

BIOLOGY OF THE COMMON ROCKFISH, *SEBASTISCUS MARMORATUS* (C. & V.) IN NORTHERN COASTAL WATER OF TAIWAN¹

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ABSTRACT

The biology of the common rockfish, *Sebastiscus marmoratus* (Cuvier et Valenciennes) from a rocky shore in northern coastal water of Taiwan is described. The fish inhabits the sea bottom among rocks and feeds mainly on young crabs and shrimps over the substratum and occasionally on other benthic invertebrates and young fishes. Two rings on scale are laid down every year for the Taiwan population, one in January, another in June, for the fish of 2 years or older, while 1 ring is laid down in the winter for age 1 fish. Growth curve is expressed as:

$$L_t = 206.7(1 - e^{-0.402(t-0.242)}) \text{ or } W_t = 267.2(1 - e^{-0.402(t-0.242)})^{2.799}$$

Breeding season of this ovoviviparous fish extends from October to January in male and December to March in female. Absolute fecundity varies from 6200 to 59400 and is size dependant. Larvae are shedded several times throughout the breeding season, the estimated number of larvae shedded at a time per female ranged from 2723 to 19954 in 2-3 ages.

INTRODUCTION

The common rockfish, *Sebastiscus marmoratus* (Cuvier et Valenciennes) is a median sized demersal fish whose distribution extends from the extreme southern Hokkaido coast of Japan southward to East China Sea and northern Taiwan. In Taiwan, it is an important catches to fishermen and sport anglers along the northern coast. It lives on the hard algal beds among rocks ranging from the shallow water of about 2 m to 30 m deep where it is replaced by an allied *S. albofasciatus*; however, the young fish may move into the lower part of tide pools. The general feature of the present species may be distinguished from the allied *S. albofasciatus* and *S. sp.* by the presence of 18 pectoral rays, and the absence of spine on second suborbital bone and red vermiform markings on top of head in the former. Other demersal fishes frequently found in the same habitat were *Epinephelus diacanthus*, *Cephalopholis pachycentrum*, *Lethrinus fletus*, *Apogon doederleini*, *Choerodon azurio*, *Parapristipoma trilineatum* and *Adioryx ruber*. *S. marmoratus* was most abundant next to *E. diacanthus* in the area.

Although some biological accounts of Japanese population have been made by Japanese workers (Mizue, 1958; Mio, 1960; Shiokawa, 1962), as yet no populations in Taiwan have been investigated.

This paper describes some detailed aspects of the biology of *S. marmoratus* from the samples collected from the northern coast of Taiwan during June 1975 and April 1977, and compares them with those of the Japanese populations.

1. This is based partly on a M.Sc. thesis of H.T. Chen approved by National Taiwan College of Marine Science and Technology, under the supervision of S.C. Lee.
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