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A MINNOW NEW TO THE MICHIGAN FAUNA.

BY T. L. HANKINSON.

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Over two hundred specimens of *Leuciscus carletoni* Kendall, a minnow not hitherto recorded from the state, were taken in different parts of Michigan in 1916. The species was described from specimens taken in Maine (Bull. U. S. Fish. Comm., XXII, 357-359), and the writer can find no other records of its occurrence, although Kendall states that it is doubtless widely distributed.

The minnow was found in 1916 in four stream systems, the Au Sable, Manistee, Molasses and White River, and a re-examination of the fish recorded from Houghton County by the writer in 1905 as *Couesius plumbeus* on the authority of Dr. S. E. Meek (Mich. Geol. and Biol. Surv., Pub. 20, Biol. Ser. 4), shows that they are also to be referred to *L. carletoni*.

*Leuciscus carletoni* and *Couesius plumbeus* resemble each other so closely as to be easily confused, particularly in the

absence of large series. The former differs from the latter chiefly in having the pharyngeal teeth usually 2, 4-5, 2 instead of 2, 4-4 2 and in having the barbel very small and frequently absent—sometimes present on one side and not on the other. Specimens of *Leuciscus carletoni* also resemble closely the horned dace, *Semotilus atromaculatus*, and this is probably one reason why it has been overlooked by students of Michigan fish. From *Semotilus* it may be readily distinguished by its more slender form, smaller mouth, finer scales on the anterior part of the body, and more posterior location of the dorsal fin. There is little chance of its being confused with the other *Leuciscus* common in Michigan (*L. neogaeus*) for it is less robust in form and tends to grow larger and has a better developed lateral line, at least in those already collected, and in having, in many cases, the maxillary barbel. In the last character it differs from other members of the genus *Leuciscus*, a fact that led the writer and Dr. Meek to wrongly assign it to the genus *Couesius*.

The writer is indebted to Dr. Henry W. Fowler, of the Academy of Natural Sciences of Philadelphia, for the identification of the specimens.