

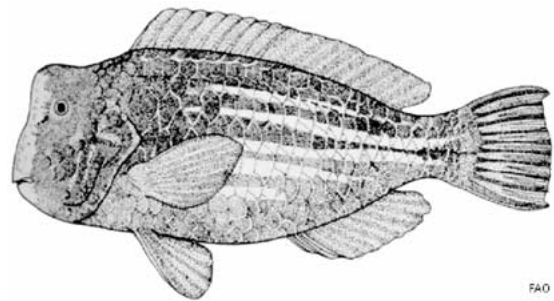
Threatened fishes of the world: *Bolbometopon muricatum* (Valenciennes 1840) (Scaridae)

Terry J. Donaldson^a & Nicholas K. Dulvy^b

^a*International Marinelife Alliance, Integrative Biological Research Program, University of Guam Marine Laboratory, UOG Station, Mangilao, GU 96913, U.S.A. (e-mail: donaldsn@uog9.uog.edu)*

^b*Centre for Environment, Fisheries and Aquaculture Science, Lowestoft, Suffolk, NR33 0HT, U.K. (e-mail: n.k.dulvy@cefas.co.uk)*

Common names: Bumphead parrotfish, giant humphead parrotfish, green humphead parrotfish (English) and numerous other names throughout the Indo-West Pacific region. **Conservation status:** Listing pending on the IUCN Red List. **Identification:** The largest species of parrotfish, reaching 130 cm total length, and 46 kg total weight; D IX, 10; A III, 9; P 15-16; pre-D 3-5; GR 16-18; 3 scale rows on cheek; depth 2.0–2.5. Adults are olive or blue green to slate grey in colour, the head is yellowish to pink. Juvenile body colour ranges from green to brown; there are five vertical rows of white spots (Myers 1999). Adults develop a prominent bulbous bump on the forehead and the dental plates are exposed. **Distribution:** Tropical and subtropical coral reef habitat, central and western Pacific to Indian Ocean and Red Sea (Myers 1999).



Abundance: Locally patchily distributed, adults always found in small shoals (≤ 40 individuals). Historically, it was common to abundant throughout much of its range. Now it is abundant only in Australia, Papua New Guinea, Solomon Islands and few other oceanic islands and is locally common in the Red Sea and New Caledonia. At other locations it is now uncommon or rare, and is virtually extinct in Guam, the Marshall Islands parts of Fiji and East Africa (Bellwood et al. 2003). **Habitat and ecology:** Wide-ranging on shallow (1–15 m deep) barrier and fringing reefs during daytime, nocturnally they rest in caves or in shallow sandy lagoon flats (typically <50 m). Juveniles are found in seagrass beds in lagoons and reef flats. Feeds on benthic algae and live corals; adult individuals are estimated to consume 5–6 tonnes of these corals per year, producing a considerable amount of sediment, and influencing significantly coral reef structure (Bellwood et al. 2003). **Reproduction:** Frequently aggregates at promontories, gutters and channel mouths or passes at or near the outer reef slope for pelagic spawning (Johannes 1981; Gladstone 1986) during a monthly lunar cycle. Courtship and spawning has been reported to occur in early morning (Gladstone 1986) although may occur at other times (Johannes 1981). **Threats:** Shoaling and group resting behaviour render this species highly vulnerable to spear fishing, particularly at night-time. **Conservation action:** Some protection afforded by regulations restricting night-time spear fishing or spear fishing with compressed air (e.g. American Samoa). **Conservation recommendations:** (1) Implement of a moratorium on commercial fishing and export. (2) Educate resource managers, fishers, consumers and the general public on the importance of conserving this species. (3) Create and enforce larger marine reserves that incorporate key habitat. (4) Further research on population ecology and behaviour. **Remarks:** Large size attained and known longevity indicate low replacement rates and high vulnerability to fishing pressure. This species appears to be of considerable functional importance, as it is the major bioeroder on coral reefs and may maintain ecosystem resilience. We acknowledge the Food and Agriculture Organization of the United Nations for permission to reproduce here their drawing of this species. This is Contribution No. 559 of the University of Guam Marine Laboratory and No. 23 of the IMA-Integrative Biological Research Program. NKD is grateful to Natural Environment Research Council, U.K. and Defra (MFD 0729) for funding his contribution to this research.

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