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Alaskan Forestry Opportunities

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A NY DEVELOPING frontier area is an area of unusual opportunity. It has been popular in recent years to emphasize frontiers of the mind. And certainly there are many frontiers of the mind. But there still remain areas that are physical and economic frontiers. And Alaska is one of them. In a unique way, it is a forestry frontier.

Do you like to hunt? Or fish? I mean hunt — in areas where the bag limit may be three deer some seasons. Or where, with some persistence, you can do the unusual, like a moose hunt, or a hunt for Alaska brown bear, or mountain goat. And the fishing is just as unique. Do you prefer 15 pound salmon, or 50 pound? Or would you like to get into a remote lake where once in a while you can pull out a trout with every second or third cast. If this sort of weekend sport seems alluring, you should be interested in finding out about forestry work in Alaska.

Narrow passages, tidal currents, and tricky navigating by small boat require foresters to develop a new set of skills to work in Southeast Alaska. This is Sergius Narrows, off the coast of Prince of Whales Island.
Typical stand of Sitka spruce and western hemlock pulp timber. Timber like this, cut under 50 year timber sale contracts offered by the U. S. Forest Service, is the raw material around which a new Alaska pulp industry is building.

But that is just one facet of Alaska. The forestry job in Alaska is opening up now, just really getting a good start. Men who go to Alaska any time in the next 10 years will be getting in on the ground floor in the development of forestry and forest industry in what is almost a brand new region. There is no other place in the United States where foresters, or people interested in forest industry, may do that.

First, though, let me give a quick background description of the Territory of Alaska. It is big. You could comfortably fit half a dozen mid-west states into its land area. There are differences in climate, in vegetation, and in living conditions from one part of Alaska to another. You hear of midnight sun in summer and 24-hour nights in the winter. That is true for part of Alaska. You hear of sled dogs and Eskimos, and primitive living conditions. That also is true, for part of Alaska. And you hear of bustling cities, of paved new highways, and of extensive military construction all over the territory. That is also true, and also for part of Alaska. One cannot adequately describe the climate and people of the United States in a single paragraph because there is so much variation. For precisely the same reason, one cannot describe the climate and people of Alaska in a single paragraph.

For purposes of discussing forestry, let us divide Alaska, as the Alaskans do, into southeast Alaska and the "interior." Southeast Alaska constitutes the panhandle. The "interior" is the rest of Alaska, except that term does not usually include the Aleutian Peninsula and islands, nor does it include the Arctic slope. The forestry problems and opportunities differ markedly between southeast Alaska and the interior.

Southeast Alaska is correctly described as an archipelago. As you fly to Juneau, you get the impression of extensive, bare mountain tops, many islands, fairly narrow waterways, and uneven patches of timber, mostly nestled fairly close to the water’s edge. Three of southeast Alaska’s communities are on the mainland. The others are on islands. All of them are on salt water. Consequently the water, and means of getting around on it, or over it, comprise a main aspect of life in southeastern Alaska.

Most of the timber grows close to water, below elevations of 1200 feet to 1500 feet. Of the over 80 billion board feet within the Tongass National Forest, which covers much of Alaska’s panhandle, it is thought that three-fourths or more lies within two miles of salt water. Construction of main roads is, therefore, not a serious problem for the forester. He has, instead, to
learn how to get around on the water in all seasons of the year.

The timber species which grow in southeastern Alaska consist of western hemlock, Sitka spruce, and two cedars, western red and Alaska-yellow. Hemlock and Sitka spruce are excellent pulping species, being suitable for processing by several different pulping methods. These species in Alaska have not heretofore supported a large sawmilling industry because the stands are very overmature, and defect is extensive. However, individual trees here and there in the stands are of sawlog or veneer quality. For these reasons, an extensive forest industry in southeast Alaska must be based on pulp mills that can operate successfully on timber too poor for sawmilling. Once pulp operations are under way, there is room for some more sawmilling and plywood production.

The period from 1951 to 1957 has seen a pulp industry come to Alaska. During that period, the U. S. Forest Service has committed 4 large blocks of timber on long-term sales under contract conditions that require the purchasers to build pulp mills in Alaska. These are all fifty year sales, and comprise the largest sales made anywhere by the Forest Service. The total volume of timber included is around 24 billion board feet. A 300 ton a day mill, built in Ketchikan between 1952 and 1954, has been in operation for over three years. During the late summer of 1957, work commenced on a mill of about the same size at Sitka, with start-up scheduled for 1959 or 1960. The two other timber sales contracts should result in mills near Juneau and Wrangell, with construction to start in the early 1960's.

The spruce-hemlock type must be clear cut in blocks to assure natural reproduction. Otherwise too many acres are lost to brush. Extensive clear cutting operations were not feasible until a market for pulp timber came into being within Alaska. Consequently, it has only been within the last 3 years or so that intensive management of parts of these timber stands has been possible.

Well, how does this set of circumstances bring about any forestry opportunities? New pulp mills are going in all over the country. What is so different or unique about new pulp mills in southeast Alaska?

