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Opportunities in Industrial Forestry in the Douglas Fir Region

E. F. HEACOX

ONE of the most important decisions that confronts every forestry student who is completing his formal education is the selection of the particular phase of forestry in which to begin his professional career. In making this all important decision he must guage each type of employment under consideration, by two standards. First, he must look at the long range opportunities for himself and for the profession of forestry in general. Secondly, he must determine to what extent the immediate employment opportunities will broaden his experience and prepare him to take advantage of future opportunities. In the hope that it may prove of some value in helping forestry graduates come to a satisfactory decision with respect to their choice of careers, the following discussion will attempt to present, from these two viewpoints, a general picture of the opportunities in industrial forestry in the Douglas fir region.

As one means of determining the future opportunities in industrial forestry, it might be well to review the development in private forestry work in this region during the past several years.

1917-1927

Thirty years ago the field of industrial forestry did not exist in the Douglas Fir region. The apparent failure of the industry to place its forest land under continuous forest management has been the subject of much discussion among timber operators, educators, foresters and others. Rightly or wrongly, the industry in general did not believe that it was economically feasible to hold land for the production of forest crops.

First, the methods of taxing forest land together with the rising curve of tax rates made it difficult to forecast with any accuracy the cumulative cost of holding forest land.

Second, in the light of past experience it seemed inconceivable that forest land could be protected from fire long enough to produce a crop of merchantable timber. These obstacles, together with other problems confronting forest land owners, seemed to preclude the economic feasibility of raising slow growing timber crops. In this highly competitive industry there were few who cared to subsidize this seemingly uneconomic undertaking.

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During this period which corresponded roughly to the first ten years following the World War I there were probably less than a dozen professional foresters employed by the forest industries, and almost without exception these men were engaged with the problems of taxation and protection. Silvicultural systems, cutting budgets, regulation and reforestation were for the most part subjects that had little place in the work-a-day world of these early foresters. Still, as they labored for better protection and stability of taxation, they were speeding the day of these refinements of forest management.

1927-1937

The efforts of these pioneer foresters were reflected in noticeable advances in forest management in the following ten year period. The Douglas fir region, with the rest of the nation, was just emerging from the depression. The original group of foresters had increased to nearly 100, all actively engaged in some form of industrial forest management.

During this time the reforestation acts with their yield tax provisions had been placed on the statute books of both Washington and Oregon. The lumber code authority of the NRA had initiated minimum silvicultural methods which were subsequently promoted strongly by the industry trade associations. The problem of managing the cut over land which was increasing at the rate of some 150,000 acres per year was assuming serious proportions. The application of silvicultural practices, classification and analysis of logged off land, together with the intensification of protection methods constituted the chief tasks of the industrial foresters.

Despite the general awareness of the dwindling supplies of virgin timber in many sectors of the region and the steady shifting of the center of the industry southward from Washington into Oregon, serious attempts at timber culture were sporadic. The exceptions were mainly companies with large investments in manufacturing plants who had in sight sufficient reserves of merchantable timber to last until new timber crops could be brought to maturity. The economic factors which discouraged the whole industry 20 years before continued to prevent wide spread adoption of timber growing practices, particularly among the smaller operators who could see no possible chance of permanent operation.

1937-1947

During the next decade, or from about 1937 to the present, industrial forestry has progressed more rapidly than in any previously period. While part of the credit is due the foresters who

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Below: Taken from same plot as above photo five years later. Photo taken 1945.
pioneered in taxation, protection and silviculture, and focused attention on the more encouraging financial aspects of timber growing, it must be recognized that changing economic conditions with respect to supply and demand for the products of the forest have been the greatest stimulus to industrial forestry.

Today there are more than 300 foresters engaged in forest management work on private land in the Douglas fir region. For the most part these men, during the past few years, have been engaged in developing extensive forest land management programs over the areas under their jurisdiction. They have been instrumental in planning and putting into effect improved protection measures "To make the world safe for forestry" to paraphrase an old slogan.

