

Fishes of the Mountain Province Section Of the Ouachita River

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ABSTRACT

A survey of the fishes of the mountain province section of the Ouachita River from the headwaters to Rammel Dam using field collections, literature records, and museum collections showed the ichthyofauna to be made up of 80 species representing 16 families. Fourteen species not previously reported from the mountain province section of the river were collected in this survey. These species include *Ichthyomyzon gagei*, *Nocomis asper*, *Notropis ortenburgeri*, *N. rubellus*, *Pimephales promelas*, *Moxostoma carinatum*, *Noturus taylori*, *Fundulus notatus*, *Lepomis humilis*, *Etheostoma histrio*, *E. proeliare*, *Percina maculata*, *P. nasuta*, and *P. uranidea*. The *Nocomis* specimens were the first collected from the Ouachita River system and the discovery of *Noturus taylori* represents a major range extension.

INTRODUCTION

The Ouachita River arises in Polk County in west-central Arkansas, flows in a southeasterly direction through 11 counties in Arkansas, six parishes in Louisiana, and enters the Red River approximately 35 miles above the confluence of the Red and Mississippi Rivers. The 605 mile length of the Ouachita River drains an area of approximately 24,790 square miles. Markham (1935) divided the river into three distinct provinces based on the type of terrain. These provinces were the alluvial lowland province, the hill province, and the mountain province. The mountain province section encompasses approximately 10 per cent of the total area drained.

Douglas (1974) included a comprehensive survey of the fishes of the Ouachita River in Louisiana while Raymond (1975) surveyed the fishes of the hill province section from Rammel Dam on Lake Catherine to the Arkansas-Louisiana line. In an effort to complete ichthyological survey work on the Ouachita River, the authors undertook a thorough investigation of the fishes of the mountain province section from the headwaters to Rammel Dam on Lake Catherine, the last major unsurveyed section of the Ouachita River proper.

Apparently Meek (1891) was the first to investigate the headwaters of the Ouachita River and its tributaries which he described as "swift, flowing streams of clear water with rock and gravel bottoms." He reported 30 species collected from the South Fork of the Ouachita River near Mt. Ida, Montgomery County, Arkansas; and three localities in Garland County, Arkansas: the Ouachita River near Crystal Springs, Mazarn Creek, and Myers Creek. Hubbs and Ortenburger (1928) sampled several tributaries of the Ouachita River in Polk County, Arkansas, collecting 12 species. These typical headwater streams were composed of alternate pools and riffles with clear water and a substrate of large rocks, gravel, and sand. Black (1940) and Buchanan (1973) added additional information on the fish fauna known to occur in the mountain province of the Ouachita River. Robison (1974) reported the presence of *Etheostoma pallidiorum* in the mountain province of the Ouachita River. *E. pallidiorum* was previously considered endemic to the Caddo River system.

The following report is based upon collections made by Meek (1891); Hubbs and Ortenburger (1928); Dr. Henry W. Robison, Southern Arkansas University; the Arkansas Game and Fish Commission (AGFC); the University of Tennessee Regional Faunas class; the authors; and from collections housed at Tulane University and Northeast Louisiana University.

DESCRIPTION OF THE AREA

The survey area from the headwaters of the Ouachita River to

Rammel Dam on Lake Catherine is approximately 90 miles in length and drains a watershed of approximately 1,516 square miles (J. E. Henley, pers. comm.) in Polk, Montgomery, Garland, and Hot Spring Counties (Fig. 1). The majority of the land drained by the Ouachita River in the mountain province section consists of mixed loblolly pine, shortleaf pine, and hardwood forests, with a small section of pure hardwood forests in Garland County. The soils in the area are mainly silty clay and silty loam with shale, sandstone, novaculite, and quartzite the common surface rocks (Foti, 1974). The extreme headwaters consist of clear rock bottom pools connected by shallow riffles and offer little habitat diversity. Stream conditions change gradually downstream as moderate or fast flowing waters cover rock, gravel, and sand substrates, and deeper pool situations become more common, offering greater habitat diversity. As the river approaches the lakes region, the water becomes less swift and more turbid, and sandy substrates become more common.

