

TYPE SPECIMENS OF FISHES IN THE TULANE UNIVERSITY COLLECTION WITH A BRIEF HISTORY OF THE COLLECTION^{1,2}

ROYAL D. SUTTKUS

Department of Biology, Tulane University, New Orleans, Louisiana 70118

INTRODUCTION

A brief history of the Tulane University fish collection and a list of type specimens are given in this paper. The publication of the latter is recognized as part of the University's responsibility following the recommendations of the International Code of Zoological Nomenclature (Recommendation 72 D. Institutional responsibility) 1961. Formerly, some paratypes were housed elsewhere (as noted) but were acquired by Tulane on a gift basis. All types are grouped in a separate room apart from the rest of the general collection. Jars containing holotypes are encircled with red paint and those containing paratypes are similarly marked with blue paint. The types as well as the general collection specimens are arranged by families in a phylogenetic sequence following Berg's (1947) classification system. Within the family the genera and species are arranged alphabetically. Each label bears a family number which has been derived by a renumbering of Berg's families of fishes which contain living representatives, that is, families with only fossil forms were excluded because fossil fish material is kept separate from extant material.

HISTORY OF THE TULANE UNIVERSITY FISH COLLECTION

During the latter half of the last century Tulane University had an active exhibit museum which included an array of natural history items as well as art items, minerals, and so forth. In the early 1950's when the old museum was disbanded there were only a few fish specimens remaining and these were suspended by thread in formalin. None had labels and so the several dozen specimens were discarded. Two dry-mounted fish speci-

mens, a cotton stuffed *Acipenser fulvescens* which has "Niagara Falls, July 1881" printed on its ventral side a partial skin of a *Rachycentron canadus* which has "New Orleans, June 3, 1894" written on the exposed part of the artificial wooden body are the only specimens retained from the former Tulane Museum collection of fishes.

The author started the modern Tulane University fish collection in the fall of 1950. However, it was not until July 11, 1951, that the first entry was made in a permanent catalog. The collection has grown steadily and at present, December 31, 1969, there are 60,030 catalog entries which total 1,849,315 specimens. Some of the earlier series, 1951 to about 1955, were stored in 70% ethanol, but the bulk of the specimens have been stored in 40% isopropyl alcohol, which is the currently used storage fluid. Of the two percentages of isopropyl alcohol available commercially (99% and 91%) 99% is used for dilution to 40% with ordinary tap water.

The fish skeletal collection totals 549 specimens, most of which are complete skeletons. The dry fish skeletal material and the cleared and alizarin-stained, glycerin stored specimens are cataloged separately from the above mentioned alcohol stored material. Moreover, the 953 x-ray negatives are cataloged separately on 4 × 6 file cards. The 953 x-rays represent a total of 12,042 specimens.

The Tulane University fish collection is not a typological or local reference collection. Geographically the Tulane collection has excellent representation of southeastern, southern and southwestern United States fresh water fishes and good representation of central United States, Mexican, Central American (particularly Costa Rica) fresh water fishes and marine fishes from the Gulf of Mexico and Caribbean Sea.

During the entire two decade period the author has been the curator of the fish collection. During the first decade of history a number of students helped in curating the collection, in particular, Sue Whitsell (Fingerman), Myrna Andersson (Wilkens) and

¹ Contribution Number 1 from the Laboratory of Systematic and Environmental Biology, Environmental Science Center, Tulane University.

² Published by Tulane University in fulfillment of an institutional responsibility recommended by the International Commission on Zoological Nomenclature, with partial financial support from the Louisiana Research Foundation.

Bangalore I. Sundararaj. In 1963 John S. Ramsey became the first volunteer student curator, followed by Clyde D. Barbour and Glenn H. Clemmer. Ramsey organized the type material; sorted, identified and cataloged a vast amount of material; studied and identified most of the unidentified cataloged material that had accumulated up to that time and took care of most of the loan requests during the 1963 to 1965 period.

Dr. D. E. Copeland (then Chairman of the Zoology Department) was instrumental in obtaining the first curatorial staff appointment for the fish collection. Mr. Albert Harris was appointed as assistant to the curator of fishes in 1965. Upon his resignation in 1966, Mr. Frank Thomas became the assistant to the curator and has continued in this position to the present time.

Without the staff appointment the ever increasing requests for loans would have been an overburdening task for the curator. Needless to say the growth of the collection and the production of publications would have been greatly curtailed without the assistant. Too, during the two decade period parts of the collection have been moved several times from one building to another on different sides of the campus and at the present time we are in the process of moving the entire collection to the Environmental Science Center which is 15 miles away on the west bank of the Mississippi River.

LIST OF TYPE SPECIMENS OF FISHES IN THE
TULANE UNIVERSITY LABORATORY OF
SYSTEMATIC AND ENVIRONMENTAL
BIOLOGY*

Clupeidae

Brevoortia gunteri Hildebrand, 1948, Smithsonian Misc. Coll. 107 (18):1-39, 9 figs.

Paratype: TU10792 (formerly United States National Museum No. 129802, sent to Tulane University as gift exchange on January 5, 1954), Texas, Aransas County, Aransas Bay, collected by Gordon Gunter.

Alepisauridae

Alepisaurus brevirostris Gibbs 1960, Breviora, Mus. Comp. Zool., (123):1-14.

* The formal opening of the Laboratory of Systematic and Environmental Biology will be announced during the latter part of 1970 or early 1971.

Paratype: TU 22990, Atlantic Ocean, latitude 37° 44' north, longitude 65° 42' west, 1957, collected by M. V. Delaware.

Cyprinidae

Algansea monticola Barbour and Contreras, 1968, Proc. Biol. Soc. Wash., 81:101-108.

Holotype: TU 40869, from Mexico, Zacatecas, Rio Juchipila near town of Jalpa, at Highway 70 bridge, one mile east of the intersection with Highway 41, 30 June 1963, CDB 63-27, collected by Clyde B. Barbour and Salvador Contreras.

Paratypes: TU30611, 49 specimens from same collection as holotype; TU30608, 76 specimens, from Mexico, Zacatecas, Rio Juchipila at Mal Paso (a little walled town) about 16 miles east of Ciudad Garcia Salinas, 28 June 1963, CDB 63-23, collected by Barbour and Contreras; TU 30609, 131 specimens, from Mexico, Zacatecas, tributary to Rio Juchipila, about 5 miles south of Villanueva on Highway 41, 28 June 1963, CDB 63-24, collected by Barbour and Contreras; TU 30610, 18 specimens from Mexico, Zacatecas, Rio Juchipila at Tabasco, upstream of bridge at south end of town, 29 June 1963, CDB 63-25, collected by Barbour and Contreras.

Nocomis effusus Lachner and Jenkins 1967, Copeia, 1967 (3):557-580.

Paratypes: TU 19488, 2 specimens from Tennessee, Rutherford County, Stones River, 6.5 miles north of Murfreesboro, Highway 231, 7 September 1958, RDS 2758, collected by Suttkus and Myrna Andersson; TU 32838, 5 specimens from Tennessee, Fentress County, tributary to Wolf River, 9.8 miles north of Jamestown, Highway 127, 3 June 1964, RDS 3474, collected by Suttkus and John S. Ramsey; TU 33115, 2 specimens from Tennessee, Cheatham County, Harpeth River, 8 miles east of White Bluff, Highway 70, 15 July 1964, JSR 64-60, collected by Ramsey and Dan W. Walton; TU 33125, 11 specimens from Tennessee, Williamson County, South Harpeth River, 4.2 miles east of Fairview, Highway 96, 15 July 1964, JSR 64-61, collected by Ramsey and Walton; TU 33171, 21 specimens from Tennessee, Rutherford County, West Fork Stones River at west edge of Murfreesboro, Highway 96, 15 July

1964, JSR 64-63, collected by Ramsey and Walton; TU 33194, 1 specimen from Tennessee, Rutherford County, Stones River at south limit of Walterhill, Highway 231, 16 July 1964, JSR 64-64, collected by Ramsey and Walton.

Notropis asperifrons Suttkus and Raney, 1955, Tulane Stud. Zool., 3(1):1-33.

