UPDATED SURVEY OF THE FISHES OF THE POTEAU RIVER, OKLAHOMA AND ARKANSAS

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A survey of the Poteau River produced 68 species of fishes, six of which are reported as new for the Poteau drainage: the pea-lipped redhorse (*Moxostoma macrolepidotum*), threadfin shad (*Dorosoma petenense*), white bass (*Morone chrysops*), redear sunfish (*Lepomis microlophus*), blue sucker (*Cycleptus elongatus*), and inland silversides (*Menidia beryllina*). Species previously collected from several places in the drainage, but absent from these collections, include blackside darter (*Percina maculata*), longnose darter (*Percina nasuta*), and brindled madtom (*Noturus miurus*). Including all species previously listed in the literature, the number of species presently known to occur in the Poteau and its tributaries is herein revised to 95.

INTRODUCTION

The fishes of the Poteau watershed were documented by Cross and Moore (2), who in 1947 conducted a preimpoundment study while Wister Lake was under construction. They took 74 species from the watershed, collecting at 32 sites with small-meshed seines and gill nets over a period of two weeks. Early visits and reports by Jordan and Gilbert (3), Meek (4), and Hubbs and Ortenburger (5) give historical accounts of the species inhabiting the Poteau watershed.

The Poteau River (222 km long) and its tributaries drain an area of about 4,839 km^2 in the mountainous regions of eastern Oklahoma and western Arkansas. It enters the Arkansas River at river mile 303 on the McClellan-Kerr Arkansas River Navigation Channel near Fort Smith, Arkansas. The basin extends 137 km from east to west and 80 km from north to south. The basin includes most of LeFlore and parts of Latimer and Haskell counties in Oklahoma, and parts of Sebastian, Scott, and Polk counties in Arkansas.

Basin topography is rugged, varying from low rounded ridges in the north and northeast to high mountainous ridges in the south, southwest, and central portions of the watershed. Elevation varies from 140.2 to 701 m above mean sea level. Valley slopes are steep and rocky, and most of the upland area is covered with timber and underbrush. The northern half of the Poteau River watershed in Oklahoma is in the Osage-Savanna Biotic District (1), characterized by the dominance of post oak and blackjack forests and intermittent tallgrass prairies. The sandstone hills and escarpments are covered by a dry scrubby forest composed principally of blackjack oak, post oak, and black hickory. The southern portion of the basin is included in the Ouachita Biotic District and has a wide diversity of plant species (1). Cross and Moore (2) give additional descriptions of the Poteau watershed.

Wister Dam was constructed in 1949 on the Poteau River at river mile 69.9 about 0.32 km south of Wister, Oklahoma. In 1971, Lock and Dam No. 13, located about 24 km downstream from the mouth of the Poteau and making about 16 km of the river navigable, became operational.

MATERIALS AND METHODS

Our 1974 survey included 51 study sites (Fig. 1 and Table 1). All sites were sampled once between May-November 1974 except sites 18 and 22, which were sampled twice, with small-meshed nylon seines, gill nets, or electrofishing. Shallow areas of the river and its tributaries were sampled by using small-meshed nylon seines varying from 2.1 m to 13.7 m in length and a portable 230-V AC electroshocker. Riffle areas were sampled with seines or a combination of seines and electroshocker. Deep areas were sampled with a boat-mounted 230-V AC electroshocker and 30.5-m monofilament gill nets with mesh cues from 38

mm to 88.9 mm. All species collected are catalogued in the University of Tulsa collections. Electroshocking was conducted during daylight hours and at night and gill nets were set at night. Scientific and common names are those used by the American Fisheries Society (6).

RESULTS AND DISCUSSION

We collected 68 species of fishes, suggesting there may be fewer species extant today than in 1947 when Cross and Moore found 74. The total list of Poteau watershed fishes is longer than that of either of the two studies indicated. Cross and Moore reported 15 additional species from the literature and personal communication records, bringing their total list to 89 species. Our 1974 survey produced six species not previously recorded in the Poteau drainage, bringing the total number of species to 95. The Poteau thus has the third richest ichthyofauna of Oklahoma rivers reported to date. Only the Kiamichi River (98), Illinois River (98), and Muddy Boggy River (101) systems have richer faunas. The complete list of species known to occur in the Poteau River watershed is shown in Table 2. Our failure to take some of the species collected by Moore and Cross is noteworthy. Silver chub (*Hybopsis storeriana*), silverband shiner (*Notropis shumardi*), and plains minnow (*Hybognathus placitus*) are species that were found by Cross and Moore in 1947 near the confluence of the Poteau and the Arkansas Rivers. The flat, sandy, flowing-water habitats present there in 1947 have been changed by the impoundment of water behind W. D. Mayo Lock and Dam, as the lake created by this structure backs up into the Poteau River about 16 km above the former mouth. This may explain our failure to find these species in the Poteau.

