



Furbish Lousewort

Pedicularis furbishiae

Living on the edge

A northern plant with a strange name seems to love a challenge. It lives, quite literally, on the edge - the edge of a river that forms the border of Maine and New Brunswick, Canada. For only 140 miles of this one river, Furbish lousewort lives on the north-facing river banks, anchoring itself against spring floods and ice scouring. Only one species of bumblebee pollinates the plant, and it reproduces only by seed. Parasitic as a seedling, Furbish lousewort hooks into the roots of neighboring plants for nutrients. Discovered in 1880, declared extinct by 1975, and rediscovered in 1976, Furbish lousewort lives in the extreme.

What's in a name?

The genus name, *Pedicularis*, is derived from the Latin *pediculus*, meaning 'louse.' 'Wort' is from the Old English, *wyr*, meaning 'plant.' Old beliefs either had louseworts giving lice to people and cattle, or curing people and cattle of lice. In actuality, louseworts have as much to do with lice as snapdragons, their plant cousins, have to do with dragons.

Furbish lousewort was first identified in 1880 by Kate Furbish, a botanical artist and naturalist, and confirmed in 1882 by Sereno Watson, a Harvard University botanist who named the plant *Pedicularis furbishiae* in honor of its discoverer. Although the original common name of Furbish's wood betony sounds poetic, it was inaccurate. Furbish lousewort is a native of the New World, living only along the St. John River. Wood betony is an Old World plant much esteemed for its medicinal value. The only mutual element between the two is the common name of lousewort.

Northern exposure, river view

Furbish lousewort grows in the area of riverbank subject to natural disturbance - ice-scouring, spring flooding, undercutting, and slumping - caused by river movement. While most plants would not seek such a dynamic place to call home, Furbish lousewort relies on the

disturbance to carry away competing vegetation and to create new areas for lousewort seeds to grow. This strategy is risky, for the natural erosion that creates new habitat for the plant also causes occasional destruction of established lousewort populations. Ecologists term this lousewort a fugitive species, meaning that it tends to disappear unpredictably from one location and turn up in others.

Furbish lousewort prefers relatively steep, moist, north or northwest-facing slopes that are shaded for most of the day by a continuous canopy of forest trees higher up the riverbank. The plant's restriction to north- and west-facing banks may explain, in part, why it is more abundant in Maine than in New Brunswick. From its headwaters near the Quebec-Maine border, the St. John River flows generally east-northeast for its first hundred miles. This stretch of the river with more suitable habitat forms the limited range of Furbish lousewort.

Disturbance - not too much!

The St. John River valley, along with the rest of northeastern North America, was covered with ice during the last glacial age. After the glaciers receded about 12,000 years ago, Furbish lousewort colonized the river valley. Recent studies show that the various lousewort populations along the river are genetically uniform. The species likely became established there from one plant's seeds. This lack of genetic variation may well restrict this plant's adaptability and may be a factor in its ecological specialization.

Ironically, Furbish lousewort requires regular natural disturbance of habitat to thrive, yet it is threatened by human-made changes to its environment. It can withstand its soil being scoured out by ice moving on the river in spring, but it cannot survive the soil being covered by dumping; it can live with the river flooding, but not with the river bank being cleared of vegetation. Road building, housing development, careless



Irene Storks

recreational use of the shoreline all threaten the survival of Furbish lousewort, which is protected by both the U.S. Endangered Species Act and the Canadian Species at Risk Act.

Friends in need

The U.S. Fish and Wildlife Service joins several citizen groups, non-government organizations, and natural resource agencies of Canada, the province and the state to develop a recovery strategy for Furbish lousewort. Landowners and users of the St. John River valley can help support current future populations of the plant by maintaining the natural quality of the shoreline habitat. Volunteer task forces and landowner education programs contribute to Furbish lousewort conservation. People working together can help this Ice Age survivor safely through another epoch.

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