

## AN OCCURRENCE OF THREADFIN SHAD, *DOROSOMA PETENENSE*, IN THE ARKANSAS RIVER OF OKLAHOMA

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Threadfin shad, *Dorosoma petenense*, were first recorded from Oklahoma in May, 1953, by Miller (1). These fish were taken from the Red River below Denison Dam in Bryan County. Threadfin shad were then taken in abundance from Lake Texoma during the summer of 1957 (Riggs and Moore, 2). Riggs and Moore hypothesized that adult threadfin migrated into Texoma over Denison Dam spillway in the flood of 1957 or migrated into the Lake from a stock held at the U. S. Fish Cultural Station near Tishomingo.

The first threadfin shad taken from the Oklahoma portion of the Arkansas River drainage were four specimens captured approximately  $\frac{1}{4}$  mile below Robert S. Kerr Dam on August 8, 1970, by Oklahoma Department of Wildlife Conservation personnel conducting research on striped bass (D-J F-29-R-2) in Keystone Lake and the Lower Arkansas River. Average standard length of the four fish were 62.3 mm (range was from 58-65 mm). The following average meristic data were recorded: anal rays 22.8 (21-24), dorsal rays 14.3 (14-15), prepelvic scutes 15 and lateral scale count 32.8 (31-39). The specimens were entered into the University of Oklahoma Museum of Zoology (No. 40368).

Fish collections from the Oklahoma portion of the Arkansas River have been conducted each year since 1952 by Dr. H. Lindsey of Tulsa University (personal communications). He did not find threadfin shad in seine collections during this period. Collections made during preimpoundment studies of Keystone Reservoir by Linton (3) and Eufaula Reservoir by Lindsey and

Houser (unpublished) did not contain threadfin shad.

Stockings of threadfin shad have been made in several Oklahoma lakes in the Arkansas River drainage by the Oklahoma Department of Wildlife Conservation. Greenleaf, Tenkiller, and Spavinaw reservoirs received introductions of threadfin shad in 1961, but these stockings were unsuccessful. Threadfin were introduced into lakes Eucha and Spavinaw in 1970 by the City of Tulsa (Sam Jackson, personal communication), and these stockings were partially successful. Although there is a remote possibility that the four specimens of threadfin shad originated from these introductions, the most plausible explanation for the presence of threadfin shad in the Arkansas River is an upstream migration from Dardanelle Reservoir, Arkansas. Collection, in 1970, by Arkansas Game and Fish personnel indicated that threadfin shad introduced into Dardanelle Reservoir in 1965 had moved upstream into Ozark Reservoir (Bill Keith, personal communication). Migration from Ozark Reservoir to the Robert S. Kerr tailwater was physically possible during 1970. With the creation of the Arkansas River lock and dam system, threadfin shad may extend successfully into this section of Oklahoma.

### REFERENCES

1. D. R. MILLER, Proc. Okla. Acad. Sci. 34: 33-34 (1953).
2. C. D. RIGGS and G. A. MOORE, Proc. Okla. Acad. Sci. 38: 64-67 (1957).
3. T. L. LINTON, *A study of fishes of the Arkansas and Cimarron Rivers in the area of the proposed Keystone Reservoir*, Okla. Fish. Res. Lab., Rept. No. 81, 1961.