Several things are unique. In other parts of the country where new pulp mills are being established, they simply follow a pattern in forest management that has already been developed by earlier operations. In southeast Alaska, pulp operations go back only to 1954. There are unsolved problems on all sides. There is an increasing amount of work to do as the Forest Service and these purchasers staff up to man the new operations. And as each successive new operation comes into being, there also comes into being a new and totally different economic situation in southeastern Alaska, one that never previously existed. So, people who go up there now, or in the next ten years, will be there at a time when a pattern for a new economic era in southeastern Alaska is being established.

What are some of the problems for foresters to work on? Do you know any other place where basic work is needed on a yield table for a major forest type on which a major forest industry will depend. Do you know any other place where work now under way in studies of second growth stands constitute virtually the first systematic gathering of research information on the second growth stands of the dominant forest type? Those are typical problems of a region at the very beginning of its technical forestry experience. There are similar basic problems in cutting area lay-out, planning logging, best ways to build roads, dependability of seed sources, control of wind throw, and the whole range of "what to do" problems associated with active, intensive forest management in a new area.

One of the especially interesting facets of forest management in southeast Alaska is the close relationship between the management of the forests and the flow of the short, swift streams where salmon spawn and on which a large salmon-fishing industry depends. The west coast salmon industry has had serious ups and downs. Just now the Alaskan fishing industry is in doldrums because of low fish numbers. It is human for people to look around for something that can be blamed. Some want to blame logging.

The Alaska Forest Research Center has had a salmon stream study going for nearly 10 years now, aimed at providing factual answers to guide both the fishing industry and the forest industry. Following a calibration period, the watersheds of two "test" salmon streams will be logged, and two "check" watersheds will remain intact. Accumulated information on stream flow, silt deposition, debris in streams, number of fish entering to spawn, etc. can be compared and differences traced to broad causes. This work, which is original research in a virgin area, is of tremendous significance and importance to the entire west coast area where there are streams into which fish go to spawn.

Answers need to be found for even such ordinary questions as "What is the best equipment to be used for logging?" Tractor logging has not worked well. Some of the stands are not dense enough to support the costs involved in donkey logging. So, what to do? Here, and on questions about roads and other improvements, are opportunities for engineers.

There are forest problems and developing opportunities in interior forests too. First in importance is fire protection. A handful of Bureau of Land Management employees are supposed to protect from fire over 200,000,000 acres of interior Alaska forests and wildlands. It is a nearly impossible charge. Fires have burned over millions and millions of acres, much of it in repeat burns, and much of it from man-caused fires.

We as a people in the United States long ago decided that we could not afford such laxness for the wildland resources of the continental United States. We can no more afford such laxness in Alaska.

The nationwide forest survey is being extended to
interior Alaska. The technical problems of how to make a forest survey in a remote land, which is unpopulated and largely unphotographed, is one of the most challenging problems to face forest survey people in many a year. So too, when the time comes, will be the job of organizing the information obtained by the forest survey to put it to best use for the development of the Territory and the benefit of the people of the United States.

There now are timber stands in interior Alaska of a size and composition such that they could support an efficient-sized unit of industry. Before that can be done, however, there are tough economic barriers that must be cracked on present high freight rates, on adverse wage differentials, and on high-cost transportation from the stump to a water shipping point.

Now, just a word about living conditions. Interior Alaska is the land with cold winters, long winter nights, warm dry summers, and long summer days. In southeastern Alaska, the climate and the absence of roads makes a difference. Southeastern Alaska is warmed by moist air blowing in from the Pacific, and consequently has fairly moderate temperatures but a good deal of rain. Precipitation at Juneau averages 80 inches in a year, Ketchikan 140. Some summers seem to be rainy most of the summer. People who live there get used to it, think little of it. But to people who come to southeastern Alaska from a dry climate, it takes a while to get used to the rain.

The towns of southeast Alaska are not interconnected by roads. That's because of the steep topography, and the impracticality of building bridges from one island to another. So, residents of southeast Alaska get around by airplane, or else by boat. Forest Service field men travel mostly by boat. Fifty-foot ranger boats are provided as part of the ordinary working equipment on every ranger district. People are very friendly. Living costs are higher than they are in the Pacific Northwest. Government employees receive a 25% living cost allowance for work in Alaska. Living costs in the major southeast Alaska communities, when compared with Seattle, Washington, run from 22% to about 30% higher. For the towns and cities of interior Alaska, living costs run somewhat higher.

Alaska is a land of great contrasts. There is frustration, and challenge. There is drudgery, and breathtaking beauty. For those who will make it so, there can be the thrill of real accomplishment. And for a forester, the next dozen years seem to hold a promise of an especially intriguing series of rewarding professional opportunities.

About the Author

A. W. Greeley received his B.S. degree in Forestry from the University of Washington and M.F. from the Yale School of Forestry. He has been employed by the U. S. Forest Service since graduation in 1935. Among his tours of duty with the Forest Service are included District Ranger, Project Timber sales Officer, and Assistant Supervisor on five different forests in Region 1; three years in the Division of Timber Management in the Forest Service; from 1947 to 1953, Assistant to the Director of the Pacific Northwest Forest and Range Experiment Station at Juneau, Alaska; and since November of 1956, Regional Forester of Region 9.

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