A large portion of the mainstream of the mountain province section has been altered by human activity. Three reservoirs have been constructed in the lower portion of the study area where the river once flowed unimpeded. Lakes Catherine and Hamilton were constructed in 1925 and 1932, respectively, for industrial purposes by Arkansas Power and Light Company. Lake Ouachita, the largest lake, is a federal reservoir completed in 1954. The upper half of the study area is predominately rural and remains virtually unaltered.

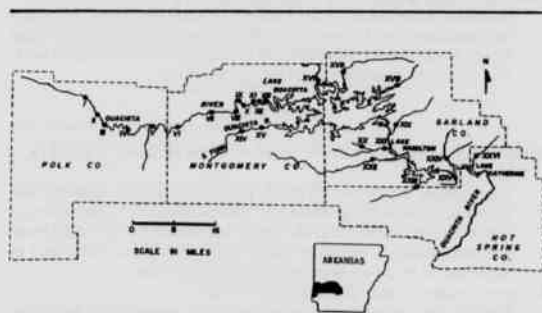


Fig. 1. Map of the mountain province section of the Ouachita River, with collecting locations.

METHODS

Most collections were made with seines of 3/16" mesh measuring 4 x 5', 8' x 10', and 8' x 20', but on several occasions, 1/4" mesh seines measuring 8' x 30' and 10' x 40' were used. Collections made by the Arkansas Game and Fish Commission (AGFC) utilized gill nets, trammel nets, and rotenone. Specimens were preserved in 10 percent formalin solution in the field before being placed in 40 percent isopropanol for permanent storage. Representative specimens are housed in the collection of fishes at Southern Arkansas University, Tulane University, University of Tennessee, and the Museum of Zoology at Northeast Louisiana University. Nomenclature follows Bailey *et al* (1970).

ANNOTATED LIST OF THE FISHES OF THE
MOUNTAIN PROVINCE SECTION OF THE
OUACHITA RIVER

Roman numerals following the species name indicate localities where the species was collected (Fig. 1).

Petryomyzontidae (Lampreys)

- Ichthyomyzon castaneus* Girard. Chestnut lamprey. V, VI
Uncommon inhabitant of the mainstream of the river and larger tributaries. AGFC reported *I. castaneus* from L. Hamilton.
- I. gagei* Hubbs and Troutman. Southern brook lamprey. VI
Uncommon; collected from mainstream in swift water during early spring.

Lepisosteidae (Gars)

- Lepisosteus oculatus* (Winchell). Spotted gar. VIII
A common inhabitant of the deep, slow-moving pools of the river and the lakes.
- L. osseus* (Linnaeus). Longnose gar.
More common in the lakes but also found in the deeper pools of the main river.

Clupeidae (Herrings)

- Dorosoma cepedianum* (Lesueur). Gizzard shad. XIII
An abundant inhabitant of the lakes. *D. cepedianum* is also common in the lower portion of the main river and larger tributaries to the lakes.
- D. petenense* (Gunther). Threadfin shad. XII, XIII
Like *D. cepedianum*, abundant in the lakes and common in the lower river and larger tributaries of the lakes.

Salmonidae (Salmons)

- Salmo gairdneri* Richardson. Rainbow trout. XXV
Stocked in the lakes for the past 10-15 years by the AGFC to accommodate sport fishermen. Reproducing populations may occur in the colder tributaries of the lakes, but for the most part, this species is maintained in lakes by stocking.

