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NOTROPIS EURYZONUS, A NEW CYPRINID FISH FROM
THE CHATTAHOOCHEE RIVER SYSTEM OF
GEORGIA AND ALABAMA¹

ROYAL D. SUTTKUS,

*Department of Zoology, Tulane University,
New Orleans, Louisiana*

The species here described is a colorful minnow which apparently occurs only in the tributaries of the lower part of the Chattahoochee River. The author wishes to thank the following persons who aided in the collection of specimens or loaned specimens under their care: Richard H. Backus, Reeve M. Bailey, Charles F. Cole, Robert H. Gibbs, F. E. Guyton, Charles D. Hancock, L. James Kezer, Edward C. Raney, and C. Richard Robins. Additional thanks are due Edward C. Raney for his encouragement and interest shown throughout the initial study done by the writer while a graduate student.

NOTROPIS EURYZONUS, sp. nov.

Figs. 1, 2, Map 1

Materials.—The type material consists of 163 specimens from 21 to 53 mm in standard length taken at eight localities in Uchee Creek, a tributary to the Chattahoochee River. Other material examined consists of 301 specimens, 21 to 55 mm, from 11 localities in other tributaries of the Chattahoochee River. Below in parentheses are indicated the number of specimens and the range of standard length in millimeters, e.g. (5, 25-42). In addition to standard abbreviations for compass directions, with the following "of" deleted, the following are used: Co. = County, Cr. = Creek, mi. = mile or miles, R. = River, trib. = tributary (of), Hwy. = Highway, CU = Cornell University, TU = Tulane University, UMMZ = University of Michigan, Museum of Zoology.

Holotype, CU 28346, an adult male, 49 mm in standard length, from Uchee Cr., trib. Chattahoochee R., 0.7 mi. E. Marvyn, Lee Co., Alabama, on June 12, 1949, by Royal D. Suttikus, Robert H. Gibbs, and Charles F. Cole. Thirty-six paratypes, CU 15990 (28-47), bear the same data as the holotype.

Other paratypes, listed below, are all from Uchee Creek, Alabama: CU 13983 (5, 25-42), trib. Uchee Cr., 3.1 mi. E. Marvyn, Hwy. 80, Russell Co., March 24, 1948; UMMZ 123951 (1, 37), Uchee Cr. at Marvyn, August 4, 1937; UMMZ 128744 (6, 22-38), Brush Cr., trib. Uchee Cr., Russell Co., May 10, 1939; UMMZ 128745 (1, 37), Brush Cr., trib. Uchee Cr., Russell Co., May 10, 1939; CU 16194 (2, 34-36),

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Uchee Cr., 9.2 mi. S. Phoenix City, Russell Co., June 12, 1949; CU 14316 (43, 21-53), Little Uchee Cr., 0.9 mi. E. Crawford, Hwy. 80, Russell Co., March 24, 1948; TU 10700 (8, 32-47), trib. Little Uchee Cr., 1.1 mi. E. Crawford, Hwy. 80, Russell Co., September 17, 1955; TU 10718 (60, 22-53), trib. Uchee Cr., 3.2 mi. W. Crawford, Hwy. 80, Russell Co., September 17, 1955.

Other material examined from tributaries of the Chattahoochee R. is listed below by state. **Alabama:** CU 15826 (5, 35-50), Hatchechubbee Cr., 4 mi. S.W. Seale, Russell Co., June 12, 1949; CU 17491 (18, 33-55), Owens Branch, trib. Abbie Cr., 1.2 mi. E. Abbieville, Hwy. 10, Henry Co., March 28, 1950; CU 17760 (44, 23-46), trib. Abbie Cr., 2.6 mi. S. Abbieville, Hwy. 241, Henry Co., March 28, 1950; CU 17665 (25, 26-43), Omussee Cr., 5.8 mi. N.E. Dothan, Hwy. 241, Houston Co., March 28, 1950; CU 16108 (68, 21-49), trib. 9.8 mi. S.W. Eufaula, Barbour Co., June 13, 1949; TU 2564 (66, 21-50), trib. 3.9 mi. N. Columbia, Hwy. 95, Henry Co., June 1, 1951; TU 2550 (27, 26-43), trib. 6.5 mi. N. Gordon, Hwy. 95, May 31, 1951. **Georgia:** CU 17455 (16, 27-53), Hodchodkee Cr., 1.1 mi. E. Lumpkin, Hwy. 27, Stewart Co., March 28, 1950; CU 15878 (8, 24-54), Hodchodkee Cr., 1.4 mi. S. Lumpkin, Hwy. 27, Stewart Co., June 11, 1949; CU 17773 (9, 26-53), Hannahatchee Cr., 8.1 mi. N. Lumpkin, Hwy. 27, Stewart Co., March 28, 1950; CU 17157 (14, 26-47), Hichitee Cr., 4.1 mi. S. Cusseta, Chattahoochee Co., March 28, 1950; CU 15813 (1, 43), Upatoi Cr., 6.7 mi. S. Talbotton, Hwy. 80, Talbot Co., June 11, 1949; TU 7649 (14, 26-40), Upatoi Cr., 6.7 mi. S. Talbotton, Hwy. 80, Talbot Co., October 11, 1953.

