

Some Observations on the Colour of the Young Form of  
*Chaetodontoplus septemtrionalis* (T. & S.)

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(With 1 plate)

キンチャクダイ幼魚における体色斑紋変化の観察

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**Introduction**

Colour change from young ones to adults is a well known phenomenon in some of the fishes of the sub-family *Pomacantinae*, family *Chaetodontidae*.<sup>1)</sup> However, there is no detailed report on such a phenomenon among the members of the genus *Chaetodontoplus*, so far. *Chaetodontoplus septemtrionalis* is distributed in the Japanese water along the coasts of southern Japan, living in rocky areas and the adults are often caught by crab gill net.

*Chaetodontoplus septemtrionalis* consists of three varieties, viz., *C. septemtrionalis* VAR. *septemtrionalis* SCHLEGEL *C. septemtrionalis* VAR. *ronin* JORDAN & FOWLER and *C. septemtrionalis* VAR. *chrysocephalus* BLEEKER and these are distinguished by the colour pattern and the number of stripes on the body. Hence, the present study on the colour of the young form of *C. septemtrionalis* is of some taxonomic interest.

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**Materials**

Two individuals, each about 2 cm in body length, were caught by dipnet from about 5 m depth near the mouth of Koajiro Bay, Kanagawa Pref. in October 1965. The fish were reared in the aquarium on clam food for about 8 months. Based on the colour pattern and meristic characters, the fish have been identified as *Chaetodontoplus septemtrionalis* (T. & S.).

**Colour when Alive**

*Body length about 2 cm* (Pl. V-1 & 2): Body chocolate brown. An yellowish band running from nape to lower jaw with a broadening near the snout; another vertical yellowish band running from anterior part of dorsal spine to the belly with a convex broadening of the anterior margin near the base of pectoral fin; margins of the soft rays of dorsal and anal yellowish; caudal fin yellow with transparent margin; pectoral fin yellowish on base.

*4 months reared* (Pl. V-3): Body colour fading to brown except dorsal and anal soft rays. On anterior side, three narrow bluish black-edged longitudinal bands\*\* running

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\*\* Slight individual variations in number and arrangement of the bluish black-edged bands have been noticed.

backwards from the posterior margin of yellowish vertical band and disappearing near the posterior part of body.

6 months reared (Pl. V-4): Longitudinal bands increase to 6 in number running all over the body; first, running from nape through base of dorsal spine to dorsal soft ray; second, from upper part of eye running just above lateral line, and third below lateral line, to upper part of caudal peduncle; fourth, running from posterior part of yellowish vertical band along the central axis to the posterior part of body; fifth, from posterior part of pectoral fin base to lower part of caudal peduncle; sixth, from chest, curving near belly to lower part of caudal peduncle. A few narrow bluish black-edged bands vermiculated on head but not continued on dorsal and anal. After six months, the number of blackedged bluish bands increases and also a few bands appear on dorsal and anal fin.

8 months reared (Pl. V-5): Body colour orange brown. The yellowish bands on snout and sides of body disappear; number of bluish black-edged bands increases to 8; vermiculated bands on head and a few longitudinal bands running along length of dorsal and anal fin present; soft dorsal and anal with a light margin; caudal fin yellow.

#### Colour in Formalin

Body uniform by pale brown. Dorsal, anal and ventral darker; caudal and pectoral fin dusky yellow; longitudinal bands on sides of body faintly visible.

#### Description of the Young

Dorsal X111, 19; anal 111, 17; pectoral 16; ventral 1, 5; pored scales on lateral line 39.

Body oval, strongly compressed, rostro-dorsal profile convex; height about 1.8 in body length, head about 3.5; eye diameter about 3.6 in head length; snout blunt about 3.5 in head length; preorbital entire, its hindmargin not free; preoperculum serrated behind, entire below, its angular spine more or less than eye; nostrils close together; scales small; spinous dorsal longer than the soft dorsal, spines gradate, the last as high as the evenly rounded soft dorsal; anal similar to dorsal; pectoral rounded; ventrals longer with the first ray slightly produced, reaching anal; caudal rounded, height of its peduncle about 2.6 in head length.

