1981 her summer work experience consisted of working on a private ranch at Jackson Hole, Wyoming. Her college activities include participation in Residence Hall week, Forestry Club and intramural sports. After graduation Pam intends to plan and design recreation areas or programs in the west. Her leisure activities include backpacking, camping and white water rafting. She is originally from Burlington, Iowa.

Dana will graduate in May, 1982, in Forest Management and a minor in Forest Biology. His hometown is Lake Mills, Iowa. He attended Lubrecht Forestry Camp in 1980. In 1981 Dana worked at land management for the Silas B. Mason Co., Inc. Iowa Army Ammunitions Plant, Middleton, Iowa. His college activities include intramural basketball, membership in Xi Sigma Pi, and working for the University Rec Service for two years. After graduation he hopes to work for a private forestry firm in silviculture/genetics research. Dana’s hobbies include backpacking, skiing and golf. He was also a member of the High School Athletic Department as a basketball officiate.

Jody will graduate May 1982 with a degree in Forest Recreation and a minor in Forest Management. She attended summer camp at Montana during 1979. Her summer work experiences include working as a park aid for the Corps of Engineers during 1980, and as a Park Technician at Saylorville Lake here in Iowa. Jody is from Manson, Iowa. Her college activities include a three-year membership in the Forestry Club. She has been editor of the Ames Forester for two years, and secretary and social chairman of her dorm floor. Jody was involved with seedling sales during Veishea and also participated in intramural softball. A May wedding is planned for Jody, after which she will pursue a job in Recreation.

David is from Minneapolis, Minnesota. He will graduate in spring, 1982, with a degree in Forest Management. He attended summer camp in 1980 in Montana. In 1979 David was a YCC group leader at the Boundary Waters, and in 1980 he was a private canoe guide there. He was a Weyerhaeuser intern in 1981. David’s college activities include memberships in the Forestry Club, the Ad Council, and the RCA Parking Committee. He is also a member of Xi Sigma Pi, Phi Kappa Phi and SAF. He is active in intramural sports, has been vice president of his dorm floor, and is a member of the Energy Conservation Force. His hobbies include reading, running, backpacking, and canoeing. After graduation David plans to work in industry.

Kelley attended summer camp in 1982 at Greenough, Montana. In 1980 she worked as a forest pathology intern at the North Central Forest Experiment Station in St. Paul, Minnesota. In 1981 she worked for Weyerhaeuser at Wright City, Oklahoma as a science and engineering intern doing regeneration research. She is a member of Xi Sigma Pi and Phi Kappa Phi, and is a student member of SAF. Kelley will graduate spring of 1982 in Resource and Pest Management. After graduation she plans to attend graduate school and eventually do research in tree physiology or genetics. Her hometown is Monroe City, Indiana.
Mike is from Burlington, Iowa. He will graduate in May, 1982 with a major in Forest Products and a minor in Industrial Engineering. He attended Lubrecht Forestry Camp in 1979. Mike has worked at Deerlodge National Forest on trail construction and timber sale preparation for three years. Mike's college activities included being a member of the ISU Forestry Club, a member of the Weightlifting Club, and a member of the Judo Club. His post graduation plans include working out West in a forest products industry in human resource management, quality control or sales. He enjoys camping backpacking, canoeing, backgammon, photography, and woodworking.

Scott graduated in December, 1981, with a double major in Forest Resource Management and Pest Management. He attended summer camp in Greenough, Montana in 1978. Scott has worked as a firefighter and member of a heli talk crew at Lolo National Forest. In 1980 he was part of a forest entomology crew in St. Paul, Minnesota, where he surveyed for Saratoga, Spittlebug and Spruce budworm. Scott is from Merrick, New York. His post graduation plans include graduate school at the University of Arkansas and future work in pest control.

Mark is from Mason City, Iowa. He will graduate in May of 1982 with a degree in Forest Management and a minor in Multiple-Use Forestry. He attended summer camp in Montana in 1979. During the winter of 1978 Mark worked for the Iowa Conservation Commission at Stevens State Forest. In the summer of 1980 he worked for the Forest Service as a crew supervisor at Mark Twain National Forest in Missouri, and in 1981 he was employed there by the Forest Service as a timber marker. Mark has been a member of the Forestry Club for four years. Mark is a certified scuba diver and enjoys other water sports. Upon graduation he intends to work as an executive officer on the CCC here in Iowa.

Chris went to Lubrecht Forestry Camp in 1979. In 1980 and 1981, Chris worked at Fremont National Forest, Paisley Range District, Oregon. His job included work in tree improvement, animal damage control, and silviculture. As a student, Chris is a member of Xi Sigma Pi forestry honor fraternity, and of Phi Kappa Phi. He is also involved at the Catholic Student Center, teaches high school religion classes, and is a retreat team member at St. Thomas Aquinas. His hometown is LeMars, Iowa. He will graduate in spring 1982 with a double major in Forest Biology and Environmental Studies. He eventually plans to attend graduate school and study forest ecology and silviculture. Chris' favorite pastimes include hunting, fly-fishing, biking, backpacking, and swimming. He also enjoys art and music.