Methods.—Counts and measurements were made following the methods described by Hubbs and Lagler (1947: 8-15), except for those listed below.

1. Dorsal to opercle count; the number of scale rows crossing a diagonal between the origin of the dorsal fin and the first lateral line scale at the margin of the opercle. Single isolated scales along the diagonal, were not included.
2. Dorsal fin, origin to tip of posterior lobe or last ray; when the posterior lobe was not developed the tip of the longest element of the last (split) ray was used.
3. Anal fin, origin to tip of posterior lobe or last ray; the procedure was the same as described for number 2 above.

Diagnosis.—A species of *Notropis* with 2, 4—4, 2 teeth and anal rays modally 10, often 9 or 11, rarely 8 or 12. Other fin rays: dorsal 8, sometimes 7, occasionally 9; pectoral 13 to 16, rarely 12 or 17; pelvic 8, rarely 7; caudal 19, occasionally 18. Scales: dorsal to opercle rows 17 to 22, rarely 16 or 23; lateral line scales 35 to 40, rarely 34, 41 or 42; around the body before dorsal fin 27 to 30, occasionally 26, 31 or 32, rarely 25 or 34; around caudal peduncle 12 or 13, occasionally 14 or 15, rarely 16. Body very deep and compressed. Origin of dorsal fin closer to base of caudal than to tip of snout and farther

TABLE 1.
PROPORTIONAL MEASUREMENTS OF ELEVEN ADULT *Notropis euryzonus*.
ALL PROPORTIONS ARE EXPRESSED IN THOUSANDTHS OF THE STANDARD LENGTH.

Measurement	Holotype CU 28346		Paratypes CU 15990	
	Male		5 Males	
	Range	Mean	Range	Mean
Standard length	48.7	44.3-46.8	39.1-40.8	40.2
Dorsal origin to snout	553	540-561	537-574	561
Dorsal origin to caudal base	502	484-510	472-505	486
Dorsal origin to occiput	365	359-376	361-385	372
Pelvic insertion to snout	489	474-487	491-505	498
Anal origin to caudal base	382	374-399	369-388	379
Body, greatest depth	292	238-300	278-292	284
Greatest width	132	126-133	131-145	139
Dorsal origin to 1. 1.	212	198-210	181-197	187
Pelvic insertion to 1. 1.	095	086-098	099-109	103
Caudal penduncle, length	217	208-224	215-227	219
Least depth	114	110-119	104-113	109
Head, length	232	238-245	239-252	246
Depth	160	168-175	167-174	171
Width	125	127-133	128-135	131
Interorbital, least fleshy width	098	092-102	092-100	095
Snout length	077	076-079	075-082	078
Dorsal fin, origin to tip of posterior lobe or of last ray	299	270-303	220-238	232
Eye length	065	066-068	067-074	069
Upper jaw length	080	080-083	081-088	084
Anal fin, origin to tip of posterior lobe or last ray	283	268-296	243-275	253
Suborbital, least width	027	022-028	025-028	026
Dorsal fin, depressed length	318	298-320	253-282	268
Dorsal fin height	317	298-320	253-282	268
Anal fin, depressed length	284	268-296	243-275	253
Anal fin height	284	253-283	222-237	229
Caudal fin, base to tip	303	295-306	283-304	292
Pectoral fin length	192	183-195	180-197	187
Pelvic fin length	204	200-208	165-181	173

TABLE 2.
COMPARISON OF SCALE COUNTS IN TWO RACES OF *Notropis euryzonus*.