Another species not taken by us, which Moore and Cross collected in 1947, is the tadpole madtom (*Noturus gyrinus*). They collected only one specimen and it has not

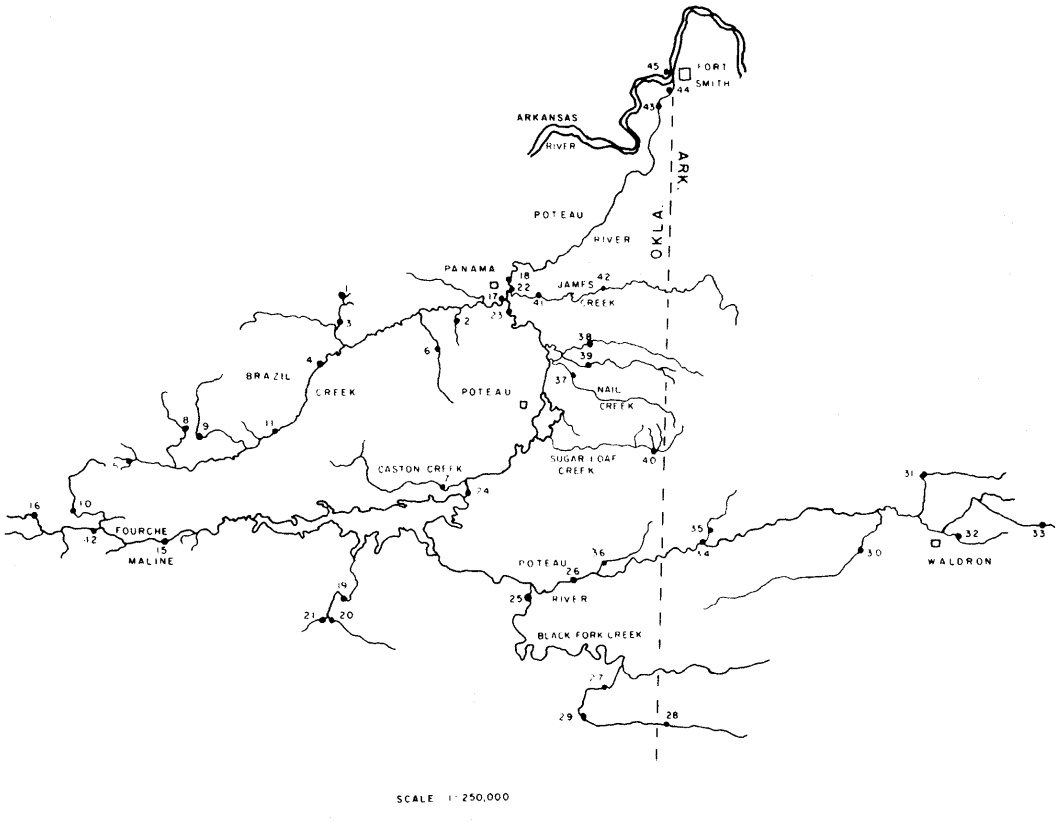

FIGURE 1. Location of study sites in Poteau River basin.