Esocidae (Pikes)

- Esox americanus vermiculatus* Lesueur. Grass pickerel. I, III, XIX, XX
Uncommon inhabitant of large, permanent pools characterized by clear, slow-moving water and an abundance of aquatic vegetation. It was collected in the upper headwaters of the main river and tributaries of the lakes where these conditions occur and is expected to be a common inhabitant of the lakes.
- E. niger* Lesueur. Chain pickerel. III, XVII
Exhibits the same habitat preferences as *E. americanus vermiculatus*. It is also expected to occur in the upper headwaters of the main river, tributaries of the lakes, and the shallower waters of the lakes.

Cyprinidae (Minnows)

- Camptostoma anomalum* (Rafinesque). Stoneroller. I, III, IV, V, VI, VII, VIII, IX, X, XI, XII, XIV, XV, XVII, XVIII, XIX, XX, XXI, XXII, XXIII, XXIV, XXVI
Common and widespread throughout the study area, especially in shallow pools and gravel bottom riffles.
- Ctenopharyngodon idella* (Valenciennes). Grass carp.
Introduced into the lakes in the early 1970's by AGFC in an effort to control aquatic plant growth.
- Cyprinus carpio* Linnaeus. Carp.
Collected from the lakes by AGFC and expected to occur in sluggish, deep portions of the river.
- Hybopsis x-punctata* Hubbs and Crowe. Gravel chub. VIII, IX, XI
Uncommon cyprinid probably restricted to the mainstream of the river in areas of permanent flow, gravel bottom, and well-defined riffles.
- Nocomis asper* Lachner and Jenkins. Redspot chub. XIV, XV
First member of its genus reported from the Ouachita River system. It was collected only from the South Fork of the Ouachita River in gravel bottom pools, 2-6 feet deep, with clear water and moderate flow.
- Notemigonus crysoleucas* (Mitchell). Golden shiner. V, IX, XI, XIII, XV
The most commonly sold baitfish in the study area, it is an uncommon inhabitant of the mainstream of the river and lakes, where it is undoubtedly constantly introduced through bait release.
- Notropis amnis* Hubbs and Greene. Pallid shiner.
Not collected by the authors but reported from the lakes in AGFC records.
- N. atherinoides* Rafinesque. Emerald shiner.
Not collected by the authors but reported from the lakes in AGFC records.
- N. boops* Gilbert. Bigeye shiner. I, II, III, IV, V, VI, VII, VIII, IX, X, XI, XII, XIII, XIV, XV, XVI, XVII, XVIII, XIX, XXI, XXIII, XXIV, XXV, XXVI
Probably the most abundant fish in the study area, it is widespread and was found in a variety of habitats.
- N. chrysocephalus isolepis* Hubbs and Ortenburger. Southern striped shiner. I, II, III, IV, V, VI, XIV, XV, XVII, XIX, XX, XXI, XXII, XXIII, XXIV, XXV, XXVI
Common inhabitant of clear pools in the upper portions of the main river and tributaries of the lakes. A conspicuous absence from the larger lower portion of the main river would seem to indicate a preference for smaller, less turbid waters.
- N. fumeus* Evermann. Ribbon shiner.
Not collected by the authors but reported from the lakes by AGFC records.
- N. ortenburgeri* Hubbs. Kiamichi shiner. I
Collected from a single location in the headwaters of the main river in clear, deep pools with rocky bottoms and is considered uncommon.
- N. perpallidus* Hubbs and Black. Colorless shiner. IV, V, VIII, X
Uncommon inhabitant of the mainstream of the river in water 2-4 feet deep with slow to moderate current. Most specimens were found associated with habitat that included *Justicia americana* and a rock and sand substrate as indicated by Snelson and Jenkins (1973).
- N. rubellus* (Agassiz). Rosyface shiner. IV, V, VI, VII, VIII, IX, X, XI, XII
A common inhabitant of the mainstream of the river near riffles or in pools with moderate current and a gravel or rock substrate. It seems to avoid the extreme headwaters and high gradient tributaries.
- N. umbratilus* (Girard). Redfin shiner. I, II, III, IV, V, VI, VII, VIII, IX, X, XI, XII, XIII, XIV, XV, XVI, XVII, XVIII, XIX, XXII, XXIV, XXV, XXVI
An abundant species distributed throughout the study area, showing a preference for pool areas with clear water and little flow.
- N. whipplei* (Girard). Steelcolor shiner. III, IV, V, VI, VII, VIII, IX, X, XI, XII, XIII, XIV, XV