COMPARISON OF SCALING COUNTS AND MEANS OF SCALING														
Race	Circumferential scales										Number	Mean		
	25	26	27	28	29	30	31	32	33	34				
Uchee Creek	—	2	4	26	21	21	9	1	—	1	85	29.08		
Lower Chattahoochee River	2	6	25	59	51	19	5	3	—	1	171	28.46		
Lateral line scales														
Race	34	35	36	37	38	39	40	41	42	Number	Mean			
Uchee Creek	—	3	13	33	15	9	9	2	—	84	37.58			
Lower Chattahoochee River	1	13	34	48	43	18	12	1	1	171	37.35			

TABLE 3.
COMPARISON OF SCALE COUNTS IN TWO RACES OF *Notropis euryzonus*.

Race	Dorsal to opercle scale rows										Number	Mean
	16	17	18	19	20	21	22	23				
Uchee Creek	—	1	9	27	27	11	5	—			80	19.66
Lower Chattahoochee River	1	13	32	62	53	10	3	1			175	19.14

Race	Circumferential scales above lateral line										Number	Mean
	13	14	15	16	17	18						
Uchee Creek	1	7	49	20	8	—					85	15.31
Lower Chattahoochee River	4	15	108	35	8	1					171	15.18

TABLE 4.
COMPARISON OF SCALE COUNTS IN TWO RACES OF *Notropis eurizonus*.

Circumferential scales below lateral line											
Race	9	10	11	12	13	14	15	Number	Mean		
Uchee Creek	—	3	35	28	18	—	1	85	11.76		
Lower Chattahoochee River	3	25	80	49	12	2	—	171	11.28		
Total circumference of the peduncle scales											
Race	12	13	14	15	16	Number	Mean				
Uchee Creek	14	13	7	4	1	39	13.10				
Lower Chattahoochee River	121	27	5	—	—	153	12.24				

TABLE 5.
COMPARISON OF SCALE COUNTS IN TWO RACES OF *Notropis eurizonus*.

Race	Circumference of peduncle scales above lateral line			Number	Mean
	5	6	7		
Uchee Creek	18	14	7	39	5.71
Lower Chattahoochee River	123	26	4	153	5.22
Circumference of peduncle scales below lateral line					
Race	5	6	7	Number	Mean
Uchee Creek	26	11	2	39	5.38
Lower Chattahoochee River	152	1	—	153	5.00

posterior than insertion of pelvic fins. Mouth terminal, inclined; upper jaw longer than eye. Lateral line complete, much decurved, its vertical distance below the origin of the dorsal fin exceeds two-thirds the body depth in the male and approximates two-thirds the body depth in the female. Dorsal and anal fins of the male greatly elevated; anterior rays of dorsal fin extend beyond posterior rays when fin is depressed. Melanophores on the membranous portion of dorsal fin do not form a crescent patch across the fin as is typical in *Notropis hypselepterus* but instead are evenly distributed over the entire fin except for extreme anterior distal tip. A wide lateral band on body. The chevron or lunate-shaped basicaudal spot usually separated from end of lateral band. Size small, to 55 mm in standard length.

Description.—Proportional measurements for the holotype and 10 paratypes are given in Table 1. Tables 2-7 give frequency tabulations of selected meristic characters. These tables give comparisons of meristic characters for specimens from Uchee Creek and from the following streams: Hatchechubbee Cr., Hichitee Cr., Hannahatchee Cr., Hodchodkee Cr., Sandy Cr., and Abbie Cr. The specimens from Uchee Creek are considered to represent one race (a category below the sub-species level) and those from all other tributaries to represent a second race which is referred to as the Lower Chattahoochee River race. Table 8 gives a detailed tabulation of the number of anal fin rays. Table 9 is a tabulation of total vertebral counts. Additional characteristics are shown in Figure 1.

The body is compressed and is deepest at the origin of the dorsal fin. Body depth enters (step-measurement) standard length 3.1 to 3.8 times in the male and 3.6 to 3.7 in the female. The predorsal profile is convex whereas the postdorsal is slightly concave. The caudal peduncle is deep and when stepped into the standard length it goes 7.7 to 9.5 times. The head is subtriangular and goes into the standard length 3.8 to 4.2 times. The snout is blunt, broadly rounded as viewed from above. The premaxillary is protractile; the upper lip protrudes slightly. The mouth is terminal, oblique and the gape reaches posteriorly nearly to a vertical in front of the eye.

