

THE RABBIT-FISHES (SIGANIDAE) OF TOMINI BAY, GORONTALO [Ikan-Ikan Beronang (Siganidae) di Teluk Tomini, Gorontalo]

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ABSTRACT

A study has been carried out to describe the rabbit-fishes of the family Siganidae at Tomini Bay, province of Gorontalo. The study was conducted from 8 to 16 August 2005. Ten species were identified: *Siganus canaliculatus*, *S. doliatus*, *S. fuscescens*, *S. guttatus*, *S. javus*, *S. lineatus*, *S. punctatus*, *S. spinus*, *S. vermiculatus* and *S. vulpinus*. Description and local name available of each species was given.

Key words: Rabbit fishes, Siganidae, Tomini Bay.

INTRODUCTION

The Siganidae, popularly known a rabbitfishes is one of the marine resources abundance in the waters of Indonesia. This family is essentially marine, tropical Indo-West Pacific fishes. The smallest species attains 20 cm standard length (SL), the largest almost 50 cm. As a single row of flattened, close-set teeth might suggest, they feed primarily on seaweeds. Consequently, most species live at depth of less than 15 m and half the species live as pair on coral reefs. The others are usually encountered in small schools. Of the latter, one species, *Siganus vermiculatus*, is almost exclusively estuarine; the remainder are not restricted to a single habitat but move between estuaries, coral reefs, rocky shores, and so on (Woodland, 1990).

The result of this work will be used as basis for further study especially on bio-diversity

monitoring and would hopefully be utilized as a basis for formulating management regulation of the fisheries resources for the coast Tomini Bay, province of Gorontalo.

METHOD

The specimens were purchased at the seven Fish Landing Port in Gorontalo (Tilamuta, Tabulo, Marisa, Papayato, Ulele, Pelabuhan and Inengo) from 8 to 16 August 2005. The specimens purchased had been collected mostly by gill net and beach seine operated by local fisherman around Tomini Bay (Fig. 1). The specimens were examined at the Laboratory of Marine Biology, Faculty of Marine Science and Fisheries, Hasanuddin University, Makassar. Identification is based on Rau & Rau (1980), Woodland (1984; 1990), Carpenter (2001), and Kimura & Matsuura (2003).

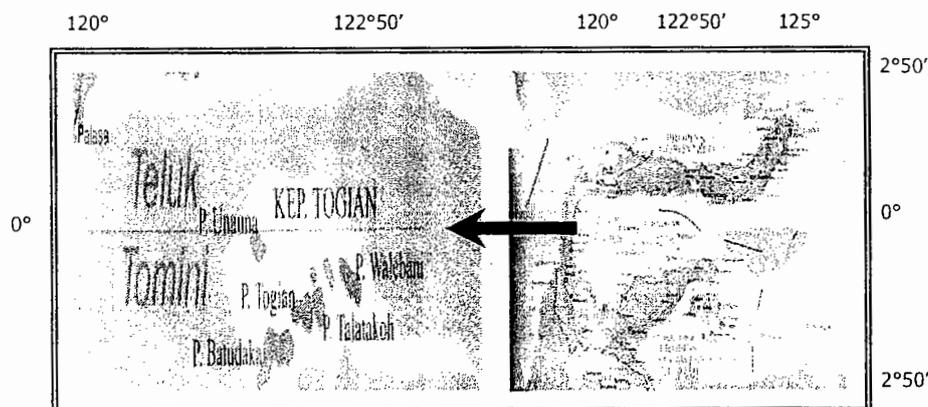


Figure 1. Map of Tomini Bay, Province of Gorontalo

RESULTS AND DISCUSSION

Diagnostic Features of the Family Siganidae

The rabbit-fishes, family Siganidae with the following combination of characters: Body ovate, compressed, covered with very small scales. Dorsal fin continuous, usually with XIII spines and 10 soft rays, and preceded by an embedded; anal fin with VII spines and 9 soft rays; A sharp spine projects forward from origin of first dorsal spines and pierces then skin of nape; pelvic fins with an inner and outer spines separated by 3 soft rays; spine venomous. Palatines and tongue toothless. Mouth small, terminal, not protractile; teeth small, incisiform, bicuspid or tricuspoid. Caudal fin truncate, emarginated or deeply forked.

Siganus canaliculatus (Park, 1797)

English name: Whitespotted rabbitfish; Local name: Beronang bintik

Descriptions: Dorsal fin spines XIII,10; anal VII, 9; pectoral fin rays 16-17. Body compressed; snout not tubular, caudal fin deeply forked; pectoral fins shorter than head.

Color in life: silvery gray above to silvery below, with touch of olive green on nape and upper surface of head. Side of body and nape covered with spots, pearly blue above to whitish below. Spots either round, ovoid or rod-shape; mostly of match head size but often smaller than this above lateral line and only pinhead size on nape. Back and sides with numerous blue spots. Fins orange and green. Ventrals and pectorals lighter. When removed from the water the colors fade rapidly.

Siganus doliatus Cuvier, 1830

English name: Barred spinefoot; Local name: Beronang bergaris

Descriptions: Dorsal fin spines XIII,10; anal VII, 9; pectoral fin rays 16-17. Snout not tubular; no distinct notch between spinous and soft portion of dorsal fin. Caudal fin emarginated.

Color in life: body blue above to silvery white below, decorated with about 30 yellow bar, variously joined below base of dorsal fin but free ends tapering away just above midventral line of body. Below eye, ocular band usually containing a pair of dark blue line running

from orbit to corner of mouth. At death the brown color of the ocular and shoulder band fades, but the yellow areas contained within the bands become dark orange-brown which is much darker than other yellow markings of head and sides.

