

## Live Bait Imports: *Chrosomus eos* and *Eucalia inconstans* as Potential Additions to Oklahoma's Fish Fauna\*

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In recent years the common usage of live bait-fishes has caused increasing concern among fishery workers. This has been especially true in Oklahoma. Not only have certain fishes had their distribution extended within the state, but fishes normally exotic to Oklahoma have been introduced and established by this procedure.

Hall (1) listed fourteen fish species known or presumed to have been introduced into Oklahoma. The presence and current distribution of five of the above species may possibly be attributed to introductions as bait fishes. One of these, the banded tetra, *Astyanax fasciatus* (Cuvier), was reported as a probable bait introduction (Riggs, 2). This probability was substantiated by Hall (1). It is the purpose of this paper to report two additional exotic fishes which are presently being imported as bait species and to consider the possibilities of their becoming established in Oklahoma.

On May 13, 1956, six brook sticklebacks, *Eucalia inconstans* (Kirtland) and four northern redbelly dace, *Chrosomus eos* Cope, were collected from minnow vats at the Snug Harbor Fishing Resort, Ft. Gibson Reservoir, Wagoner County, Oklahoma. The proprietor at this resort informed me that his live bait was purchased from Mr. W. G. McGimpsey of Langley, Oklahoma. Mr. McGimsey was reported to be importing live bait from Minnesota. These two exotic species were taken from vats which contained several thousand fathead minnows, *Pimephales promelas* Rafinesque. The stickleback and dace were probably taken with the fatheads and, therefore, were imported accidentally. The identification of these exotics was later verified by Dr. George A. Moore of Oklahoma Agricultural and Mechanical College.

On June 7, 1956, five additional brook sticklebacks were collected from the Poindexter Bait Shop, Ft. Gibson Reservoir, Wagoner County, Oklahoma. These fish were again found occurring incidentally with large numbers of fathead minnows. However, this bait had been purchased from the Chouteau Springs Bait Farm located one mile south of Chouteau, Oklahoma. It was learned that this hatchery was raising a supply of salable bait from brood fish procured from Mr. McGimpsy in June, 1955. McGimpsy had imported his stock from Minnesota. A limited check at this Chouteau hatchery showed the presence of brook sticklebacks in at least two of the brooder ponds. There was no indication that the stickleback had reproduced, although fathead minnows in the same ponds had spawned in profusion. The hatchery personnel felt that the sticklebacks were present with the original brood fish and had remained in the ponds throughout June, 1955 until June, 1956. No *Chrosomus eos* were taken at the Chouteau hatchery.

In July, 1956, McGimpsy (personal communication) verified that he had been importing live bait from Central Minnesota for over a year. He stated that he was aware that some sticklebacks and dace were present with the imports. However, he did not know the proportionate numbers of the exotics to the intended imports, fathead minnows.

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Dr. George A. Moore states that he has collected both the brook stickleback and the northern redbelly dace in Michigan from habitats that can be approximated in the Ozarkian waters of Northeastern Oklahoma. Since the apparent establishment of the banded tetra in Lake Texoma (Dowell and Riggs, in press) we cannot say with any certainty that the brook stickleback or northern redbelly dace could not become established in Oklahoma because of habitat or climatic factors. It is likely that sufficient bait bucket dispersion of these two exotics has occurred to expose them to many of the varied aquatic habitats in northeastern Oklahoma. It may, therefore, be possible that either or both of these exotic species can find suitable requirements in Oklahoma waters. This seems especially probable since it is known that some brook sticklebacks were able to survive a year in a shallow hatchery pond near Chouteau.

Future fish collectors in northeastern Oklahoma should be aware of these possibilities and watch for the occurrence of the brook stickleback and the northern redbelly dace.

#### LITERATURE CITED

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2. Riggs, Carl D. 1954. The occurrence of *Astyanax fasciatus mexicanus* in Lake Texoma. *Proc. Okla. Acad. Sci.* 33:(1952) 141.
3. Dowell, Virgil E. and Carl D. Riggs (in press). Further observations on *Astyanax fasciatus* and *Menidia audens* in Lake Texoma. *Proc. Okla. Acad. Sci.*