In both sexes, the height of the dorsal fin is equal to its depressed length and the distal margin of the fin is nearly truncate. The height of the anal fin averages less than its depressed length in the male but is considerably less than the depressed length in the female. The distal margin of the anal fin, in both sexes, is slightly falcate.

Scales are cycloid; radii number 8 to 13 with an average of 9.8 for the ten paratypes sampled. These scales were removed from the first row above the lateral line and at a point below the origin of the dorsal fin. The scales are deeper than long, moderately rounded on their posterior margins, and are nearly truncate on their anterior margins.

The exposed surface of the lateral body scales is evenly covered with melanophores, but the margins of the several middorsal scale rows



Figure 1. (top) *Notropis euryzonus*, paratype, male, 47 mm in standard length, (bottom) paratype, female, 39 mm in standard length, from Uchee Cr., trib. Chattahoochee R., 0.7 mi. E. Marvyn, Lee Co., Alabama. (Photograph by D. M. Payne.)

TABLE 6.
COMPARISON OF FIN RAY COUNTS IN TWO RACES OF *Notropis euryzonus*.

Race	Total pectoral rays											Number	Mean
	24	25	26	27	28	29	30	31	32	33			
Uchee Creek	—	—	9	7	33	13	3	—	—	—	—	65	27.90
Lower Chattahoochee River	1	1	13	10	56	26	35	7	9	1	—	159	28.72

Race	Pectoral rays											Number	Mean	
	12	13	14	15	16	17								
Uchee Creek	—	26	83	21	—	—	—						130	13.96
Lower Chattahoochee River	3	37	148	103	26	1						318	14.36	

TABLE 7.
COMPARISON OF FIN RAY COUNTS IN TWO RACES OF *Notropis euryzonus*.

Race	Anal rays					Number	Mean
	8	9	10	11	12		
Uchee Creek	1	40	53	1	—	95	9.56
Lower Chattahoochee River	—	11	141	52	2	206	10.21

Race	Dorsal rays					Number	Mean
	7	8	9				
Uchee Creek	11	84	—			95	7.88
Lower Chattahoochee River	6	206	2			214	7.98

TABLE 8.
FREQUENCY DISTRIBUTION OF THE NUMBER OF PRINCIPAL ANAL FIN RAYS IN *Notropis euryzonus*.
THE STREAMS ARE ARRANGED IN THE ORDER IN WHICH THEY ENTER THE CHATTAHOOCHEE RIVER
(Upatoi Cr. = most northern)

Stream	Anal rays							Mean
	8	9	10	11	12	Number		
Upatoi Cr.	—	1	9	4	—	14		10.36
Uchee Cr.	1	40	53	1	—	95		9.57
Hichitee Cr.	—	1	8	4	1	14		10.36
Hannahatchee Cr.	—	4	5	—	—	9		9.55
Hatchechubbee Cr.	—	—	5	—	—	5		10.00
Sandy Cr.	—	1	46	20	1	68		10.31
Hodchodkee Cr.	—	1	19	4	—	24		10.12
Abbie Cr.	—	4	58	24	—	86		10.23
Trib. (TU 2564)	—	5	48	13	—	66		10.12
Omussee Cr.	—	—	18	7	—	25		10.28
Trib. (TU 2550)	—	3	18	6	—	27		10.11

TABLE 9.
FREQUENCY DISTRIBUTION OF THE NUMBER OF VERTEBRAE IN *Notropis euryzonus*.
THE STREAMS ARE ARRANGED IN THE ORDER IN WHICH THEY ENTER THE CHATTAHOOCHEE RIVER

Creek	Number of vertebrae							Mean
	34	35	36	37	38	Number		
Uchee	1	1	16	4	—	22		36.0
Hichitee	—	1	8	4	—	13		36.2
Hodchodkee	—	—	4	3	—	7		36.4
Abbie	—	1	26	9	1	37		36.3
Trib. (TU 2564)	—	—	7	12	1	20		36.7

