



Species of Concern

NOAA National Marine Fisheries Service

Humphead Wrasse

Cheilinus undulatus

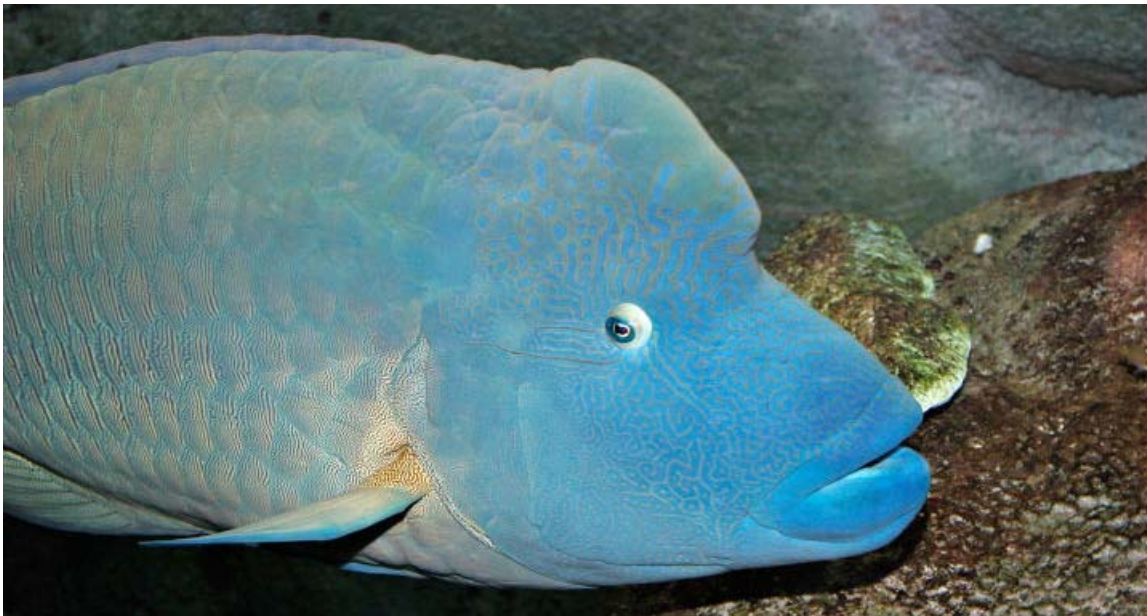


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KEY INFORMATION

Areas of Concern

Indo-Pacific region, from the Red Sea to the Tuamotus, north to the Ryukyus, including China and Chinese Taipei, east to Wake Island, south to New Caledonia, throughout Micronesia; includes the U.S. territories of Guam, American Samoa, the Northern Marianas, Howland, Baker, Jarvis and Kingman Islands and Palmyra Atoll.

Year Identified as “Species of Concern”
2004

Factors for Decline

- Fishing
- Night spearfishing
- Lack of coordinated international management
- Illegal, unregulated, unreported fishing
- Habitat loss

Conservation Designations

IUCN: Endangered
CITES: Appendix II

Current Status:

Demographic and Genetic Diversity Concerns:

It is believed to be uncommon to rare wherever it occurs, and natural densities are evidently never high even in preferred habitats. Survey results throughout the species' range have shown adult densities in unfished or lightly fished areas at 1 to 8 animals per acre of reef (Donaldson and Sadovy 2001). Once an economically important species in Guam, it is now rarely seen on reefs, and is infrequently reported on inshore survey catch results. In Wake Atoll, they are protected by regulation of the U.S. Department of Defense with limited fishing allowed, so abundances are often relatively high. Surveys conducted by the Pacific Islands Fisheries Science Center in 2002, 2004, and 2006, found humphead wrasse to be present, but uncommon, around all islands of American Samoa, and large individuals to be rare. The species was also observed to be uncommon to rare on analogous surveys during these same years at Howland and Baker Islands, in the U.S. Phoenix Islands, and at Jarvis Island, Palmyra Atoll, and Kingman Reef, in the U.S. Line Islands (unpublished data, PIFSC-CRED). Surveys also found them to be uncommon to rare in the Marianas.

Existing Protections and Conservation Actions:

It is listed as Management Unit Species in the Coral Reef Ecosystems Fishery Management Plan of the Western Pacific Regional Fishery Management



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Council. American Samoa banned the use of spear-fishing on SCUBA in 2001. All U.S. territories require licenses to export marine fishery products, and American Samoa requires that export ventures are locally owned. The waters surrounding Wake Island, Johnston Atoll, and Palmyra Atoll out to 50 fathoms are protected as a low-use MPA, which means that any person of the United States fishing for, taking, or retaining coral reef MUSs must have a special permit. Also, they may not be taken by spearfishing on SCUBA from 6 p.m. to 6 a.m. around Wake Island, Johnston Atoll, or Palmyra Atoll.

Factors for Decline:

Threats include: 1) intensive and species-specific removal in the live reef food fish trade; 2) spearfishing at night with SCUBA gear; 3) destructive fishing techniques, including sodium cyanide and dynamite; 4) habitat loss and degradation; 5) juveniles being taken from the wild and raised or "cultured" in floating net cages until saleable size; 6) a developing export market for juvenile humphead wrasse for the marine aquarium trade; 7) lack of coordinated, consistent national and regional management; and 8) illegal, unregulated, or unreported (IUU) fisheries.

Brief Species Description:

The humphead wrasse is the largest living wrasse, with a maximum size exceeding 6 feet (2 m – though rarely more than 3 feet for females) and 420 lbs (190 kg) (Sadovy et al. 2003). Adults develop a prominent hump on the forehead and thick lips. Small juveniles are black and white and larger juveniles become pale greenish with a vertically elongate black spot on each scale tending to form bars; two black lines extend posteriorly from each eye in all color phases; the dorsal profile of the head in juveniles is straight to level of eye. Individuals become sexually mature at 5 to 7 years and can live at least 30 years (Choat et al. 2006). They are protogynous hermaphrodites (with female-to-male sex change) which may make them vulnerable to overharvest. They primarily eat mollusks, fishes, sea urchins, crustaceans, and other invertebrates and are one of the few predators of toxic animals such as sea hares, boxfishes and crown-of-thorns starfish (Myers 1991). The humphead wrasse is extremely patchily distributed with adults confined to steep outer reef slopes, channel slopes, and lagoon reefs in water 3 to 330 feet (1-100 m) deep. Adults appear to be sedentary over a given patch of reef. Periodically adults move to a local spawning aggregation site where they spawn at certain times of the year and phases of the lunar and tidal cycles. They actively settle on branching hard and soft corals and seagrasses. Juveniles tend to prefer a more cryptic existence in areas of dense branching corals, bushy macroalgae or seagrasses (Donaldson and Sadovy 2001, Tupper 2007). Fish size is inversely proportional to coral cover (i.e., small fishes were abundant in areas with more coral) (Sadovy et al. 2003). The species is usually observed in solitary male-female pairs, or groups of two to seven individuals.

Contact Information

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References:

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