Michele attended summer camp at Missoula, Montana in 1979. In 1980 she worked for the Forest Service in Spearfish, South Dakota, marking timber and fighting forest fires. The following year she worked as a quality control intern at Weyerhaeuser in Marshfield, Wisconsin, where she performed process control audits on production machinery. Michele's college activities include memberships in the Forest Products Research Society, and Forestry Club. She is active in intramural sports, and is a little sister of Alpha Sigma Phi Fraternity. Her hometown is Cedar Rapids, Iowa. She will graduate in May of 1982 in Forest Products with a minor in IE/I.Ad. After graduation, Michele hopes to obtain a responsible position as part of a production management team.
Jim is from Blair, Nebraska. He will graduate in May, 1982 with a double degree in Forest Management and Business Administration. He attended Lubrecht Forestry Camp in 1980. In 1981 Jim worked in Schopfheim, West Germany for the Baden-Wuerttemberg State Forest Service as a logging crew worker. There he assisted in the felling and limbing of trees, surveying, site preparation and road maintenance. His college activities include Homecoming and Campus Chest Central Committees, the Mortarboard National Honor Society, Xi Sigma Pi, the YMCA Big PALS Program and the Forestry Club. After graduation Jim would like to work with a private industry in the area of natural resource management planning.

Duane is originally from Palmer, Iowa. He graduated in December, 1981, with a major in both Forest and Pest Management. He attended summer camp in Greenough, Montana in 1979, and also worked on a thinning crew in Ovando, Montana that same year. In 1980 he worked for the City of Des Moines Forestry Division as a tree scout for Dutch Elm Disease and Oak Wilt and, in 1980, for ISU Forestry Extension as a Forestry Technician in Hopkinton, Iowa. During his college career, Duane was a member of the Forestry Club, and an active member of intramural softball. He also likes to play the guitar and draw. As for the future, Duane hopes to become a consulting forester in woodland management, specializing in integrated pest management.

Al is from Council Bluffs, Iowa. He will graduate in May, 1982, in Forest Management. In 1979 he attended summer camp in Montana and then worked as a brush disposal and fire crew member in Potlatch, Idaho. The following two years he returned to Potlatch as a fire crew foreman and fire dispatcher. Al has been a Forestry Club member for four and a half years, an SAF member three years, and an Ag Council Representative for two years. He was a christmas tree sales chairman for two years and member of the ISU Mountaineering Club for one year. He was a teacher's assistant for an experimental ROTC rock climbing class, and the master of ceremonies at the spring game banquet. Other college activities include being dorm house social chairman, writing the christmas tree sales planning manual which is presently in use, working in a dorm post office for three years, working as a research lab assistant, intramural athletics, and being chairman of several extension forestry displays. Al is planning on a career in fire management and hopes to eventually be a fire management officer.
Graduate

Students
Samson Tokun Ajayi
Samson received his BS in forestry in 1979 from the University of Ibadan, in Nigeria. He was a forest assistant in the western state of Nigeria, and an assistant conservator of forests in Oyo State of Nigeria. His academic interests deal with forest administration and management, and his outside interests include music and sports. He would like to be an administrator in the Nigerian Forest Service, and a research fellow or lecturer in one of the Nigerian universities.

Kim D. Coder
Kim received an AA in Environmental Science from DMACC in 1976, a BS in Forest Management in 1979, and a MS in Forest Biology in 1981 from ISU. He has a background in the chemical control of competition, and interests in plant growth regulation and the transfer of technology in forestry through university extension. He is currently working with the regeneration of major tree species in Eastern Iowa and how to select silviculturally correct management regimes to provide healthy and reproducing stands. His outside interests include politics, martial arts, science fiction, exobiology, food, and writing. He plans to eventually work in extension and research.

Rich Doak
Rich received his BS in 1980 in Entomology and Pest Management from ISU. He is currently working on a MS and his academic interests deal with forest administration and management, and pest management economics. His outside interests include running, athletics, old cars, and working with residence halls and student government.

Dave Donovan
Dave received his BS in Biology, emphasis on Botany, from Viterbo College, LaCrosse, Wisconsin in 1979. He has had two years experience working in a commercial chemistry laboratory in LaCrosse. His outside interests include basketball, carpentry, hunting, and photography. His future plans are to work either in Australia, western or southern U.S. in private industry.

Roger Hanna
Roger received a BS in 1969 in Forestry and a BS in 1972 in Farm Operations from ISU. He was previously a Commissioned Officer in the U.S. Navy, and has worked for Georgia Pacific Corporation and has been a farm renter and operator. His outside interests include scuba diving, camping, and horseback riding. After completing his MS in Forest Administration and Management he plans to get a job doing extension work with private landowners.

