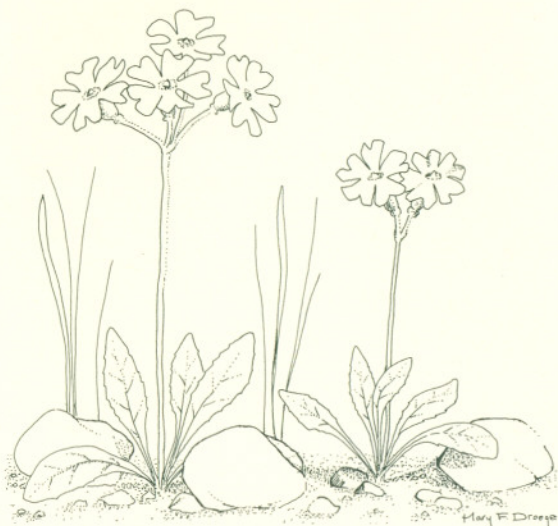


## History

In the summer of 1880, Kate Furbish, an adventurous botanist, traveled to the still wild St. John River to study its plant life. While exploring the riverbanks Miss Furbish found the lousewort and thinking perhaps it was an undiscovered species, sent a specimen to Dr. Sereno Watson of Harvard University. He verified it as a new species and named it in her honor. After an initial flurry of excitement over its discovery, interest gradually died down and "Miss Furbish's wood betony" (as it was originally called) was forgotten and assumed extinct. It wasn't rediscovered until 1976 when the U.S. Army Corp of Engineers hired Dr. Charles D. Richards of the University of Maine to search for rare plants that would be affected by the proposed Dickey-Lincoln dam. After an intensive search up and down the river turned up only eighteen populations, the U.S. Fish and Wildlife Service listed Furbish's lousewort as an endangered species. Since 1983 botanist Susan Gawler, and others, have been studying the lousewort's biology to better understand its conservation needs.



*Bird's-eye primrose*

## Conservation

It is hard for anyone to believe that a flower right in their own backyard is famous across the whole country. The lousewort is valued not because of its great beauty but because of its rarity and the mystery of its living here and nowhere else. It is a unique part of the St. John Valley's heritage.

Conservation of the lousewort depends upon the cooperation of those who own and use the riverbanks. Contrary to what some people think, the natural destruction of individual plants through ice scouring does not threaten the species. What does threaten the lousewort is permanent alteration of the riverbank habitat, specifically clearing the trees right to the river's edge. Recent studies suggest that conservation of the lousewort can go hand-in-hand with human activities. Home building, logging, and farming are not damaging as long as enough tall trees are left at the top of the bank to shade and stabilize it. Fishing and swimming won't harm the lousewort either, as long as the steep parts of the bank where they grow are left alone.

The people of the St. John Valley play a crucial role in conserving this plant. Only with your understanding can Furbish's lousewort — the St. John Valley's very own flower — be assured of a bright future.

This brochure was written by Mary Droege with technical assistance from Susan Gawler. Design and drawings by Mary Droege. Photos by Hank Tyler, Fred Bavendam & Susan Gawler. Funding was provided by U.S. Fish and Wildlife Service and the Maine State Planning Office.

**Maine Natural Areas Program  
Department of Economic &  
Community Development  
State House Station #130  
Augusta, Maine 04333**

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## Furbish's Lousewort

the St. John River



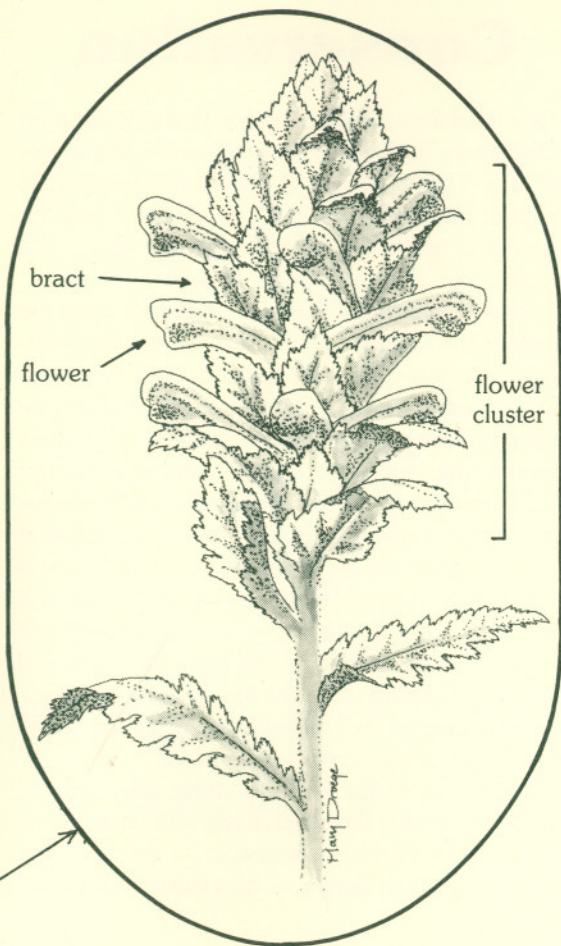
Executive Department  
Maine State Planning Office  
Critical Areas Program



