

generously supplied with tubercles. (3) The body of *lirus* is elongate and slender; that of *b. bellus* is deep and robust. (4) A broad, dark mid-lateral stripe is developed in *lirus* but absent from *b. bellus*. (5) Fin interradial pigment is lacking in *lirus* but strongly developed in *b. bellus*.

N. b. bellus is sympatric and occasionally syntopic with *N. fumeus* in the Bear and Yellow creek systems of the Tennessee drainage. Juveniles of these forms are occasionally troublesome to separate but adults can be distinguished most readily as follows: (1) *fumeus* has a dark mid-lateral stripe that is absent in *b. bellus*; (2) chin pigmentation of *fumeus* is lighter and less extensive than that of *b. bellus* (Fig. 2A); (3) fin interradial pigment is lacking in *fumeus*, well developed in *b. bellus*. Moreover *fumeus* has yellow rather than red breeding colors, smaller and weaker head tubercles, and minute pectoral fin tubercles arranged in a dense shagreen.

N. ardens and *N. umbratilis cyanocephalus* also occur in the Tennessee drainage, and the former is occasionally syntopic with *N. b. bellus* in the Bear and Yellow Creek systems. Both are readily distinguished from *N. b. bellus* by their possession of an anterior basidorsal spot.

SEXUAL DIMORPHISM.—Sexual dimorphism is strongly developed in *N. b. bellus* and is most pronounced during the breeding season. Sexual differences in tuberculation, breeding coloration, and fin pigmentation have been summarized above. No sexual dimorphism in meristic characters was noted.

Sexual dimorphism in morphometric characters is summarized in Table 2. A sample of 36 breeding males and 33 breeding females from the Tombigbee River system was used for statistical comparison with Student's *t*-test. All specimens measured were 40-50 mm SL. Mean SL for males was 45.49 mm; mean SL for females was 46.09. Levels of probability greater than 0.1 were considered not significant (ns). Following each character is given (first) the range and mean for males, (second) the range and mean for females, and (third) the probability that the two means are significantly different. Predorsal length: 518-563, 538.1; 507-552, 535.0; ns. Postdorsal length: 474-506, 489.6; 470-502, 485.6; <0.1. Prepelvic length: 465-501, 482.6; 480-514, 492.7; <0.001. Preanal length: 620-655, 638.2; 629-661, 647.9; <0.001. Head length: 224-258, 239.9; 228-247, 239.4; ns. Head depth: 163-191, 175.9; 168-187, 177.6; ns. Postorbital head length: 95-117, 103.9; 94-109, 103.2; ns. Snout length: 66-79, 71.2; 64-74, 69.7; <0.05. Upper jaw length: 78-94, 85.3; 81-92, 85.4; ns. Gape width: 53-71, 63.1; 53-72, 61.2; ns. Fleishy orbit length: 66-79, 72.7; 68-80, 74.2; <0.05. Fleishy interorbital width: 85-102, 93.6; 85-102, 92.6; ns. Body depth: 233-280, 254.4; 229-282, 254.4; ns. Body width: 123-158, 139.1; 131-164, 148.0; <0.001. Caudal peduncle