TABLE 1. *Location of collecting sites in Poteau River watershed*

Site No.	Locality	County	State
1	R23E, T7N, Sec. 22	LeFlore	OK
2	R24E, T7N, Sec. 30, 31	LeFlore	OK
3	R23E, T7N, Sec. 27, 34	LeFlore	OK
4	R23E, T7N, Sec. 9	LeFlore	OK
5	R21E, T6N, Sec. 18	Latimer	OK
6	R24E, T7N, Sec. 27	LeFlore	OK
7	R24E, T5N, Sec. 26	LeFlore	OK
8	R21E, T6N, Sec. 2	Latimer	OK
9	R21E, T6N, Sec. 12	Latimer	OK
10	R20E, T5N, Sec. 2, 10	Latimer	OK
11	R22E, T6N, Sec. 2, 3, 8, 9	Latimer	OK
12	R20E, T5N, Sec. 10, 11, 14, 15	Latimer	OK
13	R19E, T6N, Sec. 8	Latimer	OK
14	R18E, T5N, Sec. 6, 31	Latimer	OK
15	R21E, T5N, Sec. 15, 16	Latimer	OK
16	R19E, T4N, Sec. 12	Latimer	OK
17	R25E, T7N, Sec. 22	LeFlore	OK
18	R25E, T8N, Sec. 10, 11, 15	LeFlore	OK
19	R23E, T4N, Sec. 2	LeFlore	OK
20	R23E, T4N, Sec. 15	LeFlore	OK
21	R23E, T4N, Sec. 16	LeFlore	OK
22	R23E, T8N, Sec. 14, 15	LeFlore	OK
23	R25E, T8N, Sec. 27	LeFlore	OK
24	R24E, T5N, Sec. 6 (OK)	LeFlore	OK
25	R25E, T4N, Sec. 1, 6 (OK)	LeFlore	OK
26	R25E, T4N, Sec. 33 (OK)	LeFlore	OK
27	R26E, T2N, Sec. 12 (OK)	LeFlore	OK
28	R32W, T1N, Sec. 31 (AR)	Polk	AR
29	R26E, T2N, Sec. 23 (OK)	LeFlore	OK
30	R13W, T N, Sec. 28 (AR)	Scott	AR
31	R30W, T3N, Sec. 5 (AR)	Scott	AR
32	R29W, T2N, Sec. 19 (AR)	Scott	AR
33	R28W, T3N, Sec. 10 (AR)	Scott	AR
34	R32W, T3N, Sec. 22 (AR)	Scott	AR
35	R32W, T3N, Sec. 22 (AR)	Scott	AR
36	R26W, T4N, Sec. 26 (OK)	LeFlore	OK
37	R25E, T6N, Sec. 16, 22 (OK)	LeFlore	OK
38	R27E, T7N, Sec. 4, 5, 8, (OK)	LeFlore	OK
39	R26E, T7N, Sec. 13 (OK)	LeFlore	OK
40	R26E, T6N, Sec. 17 (OK)	LeFlore	OK
41	R25E, T8N, Sec. 24 (OK)	LeFlore	OK
42	R26E, T8N, Sec. 13, 14 (OK)	LeFlore	OK
43	R26E, T10N, Sec. 9 (OK)	LeFlore	OK
44	R26E, T10N, Sec. 9, 3, 35 (OK)	LeFlore	OK
45	R26E, T10N, Sec. 34 (OK)	LeFlore	OK

TABLE 2. *Fishes of the Poteau river watershed as reported by L (other literature), CM (Cross and Moore, 1952), and this survey (station [number collected]).*