- Appears limited to the larger, faster flowing waters of the mainstream and the South Fork of the river near rocky riffles in fast or moderate current. It was abundant at most locations where it was collected.
- Opsopoeodus emiliae* Hay. Pugnose shiner. III, IV, V, XII, XIII
An uncommon inhabitant of the study area collected from quiet pools and backwater areas along the mainstream of the river; also expected to occur in the shallower portions of the lakes.
- Pimephales notatus* (Rafinesque). Bluntnose minnow. I, II, III, IV, V, VI, VII, VIII, IX, X, XI, XII, XIII, XIV, XV, XVIII, XXIII, XXIV, XXV, XXVI
Widespread and common throughout the study area, with a preference for pool areas with rocky or sandy bottoms and a moderate flow.
- P. promelas* Rafinesque. Fathead minnow. IV, V
Uncommon and probably introduced into the study area through bait release.
- P. tenellus* (Girard). Slim minnow. IV, VI, VII, VIII, IX, X, XI, XII, XIII
Much less common than *P. notatus* and seemingly restricted to the mainstream of the river in pools with moderate current and rock and sand substrate.
- P. vigilax* (Girard). Bullhead minnow.
Reported by Hubbs and Ortenburger (1928) from a single specimen in the extreme headwaters. None were collected by the authors during this study.
- Semotilus atromaculatus* (Mitchill). Creek chub. XX
An uncommon inhabitant of small headwater creeks where few other species occur.
- Catostomidae (Suckers)
- Erimyzon oblongus* (Mitchill). Creek chubsucker. VI, XV
An uncommon inhabitant of the smaller tributaries in the study area, collected from sluggish pools having clear water, sand and gravel bottoms, and an accumulation of organic debris.
- Hypentelium nigricans* (Lesueur). Northern hog sucker. IV, V, VI, VIII, IX, XI, XII, XIII, XIV, XXIV, XXV, XXVI
A common inhabitant of the main river and lake tributaries in areas of permanent flow and rock bottom.
- Ictiobus cyprinellus* (Valenciennes). Bigmouth buffalo.
AGFC records indicate a single specimen collected January, 1971, just above Rammel Dam on Lake Catherine.
- Minytrema melanops* (Rafinesque). Spotted sucker. III, XIII, XV, XXVI
Widely distributed but uncommon within the study area. Most often collected from deep backwater areas of the river and lake tributaries with little flow and abundant organic debris.
- Moxostoma carinatum* (Cope). River herring. XII
Uncommon and restricted to the deeper pools of the river with strong flow.
- M. duquesnei* (Lesueur). Black redbreast. IV, VII, VIII, IX, X, XI, XII, XIII, XIV, XV, XXII
A common and widespread inhabitant of the study area in both shallow and deep pools.
- M. erythrum* (Rafinesque). Golden redbreast. III, IV, VIII, IX, XIII, XV, XXV, XXVI
Like *M. duquesnei*, common and widespread in the study area. It was found in more slowly-moving water than the other members of its genus.
- Ictaluridae (Catfishes)
- Ictalurus furcatus* (Lesueur). Blue catfish.
Periodically stocked by the AGFC in the lakes. Expected to occur in deeper waters of the river.
- I. melas* (Rafinesque). Black bullhead. XIII
Uncommon ictalurid confined to the lakes and portions of the main river and lake tributaries with little flow and a silt substrate.
- I. natalis* (Lesueur). Yellow bullhead. I, V, VIII, XII, XIX, XXI, XXIV
