

# USACE Natural Resource Management

## Freshwater Mussels



### Texas Fatmucket, Pink Mucket, Neosho Mucket, Arkansas Fatmucket

**Texas Fatmucket (*Lampsilis bracteata*):** This species has a large, elongated shell that reaches a maximum length of 3.9 inches. Exterior shell color is tan to greenish-yellow with numerous irregular, wavy, and broad and narrow brown rays.

**Status:** Candidate

**NatureServe:** Critically Imperiled

**Pink Mucket (*Lampsilis abrupta*):** The pink mucket (pearlymussel) has an elliptical to quadrangular shell that is yellow-brown in color. The shell is smooth except for relatively dark, concentric growth marks and wide greenish rays. In older individuals the shell is dull, while younger mussels are glossy.

**Status:** Endangered, listed 1976

**NatureServe:** Critically Imperiled

**Neosho Mucket (*Lampsilis rafinesqueana*):** The Neosho mucket is a freshwater mussel that has an oblong or kidney-shaped shell ranging from 4 to 6 inches in length. Typically light brown in color, younger individuals may also display green hues.

**Status:** Endangered, listed 2013

**Nature Serve:** Critically Imperiled

**Arkansas Fatmucket (*Lampsilis powelli*):** Considered a medium-sized mussel, the Arkansas fatmucket can reach over four inches in length. The smooth exterior shell is shiny olive brown without rays.

**Status:** Threatened, listed 1990

**NatureServe:** Imperiled

G1  
Critically  
Imperiled

G1  
Critically  
Imperiled

G1  
Critically  
Imperiled

G2  
Imperiled

**Genus:** *Lampsilis*, a genus of freshwater mussels in the family Unionidae, consists of 32 species. Like many other freshwater mussels, species within this genus are threatened by changes in their habitat, pollution (especially nonpoint source pollution), sedimentation, possible competition with invasive species, and dewatering from natural causes and human use.

Photos L to R: Texas Fatmucket (USFWS), Pink Mucket (USFWS), Neosho Mucket (USFWS-iNaturalist), Arkansas Fatmucket (USFWS)

#### Management and Protection:

- Per the USFWS, the reduction in numbers and range of the Texas fatmucket is primarily the result of the long lasting effects of habitat alterations such as the effects of impoundments, sedimentation, dewatering, sand and gravel mining, and chemical contaminants. In a 12-month petition finding, the USFWS (2011) found listing this species to be warranted but precluded by higher priority actions.
- The pink mucket is found in mud and sand and in shallow riffles and shoals swept free of silt in major rivers and tributaries. This species will bury itself in sand or gravel, with only the edge of its shell and feeding siphons exposed. The construction of dams on the major rivers within its historical range has been possibly the greatest single factor in its decline.
- Critical habitat for the Neosho mucket has been designated in seven areas, and covers approximately 483 river miles in Arkansas, Kansas, Missouri and Oklahoma.
  - The Arkansas fatmucket recovery plan focuses on protecting remaining habitat, researching life history and environmental interactions, and attempting to re-establish historic habitats.



**USACE ROLE:** According to the Engineering Research and Development Center's Threatened and Endangered Species Team Cost Estimates, the USACE has expended over \$1,672,000 since 2006 on efforts related to the Arkansas fatmucket, Neosho mucket, and pink mucket (pearlymussel). Since the Texas fatmucket is a candidate species any expenditures related to the species are not yet tracked. The USACE Planning, Regulatory, Navigation, Hydropower, Environmental Stewardship, and Flood Risk Management programs have all incurred costs associated with inventory, survey, monitoring, and coordination efforts.