1. *Ichthyomyzon castaneus.* L.
2. *I. gagei.* CM.
3. *Scaphirhynchus platorynchus.* L.
4. *Polyodon spathula.* L.
5. *Lepisosteus spatula.* L.
6. *L. platostomus.* 17(1), 24(1), 43(1), 44(1);
7. *L. oculatus.* 24(15), 25(1); CM
8. *L. osseus.* 23(2), 24(3), 44(7); CM, L.
9. *Amia calva.* L.
10. *Alosa ohiensis.* L.
11. *Dorosoma cepedianum.* 11(1), 18(68), 22(10), 23(10), 24(82), 25(4), 44(40), 37(1), 44(40), 45(89); CM, L.
12. *D. petenense.* 22(7), 45(2).
13. *Hiodon alosoides.* 18(1), 22(3); CM.
14. *Esox americanus.* 1(1), 32(1), 33(1), CM, L.
15. *Cyprinus carpio.* 17(6), 18(20), 24(3), 25(1), 44(78), 45(27); L.
16. *Notemigonus crysoleucas.* 14(1), 23(1), 26(1), 34(3), CM, L.
17. *Hybopsis storeriana.* L.
18. *Notropis atherinoides.* 7(3), 12(5), 15(5), 16(49), 18(48), 22(24), 23(60), 24(387), 26(38), 30(45), 34(264), 40(1), 41(7), 44(10), 45(2); CM, L.
19. *N. shumardi.* CM.
20. *N. fumeus.* 7(1), 10(19), 11(1), 14(36), 16(2), 31(9); CM, L.
21. *N. umbratilis.* 1(3), 2(16), 3(18), 4(33), 5(2), 7(1), 11(10), 15(3), 19(21), 20(20), 21(19), 23(2), 26(8), 27(107), 28(11), 31(1), 32(6), 34(19), 35(9), 38(32), 39(27), 40(26), 41(15); CM, L.
22. *N. blennius.* 45(4); SM, L.
23. *N. whipplei.* 7(14), 11(3), 22(2), 23(10), 26(97), 30(4), 34(123), 36(2), 41(6); CM, L.
24. *N. lutrensis.* 4(7), 6(16), 7(4), 12(2), 15(8), 16(13), 18(7), 22(211), 23(202), 26(8), 34(6), 41(20), 44(4); CM, L.
25. *N. amnis.* CM, L.
26. *N. emiliae.* 34(1), 25(1), CM, L.
27. *N. boops.* 2(7), 3(64), 4(25), 6(31), 8(31), 9(108), 11(29), 13(72), 16(2), 19(308), 26(58), 21(54), 25(1), 26(4), 27(202), 30(1), 31(4), 32(1), 34(93), 35(27), 36(3), 39(94), 40(48); CM, L.
28. *N. ortenburgeri.* 27(2), 30(1), 32(12), 35(7); CM, L.
29. *N. volucellus.* 22(1); CM, L.
30. *N. buchanani.* 4(1), 44(139); CM.
31. *Phenacobius mirabilis.* CM, L.
32. *Hybognathus nuchalis.* CM, L.
33. *H. placitus.* CM, L.
34. *Pimephales notatus.* 2(4), 3(3), 4(11), 6(13), 7(1), 8(4), 9(4), 11(3), 14(1), 16(1), 19(45), 20(12), 22(2), 23(1), 24(18), 25(1), 31(1), 33(3), 34(4), 35(2), 38(1), 39(14), 44(10); CM, L.
35. *P. vigilax.* 15(4), 18(2), 23(1), 24(7), 44(6), 45(12); CM, L.
36. *P. tenellus.* 4(3), 34(2); CM, L.
37. *Campostoma anomalum.* 1(23), 3(1), 4(8), 5(29), 6(162), 7(6), 9(2), 11(11), 13(1), 14(7), 16(20), 19(7), 20(3), 21(5), 22(2), 23(2), 26(5), 28(3), 30(2), 31(3), 32(18), 33(10), 34(7), 35(5), 36(56), 39(2), 40(5); CM, L.
38. *Cycleptus elongatus.* 18(1).
39. *Ictiobus cyprinellus.* 18(7), 43(1), 44(1), 45(1); L.
40. *I. bubalus.* 15(1), 17(2), 24(3), 44(22), 45(3); CM, L.
41. *I. niger.* CM, L.
42. *Carpiodes carpio.* 18(20), 44(1), 45(3); CM.
43. *C. velifer.* L.
44. *Moxostoma erythrurum.* 6(4), 18(1), 44(1); CM.
45. *M. carinatum.* CM.
46. *M. macrolepidotum.* 18(1).
47. *Minytrema melanops.* 26(1), 25(1), CM, L.
48. *Hypentelium nigricans.* L.
49. *Erimyzon oblongus.* 19(1), 21(1), 30(1); CM, L.

