

Hordeum jubatum

Foxtail Barley

by Kathy Lloyd
Montana Native Plant Society



Photo: Drake Barton

Hordeum jubatum (Foxtail Barley)

There are two specimens of foxtail barley (*Hordeum jubatum*) in the Lewis & Clark Herbarium today. One of them was collected in Montana and one at Fort Clatsop in Oregon. The Montana specimen was collected on July 12, 1806 on White Bear Island in the Missouri River near present-day Great Falls. Lewis and his party were on their way to explore the Marias River basin and stopped at White Bear Island on their way. Foxtail barley is not mentioned in Lewis's journal entry for that day, but the year before, on June 25 when the expedition was also at White Bear Island, Lewis says of this grass, "there is a species of wild rye which is now heading it rises to the height of 18 or 20 inches, the beard is remarkably fine and soft it is a very handsome grass; the culm is jointed and is in every respect the wild rye in miniature..." Frederick Pursh, the German botanist who annotated some of the Lewis and Clark plant specimens, wrote on the label, "Call'd the golden or Silken Rye. On the white bear Islands on the Missouri. Jul. 12th 1806." This

label is still on the specimen sheet at the Lewis & Clark Herbarium at the Academy of Natural Sciences in Philadelphia.

Foxtail barley is a native perennial bunchgrass in, believe it or not, the grass family (Poaceae). It is indigenous to the western United States but is now naturalized in the eastern U.S. and occurs throughout much of the country with the exception of the South Atlantic and Gulf Coast states. It also occurs throughout most of Canada and some areas of Mexico. The species is considered rare in Virginia. The grass is usually less than 32 inches tall and has flat blades and a hollow stem. It is distinctive because of the long, fine, bristle-like awns on the spikelets (the "fine and soft beard" referred to by Lewis), and the fact that three spikelets join together at a common point. *Jubatum* means crested, referring to the look of the plant. The roots are fibrous. Foxtail barley starts growth in April or May and flowers and sets seed from May until late July. Lewis must have seen it when seeds were developing and the grass was turning a beautiful, tawny, golden color.

Foxtail barley can be found in disturbed areas,

meadows, basins, and waste areas where soils are saline or alkaline. However, it also grows in non-salty soils but requires fairly moist conditions and cannot sustain itself during long dry periods. It is common along roadsides and in grain and hay fields, and is likely to be seen around sloughs, salt marshes and in overgrazed meadows.

Because foxtail barley grows in alkaline and saline areas, it may be used to help revegetate saline mine spoils and other disturbed sites. And since the grass is an aggressive colonizer of disturbed areas it may be a good choice for erosion control. The aggressive qualities of the grass may be desirable in some instances, but not in others. Foxtail barley produces many seeds that can be transported on the coats of animals, and it may end up in unexpected places.

Although Lewis was quite taken with the attractive appearance of foxtail barley, present-day grain and hay producers are less enthralled and it is sometimes considered a weed. Proper grazing techniques and management strategies can be used to reduce the presence of foxtail barley. And though many waterfowl species eat the seeds and occasionally the leaves, and it is utilized by big game and livestock before it flowers, the mature seed heads are very harmful to grazing animals, particularly deer, elk, and pronghorn. The sharp, pointed joints of the spike, each with several long, slender awns, can stick in the eyes, nose, gums and mouth of grazing animals, and cause infections, abscesses and even death.

American Indian tribes had several uses for foxtail barley. The dried and moistened root was applied as a compress for eye inflammation and the seeds were pounded into meal and eaten. Today, foxtail barley makes attractive dried flower arrangements and can be used in various craft projects.

When you are traveling about in Montana, you will probably see foxtail barley. Think of Meriwether Lewis and the amazing journey he undertook and the many plants that were new and intriguing to him and the western science of the day.



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