are noticeably outlined by heavy concentrations of melanophores. Scales on the ventral lateral area of the body, especially at the lower edge of the lateral band, show a chain-like pattern of pigmentation due to a concentration of melanophores in a central band on each scale. Specimens in alcohol, have a broad, dark-brown, lateral band which begins at the tip of the snout and passes along the side posteriorly to the base of the caudal fin. The name *euryzonus*, descriptive of this broad lateral band, was suggested by Reeve M. Bailey. The termination of the lateral band forms an indistinct spot on the base of the caudal fin. A lightly pigmented area separates the indistinct spot from a chevron or lunate-shaped patch of melanophores on the scales overlying the basal portion of the central caudal rays. A light brown stripe parallels the dark lateral band on the side, and in turn is sharply separated from the dark brown dorsal surface of the caudal peduncle. However, on the forward part of the body the light brown shades into the more intense color of the back. An even darker median dorsal stripe is clearly defined. The top of the head is dark. The lateral light stripe passes around the end of the snout just above the upper lip. The lips and chin are dark and some pigment extends on to the anterior gular region; posteriorly this area is devoid of pigment in both sexes. The female lacks melanophores on the breast and a wide median part of the belly. The male has scattered melanophores extending ventrad along the pectoral girdle, but the right and left extensions never meet to make a band across the ventral median line. The female paratypes lack melanophores on the belly but some other females have the lateral pigmentation extending down the sides of the belly, although a wide clear median ventral area is always present. There are some melanophores around the urogenital and anal openings, but none on the rest of the area between the pelvic fins and the origin of the anal fin. The sexes are similar with respect to pigmentation of the caudal and pectoral fins. The anterior portion of the pectoral fins are dusky. The edges of the caudal fin rays are dark throughout; the outer and central rays being darkest. Other details of pigmentation are given in the section titled *Sexual Dimorphism*.

Color in life.—The most striking color feature is the bright orange caudal fin. The broad bluish-gray lateral band is bordered above by a narrow stripe of orange. A small amount of orange is present at the base of the dorsal fin and diffuse orange appears in the darkish anal fin of large males. The belly and lower part of the sides are pale and the anterior tip of the dorsal fin is bright yellow-green. Specimens taken from Omussee Creek, Houston Co., Alabama, in March 1950 had a dull red line above the dark lateral band; some of these also had a thin line of green above the red. A small clear area was noted in the center of the bright orange caudal fin of the larger males. Specimens taken from Hodchodkee Creek, Steward Co., Georgia, on June 11, 1949 exhibited a similar clear "window" in the

caudal fin. Specimens taken from Uchee Creek in September, 1955 did not show this character.

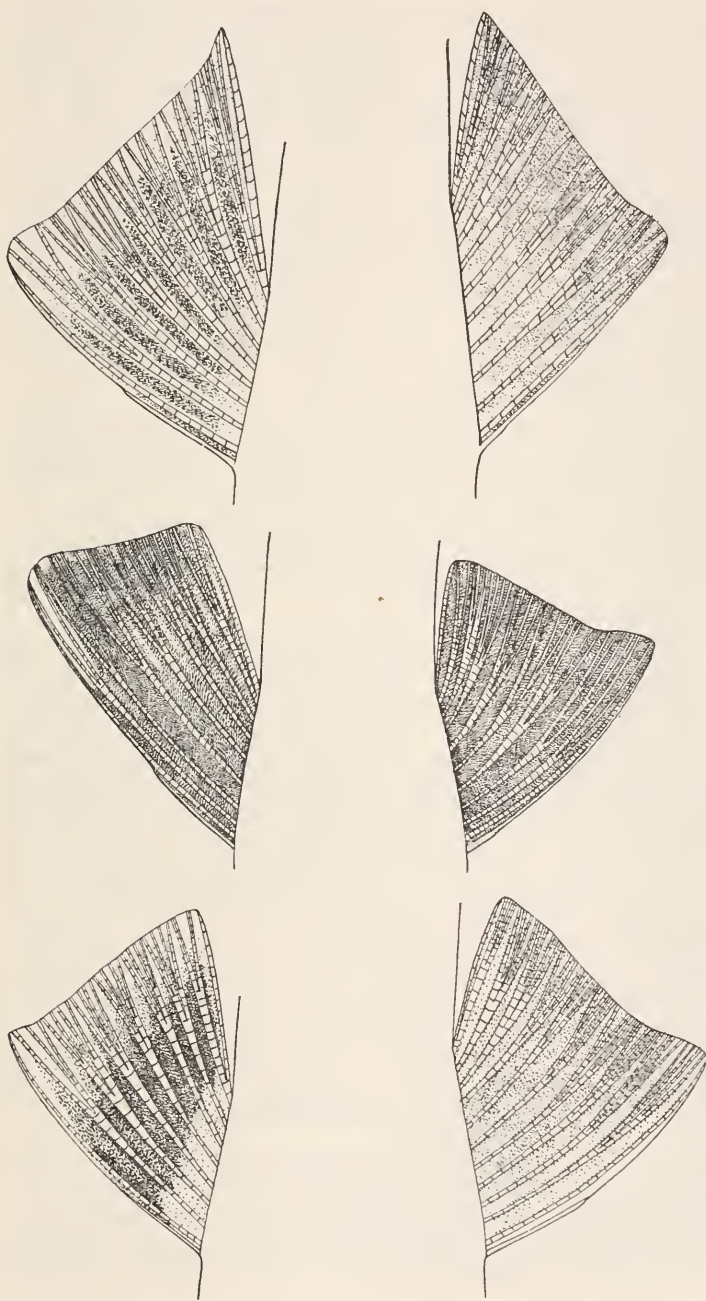
Sexual Dimorphism.—Comparisons were made between adult specimens; the most obvious differences between sexes were the color pattern and the intensity of pigmentation in the dorsal fin. The male is decidedly brighter in life and has a heavily pigmented dorsal fin (fig. 1) in which most of the interradi al membranes are dark for their entire lengths. The only part of this fin lacking melanophores is a narrow area on the anterior lobe. The interradi al membranes of the pelvic and anal fins in the male are moderately to densely pigmented throughout. The female usually has less pigment in the dorsal fin and this pigment is somewhat concentrated in the center of the fin which approximates the pigmentary pattern of the dorsal fin of *Notropis hypselopterus*. There is a light area at the base and a larger clear area at the tip of the fin. The female also exhibits less pigment in the anal and pelvic fins.