50. *Ictalurus furcatus.* CM.
51. *I. punctatus.* 18(175), 22(28), 23(10), 24(3), 44(10); CM, L.
52. *I. melas.* 17(1); CM, L.
53. *I. natalis.* 14(8), 37(10); CM, L.
54. *Pylodictis olivaris.* 17(1), 18(10), 22(10), 23(1), 44(1); CM, L.
55. *Noturus flavus.* L.
56. *N. gyrinus.* CM.
57. *N. nocturnus.* 4(1), 11(1), 16(22), 22(316), 23(33), 26(1), 34(4); CM, L.
58. *N. exilis.* 6(8), 19(1), 20(1), 21(4), 22(1), 26(4), 34(5), 35(1), 36(5); CM, L.
59. *N. miurus.* CM, L.
60. *Anguilla rostrata.* L.
61. *Fundulus dispar.* L.
62. *F. olivaceus.* 1(3), 2(6), 3(2), 4(1), 6(2), 10(3), 11(4), 13(15), 16(8), 18(1), 19(4), 20(5), 21(4), 23(1), 25(1), 26(2), 27(2), 30(8), 31(1), 32(13), 35(1), 37(10), 38(5), 39(3), 40(15), 41(1), 44(5), CM, L.
63. *Gambusia affinis.* 4(4), 11(1), 12(3), 15(28), 16(18), 23(24), 26(10), 30(1), 31(4), 32(2), 33(1), 34(2), 37(1), 40(3), 44(10); CM, L.
64. *Menidia beryllina.* 45(1).
65. *Labidesthes sicculus.* 2(7), 3(6), 6(7), 7(13), 9(3), 10(1), 14(1), 16(1), 18(11), 19(47), 20(8), 21(13), 22(5), 23(10), 24(3), 26(1), 27(19), 30(150), 31(20), 32(13), 33(1), 34(27), 35(7), 36(1), 39(6), 40(11), 41(9), 44(12); CM, L.
66. *Morone chrysops.* 18(3), 22(2), 23(1), 24(2), 44(1).
67. *Micropterus punctulatus.* 3(1), 6(3), 9(1), 16(2), 18(4), 22(2), 24(2), 25(1), 29(1), 30(1), 37(1), 39(1), 44(3); CM, L.
68. *M. salmoides.* 14(2), 15(1), 21(1), 22(1), 24(1), 25(6), 30(2), 36(1), 44(2), 45(5); CM, L.
69. *Lepomis gulosus.* 6(1), 25(5), 44(3); CM, L.
70. *L. cyanellus.* 1(5), 2(2), 3(4), 5(7), 6(54), 10(3), 14(7), 18(7), 19(11), 20(7), 21(4), 22(3), 24(1), 25(13), 26(3), 27(1), 33(1), 36(13), 37(2), 39(2), 40(1), 45(3); CM, L.
71. *L. microlophus.* 15(2), 30(4), 31(1), 41(1).
72. *L. megalotis.* 3(1), 4(1), 5(1), 6(17), 7(1), 10(1), 11(2), 13(2), 14(5), 16(3), 18(6), 19(1), 30(7), 22(14), 23(9), 32(1), 25(24), 36(3), 37(1), 39(2), 44(10), 45(3); CM, L.
73. *L. macrochirus.* 3(1), 4(1); 10(1), 11(3), 13(1), 14(7), 15(3), 16(3), 18(2), 21(1), 23(1), 24(5), 25(7), 31(5), 33(2), 26(1), 37(1), 40(1), 41(2), 42(1), 44(9), 45(5); CM, L.
74. *L. humilis.* 1(1), 4(1), 5(1), 6(2), 7(1), 15(2), 16(1), 19(1), 22(3), 23(7), 24(4), 37(2), 44(4), 45(1); CM, L.
75. *Pomoxis annularis.* 18(34), 14(1), 15(5), 22(3), 23(24), 24(99), 43(2), 44(17), 45(8); CM, L.
76. *P. nigromaculatus.* 22(1), 23(1), 24(1), 44(1), 45(1); CM, L.
77. *Stizostedion canadense.* L.
78. *Percina maculata.* CM, L.
79. *P. sciera.* 4(2), 7(1), 115(5), 16(1), 23(2), 26(2), 34(1); CM, L.
80. *P. nasuta.* CM, L.
81. *P. copelandi.* 4(6), 16(1), 34(4); CM, L.
82. *P. caprodes.* 4(3), 11(1), 19(1), 20(1), 22(6), 23(1), 24(1), 26(9), 36(1), 34(2), 40(2); CM, L.
83. *Ammocrypta vivax.* CM, L.
84. *Etheostoma nigrum.* CM, L.
85. *E. chlorosomum.* 21(1); CM, L.
86. *E. zonale.* 26(1), 34(9); CM, L.
87. *E. blennioides.* 34(3); CM, L.
88. *E. histrio.* 22(21), 34(10), 26(2); L.
89. *E. whipplei.* 4(5), 5(1), 6(11), 7(2), 10(6), 11(10), 14(1), 16(1), 20(4), 21(2), 22(1), 23(2), 26(9), 31(3), 32(12), 33(4), 35(4), 36(13), 40(2); CM, L.
90. *E. spectabile.* 3(3), 4(1), 5(4), 6(16), 7(9), 8(2), 9(5), 10(6), 11(1), 16(66), 19(17), 20(39), 21(19), 23(7), 26(5), 27(1), 30(12), 31(7), 32(9), 33(23), 34(1), 35(30), 35(30), 36(4), 39(1), 40(5); MC, L.
91. *E. flabellare.* 19(10), 20(3), 21(2), 26(4), 29(1), 34(30); L.
92. *E. proeliare.* 10(6), 16(2), 21(4), 27(1), 30(5), 31(8), 32(9), 33(4); MC, L.
93. *E. gracile.* 23(1); MC, L.
94. *E. microperca.* L.
95. *Aplodinotus grunniens.* 22(32), 23(1), 24(3), 43(1), 44(25), 45(2); MC, L.

been reported from the Poteau since. This species is generally restricted to austroriparian habitats farther to the southeast.

