

AN ANALYSIS OF POTENTIAL SENSITIVE PLANT SPECIES FOR
LONG-TERM MONITORING IN GLACIER NATIONAL PARK

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Project Accomplishments

To date, we have accomplished several objectives. First, we met with Kim Keating at Glacier National Park last October to work out specific guidelines for submission of the data on plant species that we were gathering from the literature. Although no firm format for the database was decided upon, we did decide what kinds of information to begin collecting. This information included: name, common name and taxonomic status of the species, geographic range and origin, preferred habitat, life cycle, reproduction mode, etc.

After our initial meeting, we began collecting literature on plants known to be found in Glacier National Park. We identified several key studies describing the flora of the park and surrounding areas (Standley 1921, Kujit 1982, Lesica 1985), and began to collect information on the biology of these species. An example of this information for one species is included in Table 1.

In our search for literature on the biology of the relevant species, we identified a major database that contains a large amount of information (Dittberner and Olson 1983). The Plant Information Network (PIN) was established by the US Fish and Wildlife Service to provide baseline information on the life history and ecology of plants in the western United States that might be useful in planning and mitigation of resource development. This data base was compiled and operated several years by the Western Energy and Land Use Team, Fort Collins, Colorado.

We reported these developments to Kim Keating early in January. At that time he advised us that the management group was interested in changing the type of information to be contained in the park's database. We discussed the PIN with Kim, and he was quite interested. He asked us to pursue the availability of the data and status of the database. At this time we are attempting to locate the database and determine

Table 1. Biological information to be collected for plant species on Glacier National Park's potential sensitive plant species database.

Name: Epilobium latifolium Common name: Alpine
fireweed

<p>References: 1, 2, 3 Origin: native 1 Habit: forb 1 Life cycle: perennial 1 Reproduction: vegetative sexual 1 Sex type: perfect 3 Elevation: 7,000 ft. 1; 2000-2300 m 2; along streams at lower elevations 2 Geographic range: Alaska to Wash., Colo., S. Dak., Que. and Greenl., also in Eur. and Asia 2 Habitat: often found abundantly along streams at middle or even low latitudes 2 Park status: common above timberline 2 Biotic zone: CO₂ fixation: Trophic status: aut 1 Moisture regime: moist-wet 1 Mycorrhizal relationship: Nodule forming: Nitrogen fixing: Hayfever causing: Edible: yes 1 Weediness: non-weedy 1 Anthesis: July and August 3 Vegetation structure: Soils: Rocky slopes and rock slides 2 Optimum soil depth: Disturbance indicator: Potential biomass production: Growth on gentle slopes: Growth on moderate slopes:</p>	<p>Growth on moderate slopes: Growth on steep slopes: Erosion control potential: Establishment requirements: Short-term revegetation potential: Long-term revegetation potential: Cattle palatability: Sheep palatability: Horse palatability: Energy value: Protein value: Poisonous: Wildlife cover values: Wildlife food values:</p>
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whether it will be possible to port the relevant information from the PIN directly to Glacier's database facilities. If this is possible, we will be able to collect much more information than we would if we were collecting the data directly from the literature. There are several factors that will be considered in making use of the PIN. First, it is unclear from the documentation that we have how well the information in the PIN has been documented (e.g., whether appropriate references have been included). Second, it is not clear what format the PIN data are stored in. It would be advantageous if the data from the PIN could be extracted without the use of special programs or hardware. Finally, it is not clear that the database is accessible. We anticipate working through these problems and using the information in the PIN as much as possible.

Future Plans

We plan to continue collecting information on plant species in anticipation of the Glacier Park personnel making final decisions on the database format. Once the format is decided upon, we will begin compiling the data collected. If it is feasible, we will port data from the PIN either directly to the park's computers, or at minimum use the hardcopy of PIN output to develop our own database. We anticipate completion of the database by August 1990.

Literature Cited

- Dittberner, P. L., M. R. Olson. 1983. The Plant Information Network (PIN) database: Colorado, Montana, North Dakota, Utah, and Wyoming. US Fish and Wildlife Service, FWS/OBS-83/86.
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