

7 (in 1 specimen), 8 (32), and 9 (9);  $\bar{x}=8.2$ . Preoperculo-mandibular canal well developed and without interruptions along its length; pore counts are given in Table 10. Dermosphenotic bone usually small and poorly ossified or absent, and infraorbital canal typically disconnected from postocular commissure over position of bone. Rarely (6 of 83 specimens) closure of canal complete at this point; pore counts for these 6 specimens 13 (in 2 specimens), 14 (3), and 15 (1);  $\bar{x}=13.8$ . Most frequent IO pore count formulas for specimens with interrupted canals 11+2 (20 specimens), 12+2 (13), 12+3 (10), 11+1 (6), 11+3 (4), 10+2 (3), and 13+2 (3). Number of IO pores anterior to dermosphenotic interruption 9 (in 1 specimen), 10 (8), 11 (31), 12 (28), 13 (7), and 14 (2);  $\bar{x}=11.5$ .

Lips heavily pigmented, conspicuously darker than more sparsely pigmented chin and snout tip. Gular and chin pigment forming no consistent pattern; some specimens approaching *N. b. bellus* (Fig. 2A), but most with melanophores randomly scattered over chin. Deep-lying pigment over lachrymal bone usually creating dark preorbital blotch. This blotch and the heavily pigmented lips usually forming dark band passing around snout tip. Superficial pigment on head dorsum rather uniformly scattered. Pigment reduction behind, between, and in front of nostrils, and on snout tip results in narrow, often tapering, dusky bar extending forward between nostrils to merge with thin transverse band of pigment just behind upper lip. These features of snout pigmentation most prominent in juveniles and subadults. Scapular bar absent.

Dusky middorsal stripe weak and ill-defined, developed from head to tail but not surrounding dorsal fin base. Pigment rather uniformly scattered on anterior dorsolateral area of body; scales not clearly outlined and crosshatched appearance lacking. Bars, chevrons, and darkened scales never present on body of either sex. Plumbeous lateral stripe originates at base of tail and passes forward to head. On caudal peduncle stripe dark and about one scale row wide; on trunk stripe broader (to about two and one-half scale rows wide) and slightly weaker and more diffuse. Upper margin of stripe discrete, falling along midlateral horizontal myoseptum; lower margin discrete on caudal peduncle but diffuse anteriorly. Lateral stripe usually continuing forward across upper half of opercle. At midbody pigment stops at lateral line or extends up to one scale row's distance below the (latter condition in some large breeding males). Discrete punctulations adjacent to lateral line pores absent. Lateral stripe may expand slightly over or just in advance of hypural plate, but discrete caudal spot absent. Melanophores moderately to weakly developed along anal fin base and in double row along ventral margin of caudal peduncle. Anterior basidorsal spot absent.

FIN PIGMENTATION.—Though breeding material is used for the basis of the following description, *N. b. aegnotus* contrasts with the nominal subspecies in showing little seasonal variation in the intensity of fin pigmentation.

All rays of dorsal fin with thin black borders basally. Proximal half of interradial membranes usually immaculate but occasionally with a few scattered melanophores (never enough to appear dusky to unaided eye). Pigment borders becoming progressively darker and thicker distally, their outside margins becoming blurred. In area of ray branching, dusky color bleeds off irregularly onto interradial membranes (Figs. 3A, 9). Extent of pigment diffusion variable, but melanophores rarely extend farther than a ray's thickness onto membrane. Consequently, principal interradial membrane never completely covered with pigment. Secondary interradial membranes darkened in same manner and by deposition of melanin in ray crotches. Occasionally, heavy pigmentation in and around major branching points of rays forms weakly defined series of submarginal blotches. Narrow, clear band fringes distal edge of fin. Except for being generally lighter, dorsal fin pigmentation of breeding females like that of males.

Anal fin of breeding males usually immaculate (Fig. 3A) but occasionally with few melanophores scattered along margins of first several rays. Rarely (8 of 62 specimens) ray border pigment heavier, bleeding slightly onto first few interradial