

A CHECKLIST OF CONASAUGA RIVER FISHES, TENNESSEE

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Introduction

An ichthyologist's dream is to collect fishes in Tennessee streams, and a true darterologist has not been initiated until the cool, clear Tennessee riffles race over his feet. I recently had the chance to spend a week in Tennessee while attending the annual meeting of the American Society of Ichthyologists and Herpetologists (ASIH) on the campus of the University of Tennessee, Knoxville. This is the heart of darter country, and part of the festivities included a field trip to the Conasauga River.

The state of Tennessee has five major drainages: Tennessee River, Cumberland River, Mississippi River, Ohio River, and Mobile Bay. The Conasauga River drains into the Mobile Bay drainage through the southeast corner of Tennessee in the extreme southwest corner of Polk County and much of Bradley County. The Conasauga River is small compared to the Tennessee River or Mississippi River, but is still very impressive. The river width was approximately 140', with maximum depth to 3½'. Water temperature was a cool 68°F and the water was so clear that visibility was to the bottom. The substrate consisted of gravel-cobble substrates, attached Potamogeton spp., and side channels and pockets which contained accumulated detritus and silt.

The river possesses a multitude of fish species compared to most areas in the midwest and east coast (Table 1). Etnier (1976) listed 69 species collected from the Alabama drainage (Mobile Bay) from Polk and Bradley Counties, Tennessee. This encompassed the Coosa River in addition to the Conasauga River. Thus, all species listed in Etnier's list may not occur in the Conasauga River. Smith-Vaniz (1968) reported 81 species from the Coosa River drainage in Alabama. The present collection accounted for ten families and 38 species (plus possibly a few more minnows which were unidentified).

Riffle Habitats

Riffle habitats contained the majority of the darters and several minnows. The fastest water contained the Riffle Minnow (Phenacobius catostomus), Speckled Chub (Hybopsis aestivalis), Amber Darter (Percina antisella), and Trispot Darter (Etheostoma trisella). The somewhat slower current areas were abundant with the Bronze Darter (P. palmaris), Blackbanded Darter (P. nigrofasciata), Greenbreast Darter (E. jordani), Coosa Darter (E. coosae), and Banded Snubnose

Darter (a variety of the Tennessee Snubnose Darter, E. simoterum), River Chub (Nocomis micropogon), and a single Chestnut Lamprey (Ichthyomyzon castaneus). The Rock Darter (E. rupestris) was collected among larger cobble, while an undescribed logperch was collected at the base of the riffle just above a pool habitat. This species possesses a characteristic red band in the spinous dorsal.

Stream Margin Habitats

Stream margins were characterized by slow current velocities, normally some vegetation or larger cobble, and some sand dispersed among gravel interstitial spaces. Species were varied, and included Stoneroller (Campostoma anomalum), Whitetail Shiner (Notropis galacturus), Bluntnose Minnow (Pimephales notatus), Fathead Minnow (P. promelas), Northern Hog Sucker juveniles (Hypentelium nigricans), White Sucker (Catostomus commersoni), Shadow Bass (Ambloplites ariommus), Longear Sunfish (Lepomis megalotis), Spotted Sunfish (L. punctatus), Bluegill (L. macrochirus), and juvenile Redeye Bass (Micropterus coosae), Spotted Bass (M. punctulatus), and White Crappie (Pomoxis annularis). Darter species included juvenile Greenside Darters (E. blennioides), Coosa Darter (E. coosae), Greenbreast Darter (E. jordani), and Speckled Darter (E. stigmaeum). Juvenile Banded Sculpins (Cottus caroliniae) were also found in stream margins, associated with gravel and large cobble.

Slackwater Habitats

These habitats included side channels, pockets, and areas blocked off by other obstructions normally adjacent to riffles. They typically were silt-sand substrates with emergent or submergent aquatic macrophytes. Species collected included Longear Sunfish, most of the Shadow Bass, Spotted Gar (Lepisosteus oculatus), Speckled Madtom (Noturus leptacanthus), Stonerollers, Mountain Shiner (N. lirus), Blacktail Shiner (N. venustus stigma-turus), Creek Chub (Semotilus atromaculatus), Tricolor Shiner (N. trichostius), and Bluegill (L. macrochirus).

Pool Habitats

Pools differ from slackwater habitats in that they are normally deeper areas, usually at the base of the riffle. Species collected in pools included the Southern Studfish (Fundulus stellifer), Blackspotted Topminnow (F. olivaceus), most species of minnows, Mosquitofish (Gambusia affinis), and the undescribed logperch with the red dorsal band.

