

USACE Natural Resource Management Freshwater Mussels



Cumberland Elktoe & Dwarf Wedgemussel

Cumberland Elktoe (*Alasmidonta atropurpurea*): This species of mussel has a thin, but strong shell. The outer shell of adults is smooth and has a somewhat shiny appearance. The outer shell is covered with rays which are greenish in color. Young specimens may have a yellowish-brown colored outer shell, but adults are typically darker. The inner shell ranges in color from white, bluish white, peach, or salmon and is shiny. (USFWS)

Status: Endangered, listed 1997

Nature Serve: Critically Imperiled

Dwarf Wedgemussel (*Alasmidonta heterodon*): This is small mussel which only rarely grows larger than 1.5 inches in length. The outer shell is brown or yellowish in color and has greenish rays in young or pale individuals. This species can be distinguished from other mussels because it is the only North American freshwater mussel that consistently has two lateral teeth on the right valve but only has one tooth on the left valve. (USFWS)

Status: Endangered, listed 1990

Nature Serve: Critically Imperiled

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Genus: The *Alasmidonta* genus consists of freshwater mussels in the family Unionidae. Like many genera of mussels, multiple species within *Alasmidonta* have declined in recent years and are considered to be in danger of extinction. (AMNH)

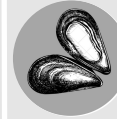
Photos Left to Right:
Cumberland elktoe (*Dick Biggins*), dwarf wedgemussel specimen (USFWS) dwarf wedgemussel in stream (USFWS)

Management and Protection:

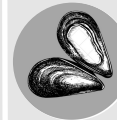
- Historically, the Cumberland elktoe had a relatively limited distribution. This already small distribution has been further reduced due to threats such as pollution from coal mine runoff and other sources and inundation for the creation of reservoirs. (NatureServe)
- Water withdrawals for various purposes including agricultural irrigation, industrial and municipal water supplies has had a negative impact on the Cumberland elktoe, especially the Big South Fork system populations. (USFWS)
- Dwarf wedgemussel populations declined drastically over the last 100 years. Once known to occur in 70 unique sites, by 1996 the species was found in only 25-30 sites. (NatureServe)
- The small size and extent of remaining dwarf wedgemussel populations make them highly vulnerable to extirpation. (USFWS)
 - The primary threats to the dwarf wedgemussel are pollution and impoundments. (NatureServe)
 - Both the Cumberland elktoe and the dwarf wedgemussel have been negatively impacted by invasive species including the Asian clam. (NatureServe)



USACE ROLE: According to the Engineering Research and Development Center's Threatened and Endangered Species Team Cost Estimates, the USACE has expended over \$294,000 on efforts related to the Cumberland elktoe and dwarf wedgemussel. The Environmental Stewardship, Flood Risk Management, Hydropower, Recreation, and Regulatory business lines have all incurred costs related to these species. Expense types included Coordination and Determination, Inventory, Survey, and Monitoring, and Research.



Cumberland Elktoe= \$48,327 (2005)



Dwarf Wedgemussel= \$246,130 (2006)

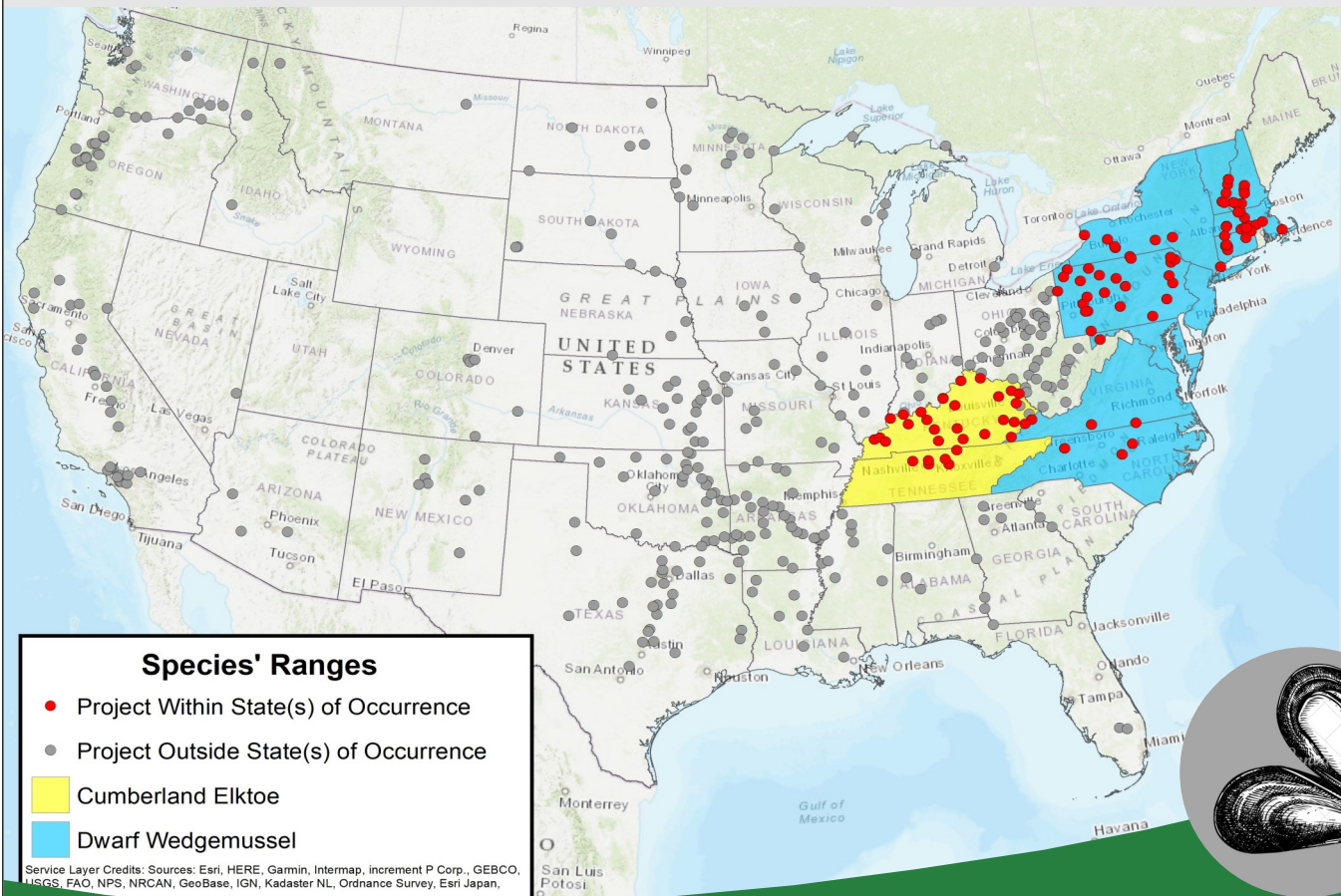
The Cumberland elktoe is listed only once in the 2019 NRM assessment. It is listed by a single project within Nashville district.

According to the 2019 NRM Assessment, twelve projects within the North Atlantic Division have the potential for the dwarf wedgemussel to occur on project lands. These projects span across the New England and the Philadelphia District. Cape Cod Canal, within the New England District, is marked as having rare occurrences of this mussel species.



Photo: Cape Cod Canal is known to have rare occurrences of dwarf wedgemussel.

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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