A widespread but uncommon inhabitant of the study area collected from the slow-moving, deeper pools but showed more tolerance to current than did the black bullhead.
- I. punctatus* (Rafinesque). Channel catfish. V, VII, VIII, XII
Reported throughout the mainstream of the river and stocked annually in large numbers in the lakes.
- Noturus gyrinus* (Mitchill). Tadpole madtom. XXIV
The least abundant member of the family Ictaluridae, probably restricted to lake tributaries having moderate current and thick growths of aquatic vegetation or heavy accumulations of organic debris.
- N. nocturnus* Jordan and Gilbert. Freckled madtom. IV, V, VI, VII, VIII, IX, XI, XII, XVI, XIX, XXII
A common inhabitant of the upper mainstream of the river in riffle areas with heavy growths of aquatic vegetation. Much less common in the lower river and lake tributaries.
- N. taylori* Douglas. Caddo madtom. IV, V, VIII, XI, XII, XIII, XV
Although previously considered endemic to the Caddo River system, it was collected from seven locations on the mainstream and South Fork of the Ouachita River. Collected most often at night from pool areas with moderate flow and sandy substrate, although it was occasionally taken from rocky riffles with fast flow.
- Aphredoderidae (Pirate perches)
- Aphredoderus sayanus* (Gilliams). Pirate perch. XIX, XX
Restricted to the lower portion of the study area near the lakes in backwaters having clear, warm water, absence of current and abundant aquatic vegetation or organic debris.
- Cyprinodontidae (Topminnows)
- Fundulus catenatus* (Storer). Northern studfish. IV, V, VI, VIII, IX, XI, XII, XIII, XIV, XV, XVII, XVIII, XIX, XX, XXI, XXIV, XXV, XXVI
Common and widespread throughout the study area. Most often found in shallow inlets away from swift current.
- F. notatus* (Rafinesque). Blackstripe topminnow. XX, XXVI
Uncommon species collected only from tributaries of the lakes in slow-moving pools or backwater areas.
- F. olivaceus* (Storer). Blackspotted topminnow. I, II, III, IV, V, VII, VIII, IX, X, XI, XII, XIII, XV, XIX, XX, XXII, XXV, XXVI
The most widely distributed topminnow collected and is expected to occur throughout the study area.
- Poeciliidae (Mosquitofishes)
- Gambusia affinis* (Baird and Girard). Mosquitofish. IV, V, VI, VIII, X, XIII, XIX, XXI, XXII, XXIV
Widespread but common only in the sluggish lower portion of the main river, but it is expected to be more numerous in the lakes.
- Atherinidae (Silversides)
- Labidesthes sicculus* (Cope). Brook silverside. I, II, III, IV, V, VI, VII, VIII, IX, X, XI, XII, XIII, XIV, XV, XVI, XVII, XIX, XXI, XXII, XXIV
An abundant inhabitant of the study area.
- Percichthyidae (Temperate basses)
- Morone chrysops* (Rafinesque). White bass.
Reported by AGFC from the lakes and by local fishermen from the river.
- M. saxatilis* (Walbaum). Striped bass. V
First introduced into Lake Ouachita in the late 1950's. During recent years it has been stocked into all three lakes in large numbers and occurs in the mainstream of the river.
- Centrarchidae (Sunfishes)
- Ambloplites rupestris* (Rafinesque). Rock bass. VI, VIII, XI, XII, XIX
An uncommon inhabitant of the main river and larger lake tributaries, found most often in pool areas with abundant aquatic vegetation.