Reineee Eshelman Hildebrandt
Reineee received a BS in Forest Recreation and Agricultural Education Extension from ISU in 1980. She has developed a computerized street tree inventory for large towns in Iowa, and is presently a Teaching Assistant for Forest Recreation, and Graduate Extension Assistant in Forestry. Her outside activities include Xi Sigma Pi, FGSA, fishing, swimming, jogging and hiking. Her future plans include developing learning units for secondary schools and eventually receiving a PhD.

Gregory Miller
Greg got his BS and MS in Horticulture from Ohio State University. He is currently looking at genetic differences in growth and nitrogen fixation in black alder, and is especially interested in breeding of woody plants, particularly those which have not received a great deal of attention from breeders in the past. His future plans include research and teaching especially related to woody plant genetics and breeding. His outside interests include hiking and camping.

Oghenekome Ukrapko Onokpise
Kome received his BS in Agriculture from the University of Ife, Ile-Ife, Nigeria in 1974, and his MS in Crop Science from the University of Guelph, Guelph, Ontario in 1980. He has had work experience in the National Service in Nigeria, a Research Officer at the Rubber Research Institute of Nigeria in which he has been involved in the breeding and selection of natural rubber, and participated in an International Expedition to the Amazon Basin, Brasil. He is currently a Research Assistant. His outside interests include reading, writing, and debate. His future plans include returning to his job at the Rubber Research Institute in Nigeria to improve his existing research programs, possibly teach forest tree breeding at one of the universities there.

Doris Kathleen Patten
Kathy received her BS in Conservation and Resource Management in 1972, and a MS in Soils in 1978 from the University of Maryland. She has had research experience as a microbiology technician for the Food and Drug Administration, Research Assistant in soil microbiology, and a Research Assistant in forest biology/soils. She would like to teach and do research at the university level.

Terry Robison
Terry received his BS in Forestry from Pennsylvania State in 1977. His academic interests deal with forest genetics and he is currently a teaching assistant for Forest Silviculture. His outside interests include hunting, fishing, softball, and football. He plans to finish his PhD and get a job.

David M. Sacks
David received a BS in Biology and Environmental Studies from Cornell College in 1981. He worked on a helicopter logging crew for two years and has done research in Rhinelander on Populus and Jack pine, and has a special interest in the area of short rotation intensive culture with Hybrid Populus clones. His outside interests include gardening, self-sufficient living styles (homesteading) and solar homes. He plans to do research in implementation of Populus plantations, and ultimately, would like to operate his own multiuse Populus plantation.

Mike F. Scanlon
Mike received his BS from ISU in 1981 in Forest Management. His special research interest is stabilizing timber prices through adjustment of allowable cut on public timberlands. He plans to finish his MS in Forest Economics and then look for a job in the western U.S.

Rita Sonnelitter
Rita received her BA in Biology-Psychology/Secondary Education in 1973 from D’Youville College in Buffalo, New York, and her MS in Horticulture in 1978 from Pennsylvania State University. Her academic interests deal with monitoring and predicting population growth levels and coincident increase reduction in Poplar stands under short rotation, intensive silviculture. She is a member of Sigma Delta Epsilon and Graduate Women in Science. Her future plans include marriage, establishing permanent residence in the Netherlands, and becoming a famous forest pathologist.

Richard Straight
Richard received his BS in Forestry from ISU in 1980. His research is currently on developing a computer program for economics land use comparisons. He has had work/research experience with Osmose Wood Preservation Division, International Paper, U.S. Army Veterinary Corps (food inspection) and is presently working on the yield of lumber from cottonwood. His outside interests include woodworking, black powder rifle and general hunting, reading, and getting ready for his first baby. His future plans include working in a managerial position in either the public or private sector.

Timothy W. Trachsel
Tim received his BS in Forest Management from ISU in 1976. He has had work/research experience with Osmose Wood Preservation Division, International Paper, U.S. Army Veterinary Corps (food inspection) and is presently working on the yield of lumber from cottonwood. His outside interests include jogging, camping, canoeing, hunting, photography, and “marriage maintenance”. He plans to return to active duty as an Air Force Officer.

Paul M. Winstorfer
Paul received his BS in 1978 through the ISU Honors Program in industrial Engineering. His academic interest areas deal in wood science research in wood anatomy and wood composite products. His outside interests include duck hunting, woodworking, and bicycling. He is aiming for a PhD in 1983, and then plans to find a job.

William Yawney
Bill received a BS in Forestry from the University of Vermont in 1977, and a MS in Forest Biology from the University of Georgia in 1980. He has done research/work for the Entomology Extension Service. Sugar Maple Research Laboratory, and Broun Paper Company. He was a Research Assistant at the University of Georgia, and is currently a Research Assistant at Iowa State. His special areas of academic interest include forest tree seedling research, electron microscopy as a tool for basic research for forest industry and a research-teaching position as a university professor.
From left: Paul Winistozfer, Rita Sonnelitter, Dan Dicarlo.


From left: Roger Hanna, Mike Scanlon, David Sacks; in front: William Yawney.

From left: Reinee Eschelman Hildebrandt, Kim Coder, Richard Straight.
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From left: Greg Miller, Tom Permar.

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