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IN WEST VIRGINIA

The Nautilus
1985
Vol. 99 (2-3)
Pages 84-87

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ABSTRACT

This report presents data collected in 1981 and 1984 on the mussels of the upper Potomac River located within the eastern panhandle of West Virginia. My data indicate that North Branch is devoid of mussels apparently as a result of extensive strip mining; South Branch has a small but healthy mussel population. The Cacapon River and Patterson Creek, tributaries to the Potomac, also have viable populations. Eight species of mussels were found in the Potomac headwaters. *Elliptio complanata*, *E. fisheriana* and *Lampsilis ventricosa* were fairly common and *Alasmidonta varicosa*, *A. undulata*, *Anodonta cataracta*, *Strophitus undulatus*, and *Lasmigona subviridis* were uncommon throughout the system. *Corbicula fluminea* was found throughout the drainage with the exception of North Branch.

The freshwater mussel fauna of the Potomac River headwaters is virtually unknown. Ortmann (1919) has done the only previous extensive collecting in the region, and that was completed around the turn of the twentieth century. He probably took a train to Romney, West Virginia, and then to Harpers Ferry to collect in the Potomac River over a distance that could be covered in a day's ride by buggy. All of his records are in the immediate area of these two towns. Johnson (1970) reported that Carol Stein did limited collecting at Harpers Ferry in the early sixties. I can find no evidence of other work having been done in the upper Potomac River.

The reasons for the paucity of work there include: very poor roads (until recently) into the area; a very difficult terrain to maneuver; and limited access to the river at any point.

Clarke (1981), Johnson (1970), and Ortmann (1919) all indicated a depauperate assemblage of mussels in this stream. My report does not dispel those findings. There are small populations present but they are widely spread and occur more often in the smaller tributaries than in the main trunk of the river. The only population of considerable size that I found was located at an area locally known as Pack Horse Ford, just downstream of Sheperdstown, West Virginia. All other areas reported herein represent small populations of no more than a couple of dozen specimens from any one site.

The Potomac River originates in the Potomac highlands in the eastern panhandle of West Virginia. The mainstem Potomac River then continues along the Maryland/West Virginia

border for Ca. 160 km to Harpers Ferry where it receives the Shenandoah River which has its headwaters in Virginia. I have not collected below Harpers Ferry. Two other major tributaries in West Virginia are the Cacapon River and Patterson Creek (Fig. 1).

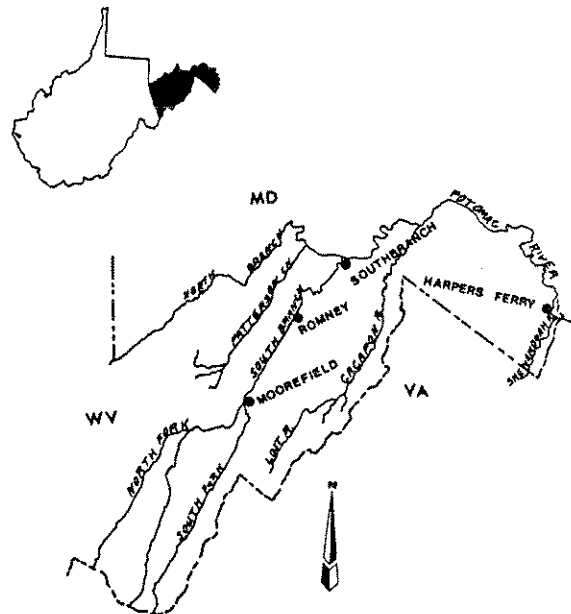


FIG. 1. Headwaters of the upper Potomac River.

Ortmann (1919) collected in the South Branch Potomac River at Romney and Southbranch and reported the following species: *Elliptio complanata* (Lightfoot, 1786), *Lasmigona subviridis* (Conrad, 1835), *Anodonta cataracta* Say, 1817, *Strophitus undulatus* (Say, 1817) and *Alasmidonta varicosa* (Lamarck, 1819). He also reported *E. complanata* and *A. varicosa* from

Species Accounts

Elliptio complanata: This species was the most commonly found species in the study area and was found at nearly every collection site.

Elliptio fisheriana: Johnson (1970) stated that this may simply represent a northern form of *Elliptio lanceolata*. *E. fisheriana* is, however, being recognized by the committee of the American Malacological Union which is currently preparing a list of generally accepted names for the naiads. While never found in abundance, it is widespread throughout the headwaters.

Lampsilis ventricosa: This species is normally an interior basin species. It was inadvertently introduced into the Atlantic drainage about the turn of the century. It has become well established and is quite common throughout much of the drainage. It has apparently replaced the resident species *Lampsilis cariosa* (Say, 1817) in the upper Potomac River. The Ohio State University Museum of Zoology has several specimens of *L. cariosa* from the lower Potomac but none from this reach (Stansbery, 1984, pers. comm.).

Alasmidonta varicosa: Apparently fairly common throughout the headwaters. Widespread throughout the Atlantic coastal drainages.

Alasmidonta undulata: This species is apparently quite rare here as only five specimens were found. Widespread throughout the Atlantic coastal drainages.

Anodonta cataracta: This species does not exhibit a widespread distribution in the head-

waters. It is typically found in larger, slower-flowing bodies of water. Only four specimens were found during this study.

Lasmigona subviridis: This small species may be more abundant than my collections indicate. It is a typical Atlantic coastal species and enjoys a widespread distribution in most of eastern North America. It has crossed the mountain barrier on at least one occasion and can be found in the New River system (a tributary of the Ohio River) of southern West Virginia. One specimen was found at each of three different collecting stations during this study.

Strophitus undulatus: This species is not common. Ortmann (1919) reported it only from South Branch at Romney. I found a single live specimen in Patterson Creek and a badly-weathered half shell in the Shenandoah River.

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