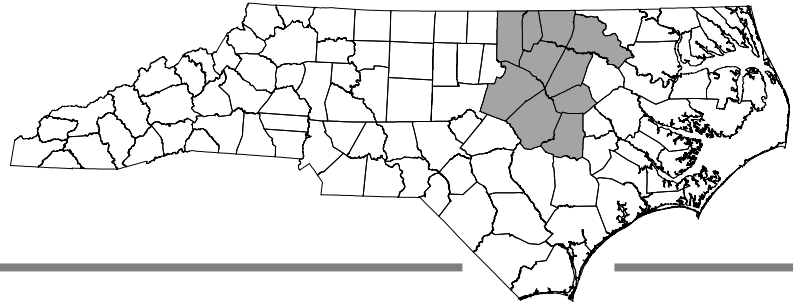

Dwarf wedgemussel

Alasmidonta heterodon

Endangered (March 14, 1990)



Description: The dwarf wedgemussel is a small bivalve, rarely exceeding 45 mm in length. Clean young shells are usually greenish-brown with green rays. As the animal ages, the shell color becomes obscured by diatoms or mineral deposits and appears black or brown. The shell is thin but does thicken somewhat with age, especially toward the anterior end. The anterior end is rounded while the posterior end is angular forming a point near the postero-ventral margin. The ventral margin is only slightly curved. The nacre is bluish-white, appearing whiter in the thicker anterior end. The most distinctive shell character of the dwarf wedgemussel is the arrangement of the lateral teeth. There are two lateral teeth in the right valve and one in the left valve. The typical arrangement for most freshwater mussel species consists of two lateral teeth in the left valve and one in the right valve. The incurrent and excurrent apertures and their associated papillae are usually white. The foot and other organs are also white.

Life History: Maximum age for the dwarf wedgemussel is around twelve years. The species is a bradyctytic breeder. Females become gravid in the early fall and glochidia are released by mid-spring. The tessellated darter (*Etheostoma olmstedi*), johnny darter (*Etheostoma nigrum*), and mottled sulpin (*Cottus bairdi*) have been identified as hosts for the dwarf wedgemussel. An anadromous fish may also serve as a host species but this has not been documented for the dwarf wedgemussel in the southern portion of its range.

Habitat: Inhabits creeks and rivers close to banks, under overhangs, and around submerged logs. Also known to live on firm substrate of sand, gravel, and muddy sand with a slow to moderate current. Requires clean water that is well-

oxygenated and nearly silt free.

Distribution: Atlantic slope rivers and creeks from New Brunswick, Canada to the Neuse River system, North Carolina. North Carolina supports the greatest number of known sites: Neuse River Basin: Orange County, Wake County, Johnston County, Wilson County, and Nash County; Tar River Basin: Person County, Granville County, Vance County, Franklin County, Warren County, Halifax County, and Nash County. Unfortunately, most of these populations are very small and isolated.

Threats: Construction of impoundments and pollution from industrial, agricultural, and domestic sources has degraded the habitat and water quality.

Management Recommendations: Preservation and restoration of high water quality and habitat. Vegetative buffer strips, conservation easements, and development of mussel sanctuaries are suggested recovery methods. Research of ecology and life history as well as identification of species of fish host(s) is needed.

Sources: Hall pers. com.; Mignogno pers. com.; USFWS 1990, 1994b., WRC website

Species identification key is available at www.ncwildlife.org. (Click on “Wildlife Species and Conservation” and then “Species” for Mussel atlas.)