**Arkansas Fatmucket = \$15,080 (since 2009)**



**Neosho Mucket = \$118,554 (since 2014)**



**Pink Mucket (pearlymussel) = \$1,609,000 (since 2006)**

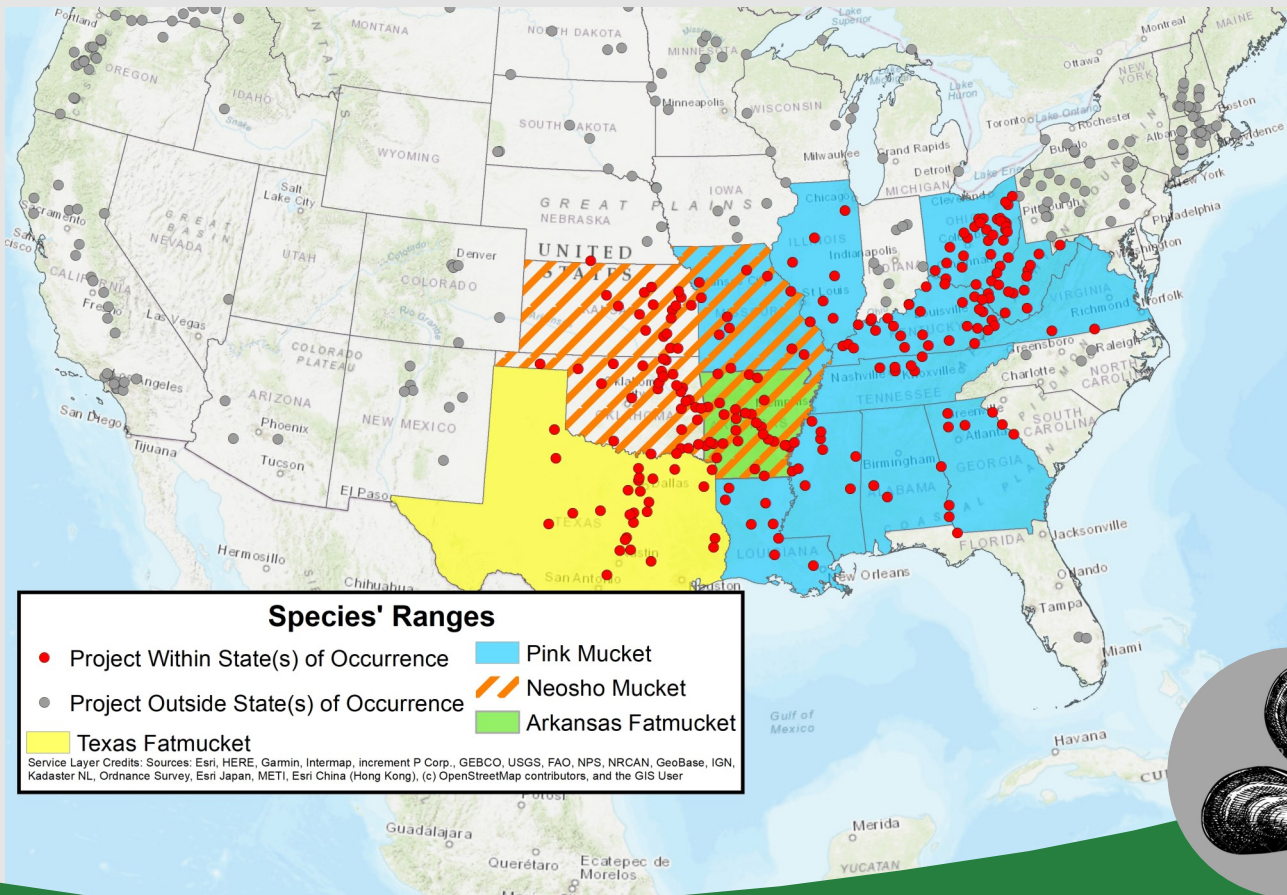


Projects such as Degray Lake, pictured above, note the potential for the occurrence of the Arkansas fatmucket.

There are likely no more than ten occurrences globally of the Arkansas fatmucket. In Arkansas, it occurs in Caddo River upstream and downstream of DeGray Lake, upper Ouachita River and South Fork Ouachita River upstream of Lake Ouachita, and the Alum, Middle, North and South forks of the Saline River. DeGray Lake, Vicksburg District, notes the potential for the species to occur. Degray Lake was constructed in 1972 on the Caddo River and spans 13,800 acres.

The pink mucket (pearlymussel) has potential occurrences at 15 projects with a natural resources management mission within the Nashville, Pittsburgh, Vicksburg, and Little Rock Districts.

*This fact sheet has been prepared as an unofficial publication of the U.S. Army Corps of Engineers (USACE). This online publication is produced to provide its readers information about best management practices related to special status species. Editorial views and opinions expressed are not necessarily those of the Department of the Army. Mention of specific vendors does not constitute endorsement by the Department of the Army or any element thereof.*



Source: Map provided by Ashleigh Boss, ORISE Fellowship, Institute for Water Resources



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