Occurrence of the Logperch (*Percina caprodes*) in the Cimarron River Drainage of Oklahoma

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The logperch *Percina caprodes* (Rafinesque) is a large (standard length [SL] up to 150 mm) member of the family Percidae (*1*, *2*). A conical snout overhanging the mouth, absence of scales on top of the head, and alternating long and short, dark, lateral bars distinguish this species from other Oklahoma darters (*2-4*). Logperch inhabit a variety of environments ranging from streams to reservoirs (*1-4*). However, they are most common over mixed sand and gravel substrates in large creeks and rivers (*2*).

The distribution of the logperch in Oklahoma is restricted to eastern tributaries of the Arkansas River and portions of the lower Red River drainage (*1-4*). However, the species was recently reported from the North Canadian River, a western tributary of the Arkansas River (*5*). The logperch has not previously been reported from the Cimarron River drainage of Oklahoma (*6-9*). In 1993 we collected logperch at three localities in the Cimarron River drainage. Four additional localities are reported from Oklahoma State University (OSUS) museum records. Museum records from the University of Oklahoma (UOMZ) contained no specimens of logperch from the Cimarron River drainage.

On 20 March 1993 we collected two logperch (OSUS 25853, SL 75 and 84 mm) from Council Creek 16.1 km east of Stillwater, Payne Co., T19N R04E S15. On 9 June 1993 we collected six logperch (OSUS 26017, SL 65 to 93 mm) from the same locality. On 16 July 1993 we collected two logperch (OSUS 26343, SL 32 and 85 mm) from Salt Creek 3.2 km west of Yale, Payne Co., T19N R05E S23. At both localities, logperch were captured in kick-sets of a seine (3.7 m long, 3.2-mm mesh) in shallow riffles (depth <0.25 m) over gravel/cobble substrates. On 7 July 1993 we captured three specimens (OSUS 26175, SL 34 to 43 mm) from the main stem of the Cimarron River 1.6 km south and 1.2 km west of Oilton, Creek Co., T18N R07E S07. In the Cimarron River we captured logperch over shifting sand substrate in a pool (1.2 to 1.5 m in depth) below a mid-stream sandbar, during hauls of a seine (7.6 m, 3.2-mm mesh). We located four previously unreported museum records (one specimen each) of logperch from the Cimarron River drainage of Oklahoma. These collection data are reported as museum number, location, legal description, SL, collector, and date of collection: OSUS 17744, Council Creek, Payne Co., T19N R04E S16, 76 mm, R. Larson, 22 March 1989; OSUS 17759, Salt Creek, Payne Co., T19N R05E S04, 62 mm, R. Larson, 23 March 1989; OSUS 25857, Crooked Creek, Beaver Co., T06N R27E S23, 23 mm, J. Pigg, 24 May 1987; OSUS 26176, Pawnee Cove in the Cimarron River arm of Keystone Reservoir, Pawnee Co., T20N R09E S30, 58 mm, J. Pigg, 24 July 1985.

It seems that a small, persistent population of logperch occurs in the lower Cimarron River in Payne, Pawnee, and Creek counties of Oklahoma. The Cimarron River from Ripley, Payne Co., downstream to its confluence with the Arkansas River has not been intensively sampled; logperch may have persisted undetected in this reach of the stream. The record from western Oklahoma (Beaver Co.) is somewhat problematic. This locality is separated from populations in the eastern portions of the drainage by about 470 km of riverine habitat that seems marginal for this species (*2*). The western portions of the Cimarron River drainage have been sampled intensively in recent years (*6,11*). The occurrence of a single small specimen (23 mm) may represent a transient introduction of the species.

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REFERENCES

1. Thompson, B.A., *Percina caprodes* (Rafinesque), logperch, in *Atlas of North American Freshwater Fishes.* (Lee, D.S., Gilbert, C.R., Hocutt, C.H., Jenkins, R.E., McAllister, D.E., and Stauffer, J.R., Jr., Eds.) N.C. State Mus. Nat. Hist., Raleigh, NC (1980) pp. 719-720.

2. Page, L.M., *Handbook of Darters.* TFH Publications, Inc., Neptune City, NJ (1983).

3. Page, L.M., and Burr, B.M., *A Field Guide to Freshwater Fishes.* Houghton Mifflin Company, Boston, MA (1991).

4. Miller, R.J., and Robison, H.W., *The Fishes of Oklahoma.* Okla. State Univ. Press, Stillwater, OK (1973).

5. Pigg, J., Coleman, M.S., and Duncan, J., An ecological investigation of the ichthyofauna of the North Canadian River in Oklahoma: 1976→1989. *Proc. Okla. Acad. Sci.* **72**, 21-32 (1992).

6. Pigg, J., Aquatic habitats and fish distribution in a large Oklahoma River, the Cimarron, from 1976 to 1986. *Proc. Okla. Acad. Sci.* **68**, 9-31 (1988).

7. Moore, G.A., and Mizelle, J.D., A fall survey of the fishes of the Stillwater Creek drainage system (Payne and Noble counties, Oklahoma). *Proc. Okla. Acad. Sci*. **19**, 43-44 (1939).

8. Cross, F.B., Effects of sewage and of a headwaters impoundment on the fishes of Stillwater Creek in Payne County, Oklahoma. *Am. Midl. Nat.* **43**, 128-145 (1950).

9. Wade, W.F., and Craven, R.E., Changes in fish fauna of Stillwater Creek, Payne and Noble Counties, Oklahoma from 1938 to 1965. *Proc. Okla. Acad. Sci.* **46**, 60-66 (1966).

10. Harrel, R.C., Stream order and community structure of benthic macroinvertebrates and fishes in an intermittent stream. Ph.D. Dissertation, Okla. State Univ., Stillwater, OK (1966) 76 pp.

11. Larson, R.D., Echelle, A.A., and Zale, A.V., Life history and distribution of the Arkansas River shiner in Oklahoma. Project Final Report. Oklahoma Dept. of Wildlife Conserv. Project No. E-8 Job No.1 (1991) 36 pp.