The suckermouth minnow (*Phenacobius mirabilis*) was not taken in our collections, but is probably still extant in the area. It may be less common now than in 1947, when it was found at two different localities in the watershed. Cross and Moore found it common at Slate Ford on the Poteau River just east of Shady Point, Oklahoma. *Phenacobius* was not taken here in 1974, although intensive collections were made on two different occasions.

The brindled madtom (*Noturus miurus*) was collected in 1947 at 10 of the collecting stations described by Cross and Moore. Most of these stations were revisited in 1974, but no brindled madtoms were taken. This species is not common at present anywhere in Oklahoma.

In the 1947 collections, the blackside darter (*Percina maculata*) was taken at 13 locations. Although we are familiar with the habitat of this species, none was collected. The longnose darter (*Percina nasuta*), a species even more rare, was reported by Cross and Moore (2) from six different localities. Although we expected to take the longnose darter it did not occur in any of our collections. It is probable that both the blackside darter and the longnose darter are more rare now than in the past.

Both have been collected several times recently by Lindsay in Lee Creek, immediately to the north of the Poteau.

The southwestern sand darter (*Ammocrypta vivax*) and the Johnny darter (*Etheostoma nigrum*) were both taken in 1947 but not in 1974. Moore and Cross found these to be rare and took them at only two locations each.

Six species taken during this survey are new records for the Poteau drainage. Two are rare anywhere in Oklahoma. One is rare this far north in Oklahoma, and the other two were either missed by all earlier workers or are now possibly much more abundant than in prior years. The two most noteworthy new finds for this survey are the blue sucker and the pea-lipped redhorse (*Moxostoma macrolepidotum*). The blue sucker (*Cycleptus elongatus*) was previously known from only five other places in Oklahoma, all outside the Poteau drainage (7). Randolph and Lindsay (8) recently reported the discovery of this species in the Poteau. Before its discovery in the Poteau River, the pea-lipped redhorse was known only from one record for the Chickaskia River in north-central Oklahoma, another at the mouth of the Verdigris, and the most recent record of Riggs and Moore (9) when they collected one specimen in the Red River near Lake Texoma.

The threadfin shad (*Dorosoma petenense*) was collected in the summer of 1974 in the mainstream of the Poteau River at localities below Lake Wister. This forage fish species is likely invading upstream in the Poteau out of the Arkansas River Navigation System. Mensinger (10) reported it for the Arkansas River and Lindsay has taken it in the Arkansas River recently.

The inland silversides (*Menidia beryllina*) has been known in this part of the Arkansas drainage since reported by Gomez and Lindsay (11). More recently, Hill et al. (12) have reported this species in the Grand River above Ft. Gibson Lake. Our one specimen (collected at locality 45) came from the mouth of the Poteau at its intersection with the McClellan-Kerr navigation channel.

The white bass (*Morone chrysops*) was not reported by Cross and Moore (2) from older records of from their own collections. The white bass was probably rare in Oklahoma streams prior to construction of large reservoirs. It was taken several times in the present survey.

The redear sunfish (*Lepomis microlophus*) was not previously recorded in the Poteau drainage, so it is herein added to the Poteau River fish list. Since this is known to be an introduced species in many places of Oklahoma, this could be the explanation of why it was never previously recorded for this watershed. It is not common throughout the drainage, but was taken in several places in 1974. Cross and Moore (2) did show evidence of this sunfish being present earlier by reporting it as a possible hybrid combination.