Paratypes: TU 2974, 22 specimens from Alabama, Wilcox County, Gravel Creek tributary to Pursley Creek 6.3 miles south of Camden, Highway 11, 3 June 1951, RDS 2140, collected by Royal D. Suttkus and Charles D. Hancock; TU 3063, 5 specimens from Alabama, Wilcox County, tributary to Pursley Creek, 1.8 miles east of Camden, Highway 10, 3 June 1951, RDS 2138, collected by Suttkus and Hancock; TU 3426, 8 specimens from Alabama, Wilcox County, Pursley Creek, tributary to Alabama River, 3.4 miles southwest of Camden, Highway 11, 3 June 1951, RDS 2139, collected by Suttkus and Hancock; TU 4251, 28 specimens from Alabama, Shelby County, tributary to Waxahatchee Creek, 4.7 miles southwest of Columbia on Highway 25, 15 June 1952, RHG 356, collected by Robert H. Gibbs, Jr. and Philip P. Caswell.

Notropis baileyi Suttkus and Raney, 1955, Tulane Stud. Zool., 2(5):69-86.

Paratypes: TU 2637, 29 specimens from Alabama, Monroe County, tributary to Alabama River, 17.3 miles south of Camden, Highway 11, 3 June 1951, RDS 2141, collected by Suttkus and Hancock; TU 2965, 4 specimens from Alabama, Wilcox County, Gravel Creek, tributary to Pursley Creek, 6.3 miles south of Camden, Highway 11, 3 June 1951, RDS 2140, collected by Suttkus and Hancock; TU 3066, 41 specimens from Alabama, Wilcox County, tributary to Pursley Creek, 1.8 miles east of Camden, Highway 10, 3 June 1951, RDS 2138, collected by Suttkus and Hancock; TU 3195, 4 specimens from Alabama, Butler County, Pine Barren Creek, 2.5 miles south of Forest Home, 2 June 1951, RDS 2136, collected by Suttkus and Hancock; TU 3430, 75 specimens from Alabama, Wilcox County, Pursley Creek, tributary to Alabama River, 3.4 miles southwest of Camden, Highway 11, 3 June 1951, RDS 2139, collected by Suttkus and Hancock.

Notropis edwardraneyi Suttkus and Clemmer, 1968, Tulane Stud. Zool. and Bot., 15(1):18-39.

Holotype: TU 49485, from Alabama, Wilcox County, Alabama River at Yellow Jacket Bar, river mile 129.8, 8 March 1967, RDS 4097, Suttkus and Gerald E. Gunning.

Paratypes: TU 44028, 7324 specimens taken with holotype; TU 33381, 1613 specimens from Alabama, Dallas County, Alabama River at Watts Bar, 3.5 miles upstream from Cahaba, River Mile 204.5, 29 June 1964, RDS 3515, Suttkus and Environmental Biology Class; TU 35243, 236 specimens from Alabama, Dallas County, Alabama River at old ferry landing across river from Cahaba, 27-28 June 1964, RDS 3508, Suttkus and Environmental Biology Class; TU 35269, 314 specimens from Alabama, Dallas County, Alabama River at Cahaba where Cahaba River enters Alabama River, 28 June 1964, RDS 3513, Suttkus, Glenn H. Clemmer, James D. Archer and John Van Conner; TU 35323, 28 specimens from Alabama, Clarke County, Alabama River along left bank across river from Choctaw Bluff, 2 July 1964, RDS 3519, collected by Suttkus and Environmental Biology Class; TU 40293, 297 specimens from Alabama, Wilcox County, Alabama River at Evans Upper Bar, River Mile 135.8, 7 April 1966, RDS 3857, collected by Suttkus and Gunning; TU 40303, 1020 specimens from Alabama, Wilcox County, Alabama River at Yellow Jacket Bar, River Mile 129.8, 7 April 1966, RDS 3858, collected by Suttkus and Gunning; TU 40320, 491 specimens from Alabama, Wilcox County, Alabama River at Tait Bar, River Mile 122.4, 7 April 1966, RDS 3859, collected by Suttkus and Gunning; TU 40335, 243 specimens from Alabama, Wilcox County, Alabama River at Wilcox Bar, River Mile 120.3, 7 April 1966, RDS 3860, collected by Suttkus and Gunning; TU 40900, 289 specimens from Alabama, Wilcox County, Alabama River at Evans Upper Bar, River Mile 135.8, 28 June 1966, RDS 3918, collected by Suttkus, Gunning and Clemmer; TU 40925, 85 specimens from Alabama, Wilcox County, Alabama River at Yellow Jacket Bar, River Mile 129.8, 28 June 1966, RDS 3919, collected by Suttkus, Gunning and Clemmer; TU 40940, 226 specimens from Alabama, Wilcox County, Alabama River at Tait Bar, River Mile 122.4, 28

June 1966, RDS 3920, collected by Suttkus, Gunning and Clemmer; TU 40950, 109 specimens from Alabama, Wilcox County, Alabama River at Wilcox Bar, River Mile 120.3, 29 June 1966, RDS 3921, collected by Suttkus, Gunning and Clemmer; TU 41400, 390 specimens from Alabama, Wilcox County, Alabama River at Yellow Jacket Bar, River Mile 129.8, 4.6 miles east of Yellow Bluff Post Office, 1 July 1966, RDS 3924, collected by Suttkus and Environmental Biology Class; TU 41608, 284 specimens from Alabama, Wilcox County, Alabama River at Evans Upper Bar, River Mile 135.8, 4 October 1966, RDS 4011, collected by Suttkus and Gunning; TU 41618, 33 specimens from Alabama, Wilcox County, Alabama River at Yellow Jacket Bar, River Mile 129.7, 4 October 1966, RDS 4012, collected by Suttkus and Gunning; TU 41632, 92 specimens from Alabama, Wilcox County, Alabama River at Reeves Bar, River Mile 128.5, 4 October 1966, RDS 4013, collected by Suttkus and Gunning, TU 41639, 187 specimens from Alabama, Wilcox County, Alabama River at Tait Bar, River Mile 122.5, 4 October 1966, RDS 4014, collected by Suttkus and Gunning; TU 41655, 119 specimens from Alabama, Wilcox County, Alabama River at Wilcox Bar, River Mile 120.5, 5 October 1966, RDS 4015, collected by Suttkus and Gunning; TU 41666, 147 specimens from Alabama, Wilcox County, Alabama River at Ohio Bar, River Mile 111.6, 5 October 1966, RDS 4016, collected by Suttkus and Gunning; TU 41670, 301 specimens from Alabama, Monroe County, Alabama River at Stein Island, River Mile 107.5, 5 October 1966, RDS 4017, collected by Suttkus and Gunning; TU 41695, 83 specimens from Alabama, Wilcox County, Alabama River at Evans Upper Bar, River Mile 135.8, 5 August 1966, RDS 3945, collected by Suttkus and Gunning; TU 41711, 29 specimens from Alabama, Wilcox County, Alabama River at Evans Lower Bar, River Mile 133, 5 August 1966, RDS 3946, collected by Suttkus and Gunning; TU 41726, 16 specimens from Alabama, Wilcox County, Alabama River at Yellow Jacket Bar, River Mile 129.7, 5 August 1967, RDS 3948, collected by Suttkus and Gunning; TU 41732, 19 specimens from Alabama, Wilcox County, Alabama River at Reeves Bar, River Mile 128.5, 5 August 1966, RDS

3949, collected by Suttkus and Gunning; TU 41745, 63 specimens from Alabama, Wilcox County, Alabama River at Tait Bar, River Mile 122.5, 5 August 1966, RDS 3950, collected by Suttkus and Gunning; TU 41755, 12 specimens from Alabama, Wilcox County, Alabama River at Wilcox Bar, River Mile 120.5, 5 August 1966, RDS 3951, collected by Suttkus and Gunning; TU 41761, 9 specimens from Alabama, Wilcox County, Alabama River at Ohio Bar, River Mile, 111.6, 5 August 1966, RDS 3952, collected by Suttkus and Gunning; TU 41772, 151 specimens from Alabama, Monroe County, Alabama River at Stein Island, River Mile 107.5, 5 August 1966, RDS 3953, collected by Suttkus and Gunning; TU 41791, 22 specimens from Alabama, Monroe County, Alabama River at St. James Bar, River Mile 104, 5 August 1966, RDS 3954, collected by Suttkus and Gunning; TU 41797, 4 specimens from Alabama, Monroe County, Alabama River, at Bates Bar, River Mile 99, 5 August 1966, RDS 3955, collected by Suttkus and Gunning; TU 41813, 10 specimens from Alabama, Monroe County, Alabama River at Silver Creek Bar, River Mile 87.6, 6 August 1966, RDS 3957, collected by Suttkus and Gunning; TU 41823, 1 specimen from Alabama, Monroe County, Alabama River at mouth of Limestone Creek, River Mile 80.1, 6 August 1966, RDS 3958, collected by Suttkus and Gunning; TU 42731, 370³ specimens from Alabama, Wilcox County, Alabama River at Evans Upper Bar, River Mile 135.8, 19 December 1966, RDS 4065, collected by Suttkus and Gunning; TU 42737, 5630 specimens from Alabama, Wilcox County, Alabama River at Yellow Jacket Bar, River Mile 129.5, 19 December 1966, RDS 4066, collected by Suttkus and Gunning; TU 42746, 687 specimens from Alabama, Wilcox County, Alabama River at Tait Bar, River Mile 122.5, 19 December 1966, RDS 4067, collected by Suttkus and Gunning; TU 42759, 900 specimens from Alabama, Wilcox County, Alabama River at Wilcox Bar, River Mile 120.5, 19–20 December 1966, RDS 4068, collected by Suttkus and Gunning; TU 44011, 175 specimens from Alabama, Wilcox County, Alabama River at Evans Upper Bar, River

³ Given incorrectly in Suttkus and Clemmer, 1968: 10 as 470 specimens.

