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NOTE

Note on a rare coral fish *Cheilinus undulatus* (Rüppell, 1835)

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Abstract

The Humphead wrasse *Cheilinus undulatus* (Rüppell, 1835), also known as Napoleon wrasse, is the biggest member of the family Labridae and a giant among reef fishes. Morphometric and meristic measurements are given. *C. undulatus* is protogynous; its natural history renders it highly vulnerable to fishing pressure. With its increasing demand in the LRFFT, there is urgent need to protect this fish by law.

The Humphead wrasse *Cheilinus undulatus* (Rüppell, 1835), also known as Napoleon wrasse, is the biggest member of the family Labridae and a giant among reef fishes. The more commonly used name derives from the prominent bulbous hump that appears on the forehead in larger adults, the intricate markings around its eyes and the large body size. The species is of considerable traditional customary significance in many Pacific islands and is much appreciated by divers, spear fishers and seafood gourmets alike. In top restaurants in Hong Kong, the head of *C. undulatus* fetches upto 80 US $ per kilogram and a pair of lips upto 2000 US $. (Kunzmann, 2004). There are a number of reports about the substantial decline in the stock due to large scale exploitation, in particular, related to its susceptibility to spear fishing and the growth of the Live Reef Food Fish Trade (LRFFT) in which live *C. undulatus* fetches top prices. In 1996, this species was listed as vulnerable on the IUCN Red List due the rapidly decreasing numbers in the live food market. It is included in the Appendix II of CITES for the countries Fiji, Ireland and the United States of America.

The species lives for nearly 30 years and is said to attain maturity at 35 – 50 cm and under 5 years of age. Smaller adults captured are said to be females while males exceed 1 m. *C. undulatus* is protogynous, a sexual pattern that renders it susceptible to size–selective fishing as occurs in the LRFFT. Maximum size attained is said to exceed 2 m and this species appear to pass through several colour and shape changes as it grows. Small juveniles have large dark spots on some of the scales that produce a series of broad dark bands. As the fish passes through different stages, the forehead becomes increasingly enlarged and lips become fleshier and body colour changes to pale green with elongate dark spots tending to form bars. (Bannerot *et al.*, 1987; Sadovy and Vincent, 2002).

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Material: A single specimen was landed at Cochin Fisheries Harbour on 14.12.2004 by hooks and lines operated off Lakshadweep. Total length was 61.5 cm and weight 5 kg. (Fig.1)

Description: Body slightly longer than deep; head contained 3.1 times in total length; eye diameter 9.7 times in head length, interorbital distance double the eye diameter; dorsal fin base 2.6 times in total length. Dorsal fin with IX spines and 10 rays; the posterior rays longer than spinous portion; pectoral fin with 12 fin rays; pelvic fin with I spine and 5 rays; anal fin with III spines and 8 rays and caudal fin with 13 rays. Lips very thick, fleshy and projecting; mouth with two sharp teeth on upper jaw and two smaller ones on lower jaw; numerous smaller white teeth on both the jaws.

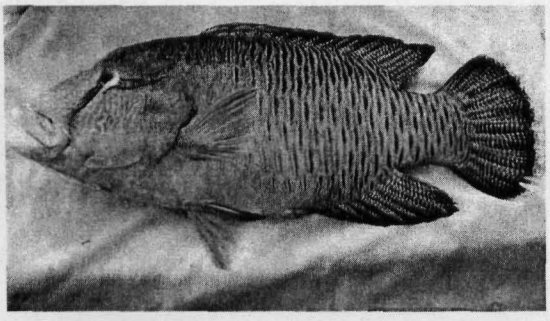

Fig. 1. *Cheilinus undulatus*

Body covered with large dark spots on some of its scales that produce a series of dark bands interspersed with narrower white bands along the length of its body. A distinctive pair of lines runs through the eye, the lines becoming more distinct posterior to the eye. The specimen was thus identified as *C. undulatus.* Morphometric measurements are given in Table I.

Distribution: *C. undulatus* is widely distributed in coral reefs and inshore

Table 1 *Morphometric measurements of* C. undulatus

Characters	Measurement (in mm)
Total length	615
Standard length	518
Head length	197.9
Snout	87.4
Eye diameter	20.4
Interorbital distance	47.3
Maxilla	66.1
Preopercular length	146.8
Gape of mouth	35.2
Dorsal fin base	240
Pectoral fin base	32.4
Pectoral fin length	105.2
Pelvic fin base	32.8
Pelvic fin length	78.7
Caudal base	85
Depth of caudal peduncle	81.7
Body depth	194.8

habitats throughout much of the tropical Indo – Pacific (Smith and Heemstra, 1986; Myers, 1991; Allen, 1993). It was reported from the Lakshadweep Islands by Jones and Kumaran (1980) and Vijay Anand (1994). Juveniles of 3 cm total length and longer are said to occur in the coral rich areas of lagoon reefs, particularly among live thickets of stag horn coral (*Acropora* spp)., in sea grass beds and murky outer reef areas with patch reefs. Adults are more common offshore than inshore, their presumed habitat being steep outer reef slopes and lagoon reefs. Typically they are solitary or paired, but have also been noted in groups of 3 –7 individuals. (Randall, 1955; Randall *et al.*, 1978).

Remarks: Heavy demand has lead to increased exploitation of coral reef fishes from the seas around Lakshadweep Islands by the fishing vessels based at Cochin. These fishes are exported from Chennai to Hong Kong through the processing plants at Cochin. The natural history of the humphead wrasse renders it particularly vulnerable to disturbance and fishing pressure because of its longevity, late sexual maturation, aggregation, spawning and sex change habits, ready accessibility and general low natural abundance. (Dulvy *et al.*, 2003) Though there are no documented reports of live food trade from India, knowing the availability of this fish and its demand in the (LRFFT), Indian seas would surely be the hunters paradise if we do not protect it by law. The use of international instruments such as CITES would appear to be particularly appropriate to protect this species given its current status and the absence of any regional management authority for overseeing this.

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