

USACE Natural Resource Management Freshwater Mussels



Inflated Heelsplitter & Fat Pocketbook

Inflated Heelsplitter (*Potamilus inflatus*): The inflated heelsplitter has a thin shell and ranges from compressed to moderately inflated. The overall shape of the shell is oval. The outer shell ranges in color from brown to black. Young individuals may have green rays. The nacre of this species ranges from pink to purple in color. The maximum shell length is about 5.5 inches. The posterior wing is prominent and may extend anterior to the beaks of young mussels. (USFWS)

Status: Threatened, listed 1990

Nature Serve: Critically Imperiled

Fat Pocketbook (*Potamilus capax*): The outer shell of this mussel is smooth. The base color of the outer shell is yellow but is frequently clouded with brown. The nacre is an iridescent, bluish white color. The anterior end of the shell is rounded, broad, and angular near the hinge. This species has a narrow, rounded posterior margin. This species is sometimes confused with *Lampsilis ovata*, but can be distinguished because *L. ovata* is shiny and lacks rays. (USFWS)

Status: Endangered, listed 1976

Nature Serve: Imperiled

G1

Critically
Imperiled

G2

Imperiled

Genus: *Potamilus* is a genus of freshwater mussels in the family *Unionidae*. The genus was widely referred to as *Proptera* in the 1950s and 1960's. However, in 1992 the Bulletin of Zoological Nomenclature recommended retention of the older name *Potamilus*. (NatureServe)

Photos Left to Right: Inflated Heelsplitter (USFWS), Fat Pocketbook (USFWS), Propagated fat pocketbooks tagged for reintroduction (USFWS)

Management and Protection:

- The USFWS listed the inflated heelsplitter as result of habitat degradation which caused further range restriction. At the time of listing, this species was known to occur in seven rivers. However, in 2000, it was only known to occur in three separate rivers. (USFWS)
- Some populations of the inflated heelsplitter continue to be threatened by sand and gravel mining, particularly the Amite River population. The species could be extirpated from the Amite River if sand and gravel mining continues to threaten stream channel stability. (USFWS)
- The primary causes of the fat pocketbook's decline are dredging and impoundments. (USFWS)
- The fat pocketbook was never common in its natural range; it has become increasingly rare as it has experienced large scale extirpations which have culminated in the loss of >70% of its range. (NatureServe)
 - Reintroduction efforts for the fat pocketbook have been unsuccessful. However, the core population in the St. Francis River system of Arkansas and the lower Wabash River of Indiana remain healthy. (NatureServe)



USACE ROLE: According to the Engineering Research and Development Center's Threatened and Endangered Species Team Cost Estimates, the USACE has expended over \$1,443,240 on efforts related to the inflated heelsplitter and fat pocketbook. Costs for these listed species have been incurred by multiple business lines including Environmental Stewardship, Flood Risk Management, Hydropower, Navigation, and Regulatory. Expense types include Site Visits and Inspections, Research, and Survey, Inventory, and Monitoring.



Inflated Heelsplitter = \$120,477 (2007)



Fat Pocketbook = \$1,322,763 (2006)

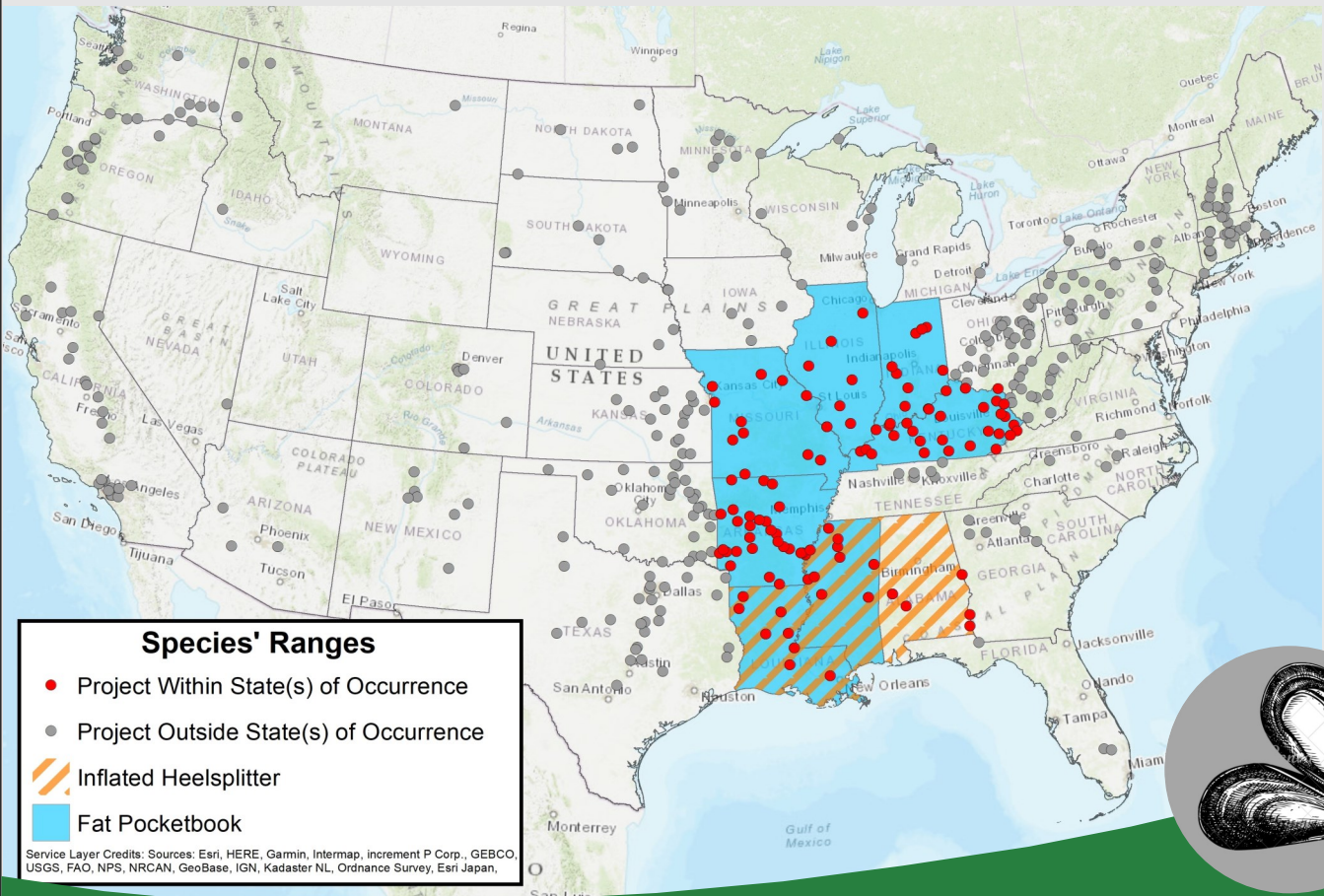
The Memphis District has a team of scientific divers experienced in qualitative and quantitative freshwater mussel surveys and aquatic habitat investigations. In 2016, four members of the dive team traveled to Demopolis, Alabama to conduct surveys for the inflated heelsplitter. These surveys were performed in two locations proposed for dredging. Some mussels were collected and turned over to the USFWS for further study.

In September of 2019, the team performed surveys in New Madrid County, Missouri looking for the fat pocketbook. Despite a robust mussel community, neither the fat pocketbook nor any other threatened or endangered species was located.



Photo: Memphis District Biologist Mike Thron conducting the 2019 survey.

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.



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