Mile 135.8, 8 March 1967, RDS 4096, collected by Suttikus and Gunning; TU 44029, 94 specimens from Alabama, Wilcox County, Alabama River at Tait Bar, River Mile 122.5, 9 March 1967, RDS 4098, collected by Suttikus and Gunning; TU 44045, 561⁴ specimens from Alabama, Wilcox County, Alabama River at Wilcox Bar, River Mile 120.5, 9 March 1967, RDS 4099, collected by Suttikus and Gunning; TU 46783, 202 specimens from Alabama, Wilcox County, Alabama River at Evans Upper Bar, River Mile 135.8, 31 May 1967, RDS 4143, collected by Suttikus and Gunning; TU 46796, 395 specimens from Alabama, Wilcox County, Alabama River at bar above Yellow Jacket Bar, 31 May 1967, RDS 4144, collected by Suttikus and Gunning; TU 46802, 223 specimens from Alabama, Wilcox County, Alabama River at Yellow Jacket Bar, River Mile 129.8, 31 May 1967, RDS 4145, collected by Suttikus and Gunning; TU 46819, 43 specimens from Alabama, Wilcox County, Alabama River at Tait Bar, River Mile 122.5, 31 May 1967, RDS 4146, collected by Suttikus and Gunning; TU 46830, 32 specimens from Alabama, Wilcox County, Alabama River at Wilcox Bar, River Mile 120.5, 31 May–1 June 1967, RDS 4147, collected by Suttikus and Gunning; TU 47346, 64 specimens from Alabama, Wilcox County, Alabama River at Evans Upper Bar, River Mile 135.7, 7 August 1967, RDS 4177, collected by Suttikus and Gunning; TU 47361, 49 specimens from Alabama, Wilcox County, Alabama River at Yellow Jacket Bar, River Mile 129.8, 7 August 1967, RDS 4178, collected by Suttikus and Gunning; TU 47374, 86 specimens from Alabama, Wilcox County, Alabama River at Reeves Bar, River Mile 128.5, 7 August 1967, RDS 4179, collected by Suttikus and Gunning; TU 47387, 168 specimens from Alabama, Wilcox County, Alabama River at Tait Bar, River Mile 122.5, 7–8 August 1967, RDS 4180, collected by Suttikus and Gunning; TU 47396, 33 specimens from Alabama, Wilcox County, Alabama River at Wilcox Bar, River Mile 120.6, 8 August 1967, RDS 4181, collected by Suttikus and Gunning; TU 47408, 475 specimens from Alabama, Wilcox County, Alabama River at Ohio Bar, River Mile 111.7,

8 August 1967, RDS 4182, collected by Suttikus, Clemmer and Gunning; TU 47420, 173 specimens from Alabama, Monroe County, Alabama River at Stein Island, River Mile 107.5, 8 August 1967, RDS 4183, collected by Suttikus and Gunning; TU 47435, 229 specimens from Alabama, Monroe County, Alabama River at Bates Bar, River Mile 99.4, RDS 4184, collected by Suttikus and Gunning; TU 47452, 134 specimens from Alabama, Monroe County, Alabama River at Haines Island, River Mile 96, 8 August 1967, RDS 4185, collected by Suttikus and Gunning; TU 47477, 89 specimens from Alabama, Wilcox County, Alabama River at Evans Lower Bar, River Mile 133, 9 August 1967, RDS 4186, collected by Suttikus and Gunning; TU 47491, 24 specimens from Alabama, Monroe County, Alabama River at St. James Bar, River Mile 104, 10 August 1967, RDS 4187, collected by Suttikus and Gunning; TU 47499, 16 specimens from Alabama, Monroe County, Alabama River at Silver Creek Bar, River Mile 87.7, 17 August 1967, RDS 4188, collected by Suttikus and Clemmer; TU 47515, 306 specimens from Alabama, Wilcox County, Alabama River at Hobbs Bar, River Mile 149.5, 18 August 1967, RDS 4189, collected by Suttikus and Clemmer; TU 47762, 143 specimens from Alabama, Wilcox County, Alabama River at Lower Canton Bar, River Mile 156.7, along left bank, 18 August 1967, RDS 4190, collected by Suttikus and Clemmer; TU 47781, 9 specimens from Alabama, Wilcox County, Alabama River at Lower Canton Bar, River Mile 156.7, along right bank, 18 August 1967, RDS 4191, collected by Suttikus and Clemmer; TU 47822, 85 specimens from Alabama, Wilcox County, Alabama River at Hurricane Island, River Mile 166.5, 19 August 1967, RDS 4193, collected by Suttikus and Clemmer; TU 47838, 75 specimens from Alabama, Wilcox County, Alabama River at St. John Bar, River Mile 164.8, 19 August 1967, RDS 4192, collected by Suttikus and Clemmer; TU 47909, 152 specimens from Alabama, Wilcox County, Alabama River at Evans Upper Bar, River Mile 135.7, 26 September 1967, RDS 4204, collected by Gunning and Armand Kuris, TU 47924, 105 specimens from Alabama, Wilcox County, Alabama River at Yellow Jacket Bar, River Mile 129.8, 26 September

⁴ Given incorrectly in Suttikus and Clemmer, 1968: 20 as 461 specimens.

1967, RDS 4203, collected by Suttkus and Clemmer; TU 47936, 39 specimens from Alabama, Wilcox County, Alabama River at Reeves Bar, River Mile 128.5, 26 September 1967, RDS 4204, collected by Suttkus and Clemmer; TU 47968, 230 specimens from Alabama, Wilcox County, Alabama River at Tait Bar, River Mile 122.5, 27 September 1967, RDS 4207, collected by Suttkus and Kuris; TU 47980, 108 specimens from Alabama, Wilcox County, Alabama River at Wilcox Bar, River Mile 120.6, 27 September 1967, RDS 4208, collected by Suttkus and Kuris; TU 47994, 65 specimens from Alabama, Wilcox County, Alabama River at Ohio Bar, River Mile 111.7, 27 September 1967, RDS 4209, collected by Suttkus and Kuris; TU 48012, 232 specimens from Alabama, Monroe County, Alabama River at Stein Island, River Mile 107.5, 27 September 1967, RDS 4210, collected by Suttkus and Clemmer.

Notropis euryzonus Suttkus, 1955, Tulane Stud. Zool., 3(5):83-100.

Paratypes: TU 10700, 8 specimens from Alabama, Russell County, tributary to Little Uchee Creek, 1.1 miles east of Crawford, Highway 80, 17 September 1955, RDS 2520, collected by Suttkus; TU 10718, 60 specimens from Alabama, Russell County, tributary to Uchee Creek, 3.2 miles west of Crawford, Highway 80, 17 September 1955, RDS 2521, collected by Suttkus.

Notropis bypsilepis Suttkus and Raney, 1955, Tulane Stud. Zool., 2(7):159-170.

Paratypes: TU 8883, 4 specimens (formerly part of Cornell University No. 17138) Georgia, Fulton County, Vickery Creek at junction with Chattahoochee River at Roswell, Highway 19, 30 March 1950, ECR 1765 and RDS 1765, collected by Edward C. Raney, Suttkus, C. Richard Robins and Richard Backus.

Notropis imeldae Cortes 1966, An. Esc. nac. Cienc. biol., Mex., 15:185-192.

Paratypes: TU 55375, 5 specimens from Mexico, Oaxaca, Rio Atoyac at Juchatengo, latitude 16° 20' north, longitude 97° 05' west, 16 April 1965, collected by Imelda Martinez and Lauro Gonzalez.

Notropis signipinnis Bailey and Suttkus, 1952, Occ. Pap. Mus. Zool. Univ. Mich., No. 542:1-15.