- Lepomis cyanellus* Rafinesque. Green sunfish. I, II, III, IV, V, VI, VII, VIII, IX, XI, XII, XIV, XV, XVI, XVII, XIX, XX, XXII, XXIV
Uncommon but widely distributed throughout the study area and expected to be common in the lakes.
- L. gulosus* (Cuvier). Warmouth. III, XIII
Collected from backwater pools of the main river having abundant organic debris and from the lakes; very uncommon.
- L. humilis* (Girard). Orangespotted sunfish. IV
Collected from a single sandy bottom pool with moderate flow in the upper portion of the main river.
- L. microlophus* (Gunther). Redear sunfish. II, VII, XII, XIII, XXIV
Uncommon but widely distributed in quiet pools along the main river, larger tributaries and the lakes.
- Micropterus dolomieu* Lacepede. Smallmouth bass. I, V, VI, VII, XII, XIII, XXII
Uncommon and restricted to the mainstream of the river and larger lake tributaries in pools with moderate flow and clear rock or sand bottom.
- M. punctulatus* (Rafinesque). Spotted bass. I, II, III, IV, V, VI, VII, VIII, IX, XI, XII, XIII, XIV, XV, XIX, XXI, XXII
The most common and widely distributed member of its genus within the study area.
- M. salmoides* (Lacepede). Largemouth bass. I, III, V, VI, XXIV
The largemouth bass is stocked annually by the AGFC in the lakes. It was occasionally collected from the mainstream of the river.
- Pomoxis annularis* Rafinesque. White crappie. IV, XIII
Common in the lakes and deeper pools of the main river.
- P. nigromaculatus* (Lesueur). Black crappie.
Reported from the lakes by the AGFC.
- Percidae (Perches)
- Etheostoma blennioides* Rafinesque. Greenside darter. I, IV, V, VI, VII, VIII, IX, X, XI, XII, XIV, XV, XVI, XVII, XVIII, XIX, XX, XXI, XXII, XXIV
Common throughout the main river and lake tributaries where it was collected from a variety of habitats. Adults were taken from deep, rocky riffles with swift current while juveniles were taken from pools with moderate flow and aquatic vegetation.
- E. chlorosomum* (Hay). Bluntnose darter. XIII
Collected only at the confluence of the Ouachita River and Lake Ouachita in slow-moving water with a sandy substrate although it may occur in the lakes near the confluence of tributaries.
- E. colletti* Birdsong and Knapp. Creole darter. XV, XIX, XXIV, XXVI
Uncommon and restricted to lake tributaries in shallow, rocky riffles with moderate to fast current.
- E. histrio* Jordan and Gilbert. Harlequin darter. XII
Uncommon; was collected from a single location in the lower portion of the main river from a shallow riffle with rock and sand substrate and moderate flow.
- E. nigrum* Rafinesque. Johnny darter. I, IV, V, VIII, XI, XII, XIII, XV
Uncommon and limited in distribution to the mainstream and South Fork of the Ouachita River. Found in quiet pools with clean sand and gravel bottoms.
- E. pallidiorum* (Distler and Metcalf). Paleback darter. XX
Previously considered endemic to the Caddo River system, it is apparently restricted to Mayberry Creek within the mountain province section of the Ouachita River and is extremely uncommon (Robison, 1974).
- E. proeliare* (Hay). Cypress darter. XIX
Specimens were collected from Glazypeau Creek in shallow pools with no flow and heavy aquatic vegetation consisting of *Myriophyllum heterophyllum* and algae.
- E. radiosum* (Hubbs and Black). Orangebelly darter. I, II, III, IV, V, VI, VII, VIII, IX, X, XI, XII, XIII, XIV, XV, XVI, XVII, XVIII, XIX, XXI, XXII, XXIII, XXIV, XXVI
The most common and widely distributed member of its genus within the study area.
- E. stigmaeum* (Jordan). Speckled darter. IV, VI, VIII, XI, XII, XIII, XV