#### References

- 1). M. WEBER and L.F DE BEAUFORT 1936 The Fishes of the Indo-Australian Archipelago, Vol. VII.
- 2). H. W. FOWLER and B. A. BEAN 1929 Contributions to the Biology of the Philippine Archipelago and Adjacent Regions, Bull. 100, Vol. 8
- 3). K. MATSUBARA 1955 Fish Morphology and Hierarchy, Part II
- 4). D. S. JORDAN and H. W. FOWLER 1903 A Review of the *Chaetodontidae* and Relative Families of Fishes Found in the Waters of Japan. Proc. U.S. Nat. Mus. Vol. XXV No. 1296

#### Explanation of Plate V.

1. & 2. Body length about 2 cm, few days after caught
3. 4 months reared
4. 6 months reared
5. 8 months reared

Photographed by F. YASUDA

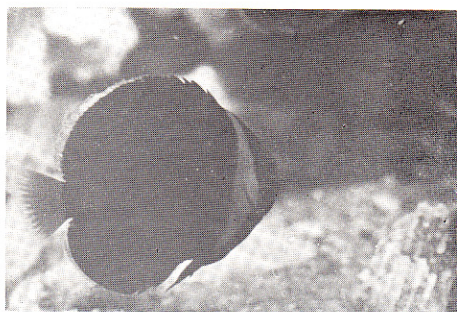
## 抄 録

チョウチョウウオ科 *Chaetodontidae* に属する魚類のうちとくにキンチャクダイ属 *Chaetodontoplus* およびサザナミヤッコ属 *Pomacanthus* に属する魚類は老幼によりその体色、斑紋が著しく変化することが知られ、過去においては同一種のものが老幼により別種とさえ思われていた時期もあった。しかし、その後 *Pomacanthus* に属する魚類についてはその生活史が明らかになり明細な報告がもたらされているが、*Chaetodontoplus* に属する魚類とくにキンチャクダイ *septemtrionalis* については、老幼により体色、斑紋が変化することが予想されてはいても、未だ明細な報告はない。

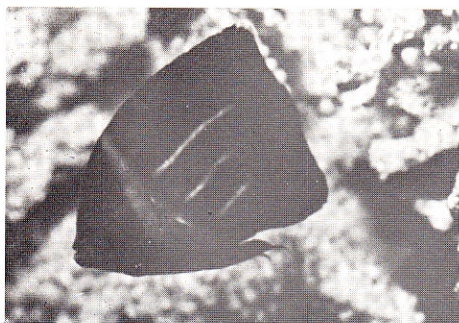
本報告は 1965 年 10 月神奈川県小網代より採集したキンチャクダイ属の幼魚と思われる魚を約 8 ヶ月間飼育観察し、キンチャクダイ成魚と同じ体色、斑紋になるまで追跡することが出来たので、その体色、斑紋の変化を報告する次第である。



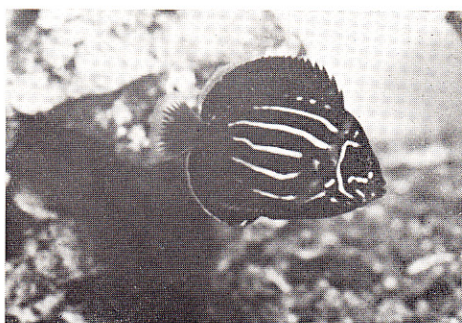
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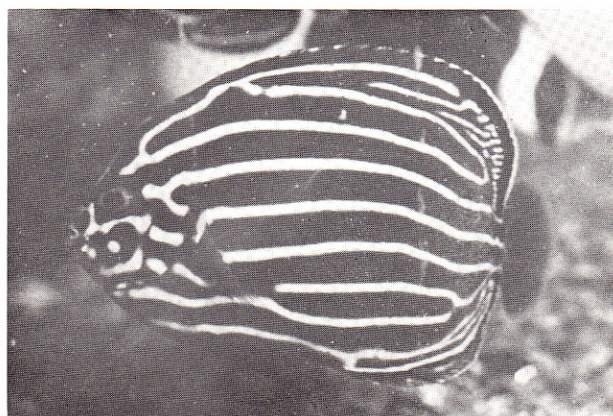
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