Siganus fuscescens (Houttuyn, 1782)

English name: Mottled spinefoot; Local name: Beronang lurik

Descriptions: Dorsal fin spines XIII,10; anal VII, 9; pectoral fin rays 15-17. Snout not tubular; distinct notch between spinous and soft portion of dorsal fin. *Color in life:* olive green or brown above to silvery below; all of head and body, except for snout, covered with pearly blue spots. Spot small on head and nape, becoming larger on lower sides. Spots round, especially above lateral line and on head, but many on mid to lower sides may be slightly or strongly elongated horizontally. Anal fin, spinous part of dorsal fin, and pelvic fins same color as adjacent area of side. Soft part of dorsal fin and caudal fin dusky; pectoral hyaline.

Siganus guttatus (Bloch, 1787)

English name: Golden spinefoot; Local name: Beronang bercak oranye

Descriptions: Dorsal fin spines XIII,10; anal VII, 9; pectoral fin rays 15-16. Snout not tubular; no distinct notch between spinous and soft portion of dorsal fin. Caudal fin truncate or weakly emarginated.

Color in life: dusky blue above to silvery below. Body with numerous large golden-brown blotched separated by a network of blue lines. The spots are relatively large in juveniles and fused into longitudinal patches with blue interspaces forming chains and longitudinal lines. Usually a large, pale yellow blotch below end of soft dorsal base. Dorsal, anal and caudal fins with round brown spots.

Siganus javus (Linnaeus, 1766)

English name: Streaky spinefoot; Local name: Beronang bintik

Descriptions: Dorsal fin spines XIII,10; anal VII, 9; pectoral fin rays 17. Snout not tubular; no distinct notch between spinous and soft portion of dorsal fin.

Caudal fin emarginated.

Color in life: body dark bronze above to white on belly and thorax. Head and back with numerous small rounded gray spots, which are smaller than interspaces. Spots on side and belly become more elongate and tend to fuse into longitudinal pale lines. Cheeks golden yellow, spotted with blue; opercular area bronze and similarly spotted. Head with spots but no longitudinal streaks. Fins immaculate, generally brown, but pectoral yellow.

***Siganus lineatus* (Valenciennes, 1835)**

English name: Goldenlined spinefoot; Local name: Beronang bintik

Descriptions (based on 10 specimens): Dorsal fin spines XIII,10; anal VII,9; pectoral fin rays 15-16. Snout not tubular; no distinct notch between spinous and soft portion of dorsal fin. Caudal fin emarginate in small juveniles but becoming more forked with increasing size.

Color in life: blue above to silvery below; broad, bronze, horizontal, wavy bands on side of body. A bright yellow spot about size of orbit on back immediately below last few rays of dorsal fin.

***Siganus punctatus* (Foster, 1801)**

English name: Goldspotted spinefoot; Lokal name: Beronang ayam

Descriptions (based on 20 specimens): Dorsal fin spines XIII,10; anal VII,9; pectoral fin rays 16. Snout not tubular; no distinct notch between spinous and soft portion of dorsal fin. Cheeks fully covered with strong scales. Caudal lobes broadly rounded at tips, particularly the lower lobe.

Color in life: color pattern of this species changes with age. The color pattern on the caudal fin is an extension of that on the body; the spots, in rows along the fin ray. Body bluish. Fins and body covered with many orange spot. One dark blotch on shoulder.

***Siganus spinus* (Linnaeus, 1758)**

English name: Little spinefoot; Local name: Beronang kecil

Descriptions: Dorsal fin spines XIII,10; anal VII,9; pectoral fin rays 17. Snout not tubular; distinct notch

between spinous and soft portion of dorsal fin. Cheeks scales fine, but densely packed over lower two-third of preoperculum region. Caudal fin emarginated in juveniles, truncate in adults.

Color in life: this fish can adopt a number of camouflage patterns involving off-white, pale gray to blackish, and various shades of brown. Head and body with vermiculate pattern. The rays of soft portion of dorsal and anal fins bear 2 or 3 dark bands; membranes of this part of these fins hyaline dusky. Pectoral fins hyaline brown. Caudal fin brown, crossed by 3 or 4 pale, wavy bars which may only be distinct on outermost rays.

***Siganus vermiculatus* (Valenciennes, 1835)**

English name: Vermiculated spinefoot; Local name: Beronang rante

Descriptions: Dorsal fin spines XIII,10; anal VII,9; pectoral fin rays 16. Snout not tubular; no distinct notch between spinous and soft portion of dorsal fin. Cheeks with strong overlapping scales, the area covered usually extensive, sometimes absent from a strip just below orbit. Caudal fin emarginated.

Color in life: body bluish white covered with narrow vermiculating dark brown bands. Head brown to brownish yellow or golden yellow with irregular blue lines. Vermiculating pattern spreading onto base of caudal fin, but most of fin spotted. Pectoral fin membranes hyaline, the rays tinged with brown. Pelvic fin silvery, the outer spine and ray tinged with brown. Iris golden.

***Siganus vulpinus* (Schlegel and Muller, 1845)**

English name: Common foxface; Local name: Beronang cecet

Descriptions (based on 5 specimens): Dorsal fin spines XIII,10; anal VII,9; pectoral fin rays 16-17. Snout projecting, tubular; no distinct notch between spinous and soft portion of dorsal fin. Caudal fin emarginate.

Color in life: Midline of head profile usually with a narrow white blaze which may run from lip to tip of procumbent dorsal spine or be confined to interorbital region. Broad diagonal black or dark brown bar on head through eye; similar colored area also on anterior part of body anterior to pectoral and pelvic base.

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