# Introduction

Did you know that the St. John River has its own special flower, found nowhere else in the whole world? It does . . . a flower with the unlikely name of Furbish's lousewort (*Pedicularis furbishiae*).

The lousewort grows on the sloping riverbanks of the St. John River. In the spring, when the river is free of ice, the lousewort grows a cluster of leaves. The leaves are four to seven inches long, lined with a silvery edge, and fern-shaped (although not a fern). Young plants stay as a leafy cluster all summer. Plants that are large enough produce a flowering stem. The stem ranges in height from one to three feet, changing from green to deep red in late summer. At the top of the stem are one or more clusters of yellow flowers (see illustration) that look like their cousins the snapdragons. The flowers bloom from mid-July through August and the tiny seeds, which mature by late September, are carried away by wind and water.

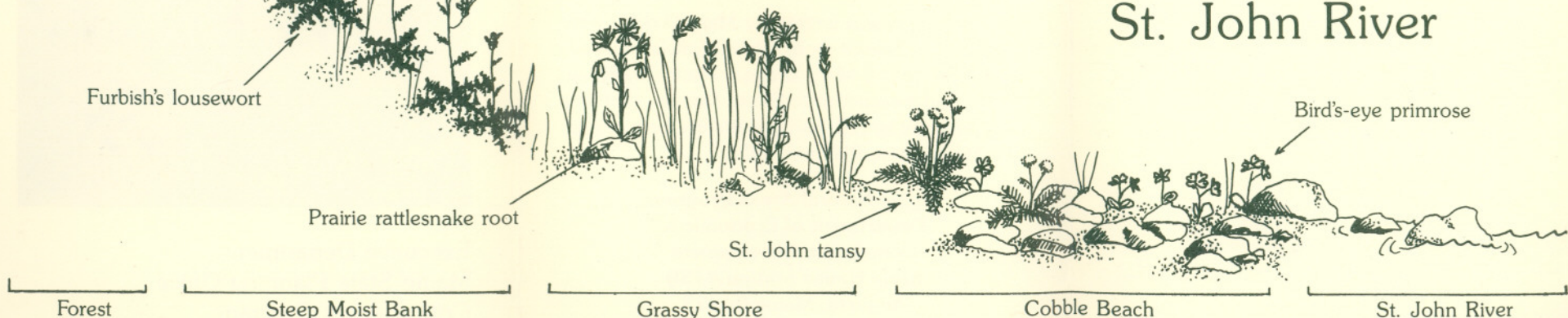


# Habitat

There is only a narrow band of riverbank in which louseworts can grow. Within this band conditions may vary but louseworts seem to favor steep, damp banks that are well shaded. They are never found in the spruce-fir forest, on the lower cobble beach or in areas where there is standing water. Most louseworts grow on north-facing riverbanks because the vegetation is less dense there. Shade provided by the forest canopy above is crucial. The lousewort shares its riverbank habitat with common roadside wildflowers such as asters and clover as well as rare plants such as northern painted cup and the St. John tansy.

The lousewort has chosen a dangerous place to grow. In spring, massive ice flows sometimes scour the banks. It is not uncommon for entire populations of louseworts to be wiped out in one spring ice-out. Yet ironically louseworts wouldn't survive without the ice. The river's ice scouring and spring flooding help ensure space for them to grow by keeping the banks free of trees and tall shrubs with which the lousewort can't compete. It is an uncertain life. As the riverbanks change louseworts must find new suitable habitat. As a result, their populations gradually shift up and down the river over the years.