Both Washington and Oregon now have statutes prescribing minimum silvicultural standards on all private land. The development and improvement of silvicultural practices has been a major part of the private forester's work. Artificial reforestation has also been a primary project of a number of foresters, particularly those employed by the larger companies. In 1941 the forest industries installed a forest nursery at Nisqually, Washington which is operated by the West Coast Lumbermen's Association to provide planting stock for all member companies.

The extensive areas of tax roll land that existed 20 years ago have largely disappeared. A small amount of it has been diverted to farming and grazing, but by far the greatest proportion has been incorporated into sustained yield units of companies having large investments in permanent manufacturing plants.

This brief summary is obviously a drastic oversimplification of events. Its purpose is merely to indicate the extent to which conditions have changed during the past 30 years. Today, problems of taxation and protection, while far from solved, no longer appear as impossible barriers to forest management. Silvicultural practices have been developed to the point that reasonably good reforestation can be expected on a large proportion of the area currently being logged in the region. Today the industry is forestry minded; it recognizes that its future timber reserves are not acres of virgin forest in some untapped forest region, but rather acres of seedlings, saplings, and second growth growing in the hills behind the saw mills, pulp mills, and plywood plants.

It is perhaps presumptuous to attempt to predict the direction which industrial forestry will take, and the progress that will be made during the next decade. General economic conditions will to a considerable extent dictate future trends just as they have been a determining factor in the past. New developments in the

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Below: Taken from the same point as above photo five years later. Photo taken in 1945.
wood using industries will also strongly influence forestry activities during the next few years.

Expansion of the pulp industry and improved utilization processes in the saw mills has already created markets for sizes and grades of logs which have been considered unmerchantable until recent times. While the large, clear, fine grained Douglas fir saw logs and peelers are still the cream of the crop, logs of all sizes and grades now find ready markets.

The pulp industry, for example, is operating to an increasing extent on a diet of cordwood and small logs. This material can readily be grown on rotations of 30 to 50 years instead of the 80 to 100 years required for the production of saw logs. The development of these short rotation crops will require serious attention and study of many managing foresters during the next few years.

These short rotations also open the field of sustained yield operation, with regular annual income, to the small land owner. In the aggregate these small acreages represent a sizable forest area which will require the attention of trained foresters.

Furthermore, it is well recognized by foresters that the better sites will produce yields of 800 to 1,000 ft. of saw logs per acre per annum plus one-half to one cord of small wood per acre per year. This cordwood volume which is normally lost through natural mortality amounts to 3 billion feet per year in the Douglas fir region, according to the Kirkland report. Recovery of a portion of this volume through the development of thinning operations will undoubtedly be a major undertaking of foresters in many parts of the region.

A substantial volume of small logs is now being recovered by pre-logging and re-logging methods in a number of logging operations. These so called salvage operations will continue to receive the attention of foresters and loggers, and if economic conditions remain favorable, new methods will be developed and this type of work will be extended generally over the region.

On forest properties which have been under extensive management for several years, a major activity during the next decade will be the revision and intensification of management plans and the formulation of realistic cutting budgets.

So far we have been discussing opportunities for foresters in this region from the standpoint of the future outlook for the profession as a whole with some comment as to the general type of work that foresters have been doing and may expect to do. However, the forestry graduate about to begin his professional career will probably say, "This sounds fine, but how do I get in on it? Where do I begin?"

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Ten years ago the answers to these questions were oft times rather discouraging. There were relatively few openings in the forestry staffs of private companies. Labor in general was plentiful, jobs were scarce and foresters found it difficult to compete at the employment agencies with the ready supply of skilled and experienced woodsmen.

Fortunately the situation is much more favorable for foresters today. The forestry organizations which have been maintained by the various operating companies for several years will use a few men each year for replacements and additions to their crews. Each year more land owners are hiring foresters to analyze their holdings and make recommendations as to the best manner of handling the land. A number of forestry consulting firms have been established during the past few years and these agencies represent an additional source of employment.

However, for the forester who plans a career in industrial forestry it is generally conceded by many foresters now working in the region that the greatest field of opportunity lies in the logging industry itself. The forester who aspires to a position of responsibility in industrial forestry needs more than a superficial knowledge of the silvicultural and economic problems and prospects of the region; a somewhat more intimate knowledge than can be gained from "formal education" as to the mechanics of logging, fire protection and utilization.