The sexes differ in the pigmentation about the anal and urogenital openings. The female has a large square patch of melanophores immediately behind the anal orifice whereas the male has a small crescent of dense pigmentation around the anterior base of the urogenital elevation.

In the male one row of large breeding tubercles project laterally from the lower jaws and the tip of each tubercle is curved upward. Below this main row there may be one to three additional rows of tubercles on either side; those tubercles nearest the main rows are more curved than those in the medial rows. Medium-sized tubercles are present in a group on the preorbital area. Small tubercles are scattered on the suborbital, preopercle and subopercle and a few form a ring around the eye. The scales in several of the rows behind the opercle are margined with small tubercles. The female has a single row of medium-sized tubercles on the lateral edge of the dentary and a few scattered ones along the medial margin of each dentary. There are a few minute tubercles on the suborbital and preorbital regions. The remaining surface of the head and scales behind the opercle lack tubercles. In addition to the above characteristics, the sexes can readily be separated by differences in the size of the dorsal, anal and pelvic fins (Table 1).

Intraspecific variation.—Two races of *Notropis euryzonus* are recognized mainly on the basis of the number of anal rays. The Uchee Creek race has an anal ray count which averages 9.6, and the Lower Chattahoochee River race averages slightly higher with 10.2 (Table 7). Apparently this character is not clinal (Table 8). A possible cline is illustrated by the frequency distributions of the number of vertebrae (Table 9).

In addition to the above, the Uchee Creek race has a lower pectoral ray count (Table 6), a higher circumferential body scale count (Table 2), more rows of scales between the origin of the dorsal fin and the



Figures 2-4. 2. (middle) Dorsal and anal fins of an adult male, paratype of *Notropis euryzonus* (CU 15990), 46 mm in standard length from Uchee Cr.; 3. (left) Dorsal and anal fins of an adult male *Notropis hypselopterus* (CU 16114), 47 mm in standard length from Choctawhatchee R. drainage; 4. (right) Dorsal and anal fins of an adult male *Notropis hypselopterus* (CU 15803), 49 mm in standard length from Flint R. system. (William C. Dilger, delineator.)

margin of the opercle (Table 3), and a higher circumferential peduncle scale count (Table 4). The specimens from Hannahatchee Cr. have a low anal ray count as shown in Table 8 and are like the Uchee Creek specimens in this respect but have a higher pectoral ray count and thus were not included with the latter.

