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SURVEYING NATURAL AREAS ON MAINE'S PUBLIC LANDS

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In 1973, Maine established a new resource management agency to care for three classes of land that had previously received only minimal management. These were a series of old institutional properties, the state-owned submerged lands, and the constitutional trust lands known as public reserved lands. While there are several systems of publicly owned parks, wildlife lands, and federal lands, the term public lands, as used in this paper, will refer only to the public reserved lands.

This paper describes a cooperative program of natural area inventories undertaken by the Bureau of Public Lands with the well-known Maine Critical Areas Program (Tyler, 1981). The objective of the inventories is to identify, prior to management planning where possible, significant geologic, cultural, ecological, and interpretive features of the major public land units.

The public lands total almost 400,000 acres. Knowledge of their natural features is limited for two reasons. Most importantly, 329,000 acres have come into state control in the last six years, as a result of a program of land exchanges that consolidated small scattered tracts into large ones.

The agency's time, and funds have been heavily committed to this land exchange program, as yet uncompleted, and to on-the-ground land management. A second problem has been the lack of published information on the natural history of most of these areas. Except in limited instances, these areas have not been thoroughly investigated.

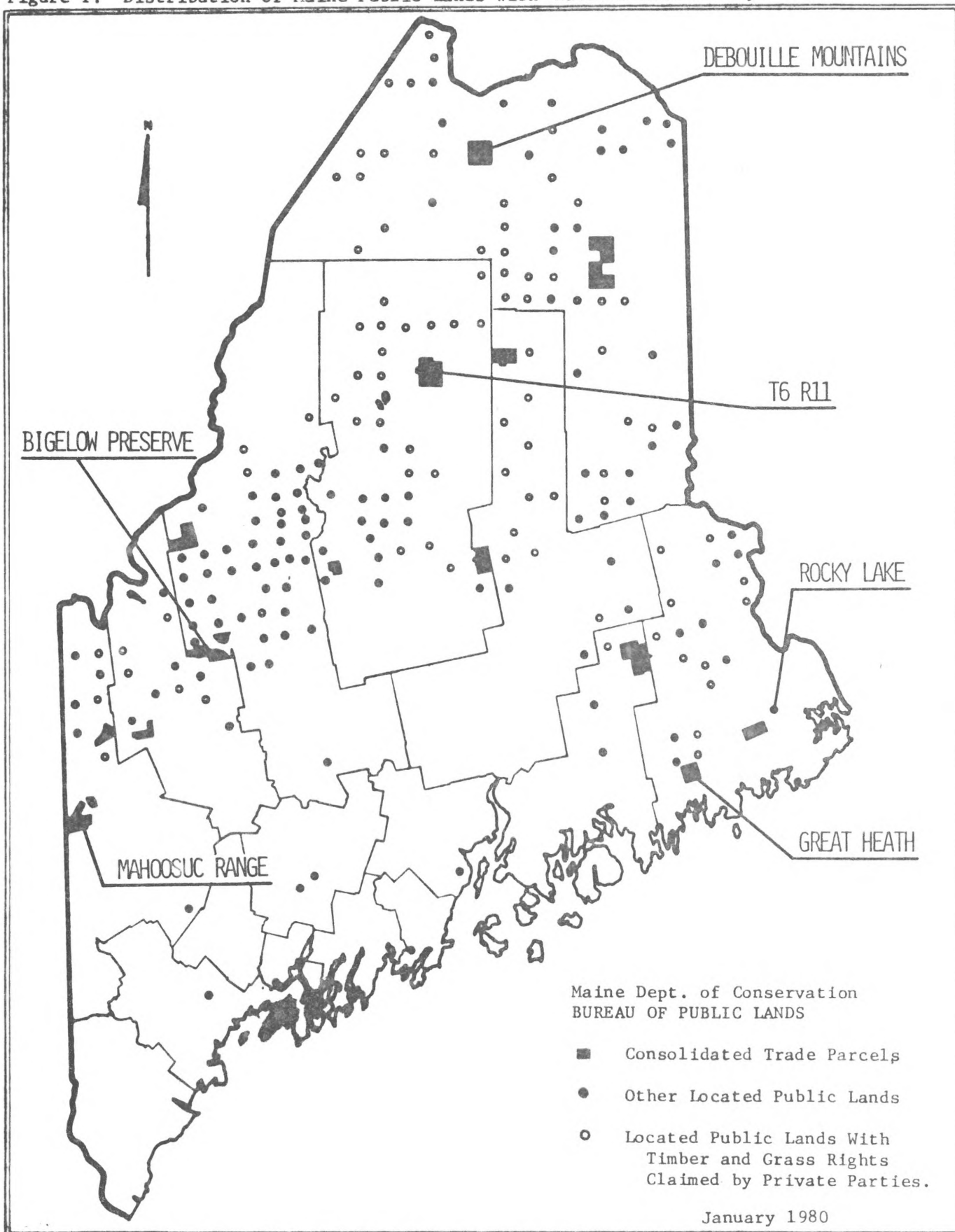
The Bureau of Public Lands is a dedicated revenue agency, subsisting on timber revenue and other income. To carry out a program of intensive forestry, dispersed recreation, and wildlife management will require a cost-effective program generating a high level of revenue. These are intended to be working forests. Because of their public ownership, the management is to be highly sensitive to ecological, aesthetic, wildlife, and other nontimber values.

