BROOK LAMPREYS  
(ICHTHYOMYZON FOSSOR AND LAMPETRA APPENDIX) IN THE WISCONSIN PORTION OF THE ILLINOIS RIVER DRAINAGE  

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The distribution of Wisconsin fishes has been recently detailed by Becker (1983), with additional work conducted by the Wisconsin Department of Natural Resources Fish Distribution Survey (Fago 1982, 1983). The purpose of this note is to provide new locality information for two species of nonparasitic brook lampreys in southeast Wisconsin. Both species were collected on April 25, 1982, in the Mukwanago River, a tributary to the Fox River in the upper Illinois River drainage.

Northern Brook Lamprey  

Two adult northern brook lampreys (Ichthyomyzon fossor) were captured with a seine at the County Road E crossing, just downstream from Eagle Spring Lake in Waukesha County (T-5-N, R-17-E, Sec. 36). The stream at this site was 3-5 meters wide and less than 1.5 meters deep throughout, with many shallower riffles. The bottom was variable with some gravel, boulders, and silt. Fantail darters (Etheostoma flabellare), banded darters (E. zonale), a common shiner (Notropis cornutus), and a hornyhead chub (Nocomis biguttatus) also were collected. Total lengths of the two lampreys after preservation were 131 and 132 mm. Both specimens were deposited in the fish collection of the University of Wisconsin Zoology Museum (UWZM #8266).

Northern brook lampreys have not been reported previously from the Illinois River drainage in Wisconsin (Becker 1983), although they were collected recently at one location in the adjacent Rock River drainage (Fago 1982). They also have been collected recently in the Kankakee River in the upper Illinois River drainage in Illinois, the only known locality for that state (Smith 1979). The upper Illinois River drainage may have been reached by direct dispersal up the Illinois River from the Mississippi River, since locality records in the lower Missouri River drainage (Rohde and Lanteigne-Courchene 1980) indicate that northern brook lampreys were present at one time near the mouth of the Illinois. Alternately, northern brook lampreys may have gained access to the upper Illinois River drainage through recent secondary connections, as postulated by Bailey (1954) for the brassy minnow (Hybognathus hankinsoni).

American Brook Lamprey  

American brook lampreys (Lampetra appendix) were collected at the County Road CP crossing in Waukesha County (T-5-N, R-18-E, Sec. 32). Several spawning aggregations of 8-10 individuals were observed in the early afternoon at a water temperature of 15.4°C and a depth of 26-40 cm. Bottom substrate was gravel and pebbles, and stream width was 8-10 meters. Other fish species collected were hornyhead chubs, blacknose shiners (Notropis heterolepis), fantail darters, banded darters, johnny darters (Etheostoma nigrum), and rock bass (Ambloplites rupestris). Three lampreys were deposited in the University of Wisconsin Zoology Museum (UWZM #8368).

American brook lampreys were not reported from the Wisconsin portion of the Illinois River drainage by Becker (1983), but they recently have been collected in this drainage by the Wisconsin Department of Natural Resources (D. Fago, personal...
communication). They also have been recorded in the Fox River drainage in Illinois and elsewhere in the Illinois River system (Smith 1979), and like the northern brook lamprey, have been recorded recently in the adjacent Rock River drainage in Wisconsin (Fago 1982).

**DISCUSSION**

Brook lampreys may be difficult to detect, even in heavily collected areas (e.g., see Trautman 1981, p. 149). For example, the southern brook lamprey (*Ichthyomyzon gagei*) only recently was discovered in the St. Croix River drainage in northwest Wisconsin (Cochran 1984). That *I. fssor* and *L. appendix* have not been recorded previously from the vicinity of the most densely populated area of Wisconsin is therefore not surprising. It is noteworthy, however, that both species have persisted in this region; populations of brook lampreys have declined near some urban areas (Eddy and Underhill 1974; Trautman 1981). Judging from recent collection records, the American brook lamprey is more common than the northern brook lamprey in southeastern Wisconsin.

Brook lampreys often are perceived negatively by the general public, perhaps through association with the sea lamprey (*Petromyzon marinus*) and other parasitic species. Unfortunately, misinformation in certain recent popular Wisconsin publications may serve to perpetuate this tendency. Vladykov (1973) provided ecological, economic, and ethical reasons for the conservation of this relatively vulnerable component of our ichthyofauna.

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**NOTE**

1 Smith (1977) found a “brook lamprey” in the Kickapoo River and stated that “...it attaches itself to living fishes and rasp their flesh. It also eats worms and insects.” Brook lampreys are not parasitic and no lamprey is known to prey on invertebrates. Also, in a recent newspaper review of Becker’s (1983) monograph, Elsner (1983) referred to “detested lampreys.” Half of Wisconsin’s lamprey species are nonparasitic and do not deserve such a reputation.

**LITERATURE CITED**