The end products of industrial forestry are saw logs, peelers, pulp wood, poles, piling and lesser products. For the industrial forester there is no substitute for a sound working knowledge of grades, measurements, defects, markets and prices of these commodities.

Today the opportunity is unexcelled for foresters to serve a professional internship in the woods. While many jobs are open only to skilled men, alert and ablebodied beginners find it relatively easy to move from the unskilled to the skilled jobs. One can work at a variety of jobs in the rigging crews and learn first hand some of the problems of logging with skidders, high leads, and tractors in different timber types and under varying topographic conditions. Theoretical aspects of logging engineering, utilization and economics rapidly take on a practical hue when viewed from the business end of a choker.

It is somewhat more difficult for an inexperienced man to break in on timber falling and bucking. However, opportunities arise from time to time for individuals with some aptitude for this type of work to team up with an experienced partner with good results. One cannot fall and buck timber for any length

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of time without coming face to face with the practical side of pathology, mensuration, utilization and ecology.

It is impossible to foretell how long this opportunity to move about more or less freely from job to job in the logging industry will exist, but while it does last it should be given serious consideration by the forester who is looking toward a career in private industry. There is no question but that the forester who rounds out his formal education with a year or two of logging experience will find that his opportunities have been considerably broadened and that he will have gained a strong competitive position among his fellow foresters for professional forestry employment. More and more it is becoming the practice to hire foresters who have had practical experience in one or more phases of logging.

Our discussion so far has dealt largely with the forest management phase of forestry; however, at the present time, the manufacturing end of the industry offers the same favorable opportunities for employment. The demand for men varies locally and fluctuates from time to time, but generally speaking jobs are available in the pulp and paper mills, sawmills, and plywood plants throughout the region. The type of employment ranges from common labor to semi-skilled and skilled jobs and to a more limited extent laboratory research, and should provide practical experience to graduates who have specialized in wood technology, forest products, chemistry, and allied subjects. Some companies offer the further advantage of conducting schools for training employees in the technical and practical aspects of the industry.

However, the graduate of forest management who goes into the manufacturing end of the forest products industries will probably find that he is up against strong competition from mechanical and electrical engineers, chemists, and graduates of business administration and salesmanship. Here the graduate of forest management is by training, the visiting team on unfamiliar ground. On the other hand, when the graduate of forest management goes into the woods he is on his home field. His education and training for the job of managing a forest and producing timber crops is better than the training of any other group with whom he is competing.

One further point is important and is overlooked frequently enough to demand attention here. When a forester selects the region in which he desires to work and further chooses the particular field of forestry that appeals to him he is, at the same time, selecting the conditions under which he, his wife, and his family are going to live for a considerable number of years.

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Excepting the city of Portland, Oregon, which quietly boasts of having several million feet of virgin timber within the city limits, the timber and the forest land of this region are at some considerable distance from town. In the pursuit of his duties the forester is invariably required to spend much of his time away from home and family, living in logging camps or camps of his own providing. His family, in order to remain as near as possible to his headquarters, must more often than not be prepared to live under conditions somewhat less modern than a steam heated apartment. While the mode of living of the forester and his family is not ideal, there are compensations for those who like the woods and who undertake a forestry career with full knowledge of what it will entail.

Today, there are over 13 million acres of commercial, coniferous forest land in private ownership in the Douglas fir region. Planning and providing protection for this area from fire, insects, and disease is a job for foresters. Development of the full timber growing capacity of this area is a task for foresters. Formation of sound management plans and realistic cutting budgets is certainly a function of foresters. Maintaining accurate dependable inventories of the constantly changing forest cover is a job for foresters.

No one can predict the number of foresters per acre that will be required to handle the many and varied tasks that go into the job of growing timber on these 13 million acres. However, it seems inevitable that the job will require many “general practitioner” type of foresters and, as time goes on, need for intensification of forestry measures will call for the services of more and more specialists in the various phases of technical forestry and allied fields.

There is a job to be done, a professional service to be rendered, and the rate of progress will depend as much upon the forestry profession as it will upon timber operations and owners of forest land.

Ames Forester