Parallels *E. nigrum* very closely in distribution and relative abundance in the study area. Both seem limited to the upper half of the study area and are more common in the slower, sandy bottom portions of the lower main river.

- E. zonale* (Cope). Banded darter. IV, V, VI, VII, VIII, IX, X, XI, XII, XIV, XV, XXII
Common in the upper half of the study area in rocky riffles of the mainstream and South Fork of the river.
- Percina caprodes* (Rafinesque). Logperch. VI, VIII, IX, XI, XII, XIII, XV, XIX, XXI, XXII, XXIV, XXV
Widely distributed and moderately common. Most often collected from depressions in rock bottom or sandy bottom pools in the mainstream of the river and lake tributaries.
- P. copelandi* (Jordan). Channel darter. IV, V, VI, VIII, IX, X, XI, XII, XIII, XV, XIX, XXI, XXII
Most common member of its genus within the study area. Collected most frequently from sluggish riffles and sandy bottom pools in the mainstream of the river and lake tributaries.
- P. maculata* (Girard). Blackside darter. V
A single specimen was collected from a slow-moving portion of the main river with rock and sand bottom during the spring of the year.
- P. nasuta* (Bailey). Longnose darter. V, VI, VIII, IX, XI, XIII
The longnose darter appears to be uncommon and seasonal in its habitat selection throughout the mainstream of the river. Specimens collected during the spring of the year were in fast, deep riffle areas with rocky substrate and thick growth of *Podostemon heterophyllum*. The single specimen taken during the fall was collected from a sluggish silt bottom pool at the confluence of the river and Lake Ouachita.
- P. uranidea* (Jordan and Gilbert). Stargazing darter. XI, XII
Uncommon and apparently restricted to the main river. Two specimens were collected at night in fast, deep riffle areas with gravel and rock substrate.
- Stizostedion vitreum* (Mitchill). Walleye.
Stocked into the lakes by AGFC, the walleye is reported common in the lower portions of the main river during the spring months.

Sciaenidae (Drums)

- Aplodinotus grunniens* Rafinesque. Freshwater drum.
Collected from the lakes by the AGFC.

DISCUSSION

The known ichthyofauna of the mountain province of the Ouachita River is represented by 80 species distributed among 16 families. Another species was reported in the literature but is of questionable status. Meek (1891) reported *Chrosomus (Phoxinus) erythrogaster* from the South Fork of the Ouachita River near Mt. Ida. This species has not been reported since from the Ouachita River drainage. If it did occur, it probably has been eliminated from the study area, or perhaps its inclusion in the literature is the result of misidentification. *Nocomis asper* was the first member of its genus reported from the Ouachita River drainage (Douglas and Harris, 1977). Within Arkansas, it was previously considered restricted to the Arkansas River drainage in the northwest corner of the state. The occurrence of *N. asper* within the Ouachita River drainage is not easily explained. Bait release and faunal exchange between the Arkansas and Ouachita River drainages are possibilities that are considered unlikely. A more plausible explanation is that the Ouachita River population is a disjunct relict much like three isolated populations of *N. asper* in Oklahoma (two in the Red River drainage and one in the White River drainage) reported by Lachner and Jenkins (1971). *Noturus taylori* was considered endemic to the Caddo River system prior to this study (Douglas, 1972). *N. taylori* was collected from seven stations in the mainstream and South Fork of the Ouachita River. It is hypothesized that *N. taylori* evolved in the Caddo system, migrated via lateral stream transfer and capture to the mountain province section, and has since established a reproducing population there. The distribution and biogeography of *N. taylori* is being

treated more fully by Robison and Harris (in press).

Fourteen of the 80 species now known from the mountain province of the Ouachita River had not been reported previous to this study. These species include: *Ichthyomyzon gagei*, *Nocomis asper*, *Notropis ortenburgeri*, *N. rubellus*, *Pimephales promelas*, *Moxostoma carinatum*, *Noturus taylori*, *Fundulus notatus*, *Lepomis humilis*, *Etheostoma histrio*, *E. proeliare*, *Percina maculata*, *P. nasuta*, and *P. uranidea*.

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