

USACE Natural Resource Management Freshwater Mussels



Shinyrayed Pocketbook & Orangenacre Mucket

Shinyrayed Pocketbook (*Hamiota subangulata*): This is a mid-sized freshwater mussel that can grow as large as 3.3 inches. The shell is smooth and elliptical shaped. The shell is a yellowish-brown color and has green rays on the outer shell. The inner shell is white. The left valve of this species has two large teeth while the right valve has just one large, flattened tooth. (University of Georgia)

Status: Endangered, listed 1998

Nature Serve: Imperiled

Orangenacre Mucket (*Hamiota perovalis*): This is a medium sized mussel that can grow up to 3.5 inches in length. The outer shell may or may not have green rays and ranges from yellow to a dark, reddish brown base color. The inner shell can be orange, rose, pink, or occasionally, white. This mussel is moderately thick, inflated, and oval in shape. Mature females have an obliquely truncated posterior margin. (USFWS)

Status: Threatened, listed 1993

Nature Serve: Imperiled

G2

Imperiled

G2

Imperiled

Genus: First described in 2005, this genus of freshwater mussels consists of four species once assigned to the genus *Lampsilis*. Distinct traits of this genus include packaging of their larvae in a superconglutinate lure to attract host fishes, placement and shape of the marsupia, and the release of glochidia through the excurrent siphon. (Roe & Hartfield, 2005)

Photos Left to Right: shinyrayed pocketbook (USFWS), orangenacre mucket (USFWS), shinyrayed pocketbook (USFWS), & orangenacre mucket (MUSSEL Project)

Management and Protection:

- The shinyrayed pocketbook was listed by the USFWS due to significant habitat loss, range restriction, and population fragmentation. (USFWS)
- The shinyrayed pocketbook's population has been stable since 2007. As local populations have declined, new populations have been discovered. (USFWS)
- A Five-Year Review by USFWS in 2007 indicated that the shinyrayed pocketbook was undergoing range extensions, but not to a degree that warranted a change in status.
- Since listing, the orangenacre mucket has undergone a range expansion. However, the newly discovered populations are small and remain fragmented. (USFWS)
- The orangenacre mucket has been negatively impacted by habitat modification, sedimentation, eutrophication, and water quality degradation. (USFWS)
 - The USFWS designated critical habitat for the orangenacre mucket in 2004. This critical habitat includes 480 miles of currently occupied rivers in Mississippi and Alabama. Additionally, 136 miles of unoccupied river habitat was included in the designation.



USACE ROLE: According to the Engineering Research and Development Center's Threatened and Endangered Species Team Cost Estimates, the USACE has expended over \$51,000 on efforts related to the shinyrayed pocketbook and the oranegenacre mucket. Costs associated with these species have been incurred by multiple business lines including Environmental Stewardship and Regulatory on expenses such as Inventory, Survey, and Monitoring efforts, Research, and Coordination and Determination.



Shinyrayed Pocketbook = \$26,050 (2006)



Oranegenacre Mucket = \$25,326 (2005)

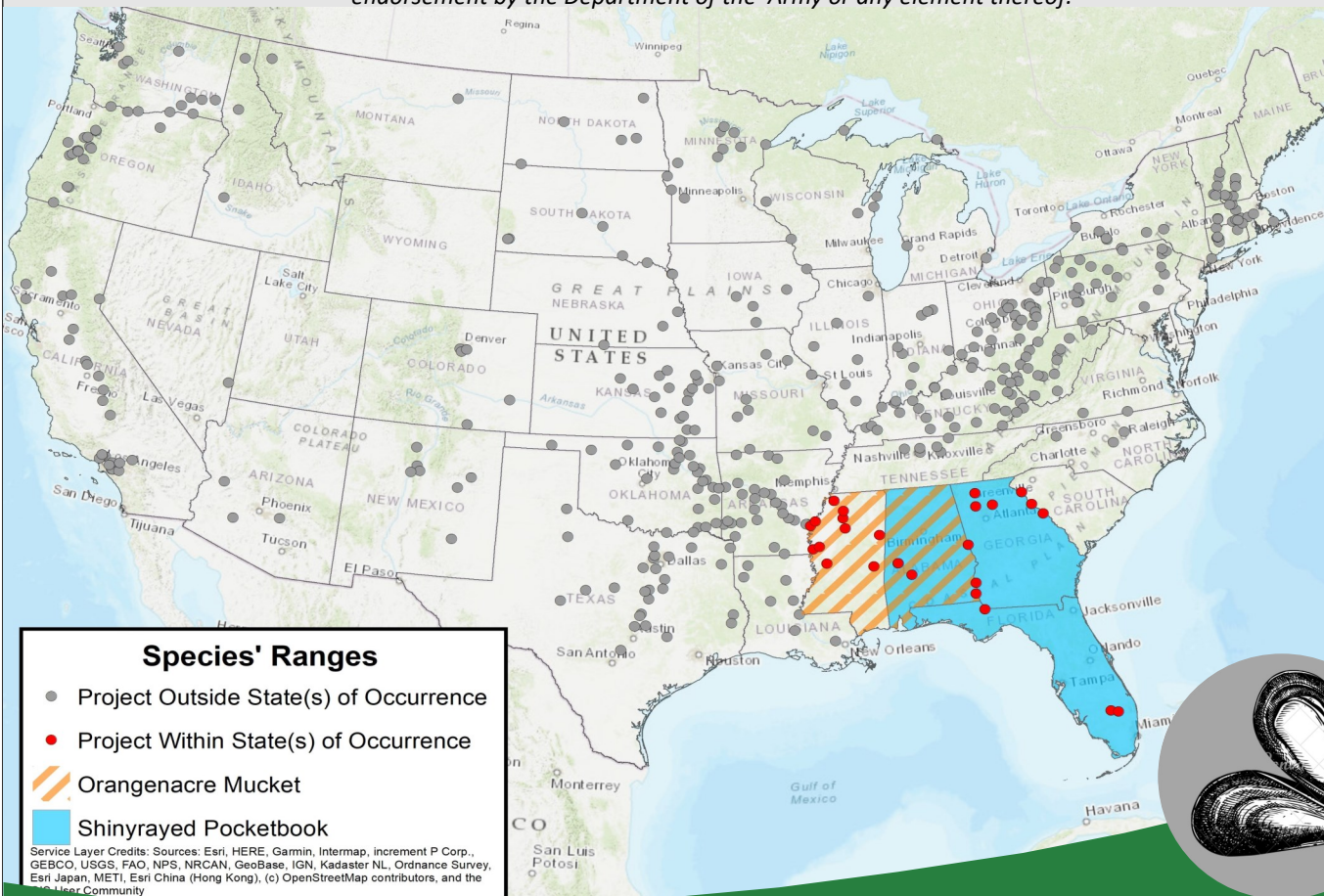
In the 2019 NRM Assessment, it is noted that the shinyrayed pocketbook is found at a single project within the South Atlantic Division. The Jim Woodruff Lock & Dam and Lake Seminole project is marked as having rare occurrences of the shinyrayed pocketbook.

The 2019 NRM Assessment indicates that the oranegenacre mucket is found at three projects within the South Atlantic Division. The Alabama River Lakes project is noted to have occasional occurrences of the species while both the Tennessee-Tombigbee Waterway project and wildlife mitigation area are marked as having rare occurrences of this mussel.



Photo: Lake Seminole has rare occurrences of the shinyrayed pocketbook.

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.



Species' Ranges

- Project Outside State(s) of Occurrence
- Project Within State(s) of Occurrence
- ▨ Oranegenacre Mucket
- Shinyrayed Pocketbook

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