Discussion

The most diverse area was the stream margins, which tended to have a variety of species common to both the pool and riffle habitats. Stream margins have reduced current velocities, and provide some measure of protection from larger individuals of

predator species. A comparison between various basins in the southeastern section of Tennessee and Alabama contained similar species assemblages. The greatest diversity was found in the larger Coosa River (Smith-Vaniz, 1968), while very similar numbers of species were collected between the present study and Etnier's reported listing of species for the Mobile Bay drainage (1976). The Conasauga River was also a haven for darters. A total of 14 darter species may be present, and 11 species were collected, with only a minnow seine and a moderate amount of effort. Those species which were endangered or protected (e.g., Trispot Darter, Amber Darter) were released. Three species were collected in the present study that were not previously reported. These included the Riffle Minnow, Bluntnose Minnow, and River Chub. Representative specimens from the present study were deposited into the permanent fish collection of Southern Illinois University at Carbondale.

Anyone interested in native fishes would thoroughly enjoy a trip to the Conasauga River for a day of collecting.

Literature Cited

Etnier, David A. 1976. A checklist of the fishes of Tennessee. University of Tennessee, Knoxville. 7 pp.

Smith-Vaniz, William F. 1968. Freshwater fishes of Alabama. Auburn University Agricultural Experiment Station. Paragon Press: Montgomery. 211 pp.

Note: Dr. David A. Etnier, University of Tennessee-Knoxville, is currently working towards a state book on the fishes of Tennessee. Quite a task, working within a state that has as much diversity as Tennessee. We wish him the best with his efforts and look forward to its release.

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TABLE 1. A Comparative list of Fishes collected from the Conasauga River, Mobile Bay Basin, and Coosa River, Tennessee and Alabama.

SPECIES	CONASAUGA RIVER (Present study)	MOBILE DRAINAGE, TN (Etnier 1976)	COOSA RIVER SYSTEM, AL (Smith-Vaniz 1968)
Family Petromyzontidae, lamprey			
Chestnut lamprey, <u>Ichthyomyzon castaneus</u>	X	X	X
Southern brook lamprey, <u>I. gagei</u>		X	X
Least brook lamprey, <u>I. nebulosus</u>		X	X
Family Acipenseridae, sturgeon			
Lake sturgeon, <u>Acipenser fulvescens</u>			X
Family Lepisosteidae, gar			
Spotted gar, <u>Lepisosteus oculatus</u>	X	X	X
Family Clupeidae, herring			
Gizzard shad, <u>Dorosoma cepedianum</u>		X	X
Threadfin shad, <u>D. pretense</u>			X
Family Hiodontidae, mooneye			
Mooneye, <u>Hiodon tergisus</u>			X
Family Esocidae, pike			
Redfin pickerel, <u>Esox americanus</u>		X	X
Chain pickerel, <u>E. niger</u>		X	X
Family Cyprinidae, carp and minnows			
Stoneroller, <u>Camptostoma anomalum</u>	X	X	X
Goldfish, <u>Carassius auratus</u>			X
Carp, <u>Cyprinus carpio</u>		X	X
Silverjaw minnow, <u>Erycymba buccata</u>			X
Speckled chub, <u>Hybopsis aestivalis</u>	X	X	X
Bigeye chub, <u>H. amblops</u>			X
Silver chub, <u>H. storeriana</u>			X
River chub, <u>Nocomis micropogon</u>	X		X
Golden shiner, <u>Notemigonus crysoleucas</u>		X	X
Burrhead shiner, <u>Notropis asperifrons</u>		X	X
Emerald shiner, <u>N. atherinoides</u>		X	X
Rough shiner, <u>N. baileyi</u>			X
Pretty shiner, <u>N. bellus</u>			X
Blue shiner, <u>N. caeruleus</u>		X	X
Alabama shiner, <u>N. callistius</u>		X	X
Rainbow shiner, <u>N. chrosomus</u>		X	X
Striped shiner, <u>N. chrysocephalus</u>		X	X
Mountain shiner, <u>N. lirus</u>	X	X	X
Silverstripe shiner, <u>N. stilbicus</u>		X	X
Tricolor shiner, <u>N. trichostius</u>	X	X	X
Blacktail shiner, <u>N. venustus stigmaturus</u>	X	X	X
Mimic shiner, <u>N. volucellus</u>			X
Coosa shiner, <u>N. xaenocephalus</u>		X	X
Rifle minnow, <u>Phenacobius catostomus</u>	X		X
Bluntnose minnow, <u>Pimephales notatus</u>	X		X
Fathead minnow, <u>P. promelas</u>	X	X	X
Blacknose dace, <u>Rhinichthys atratulus</u>		X	X
Creek chub, <u>Semotilus atromaculatus</u>	X	X	X
Family Catostomidae, suckers			
Quillback, <u>Carpoides cyprinus</u>			X
White sucker, <u>Catostomus commersoni</u>	X	X	X
Blue sucker, <u>Cycleptus elongatus</u>			X
Alabama hog sucker, <u>Hypentelium etowanum</u>		X	X
Northern hog sucker, <u>H. nigricans</u>	X	X	X
Smallmouth buffalo, <u>Ictiobus bubalus</u>		X	X
Spotted sucker, <u>Minytremis melanops</u>		X	X
River hogsucker, <u>Moxostoma carinatum</u>			X
Black hogsucker, <u>M. duquesnei</u>		X	X
Golden hogsucker, <u>M. erythrum</u>		X	X
Blacktail hogsucker, <u>M. poecilurum</u>		X	X
Family Ictaluridae, catfish			
Blue catfish, <u>Ictalurus furcatus</u>			X
Black bullhead, <u>I. melas</u>		X	X
Yellow bullhead, <u>I. natalis</u>		X	X
Brown bullhead, <u>I. nebulosus</u>			X
Channel catfish, <u>I. punctatus</u>		X	X
Speckled madtom, <u>Noturus leptacanthus</u>	X	X	X
Frecklebelly madtom, <u>N. munus</u>		X	X
Flathead catfish, <u>Pylodictis olivaris</u>			X