Paratypes: TU 1133, 164 specimens from Mississippi, George County, Maletts Spring Branch, tributary to Rocky Creek, tributary to Escatawpa River, 6.6 miles southeast of Lucedale, 4 June 1951, RDS 2147, collected by Suttkus and Hancock.

Notropis uranoscopus Suttkus, 1959, Copeia, 1959(1):7-11.

Holotype: TU 15289, from Alabama, Bibb County, Cahaba River, 2.2 miles north of Centerville, 17 March 1957, RDS 2594, collected by Suttkus, Rudolph J. and Helen V. Miller, John DeAbate.

Paratypes: TU 18551, 18 specimens from same collection as holotype; TU 18569, 2 specimens from Alabama, Bibb County, Cahaba River, 2 miles south of Centerville, 5 July 1954, University of Alabama Number 406, collected by Henry Howell, Bryan brothers, Ralph Chermock, A. F. Hemphill, and Herbert Boschung; TU 18570, 8 specimens from Alabama, Bibb County, Cahaba River, 2 miles south of Centerville, 5 July 1954, collected by Jack Mallory; TU 18674, 8 specimens from Alabama, Bibb County, Cahaba River, 8.5 miles north of Centerville, Highway 27 crossing, 8 July 1958, RDS 2738, collected by Suttkus, Myrna Andersson, Susan Salisbury, and John DeAbate; TU 19410, 21 specimens from Alabama, Bibb County, Cahaba River, 8.5 miles north of Centerville, Highway 27 crossing, 8 September 1958, RDS 2760, collected by Suttkus and Myrna Andersson.

Ictaluridae

Ictalurus serracanthus Yerger and Relyea, 1968, Copeia, 1968(2):361-384.

Paratypes: TU 22592, 4 specimens from Florida, Gadsden County, Lake Talquin just west of mouth of Little River, 20 October 1959, JMB 78, collected by James M. Barkuloo, et al.; TU 22642, 1 specimen from Florida, Leon County, Ochlockonee River at Jackson Bluff, Highway 20, 14-15 November 1959, RDS 2861, collected by Suttkus, Barkuloo and Ernest Grover; TU 37226, 3 specimens from Florida, Wakulla County, Sopchoppy River, 2.4 miles south of Sop-

choppy, Highway 319, 27 May 1964, collected by Kenneth Relyea.

Noturus albater, Taylor, 1969, Bull. U. S. Nat. Mus., (282):1-315.

Paratypes: TU 10180, 1 specimen from Arkansas, Newton County, Big Buffalo River, 15.8 miles west of Jasper, Highway 21, 30 April 1955, RDS 2485, collected by Suttkus, Ann Harper, Wanda Hildebrand and Hinton D. Hoese; TU 12240, 15 specimens from Arkansas, Washington County, West Fork White River 6.1 miles south of Fayetteville, Highway 71, 2 September 1955, RDS 2509, collected by Suttkus; TU 12258, 85 specimens from Arkansas, Washington County, White River 8.3 miles east of Springdale, Highway 68, 3 September 1955, RDS 2512, collected by Suttkus; TU 16553, 35 specimens from Arkansas, Washington County, White River 8.3 miles east of Springdale, Highway 68, 4 October 1957, collected by Suttkus, Charles F. Cole, John DeAbate, Susan Harvey, Myrna Andersson, and Bangalore I. Sundararaj; TU 16575, 12 specimens from Arkansas, Washington County, White River 8.3 miles east of Springdale, Highway 68, 5 October 1957, RDS 2667, collected by Suttkus, Cole, DeAbate, Harvey, Andersson, and Sundararaj; TU 22401, 7 specimens from Arkansas, Madison County, War Eagle Creek, 5.4 miles north of Huntsville, Highway 23, 25 October 1959, RDS 2856, collected by Suttkus, Andersson, Sundararaj; TU 22504, 37 specimens from Arkansas, Newton County, Buffalo Fork of White River, 15.5 miles west of Jasper, Highway 74, 24 October 1959, RDS 2853, collected by Suttkus, Andersson, Sundararaj; TU 22514, 2 specimens from Arkansas, Newton County, Buffalo Fork of White River 15.5 miles west of Jasper, Highway 74, 25 October 1959, RDS 2854, collected by Suttkus, Andersson, and Sundararaj; TU 22709, 9 specimens from Arkansas, Cleburne County, Devils Fork Little Red River between Stark and Edgemont, 23 October 1959, RDS 2852, collected by Suttkus, Andersson, and Sundararaj.

Noturus elegans Taylor, 1969, Bull. U. S. Nat. Mus., (282):1-315.

Paratypes: TU 19390, 12 specimens from Kentucky, Green County, Green River 3.8 miles east-northeast of Donnansburg, High-

way 88, 7 September 1958, RDS 2756, collected by Suttkus and Myrna Andersson; TU 19460, 16 specimens from Kentucky, Barren County, tributary to Barren River, 2.6 miles southwest of Lucas, Highway 31E, at old mill dam, 7 September 1958, RDS 2757, collected by Suttkus and Andersson.

Noturus lachneri, Taylor, 1969, Bull. U. S. Nat. Mus., (282):1-315.

Paratypes: TU 7074, 1 specimen from Arkansas, Garland County, 7.7 miles south-southwest of Owensville, 3 miles southeast of U. S. Highway 70, 7 August 1953, EL 94, collected by Ernest Liner; TU 7077, 2 specimens from Arkansas, Garland County, 7.7 miles south-southwest of Owensville, 3 miles southeast of U. S. Highway 70, 7 August 1953, EL 94, collected by Ernest Liner.

Noturus munitus Suttkus and Taylor, 1965, Proc. Biol. Soc. Wash., 78:169-178.

Holotype: TU 26250, from Mississippi, Marion County, Pearl River, 216 miles east of Sandy Hook, 14 November 1955, collected by Suttkus and Kristin T. Nielsen.

Paratypes: TU 11311, 195 specimens from same collection as holotype; TU 1844, 23 specimens from Mississippi, Marion County, Pearl River 2.3 miles east of Sandy Hook, 24-25 November 1951, RDS 2207, collected by Suttkus and Paul K. Anderson; TU 3557, 8 specimens from Mississippi, Marion County, Pearl River, 2.3 miles east of Sandy Hook, 16 February 1952, RDS 2238, collected by Suttkus, Paul K. Anderson, Howard K. Suzuki, Thomas Cain; TU 3627, 73 specimens from Mississippi, Marion County, Pearl River, 4 miles northeast of Sandy Hook, 13 January 1952, RDS 2217, collected by Suttkus, Anderson and Walter D. Stone; TU 3951, 11 specimens from Mississippi, Marion County, tributary to Pearl River, 4.8 miles southeast of Columbia, Highway 13, 23 May 1952, RDS 2297, collected by Suttkus, Cain and Franklin Sogandares-Bernal; TU 4872, 1 specimen from Mississippi, Marion County, tributary to Pearl River, 4.3 miles south of Foxworth, 19 August 1952, RDS 2173, collected by Suttkus, Hancock and Joe Black; TU 7369, 1 specimen from Louisiana, Washington Parish, Pushepatapa Creek, 0.8 mile south of Varnado, 19 January 1952, RDS 2222, collected by Suttkus and Suzuki;

TU 8886, 4 specimens from Mississippi, Marion County, tributary to Pearl River, 0.5 mile south of Hub or 8.5 miles south of Columbia, 28 October 1950, RDS 2013, collected by Suttkus and Clarence Lavett Smith; TU 9709, 3 specimens from Mississippi, Marion County, tributary to Pearl River, 5 miles south of Columbia, 30 June 1954, RDS 2456, collected by Suttkus; TU 10462, 3 specimens from Louisiana, Washington Parish, Pushepatapa Creek, 0.8 mile south of Varnado, 29 June 1954, RDS 2455, collected by Suttkus and Nielsen; TU 11588, 1 specimen from Louisiana, Washington Parish, Pushepatapa Creek, 8.2 miles north of Bogalusa, 7 May 1956, RDS 2556, collected by Suttkus and Field Zoology Class; TU 13954, 214 specimens from Mississippi, Marion County, Pearl River, 2.3 miles east of Sandy Hook, 5 October 1956, RDS 2565, collected by Suttkus, Rudolph J. Miller and Robert K. Chipman; TU 14930, 67 specimens from Mississippi, Marion County, Pearl River, 2.3 miles east of Sandy Hook, 12–13 January 1957, RDS 2576, collected by Suttkus and Miller; TU 14938, 82 specimens from Mississippi, Marion County, Pearl River, 2.6 miles east of Sandy Hook, 6 January 1957, RDS 2574, collected by Suttkus and Miller; TU 15073, 2 specimens from Louisiana, Washington Parish, Pushepatapa Creek, 1 mile south of Varnado or 7 miles north of Bogalusa, 13 January 1957, RDS 2578, collected by Suttkus and Miller; TU 15171, 92 specimens from Mississippi, Marion County, Pearl River, 2.3 miles east of Sandy Hook, 22–23 January 1957, RDS 2580, collected by Suttkus and Norman C. Negus; TU 15465, 2 specimens from Louisiana, Washington Parish, Pushepatapa Creek, 7 miles north of Bogalusa, Highway 21, 21 April 1957, RDS 2600, collected by Suttkus, Robert H. Gibbs, et al.; TU 16148, 6 specimens from Mississippi, Marion County, Ten Mile Creek, tributary to Pearl River, 9.7 miles north of Sandy Hook, 7 August 1957, RDS 2641, collected by Suttkus and Miller; TU 17472, 1 specimen from Louisiana, Washington Parish, Pushepatapa Creek, 0.8 mile south of Varnado, Highway 21, 20 March 1958, RDS 2692, collected by Suttkus, Myrna Andersson and Susan Harvey; TU 17721, 4 specimens from Mississippi, Simpson County, Strong River, 2 miles west of Pinola, 3 April 1958,

