

Midwest Region

The USFWS on July 22, 1991, classified a mussel, the winged mapleleaf freshwater mussel (*Quadrula fragosa*), as endangered. This species is similar in general appearance to the mapleleaf mussel (*Quadrula quadrula*), which is still widespread throughout the central U.S., but there are differences in the shape of the shells. The two species also can be distinguished by their habitat needs; while *Q. fragosa* seems to prefer clean riffle areas, *Q. quadrula* can exploit impoundments and a muddy substrate.

The winged mapleleaf historically occurred throughout the Mississippi, Ohio, Tennessee, and Cumberland River drainages in at least 12 states. Approximately 99 percent of its habitat has been lost due to impoundments, channelization, pollution, and sedimentation resulting from soil erosion. The single known remaining population occurs along fewer than 5 miles of the St. Croix River within Saint Croix National Scenic Riverway on the Minnesota/Wisconsin border. This population's small size and restricted range makes it vulnerable to extinction from additional habitat degradation. Threats of a more indirect nature could include problems with the species of host fish (so far unknown) that the winged mapleleaf needs to parasitize during its larval stage.

An apparent lack of reproduction in the winged mapleleaf population is a concern. During surveys in 1988 and 1989, no gravid females were located, and no individuals younger than 4 years could be found. Other mussel species in the same area did not show such reproductive failures.