TABLE 1. (Continued)

SPECIES	CONASAUGA RIVER (Present study)	MOBILE DRAINAGE, TN (Etnier 1976)	COOSA RIVER SYSTEM, AL (Smith-Vaniz 1968)
Family Cyprinodontidae, topminnows			
Blackstripe topminnow, <u>Fundulus notatus</u>		X	
Blackspotted topminnow, <u>F. olivaceus</u>	X	X	X
Southern studdfish, <u>F. stellifer</u>	X	X	X
Family Poeciliidae, livebearers			
Mosquitofish, <u>Gambusia affinis</u>	X	X	X
Family Percichthyidae, temperate bass			
White bass, <u>Morone chrysops</u>			X
Family Centrarchidae, sunfish			
Shadow bass, <u>Ambloplites ariomus</u>	X	X	
Rock bass, <u>A. rupestris</u>			X
Flier, <u>Centrarchus macropterus</u>			X
Redbreast sunfish, <u>Lepomis suritus</u>			X
Green sunfish, <u>L. cyanellus</u>	X	X	X
Wormouth, <u>L. gulosus</u>		X	X
Bluegill, <u>L. macrochirus</u>	X	X	X
Longear sunfish, <u>L. megalotis</u>	X	X	X
Redear sunfish, <u>L. microlophus</u>		X	X
Spotted sunfish, <u>L. punctatus</u>	X	X	X
Redeye bass, <u>Micropterus coosae</u>	X	X	X
Spotted bass, <u>M. punctulatus</u>	X	X	X
Largemouth bass, <u>M. salmoides</u>		X	X
White crappie, <u>Pomoxis annularis</u>	X	X	X
Black crappie, <u>P. nigromaculatus</u>			X
Family Percidae, perch and darters			
Crystal darter, <u>Ammocrypta asprella</u>			X
Coosa darter, <u>Etheostoma coosse</u>	X	X	X
Coldwater darter, <u>E. ditrema</u>		X	X
Greenbreast darter, <u>E. jordani</u>		X	X
Rock darter, <u>E. rupestre</u>	X	X	X
Tennessee snubnose darter (subspecies), <u>E. simoterum</u>	X	X	X
Speckled darter, <u>E. stigmaeus</u>	X	X	X
Trispot darter, <u>E. trisella</u>	X	X	X
Amber darter, <u>Percina antesella</u>	X	X	(a)
Kedfin logperch, <u>P. carbonaria</u>	X	X	
Logperch sp., <u>P. (evermanni) sp.</u>	X	X	X
Bridled darter, <u>P. sp.</u>	X	X	
Blackbanded darter, <u>P. nigrofasciata</u>	X	X	X
Bronze darter, <u>P. palmeris</u>	X	X	X
River darter, <u>P. shumardi</u>		X	X
Walleye, <u>Stizostedion vitreum</u>		X	X
Family Cottidae, sculpins			
Banded sculpin, <u>Cottus caroliniae</u>	X	X	X
Pygmy sculpin, <u>C. pygmaeus</u>			X

(a) Species not previously described.