RDS 2697, collected by Suttkus, Jayson S. Suttkus and Andersson; TU 17951, 1 specimen from Mississippi, Marion County, Ten Mile Creek, 10.4 miles south of Columbia, Highway 35, 3 May 1958, RDS 2711, collected by Suttkus, Andersson and Sidney Simpson; TU 18739, 2 specimens from Mississippi, Simpson County, Strong River, 2 miles west of Pinola, Highway 28 (formerly Hwy 20), 3 July 1958, RDS 2735, collected by Suttkus, Andersson, and J. S. Suttkus; TU 18963, 60 specimens from Mississippi, Marion County, Pearl River, 2.3 miles east of Sandy Hook, 3 November 1957, RJM 1053, collected by R. J. Miller, Helen V. Miller, Andersson and Donald Boyer; TU 19781, 9 specimens from Mississippi, Simpson County, Strong River, 2 miles west of Pinola, Highway 20, 8 May 1959, RDS 2774, collected by Suttkus and J. S. Suttkus; TU 19825, 52 specimens from Louisiana, Washington Parish, Bogue Chitto River, 1 mile west of Warnerton, 2 May 1959, RDS 2770, Suttkus, Douglas Landwehr, and L. Redman; TU 19880, 3 specimens from Louisiana, Washington Parish, Bogue Chitto River, 1 mile west of Warnerton, 3 May 1959, RDS 2773, Suttkus and Vertebrate Natural History Class; TU 22824, 38 specimens from Mississippi, Marion County, Pearl River, 2.3 miles east of Sandy Hook, 26 October 1959, RDS 2857, collected by Suttkus, Andersson, and Bangalore I. Sundararaj; TU 23127, 1 specimen from Mississippi, Marion County, Pearl River, 2.3 miles east of Sandy Hook, 24 March 1960, RDS 2897, collected by Suttkus and Gerald E. Gunning; TU 23310, 1 specimen from Louisiana, Washington Parish, Bogue Chitto River, 1 mile south of Enon, Highway 437, 3 July 1960, RDS 2913, collected by Suttkus and John S. Ramsey; TU 23351, 1 specimen from Louisiana, Washington Parish, Bogue Chitto River, 2 miles west of Warnerton, Highway 438, 3 July 1960, RDS 2914, collected by Suttkus and Ramsey; TU 23518, 24 specimens from Mississippi, Copiah County, Copiah Creek, 2.4 miles south of Georgetown, Highway 27, 22 July 1960, RDS 2935, collected by Suttkus and Ramsey; TU 23701, 1 specimen from Mississippi, Marion County, tributary to Pearl River, 0.5 mile north of Marion County line, 21 July 1960, RDS 2928, collected by Suttkus and Ramsey; TU 23869,

3 specimens from Mississippi, Copiah County, Copiah Creek, 2.1 miles south of Georgetown, Highway 27, 25 November 1960, RDS 2940, collected by Suttkus and Prudence Menzies; TU 26657, 87 specimens from Mississippi, Marion County, Pearl River, 2.3 miles east of Sandy Hook, 20 October 1961, JSR 61-95, collected by Ramsey and Jamie Thomerson; TU 26695, 1 specimen from Mississippi, Marion County, Holiday Creek, 0.5 mile south of Goss, Highway 13, 21 October 1961, JSR 61-98, collected by Ramsey and Thomerson; TU 26759, 11 specimens from Mississippi, Lawrence County, Fair River, 4.5 miles north of Monticello, Highway 27, 3 November 1961, JSR 61-104, collected by Ramsey and Thomerson; TU 26878, 1 specimen from Mississippi, Marion County, Silver Creek at north limits of Morgantown, Highway 587, 9 December 1961, JSR 61-116, collected by Ramsey and Thomerson; TU 27137, 5 specimens from Mississippi, Lawrence County, Pearl River, 2.5 miles south of Oakvale, 29 August 1962, RDS 3166, collected by R. D. and J. S. Suttkus; TU 27172, 18 specimens from Mississippi, Marion County, 1.5 miles southeast of Morgantown, 30 August 1962, RDS 3168, collected by R. D. and J. S. Suttkus; TU 27299, 12 specimens from Mississippi, Lawrence County, Bahala Creek, 6 miles south of Rockport, Highway 27, 28 October 1961, JSR 61-103, collected by Ramsey and Thomerson; TU 28034, 87 specimens from Mississippi, Marion County, Pearl River, 1.5 miles southeast of Foxworth, 1 December 1962, RDS 3187, collected by R. D. and J. S. Suttkus; TU 28272, 47 specimens from Mississippi, Marion County, Pearl River, 1.5 miles southeast of Foxworth, 17 October 1962, RDS 3172, collected by Suttkus and Clyde D. Barbour; TU 28303, 4 specimens from Mississippi, Marion County, Pearl River, 3 miles southeast of Foxworth, 18 October 1962, RDS 3173, collected by Suttkus and Barbour; TU 28316, 13 specimens from Mississippi, Marion County, Pearl River above mouth of Ten Mile Creek, 6 miles southeast of Foxworth, 18 October 1962, RDS 3174, collected by Suttkus and Barbour; TU 28345, 10 specimens from Mississippi, Marion County, Pearl River, 4 miles north-northeast of Sandy Hook, 0.5 mile upstream from mouth of Hurricane

Creek, 18 October 1962, RDS 3175, collected by Suttkus and Barbour; TU 28373, 7 specimens from Mississippi, Marion County, Pearl River, 2 miles northeast of Sandy Hook, 18 October 1962, RDS 3176, collected by Suttkus and Barbour; TU 28391, 23 specimens from Mississippi, Marion County, Pearl River, 1.5 miles northeast of Sandy Hook, 19 October 1962, RDS 3177, collected by Suttkus and Barbour; TU 28403, 16 specimens from Mississippi, Marion County, Pearl River, 2.3 miles east-southeast of Sandy Hook, 19 October 1962, RDS 3178, collected by Suttkus and Barbour; TU 28429, 24 specimens from Louisiana, Washington Parish, Pearl River, 4 miles east of Angie, 19 October 1962, RDS 3179, collected by Suttkus and Barbour; TU 28534, 240 specimens from Mississippi, Marion County, Pearl River, 1.5 miles southeast of Foxworth, 19-20 December 1962, RDS 3188, collected by Suttkus and William T. Mason; TU 28719, 30 specimens from Mississippi, Marion County, Pearl River, 2.3 miles east of Sandy Hook, 21 October 1961, JSR 61-97, collected by Ramsey and Thomerson; TU 28768, 129 specimens from Mississippi, Marion County, Pearl River, 2.3 miles east of Sandy Hook, 28 December 1962, RDS 3191, collected by Suttkus and Ramsey; TU 28820, 14 specimens from Mississippi, Simpson County, Strong River, 2 miles west of Pinola, Highway 28, 29 December 1962, RDS 3193, collected by Suttkus and Ramsey; TU 29942, 5 specimens from Louisiana, Washington Parish, Pearl River just below sill at Pools Bluff, 4 miles south of Bogalusa, 30-31 August 1963, collected by Suttkus and Gunning; TU 29962, 1 specimen from Louisiana, St. Tammany Parish, Pearl River at River Mile 52, 0.2 mile below mouth of McGehee Creek, 10 September 1963, RDS 3326, collected by Suttkus, Ramsey, and Gunning; TU 29975, 1 specimen from Louisiana, St. Tammany Parish, Pearl River at River Mile 46, 10 September 1963, RDS 3328, collected by Suttkus, Ramsey and Gunning; TU 29989, 1 specimen from Louisiana, St. Tammany Parish, West Pearl River, 5 miles southeast of Talisheek, 11 September 1963, RDS 3332, collected by Suttkus, Ramsey, and Gunning; TU 30010, 17 specimens from Louisiana, Washington Parish, Pearl River just below sill at Pools Bluff, 4 miles south of Bogalusa, 29 September 1963, RDS

