

Distribution Record and Range Extension for the Southern Redbelly Dace, *Chrosomus erythrogaster* (Actinopterygii: Cypriniformes), from Sequoyah County, Oklahoma

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INTRODUCTION

The southern redbelly dace, *Chrosomus erythrogaster* (formerly *Phoxinus*; Strange & Mayden 2009) is found in headwater streams throughout the central United States. This species persists primarily in highlands at the southern extent of its range, and is intolerant of turbid lowland waters (Stasiak 2007). *Chrosomus erythrogaster* has been reported from six counties (Adair, Cherokee, Craig, Delaware, Mayes, and Ottawa) in the Ozark region of northeastern Oklahoma (Miller and Robison 2004), but has yet to be recorded from Sequoyah County, along the southwestern edge of the Ozark Plateau in Oklahoma. In Sequoyah County, the characteristic spring-fed, rocky streams that *C. erythrogaster* is dependent upon (Stasiak 2007) drain into unsuitable lowland, warmwater streams of the Arkansas River Valley.

MATERIALS AND METHODS

On March 4, 2013, the authors collected two individuals of *Chrosomus erythrogaster* while surveying Oklahoma salamanders (*Eurycea tynerensis*), which inhabit similar spring-fed stream habitats (Tumilson et al. 1990, Tumilson and Cline 2003). Fishes were collected using dipnets just downstream from a large pool (~4m diameter, ~1.5 m depth) at the confluence of two streams tributary to Sallisaw Creek. The locality is 3.8 miles due north of Marble City at the intersection of E950 Rd. and S4600 Rd. (old US 17). Geographic coordinates are 35.635988° N, 94.827967° W. The pool contained many more individuals of *C. erythrogaster*; other fish species pres-

ent based on visual inspection included *Etheostoma whipplei*, *Camptostoma* sp., *Semotilus atromaculatus*, and *Lepomis cyanellus*. Ambient temperature was 18.3°C, stream temperature was 11.3°C, and the substrate was bedrock with a mix of cherty limestone and clastic gravels.

RESULTS AND DISCUSSION

Adult *Chrosomus erythrogaster* had already developed breeding colors, although it was at least one month prior to breeding season (April to May; Smith 1908, Miller and Robison 2004). Red pigmentation was extensive across the belly, all fins were bright yellow, and both individuals were male with well-developed tubercles on the heads and pectoral fins. Total lengths were 75.7mm (SDM 434) and 64.5 mm (SDM 435).

This collection represents the first record of southern redbelly dace, *Chrosomus erythrogaster*, from Sequoyah County, Oklahoma (Figure 1) and the most southerly record for this species in the Oklahoma Ozarks (Miller and Robison 2004). This species is the focus of an ongoing phylogeographic study by SDM, including disjunct populations in Oklahoma (Figure 1) as well as the majority of its contiguous range in the central United States. Specimens were preserved in 70% ethanol and deposited at the Sam Noble Oklahoma Museum of Natural History (Lot: OMNH# 83041). It is probable that other streams in the area contain populations of this Ozark species, and future surveys are likely to reveal additional southern localities in Oklahoma as well as localities to the south of its recorded range in Arkansas.

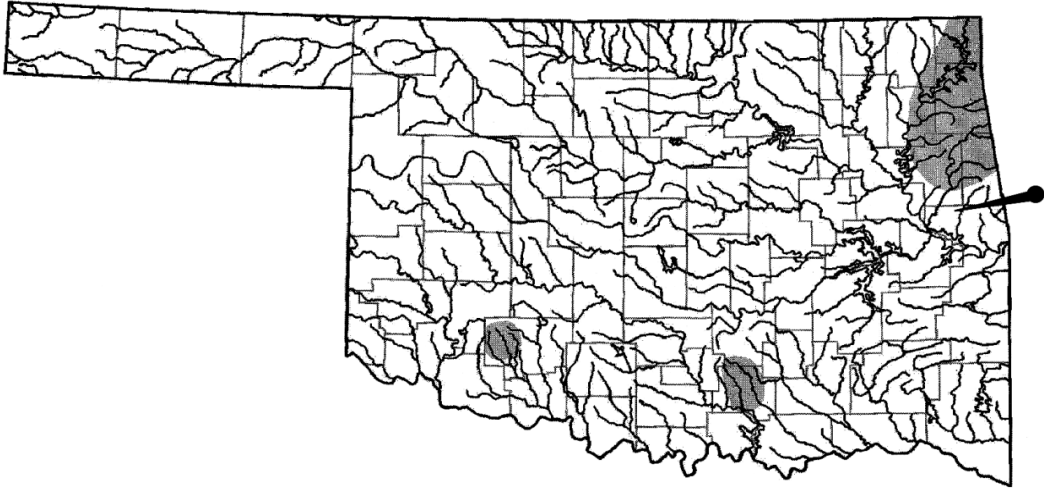


Figure 1: Range of *Chrosomus erythrogaster* in Oklahoma (shaded areas) from Miller and Robison (2004), with new collection locality from Sequoyah County indicated by black pin.

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