The Bureau currently manages 15 major tracts, larger than 2,000 acres. Acquired in past land trades, these include forest lands surrounding major scenic features, some of extremely high ecologic interest (Table 1).

The largest tract is the Bigelow Preserve, which will be about 35,000 acres when acquisition is complete. The mountain ridgeline reaches well above timberline and carries an important portion of the Appalachian Trail. A natural areas inventory of this tract revealed several features of ecological, cultural, and interpretive significance, which will be considered as the Bureau develops its timber management plan for the area. The Bureau's plans are subject to overall policy guidance adopted by the Commissioners of Conservation and Inland Fisheries and Wildlife. In 1980 the Bureau's botanist and a Critical Areas Program (CAP) geologist carried out the inventory of the Bigelow Preserve, and areas in Washington County and Aroostook County (Figure 1).

*From 1979 to 1981, Irland was Director, Maine Bureau of Public Lands.

Figure 1. Distribution of Maine Public Lands with Natural Area Surveys



The existence of an established and operating natural area inventory program, the CAP, enabled the Bureau to quickly and efficiently start up and complete natural area inventories of recently acquired state land. The CAP's knowledge of the state's naturalists, its compilation of 70 reports, 60 botanical fact sheets, and rare plant list provided a firm data base. Further, the previous identification and documentation of over 700 significant natural areas provided benchmarks throughout the state that enabled the inventories to compare areas located on Bureau land to other known areas.

The CAP staff had gained experience in supervising natural areas inventories through years of voluntary experience in helping the Maine Chapter of The Nature Conservancy conduct natural resource inventories on its 60 preserves in Maine. The CAP's data base and published reports had greatly assisted TNC's inventory efforts.

The working relationship that the CAP had established with a variety of key natural resource person's enabled a rapid start-up time and gained assistance from a variety of individuals. The Bureau contracted directly with Dr. William Drury of the College of the Atlantic for a botanical survey of Maine's largest peat-land, the Great Heath, located in eastern Maine in Washington County.

The Bureau lands include about 30 miles of the Appalachian Trail, making it a participant in the interagency planning process for the Trail (Sperling, 1981). With a grant from the Appalachian Mountain Club's Murphy Fund, the Bureau and the Critical Areas Program completed a brief ecological reconnaissance of the alpine zone of the Mahoosuc Range in Summer 1981. Also, during 1981, the CAP was able to easily complete a preliminary inventory of the Appalachian Trail in Maine in response to a request from the National Park Service (Tyler, 1981b). This inventory indicated the presence of eight candidate critical areas, in addition to four National Natural Landmarks and twelve registered critical areas.

The Bureau has developed a systematic program of forest inventories to support its management program (Irland, Hoar and Spivey, 1981). Based on these inventories, management plans are prepared which guide activities on each parcel or district for ten years. It is the Bureau's objective to complete plans for at least 250,000 acres by 1985. This will be a huge task.

To assure that its plans are based on a full view of an area's natural resources, the Bureau developed a cooperative effort with the Maine Critical Areas Program, a program of the State Planning Office. The effort began in spring 1980. The Bureau hired a botanist on its full-time staff, who has remained for two field seasons. The Critical Areas Program supplied field assistants, help from volunteer botanists, technical review and editorial assistance. Written reports will be available for the Bigelow Preserve, Mahoosuc Range, and the Great Heath.

To date, a number of significant finds have been located on Maine's public lands. These include a significant occurrence of a rare sandwort (*Arenaria rubella*, Debouille area), a fen (alkaline wetland, T6R11), a nationally threatened species of silverling (*Paranychia argyrocoma* var. *albimontana*, Mahoosuc), and an old growth spruce-fir stand (Bigelow). These features will be recognized in management plans. In time, we hope that a significant interpretive program will emerge. The Bureau has taken an initial step (Brown, 1980). The CAP has developed a series of successful and popular educational brochures on a variety of unusual and rare natural features in Maine. In 1980, the CAP produced an educational brochure on common wildflowers for Baxter State Park (Gawler and Tyler, 1981).

The experience gained by the joint CAP-Bureau inventory proved helpful in guiding a natural resource inventory to locate rare and unusual features within the 29,000 acre Scientific Forestry Management Area and within the 200,000 acre Baxter State Park (BSP). The CAP supervised the Baxter State Park funded inventory.

The State of Maine was able to quickly conduct efficient natural areas inventories of state owned land because of the existence of an established Critical Areas Program. Without the CAP's data base and knowledge of key resource people, the undertaking of the inventories would have been much more difficult. These inventories represent a very useful application of a state natural areas program and enhance the overall knowledge of Maine's natural history. We hope that this trend will continue to completely inventory the remaining state owned lands.

Table 1. Major Natural Area Surveys Undertaken on Maine Public Lands

Unit	Location	Acreage	Remarks
Bigelow Preserve (Dead R. + N1/2 Bigelow)	Western Maine	35,000	Highly significant alpine zone. Appalachian Trail.
Mahoosuc Range (Riley)	W. Maine, on New Hampshire line	20,000	Focus on Alpine zone. Funded by AMC.
Debouille (T15 Ra)	N. Maine	23,000	Mountains and ponds. Underbotanized.
Rocky Lake (18ED)	Eastern Maine	9,000	Headwaters of Machias River. Flatlands.
T6 R11	Northern Maine (adj. Baxter Park)	23,000	Headwaters of Allagash River.
Great Heath (T18MD)	Eastern Maine	3,000	Largest peat bog in state.

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