

the natural distribution of *P. cereolus* is rather restricted geographically. It inhabits the Florida Keys and the rim of the peninsula (Pilsbry, 1940). Although the spread of *P. cereolus* may not be of economic or regulatory concern and no established colonies of *H. aspersa* are known to occur in Wisconsin, they well illustrate the dispersal of mollusks is a continuing problem.

Voucher specimens of both species are deposited in the University of Wisconsin-Stevens Point Museum of Natural History.

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THE INDIGENOUS DISTRIBUTION OF *ELLIPTIO COMPLANATA*
 IN OHIO: ARCHAEOLOGICAL EVIDENCE

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ABSTRACT

It generally has been concluded that extra-limital records of the freshwater mussel, Elliptio complanata, in Ohio resulted from species dispersal allowed by the nineteenth century construction of canals. Faunal remains from a prehistoric archaeological site suggest that an earlier mechanism of dispersal was in operation. The potential value of archaeological evidence for zoogeographical studies is stressed.

The freshwater mussel *Elliptio complanata* (Solander in Lightfoot) is distributed widely in the rivers of the Atlantic Seaboard of North America, in the rivers and lakes of the Great Lakes basin, and in a few rivers flowing into the extreme eastern portion of the Gulf of Mexico. It generally is excluded, however, from the Interior Basin of the Ohio and Mississippi Valleys (Matteson 1948; LaRocque 1967: 171-172).

In Ohio, *Elliptio complanata* has been reported from two localities: Grand River, Ashtabula County (Ortmann 1919: 103) and

Tuscarawas River, Tuscarawas County (Sterki 1907: 393). The Grand River is part of the Great Lakes drainage system; the Tuscarawas River is part of the Ohio River drainage system. The occurrence of the species in the Tuscarawas River, presently unconnected with other rivers from which *Elliptio complanata* is known, requires explanation.

Sterki (1907: 393) suggested that the species migrated to the Tuscarawas River from Lake Erie via the Ohio Canal. While recognizing the possibility of "a very complex and rather un-

likely introduction through drainage changes in the river system," LaRocque (1967: 172) favored the explanation of introduction through nineteenth century canals.

These interpretations of the meager evidence are hampered by limited time depth for distributional data. Molluscan remains from prehistoric archaeological sites, typically collected and identified during the course of archaeological research, can extend that time depth backward considerably.

The Anderson Village site (33-Wa-4) is located in Warren County, Ohio, on the banks of the Little Miami River, a tributary of the Ohio River. During the years around 1350 A.D., it was occupied by Indians of the Fort Ancient Culture. Excavation at the site by Patricia S. Essenpreis in 1976 disclosed a series of refuse pits ("features"), some of which contained several hundred freshwater bivalve shells, apparently the refuse remaining from human meals. These remains subsequently were analyzed and reported by Barber (1978).

The Anderson Village site produced 10 valves of *Elliptio complanata*, 2 from Feature 10 and 8 from Feature 11. Seven of the 10 valves were whole or nearly so and all included both hinge and umbo portions. Preservation of shell was good and the identifications were routine and certain.

These remains of *Elliptio complanata* might be explained in two ways. First, they might be claimed to have been imported from the Great Lakes drainage basin. The distance involved, however, is one of over 100 kilometers and successfully transporting a perishable foodstuff such a distance would have been impossible. The shells were found with domestic refuse indicating simple cooking; there was no evidence

of the use of shells for industrial or other purposes.

Second, the *Elliptio complanata* might have been living in the Little Miami River during the fourteenth century and might have been gathered locally. This explanation is consistent with present knowledge of human resource exploitation and is favored here.

The Anderson Village site remains, therefore, suggest that the Euro-American canals might not have been the mechanism of introduction of *Elliptio complanata* to the Ohio Valley, or at least not the earliest mechanism. Complex river system changes or even fortuitous transportation by mobile animals indeed may have been responsible.

Archaeologists long have sought the advice of zoologists in the interpretation of the faunal remains they encounter. Though largely untapped, archaeological remains form a data base which zoologists profitably could use, especially in zoogeographical studies. Hopefully the future will demonstrate the mutual benefit of increased information exchange between the disciplines.

Identification of the mussel was confirmed by Richard I. Johnson.

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