3342, collected by Suttkus, Ramsey and Gunning; TU 30025, 2 specimens from Louisiana, St. Tammany Parish, Pearl River, 0.2 mile below mouth of McGehee Creek, 10 October 1963, RDS 3343, collected by Suttkus and Gunning; TU 30040, 2 specimens from Louisiana, Washington Parish, Pearl River just below sill at Pools Bluff, 4 miles south of Bogalusa, 25 October 1963, RDS 3353, collected by Suttkus and Gunning; TU 30149, 32 specimens from Mississippi, Simpson County, Strong River at rapids upstream of Highway 28 bridge, 2 miles west of Pinola, 6 November 1963, RDS 3357, collected by Suttkus and Ramsey.

Noturus phaeus Taylor, 1969, Bull. U. S. Nat. Mus., (282):1-315.

Paratypes: TU 3037, 4 specimens from Mississippi, Lafayette County, tributary to Yocona River, 5.1 miles east of Yocona or 14.7 miles east of Oxford, 23 May 1952, collected by Suttkus, Thomas Cain, Franklin Sogandares-Bernal; TU 3124,⁵ 4 specimens from Mississippi, Lafayette County, tributary to Yocona River, 8 miles east of Oxford, Highway 6, 24 May 1952; TU 14014, 1 specimen from Mississippi, Lafayette County, Yocona River 7.9 miles southeast of Oxford, Highway 334, 12 July 1956, collected by George H. Penn and Joe B. Black; TU 14024, 1 specimen from Mississippi, Alcorn County, 3 miles north of Biggersville, U. S. Highway 45, 12 July 1956, collected by Penn and Black; TU 14036, 2 specimens from Mississippi, Benton County, 0.3 mile west of Michigan City, Mississippi, Highway 7, 11 July 1956, collected by Penn and Black.

Noturus stigmosus Taylor, 1969, Bull. U. S. Nat. Mus., (282):1-315.

Paratypes: TU 19217, 4 specimens from Michigan, Washtenaw County, Huron River at North Territorial Road, 4 miles northwest of Dexter, 31 August 1958, RDS 2750, collected by Suttkus, Carter Gilbert, and William Davis; TU 19246, 6 specimens from Michigan, Washtenaw County, Huron River at North Territorial Road, 4 miles northwest of Dexter, 3 September 1958, RDS 2752, collected by Suttkus, Myrna Andersson, and Thomas Poulson.

Prietella phreatophila Carranza, 1954, Ciencia, Mex., 14(7-8):129-136.

Paratypes: TU 10810, 4 specimens (formerly in the series retained by Carranza at time of publication, subsequently sent to Tulane as a gift; one specimen removed, skeletonized and recataloged as Osteology Collection No. 178) from Mexico, Coahuila, "El Potrero" de Doua Mariana, Municipio de Muzquiz, at the base of Sierra de Santa Rosa, 29 August 1954, collected by Jorge Carranza and C. Bolivar.

Cyprinodontidae

Cualac tessellatus Miller, 1956, Occ. Pap. Mus. Zool. Univ. Mich., 581:1-17.

Paratypes: TU 6557, 32 specimens from Mexico, San Luis Potosi, La Media Luna, about 7 miles south-southwest of settlement of Rio Verde, collected by Richard T. Gregg.

Caproidae

Antigonia combatia Berry and Rathjen, 1959, Quart. Journ. Fla. Acad. Sci. (1958) 21(3):255-258.

Paratypes: TU 18373, 2 specimens from Atlantic Ocean, latitude 07° 31' north, longitude 54° 16' west, off Surinam, 125 fathoms, 8 November 1958, Oregon Sta. No. 2013, collected by M/V Oregon.

Atherinidae

Chirostoma riojai Solorzano and Lopez, 1965, Ciencia, Mex. 24(3-4):145-150.

Paratypes: TU 40173, 2 specimens from Mexico, Mexico, Laguna de Santiago Tilapa, 31 October 1963, LB 1820, collected by A. Solorzano, R. Cruz, R. Aguilar and F. Carmona.

Poblana ferdebueni Solorzano and Lopez, 1965, Ciencia, Mex., 23(5):209-213.

Paratypes: TU 38631, 3 specimens from Mexico, Puebla, Laguna de Almoloya o Chignahuapan, 22 May 1959, L. B. 951, collected by A. Solorzano and T. Obregon.

Serranidae

Pikea mexicanus Schultz, 1958, Proc. U. S. Nat. Mus., 108(3405):321-329.

Paratypes: TU 11004, 6 specimens from Gulf of Mexico, latitude 27° 10' north,

⁵ Given incorrectly in Taylor, 1960: 101 as TU 3134.

longitude $96^{\circ} 20'$ west, 150 fathoms, 5 June 1954, Oregon Sta. 1094, collected by M/V Oregon; TU 11008, 1 specimen from Gulf of Mexico, latitude $27^{\circ} 10'$ north, longitude $96^{\circ} 20'$ west, 150 fathoms, 5 June 1954, Oregon Sta. 1094, collected by M/V Oregon; TU 12972, 11 specimens from Gulf of Mexico, latitude $28^{\circ} 47'$ north, longitude $85^{\circ} 19'$ west, 64 fathoms, 40 foot flat trawl, 7 March 1953, Oregon Sta. 895, collected by M/V Oregon; TU 12985, 1 specimen from Gulf of Mexico, latitude $29^{\circ} 19'$ north, longitude $86^{\circ} 04'$ west, 82 fathoms, 40 foot trawl, 31 October 1953, Oregon Sta. 864, collected by M/V Oregon; TU 14739, 1 specimen from Gulf of Mexico, latitude $27^{\circ} 40'$ north, longitude $95^{\circ} 45'$ west, 100 fathoms, 80 foot balloon trawl, 7 May 1956, Oregon Sta. 1510, collected by M/V Oregon.

Centrarchidae

Ambloplites ariommus Viosca 1936, Copeia, 1936(1):37-45 (currently considered as subspecies, *Ambloplites rupestris ariommus*).

Paratypes: TU 2856, 14 specimens from Louisiana, St. Tammany Parish, Little Bogue Falaya "Falia" Creek, 3 miles north of Covington, 19 May 1935, collected by Percy Viosca and George H. Penn (formerly in the private collection of the late Percy Viosca; given to Tulane about 1955; specimens are green because the original label was a shipping tag with a copper eyelet and the specimens were kept in formalin by Viosca).

Sparidae

Calamus nodosus Randall and Caldwell, 1966, Bull. Los Angeles County Mus. Nat. Hist. Sci., (2):1-47.

Paratype: TU 37765, 1 specimen from Atlantic Ocean off Georgia Coast, latitude $33^{\circ} 42'$ north, longitude $77^{\circ} 11'$ west, 12-20 fathoms, 9 December 1959, Silver Bay Sta. 1507, collected by M/V Silver Bay.

Percidae

Etheostoma collettei Birdsong and Knapp, 1969, Tulane Stud. Zool. and Bot., 15(3): 106-112.

Paratypes: TU 52876, 5 specimens from Louisiana, Union County, Meridian Creek, 1 mile east of Conway, sec. 17, T22N, R1E, 21

May 1956, collected by William R. Taylor and L. W. Lowe.

Etheostoma ditrema Ramsey and Suttkus, 1965, Tulane Stud. Zool., 12(3):65-77.

Holotype: TU 35703, from Georgia, Chattooga County, a spring flowing into a tributary to Mills Creek, tributary to Chattooga River, 4.3 airline miles due west of Lyerly, 18 July 1962, RDS 3134, collected by Suttkus and William T. Mason.