Relationships.—*Notropis euryzonus* is most closely related to *Notropis hypselopterus* (Gunther) and *Notropis stonei* Fowler and less so to *Notropis signipinnis* Bailey and Suttkus. *N. euryzonus* has not been taken together with either *N. hypselopterus* or *N. signipinnis* both of which occur in the same drainage. In 1951, the writer and Charles D. Hancock collected *N. hypselopterus* in a tributary of Chattahoochee River only two miles distant from a population of *N. euryzonus*. There were no apparent differences between the two streams with regards to habitats. Additional collecting may reveal cohabitation of a stream by the two forms.

Notropis euryzonus is apparently an endemic of the Apalachicola River system as is *Notropis hypsilepis* Suttkus and Raney. The most southern locality given for *N. hypsilepis* by Suttkus and Raney (1955: 162) was Hodchodkee Creek, 1.4 mi. S. Lumpkin, Georgia. *N. euryzonus* was taken from this same locality on a different date by the author. The two species have been taken from other streams in the area of overlap which extends from Hodchodkee Creek to Uchee and Upatoi Creek.

In many respects, including meristic characters, *N. euryzonus* is similar to *N. hypselopterus*, but prominent differentiating characters exist in the shape and pigmentation of the dorsal fin of the male. Figures 2-4 illustrate the shape and pigmentation of dorsal and anal fins of *N. euryzonus* (Chattahoochee River system), *N. hypselopterus* (Choctawhatchee River drainage) and *N. hypselopterus* (Flint River system). The general outline of the dorsal fin of *N. euryzonus* is rectangular and that of *N. hypselopterus* is triangular. The posterior elements are greatly extended in *N. hypselopterus*, especially so in the Flint and lower Apalachicola River specimens (males). *N. hypselopterus* in the Choctawhatchee River drainage has the fins and posterior part of the body colored with brilliant orange. The burnt orange color and the heavy concentration of melanophores in the dorsal and anal fins of *N. euryzonus* cause the fins to appear less brilliant or gaudy than in *N. hypselopterus* of the Choctawhatchee. *N. hypselopterus* in the Apalachicola drainage lack the brilliant orange but have instead some rose and dull red-orange areas on the posterior fins and body. The lateral band of *N. euryzonus* is gray with a tinge of blue.

The clear "window" found in the caudal fin of *N. euryzonus* is not present in the forms of *hypselopterus*.

Notropis euryzonus most likely evolved from a *hypselopterus* stock which moved up the Apalachicola River system during Pleistocene time. Possibly the Flint and Choctawhatchee River system were popu-



Map 1. Distribution of *Notropis euryzonus*. Circle indicates type locality.

lated later than the Chattahoochee part of the Apalachicola or if all three (Chattahoochee, Choctawhatchee and Flint) were populated at the same time speciation was not as rapid in the latter two streams because the forms in these systems have not reached a specific level of differentiation. Isolation was probably effected by one of the periods of coastal inundations during the Pleistocene.

Ecology.—The type locality, Uchee Creek, is a shallow stream about 10 feet wide with a sand bottom. The water was brown and clear on June 12, 1949. The estimated flow was eight cubic feet per second.

Most streams in which *N. euryzonus* was seined have colorless water. The tributaries of Uchee Cr. and the tributary of the Chattahoochee River, 9.8 mi. S.W. Eufaula, Barbour Co., Alabama, have brown water.

The tributaries of the Chattahoochee River from which *N. euryzonus* was collected have various bottom types. Hodchodkee Cr., Stewart Co., Georgia has mud and clay; Abbie Cr., Henry Co., Alabama, Omussee Cr., Houston Co., Alabama, and Hichitee Cr., Chattahoochee Co., Georgia have shifting sand and silt and Hachechubbee Cr. and one tributary of Uchee Cr., Russell Co., Alabama have exposed bed-rock and drifting sand.

The specimens of *N. euryzonus* usually were taken near shelter either in the form of logs or aquatic vegetation. These minnows seldom moved from their niche and could be seined with little difficulty. The collecting of this species was difficult only when the shelter was thick and entangled with debris. *Orontium aquaticum* and *Sparganium* sp. were the most common aquatic plants recorded for the collection localities. The incidence of *Notropis euryzonus* with golden club, *Orontium aquaticum*, was not as consistent as that noted by Bailey and Suttkus (1952: 14) for *Notropis signipinnis*.

The name *euryzonus*, derived from *eury*, broad, and *zona*, zone, refers to the broad lateral band. *Notropis* is treated as masculine and the adjectival form is used in the formation of the specific name.

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