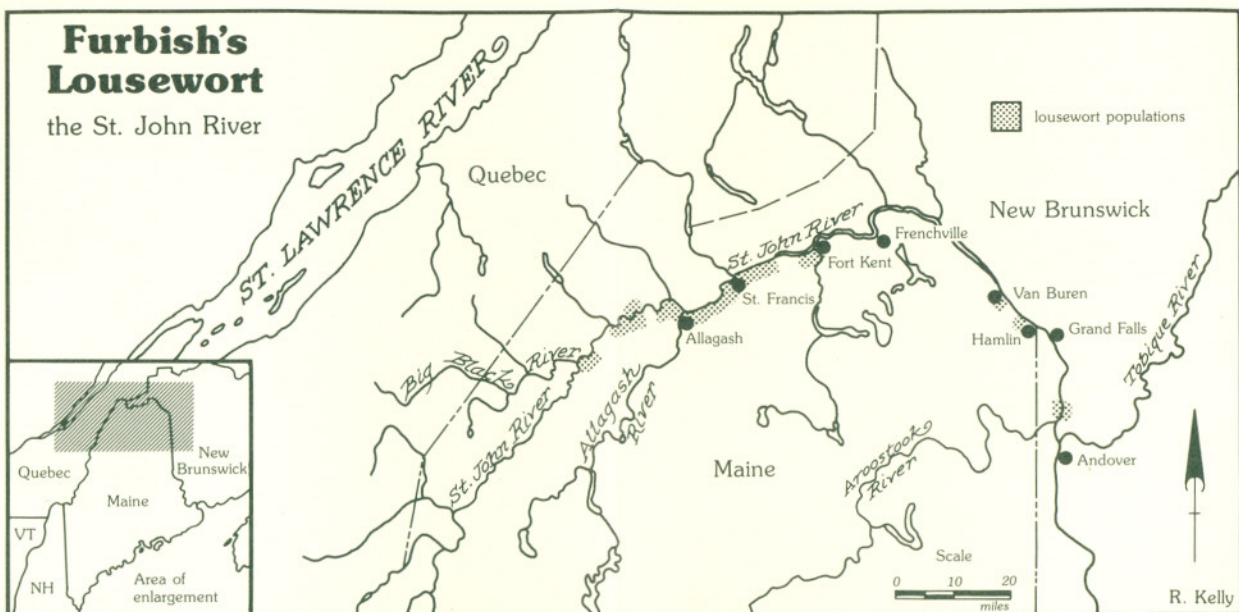
## The banks of the St. John River





## Furbish's Lousewort

the St. John River



## Location

The only place in the world Furbish's lousewort grows is on the banks of the St. John River in northern Maine and adjacent New Brunswick. It is currently known to occur from the confluence of the Big Black River in Maine to Andover, New Brunswick. The populations downriver are few and widely scattered; at least ninety five percent of the louseworts occur upriver of Fort Kent. The lousewort has been searched for with no success on nearby rivers such as the Big Black, Allagash and St. Francis. Why it only occurs on the St. John River is a bit of a mystery. Most likely the lousewort simply requires a very specific habitat or combination of riverbank conditions such as those found only on the St. John River.

## The St. John River Ecosystem

What makes the St. John River so unique?  
There are many reasons. The St. John River is

the longest free-flowing river in the northeastern U.S., covering 200 miles from its headwaters to the first dam at Grand Falls. Because there are no impoundments upriver, spring flooding still occurs. Also, unlike most Maine rivers, the St. John flows north. In the spring its headwaters usually thaw before more northern reaches of the river. When the thawed headwaters back up against the still frozen river, it creates severe pressures that often cause damaging ice flows and flooding. This, however, keeps the river banks open and spacious. In addition, calcium bearing rocks left by the glacier and now exposed by erosion, neutralize the acid soil creating an ideal habitat for many unusual plants. And the short, cool, moist summers mimic a subarctic climate. All these conditions combine to produce a unique river ecosystem where over thirty other rare plants grow.

There is no other place in the U.S. where this unusual combination of rare plants can be found. With the exception of Mount Katahdin, the banks of the St. John River support more rare plants than any other place in Maine. It is not just the lousewort, but the whole river ecosystem that is unique and irreplaceable.





*Grass-of-parnassus*

## Other rare plants

Many of the rare plants on the St. John typically grow further north in the Canadian subarctic or on mountain tops. Some are more common in other states or provinces, while others, such as the St. John tansy are rare wherever they grow.

Each of these plants grows only under very specific conditions or habitats. Some of them, like the St. John tansy, are found on the open cobble beach, flooded in winter, baked dry in summer. Others like the New England violet manage to survive in cracks of rock outcrops at the river's edge. There are also plants that favor wet, limy seeps such as the striking grass-of-parnassus with its five cream colored petals beautifully striped with green, or the bird's-eye primrose which brightens the shores with magenta flowers in early June. Prairie rattlesnake root, here far from the prairies, is found along the St. John in the grassy shore area which resembles a prairie habitat. It is the scarcity of these habitats that is often the cause for a plant's rarity. With fewer available places to grow, these plants are more sensitive to the destruction of their habitat than more common plants.



*St. John tansy*



*Prairie rattlesnake root*