Paratypes: TU 29153, 21 specimens from same collection as holotype; TU 26086, 8 specimens from Georgia, Chattooga County, spring tributary to Mills Creek, tributary to Chattooga River, 5.3 miles west of Lyerly, 19 April 1962, RDS 3052, collected by Suttkus, John S. Ramsey, Jamie Thomerson, and Clyde D. Barbour; TU 27566, 9 specimens from spring tributary to Mills Creek, tributary to Chattooga River, 5.3 miles west of Lyerly, 30 May 1962, JSR 62-57, collected by John S. Ramsey; TU 32981, 43 specimens from Georgia, Chattooga County, spring tributary to Mills Creek, tributary to Chattooga River, 5.3 miles west of Lyerly, 23 June 1964, RDS 3499, collected by Suttkus and Environmental Biology Class.

Etheostoma microlepidum Raney and Zorach, 1967, Am. Midl. Nat., 77(1):93-103.

Paratypes: TU 19479, 19 specimens from Tennessee, Rutherford County, East Fork of Stones River, 6 miles north of Murfreesboro, Highway 231, 7 September 1958, RDS 2758, collected by Suttkus and Myrna Andersson; TU 32983, 71 specimens from Tennessee, Cheatham County, Harpeth River, 8 miles east of White Bluff, Highway 70, 15 July 1964, JSR 64-60, collected by John S. Ramsey and Dan Walton.

Etheostoma moorei Raney and Suttkus, 1964, Copeia, 1964(1):130-139.

Paratypes: TU 22697, 41 specimens from Arkansas, Cleburne County, Devils Fork, Little Red River between Stark and Edgemont, Highway 16, 23 October 1959, RDS 2852, collected by Suttkus, Myrna Andersson, and Bangalore I. Sundararaj; TU 26227, 22 specimens from Arkansas, Van Buren County, Middle Fork, Little Red River at Shirley, 17 August 1962, RDS 3157, collected by Suttkus and William T. Mason; TU 26249, 21 specimens from Arkansas, Van Buren County,

South Fork, Little Red River, 9 miles southwest of Clinton, Highway 95, 17 August 1962, RDS 3158, collected by Suttkus and Mason.

Etheostoma nuchale Howell and Caldwell, 1965, Tulane Stud. Zool., 12(4):101-108.

Paratypes: TU 34591, 20 specimens from Alabama, Jefferson County, Glen Spring at Bessemer, NE $\frac{1}{4}$, Sec. 17, T 19S, R4W, along county Highway 20, 9 September 1964, RDS 3582, collected by Suttkus, John S. Ramsey, and Francis L. Rose.

Poecilichthys whipplii radiusus Hubbs and Black, 1941, Occ. Papers Mus. Zool. Univ. Mich., 429:1-27. (Now known as *Etheostoma radiusum*).

Paratypes: TU 52871, 1 specimen from Arkansas, Garland County, North Fork, Ouachita River, 2.5 miles west of Buckville, 1 June 1939, collected by T. Holder; TU 52872, 5 specimens from Arkansas, Garland County, Cataract Branch, $1\frac{3}{4}$ miles north of Cedar Glade, 2 May 1939, collected by T. Holder; TU 52873, 2 specimens from Arkansas, Garland County, Big Branch, $2\frac{1}{4}$ miles west of Buckville, 16 May 1939, collected by T. Holder. These eight paratypes apparently had been retained at the University of Arkansas by John D. Black subsequent to the description. During 1967, a large part of the University of Arkansas' fish collection was given to Tulane University and thus the transfer of the type material.

Etheostoma rubrum Raney and Suttkus, 1966, Tulane Stud. Zool., 13(3):95-102.

Paratypes: TU 30171, 47 specimens from Mississippi, Copiah County, Bayou Pierre, 8.6 miles southwest of Utica, Highway 18, 7 December 1963, JSR 63-58, collected by John S. Ramsey and Michael D. Dahlberg; TU 31341, 2 specimens from Mississippi, Hinds County, White Oak Creek, tributary to Bayou Pierre, 2.7 miles south of Utica, Highway 18, 1 February 1964, RDS 3378, collected by Edward C. Raney and Suttkus; TU 37305, 4 specimens from Mississippi, Copiah County, Bayou Pierre, 8.6 miles southwest of Utica, Highway 18, 18 March 1965, RDS 3643, collected by Suttkus and Larry Ogren; TU 37451, 53 specimens from Mississippi, Copiah County, Bayou Pierre, 8.6

miles southwest of Utica, Highway 18, 28 April 1965, RDS 3661, collected by Suttkus and Francis L. Rose; TU 40368, 10 specimens from Mississippi, Copiah County, Bayou Pierre, 8.6 miles southwest of Utica, Highway 18, 2 April 1966, RDS 3855, collected by Suttkus and Glenn H. Clemmer.

Percina aurolineata Suttkus and Ramsey, 1967, Tulane Stud. Zool., 13(4):129-145.

Holotype: TU 39573, from Georgia, Gilmer County, Coosawattee River about 200 yards below the mouth of a small spring tributary, 4.2 miles southwest of the center of Ellijay, 18 June 1966, RDS 3910, collected by Suttkus and Environmental Biology Class.

Paratypes: TU 41049, 3 specimens from same collection as holotype; TU 38320, 5 specimens from Georgia, Gilmer County, Cartecay River, tributary to Coosawattee River, 2.9 miles southeast of Ellijay, along Highway 52, 18 June 1965, RDS 3695, collected by Suttkus and Environmental Biology Class; TU 38507, 15 specimens from Georgia, Gilmer County, Coosawattee River, 4.2 miles southwest of Ellijay, 22 June 1965, RDS 3707, collected by Suttkus and Environmental Biology Class; TU 40714, 4 specimens from Georgia, Gilmer County, tributary to Cartecay and Cartecay River, 2.9 miles southeast of Ellijay, along Highway 52, 15 April 1966, RDS 3881, collected by Suttkus and Glenn H. Clemmer; TU 41053, 6 specimens from Georgia, Gilmer County, Cartecay River, 3.1 miles southeast of Ellijay, along Highway 52, 17 June 1966, RDS 3909, collected by Suttkus, Clemmer, and Environmental Biology Class.

Percina lenticula Richards and Knapp, 1964, Copeia, 1964, (4):690-701.

Paratypes: TU 15291, 7 specimens from Alabama, Bibb County, Cahaba River, 2.2 miles north of Centerville, just off Highway 5, 17 May 1957, RDS 2594, collected by Suttkus, Rudolph J. and Helen V. Miller, and John DeAbate.

Clinidae

Starksia y-lineata Gilbert, 1965, Notulae Naturae, No. 379:1-6.

Paratypes: TU 36401, 2 specimens from Caribbean Sea, Grand Cayman Island, "Iron-shore" formation in front of Seaview Lodge,

south side of Georgetown, depth 2–12 feet, collected by Carter R. Gilbert and John C. Tyler.

Microdesmidae

Microdesmus carri Gilbert, 1966, Copeia, 1966, (2):325–332.

Paratypes: TU 36400, 2 specimens from Atlantic Ocean, Costa Rica, Limon Province, east side of Tortuguero lagoon, near mouth, 7 August 1964, collected by D. P. Kelso.

Microdesmus suttkusi Gilbert, 1966, Copeia, 1966, (2):325–332.

Holotype: TU 25110, from Costa Rica, Puntarenas Province, boca de Rio Baru at Dominical, 28 January 1961, RDS 2961, collected by Suttkus, Alfred Smalley, et al.

Paratypes: TU 25130, 1 specimen from Costa Rica, Puntarenas Province, Rio Baru, 1 kilometer north of Dominical, 28 January 1961, RDS 2962, collected by Suttkus, Smalley, et al.; TU 25262, 1 specimen from Costa Rica, Puntarenas Province, at La Barca, 27 February 1960, collected by Salvador Jimenez-C.

Draconettidae

Draconetta oregona Briggs and Berry, 1959, Copeia, 1959, (2):123–133.

Paratypes: TU 18831 (not 188831 as given in description), 3 specimens from Atlantic Ocean, latitude 02° 04' north, longitude 47° 00' west, 125 fathoms, 17 November 1957, Oregon Sta. 2080, collected by M/V Oregon.

Gobiidae

Gobiosoma evelynae Böhlke and Robins, 1968, Proc. Acad. Nat. Sci. Philadelphia, 120(3):45–174.

Paratypes: TU 48782, 2 specimens from Atlantic Ocean, Virgin Islands, Anguilla Island, Dowlings Shoal, west of Crocus Bay off north end of Sand Island, 17 July 1965, collected by James C. Tyler and William N. Eschmeyer.

Gobiosoma genie Böhlke and Robins, 1968, Proc. Acad. Nat. Sci. Philadelphia, 120(3):45–174.

Paratypes: TU 48781, 1 specimen from Atlantic Ocean, Bahama Islands, Hog Island, north shore (station 122), 15 March 1953, collected by Charles C. G. Chaplin.