Species recorded from the older literature, or by personal communication, by Cross and Moore (2), but not collected by them in 1947, include the sturgeon (*Scaphirhynchus platorynchus*), paddlefish (*Polyodon spathula*), bowfin (*Amia calva*), alligator gar (*Lepisosteus spatula*), Alabama shad (*Alosa alabamae*), and the harlequin darter (*Etheostoma histrio*). We took only one of these species, the harlequin darter. Cross and Moore failed to find this species in 1947, but reported a single specimen taken at Hontubby toward the Arkansas state line on the Poteau River. This specimen was collected in 1950 by Dr. A. P. Blair, representing the only record of this species since Jordan and Gilbert reported it abundant in the Poteau in 1886 (3). During the summer of 1974, we took several specimens at Hontubby, one specimen near Wilburton on the Fourche Maline, and a large series (19 specimens) in a large riffle at a site on the Poteau River immediately east of Panama, Oklahoma, well downstream from Wister Lake.

The harlequin darter nears the western limit of its total range in the Poteau drainage, and it is believed the new record for the Fourche Maline is the extreme western record for this species. The harlequin darter is not known from any stream in Oklahoma north of the Arkansas River, and since the riffle where this large series was collected appears to be the last one downstream on the Poteau, it is not likely this species will be collected any farther north than this, in this westernmost part of its range.

The sturgeon and paddlefish were probably much more abundant previously. The

paddlefish is probably still present as a rare occurrence in the Poteau. However, occurrence of the sturgeon is doubtful since the Arkansas River is no longer a free-flowing stream. The sturgeon does not seem to persist in reservoirs as the paddlefish does. The bowfin became common (personal communication, Al Houser and local residents) in Lake Wister and in the tailwaters below the dam soon after Wister was closed. The bowfin was reported as common in this area in 1950, but has not been reported recently, and was not found in this survey.

The status of the Alabama shad in Oklahoma is unclear, but Moore identified specimens taken from the Poteau River by Hutchins and Hall as belonging to this species. This fish was not taken by Moore and Cross in 1947, nor by us.

Our collection of the grass pickerel (*Esox americanus*) near Milton, Oklahoma, is noteworthy because it represents a westward extension of its range this far northward in Oklahoma. Hubbs and Ortenburger (5) reported one specimen in the Poteau southwest of Fort Smith, Arkansas. Cross and Moore (2) reported this species from five different localities, but all were along the southernmost edge of the Poteau watershed. Our record near Milton is in the extreme northwest portion of the watershed, and this one specimen was taken from a tributary of Brazil Creek, representing also the first record of a pickerel in Brazil Creek or any of its tributaries.

The pugnose minnow (*Notropis emiliae*) is widely distributed over eastern Oklahoma, but never occurs in large populations. This minnow was collected at several different places in our study, but only one specimen was taken at each place.

The ribbon shiner (*Notropis fumeus*), as herein listed, presents an enigma. Dr. George A. Moore (personal communication) has for a long time thought that this Poteau watershed minnow (found also in the adjacent San Bois Creek to the west) should be described as a new form (species). Dr. Carl Hubbs gave the name *Notropis fumeus analis* to it. Snelson (13), in his review of this species, has more recently accepted these Poteau specimens as *Notropis fumeus* without adding any trinomial.

The steelcolor shiner (*Notropis whipplei*) and the bigeye shiner (*Notropis boops*) were the most common minnows in our survey. The bigeye shiner is the most successful species in the smallest of tributaries and is highly successful in the intermediate-sized streams, but is rarely found in the mainstream of the Poteau River below Lake Wister. The steelcolor shiner is the most common fish in the mainstream of the Poteau River above Lake Wister. Breeding populations with many tuberculate, yellow-finned males were found to be abundant in the Poteau near the Oklahoma-Arkansas State line in July 1974.

The pallid shiner (*Notropis amnis*) is uncommon but supposedly widespread in eastern Oklahoma according to Miller and Robinson (14). Cross and Moore (2) reported it from 10 of their sites, indicating that this minnow was a very conspicuous member of the Poteau fauna in 1947. Our collections were made in the same areas where the previous workers had found this minnow, but only one specimen was taken, in the mainstream of the Poteau River at Slate Ford near Shady Point, Oklahoma. Whether the reduction of this species in the Poteau is due to the presence of Wister Lake remains problematic.

ACKNOWLEDGMENTS

This study was supported by the US Corps of Engineers, Tulsa District (contract number DACW-56-74-C-0220). University of Tulsa students who were valuable field assistants include Reuben Bell, Pat Graham, Warren Adams, Colin Yeary, Penny Marks, Dale Maxwell, Laurie Gordon, and Steve Bailey.

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