Triglidae

Bellator ribeiroi Miller, 1965, Quart. Jour. Florida Acad. Sci., 28(3):259–266.

Paratypes: TU 37821, 2 specimens from Atlantic Ocean off Colombia, latitude 08° 50.5' north, longitude 76° 53.5' west, 37–40 fathoms, 27 May 1964, Oregon Sta. 4899, collected by M/V Oregon.

Peristedion greyae Miller, 1967, Bull. Mar. Sci., 17(1):16–41.

Paratypes: TU 33302, 2 specimens from Atlantic Ocean off North Carolina, latitude 34° 15' north, longitude 75° 54' west, 190–200 fathoms, 9 June 1962, Silver Bay Sta. 4159, collected by M/V Silver Bay.

Cottidae

Cottus pygmaeus Williams, 1968, Copeia, 1968, (2):334–342.

Paratypes: TU 34396, 47 specimens from Alabama, Calhoun County, Coldwater Creek, just below Coldwater Springs at town of Coldwater, 31 August 1964, RDS 3571, collected by Suttkus and John S. Ramsey.

Tetraodontidae

Sphoeroides parvus Shipp and Yerger, 1969, Proc. Biol. Soc. Wash., 82:477–488.

Paratypes: TU 9381, 1 specimen from Louisiana, St. Tammany Parish, Lake Pontchartrain, 2 miles west of South Drawbridge of L and N railroad, latitude 30° 10' north, longitude 89° 55' west, 5 November 1954, M/V Anna Inez Station 547, collected by Suttkus and party; TU 19038, 2 specimens from Louisiana, Cameron Parish, at jetties along west bank of Calcasieu River at Cameron, 28 April 1957, RFS 7, collected by Rita F. Smith and Michael Guidry; TU 22573, 14 specimens from Louisiana, Jefferson Parish, Gulf of Mexico, 100 yards off Grand Terre Island near Grand Isle, 12 December 1959, collected by Douglas Landwehr and Richard D. Lumsden.

Batrachoididae

Porichthys bathoiketes Gilbert, 1968, Bull. Mar. Sci., 18(3):671–730.

Paratypes: TU 18572, 9 specimens from Atlantic Ocean, latitude 11° 27' north, longitude 83° 11' west, 135 fathoms, 9 September

1957, Oregon Sta. 1902, collected by M/V Oregon; TU 18573, 1 specimen from Atlantic Ocean, latitude 16° 07' north, longitude 81° 05' west, 130 fathoms, 24 August 1957, Oregon Sta. 1891, collected by M/V Oregon; TU 18574, 3 specimens from Atlantic Ocean, latitude 16° 38' north, longitude 81° 39' west, 150 fathoms, 22 August 1957, Oregon Sta. 1879, collected by M/V Oregon; TU 19928, 2 specimens from Atlantic Ocean, latitude 16° 39' north, longitude 81° 43' west, 125 fathoms, 22 August 1957, Oregon Sta. 1878, collected by M/V Oregon.

SUMMARY

A brief history of the Tulane University fish collection and a list of type specimens are given. The modern collection was started in 1950 and has grown to nearly two million catalogued specimens in two decades. The following seven holotypes are housed in the Tulane University collection: *Algansea monticola*, *Notropis edwardraueyi*, *Notropis uranoscopus*, *Noturus munitus*, *Etheostoma ditrema*, *Percina aurolineata*, *Microdesmus suttkusi*. There are 30,190 paratypes of 47 different species.

COMPLETE CITATIONS OF ORIGINAL DESCRIPTIONS

- HILDEBRAND, SAMUEL F. 1948. A review of the American menhaden, genus *Brevoortia*, with a description of a new species. *Smithson. Misc. Coll.*, 107(18):1-39.
- GIBBS, ROBERT H., JR. 1960. *Alepisaurus brevirostris*, a new species of lancet fish from the Western north Atlantic. *Breviora* (123): 1-14.
- BARBOUR, CLYDE D., and SALVADOR CONTRERAS. 1968. *Algansea monticola*, a new cyprinid fish from the Pacific slope of central Mexico. *Proc. Biol. Soc. Wash.*, 81:101-108.
- LACHNER, ERNEST A., and ROBERT E. JENKINS. 1967. Systematics, distribution and evolution of the chub genus *Nocomis* (Cyprinidae) in the southwestern Ohio River basin, with the description of a new species. *Copeia*, 1967 (3):557-580.
- SUTTKUS, ROYAL D., and EDWARD C. RANEY. 1955. *Notropis asperifrons*, a new cyprinid fish from the Mobile Bay drainage of Alabama and Georgia, with studies of related species. *Tulane Stud. Zool.*, 3(1):1-33.
- SUTTKUS, ROYAL D., and EDWARD C. RANEY. 1955. *Notropis baileyi*, a new cyprinid fish from the Pascagoula and Mobile Bay drainages of Mississippi and Alabama. *Tulane Stud. Zool.*, 2(5):69-86.
- SUTTKUS, ROYAL D., and GLENN H. CLEMMER. 1968. *Notropis edwardraueyi*, a new cyprinid fish from the Alabama and Tombigbee river systems and a discussion of related species. *Tulane Stud. Zool. and Bot.*, 15(1):18-39.
- SUTTKUS, ROYAL D. 1955. *Notropis curyzonus*, a new cyprinid fish from the Chattahoochee River system of Georgia and Alabama. *Tulane Stud. Zool.*, 3(5):83-100.
- SUTTKUS, ROYAL D., and EDWARD C. RANEY. 1955. *Notropis hypsilepis*, a new cyprinid fish from the Apalachicola River system of Georgia and Alabama. *Tulane Stud. Zool.*, 2(7):159-170.
- CORTES, M. T. 1966. Consideraciones sobre el genero *Notropis* y descripcion de una especie nueva, procedente del rio Atoyac en Juchatengo, Oax., Mexico. *An. Esc. nac. Cienc. biol., Mex.*, 15:185-192.
- BAILEY, REEVE M., and ROYAL D. SUTTKUS. 1952. *Notropis signipinnis*, a new cyprinid fish from southeastern United States. *Occ. Pap. Mus. Zool. Univ. Mich.*, No. 542:1-15.
- SUTTKUS, ROYAL D. 1959. *Notropis uranoscopus*, a new cyprinid fish from the Alabama River system. *Copeia*, 1959 (1):7-11.
- YERGER, RALPH, and KENNETH RELYEA. 1968. The flat-headed bullheads (Pisces: Ictaluridae) of the southeastern United States, and a new species of *Ictalurus* from the Gulf Coast. *Copeia*, 1968 (2):361-384.
- TAYLOR, WILLIAM RALPH. 1969. A revision of the catfish genus *Noturus* Rafinesque with an analysis of higher groups in the Ictaluridae. *Bull. Nat. Mus.*, No. 282:1-315.
- SUTTKUS, ROYAL D., and WILLIAM RALPH TAYLOR. 1965. *Noturus munitus*, a new species of madtom, family Ictaluridae, from southern United States. *Proc. Biol. Soc. Wash.*, 78:169-178.
- CARRANZA, JORGE. 1954. Descripcion del primer bagre anoftalmo y depigmentado encontrado en aguas mexicanas. *Ciencia*, 14 (7-8):129-136.
- MILLER, ROBERT RUSH. 1956. A new genus and species of cyprinodontid fish from San Luis Potosí, Mexico, with remarks on the subfamily Cyprinodontinae. *Occ. Pap. Mus. Zool. Univ. Mich.*, 581:1-17.
- BERRY, FREDERICK H., and WARREN F. RATHJEN. 1958. A new species of the boarfish genus *Antigonia* from the western Atlantic. *Quart. Journ. Fla. Acad. Sci.*, 21(3):255-258.
- SOLORZANO, A., and Y. LOPEZ. 1965. Nueva especie de *Chiostoma* capturada en la Laguna de Victoria o de Santiago Tilapa, Estado de Mexico (Pisc., Atherin.). *Ciencia, Mex.*, 24(3-4):145-150.
- SOLORZANO, A., and Y. LOPEZ. 1965. Nueva especie de *Poblana* capturada en la Laguna de Almoloya o Chignahuapan, Estado de Puebla (Mexico). *Ciencia, Mex.*, 23(5): 209-213.
- SCHULTZ, LEONARD P. 1958. Three new seranid fishes, genus *Pikea*, from the western Atlantic. *Proc. U. S. Nat. Mus.*, 108 (3405): 321-329.
- VIOSCA, PERCY, JR. 1936. A new rock bass from Louisiana and Mississippi. *Copeia*, 1936 (1):37-45.

