



# Pacific Islands Regional Office

## NOAA Fisheries Service



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## Species of Concern Proactive Conservation Program

### August 2006 Workshop Proceedings



Humphead Wrasse (*Cheilinus undulatus*)  
Photograph © by J.E. Maragos/USFWS



Hawaiian reef coral (*Montipora dilatata*)  
Photograph © by J.E. Maragos/USFWS



Bumphead parrotfish (*Bolbometopon muricatum*)  
Photograph © by John E. Randall/Bishop Museum



Inarticulated brachiopod (*Lingula reevii*)  
Photograph © by Cory Pittman

## Executive Summary

On August 21 and 22, 2006, the National Marine Fisheries Service (NMFS) Pacific Islands Regional Office (PIRO) Protected Resources Division held its first Species of Concern workshop in Honolulu, Hawaii, for species in the Pacific Islands region. As defined by NMFS, a “Species of Concern” is a species or vertebrate population for which there is concern or great uncertainty about its status. Species of Concern (SOC) are not listed under the Endangered Species Act (ESA) and are not protected by the ESA. The goals of the SOC Program are: to increase public awareness about these species; to identify those species potentially at risk and in need of protective measures before listing under the ESA becomes necessary; to identify data deficiencies and uncertainties associated with the status of the species; to work cooperatively with regional co-managers and interest groups to obtain the information necessary to evaluate species status and threats; and to identify conservation opportunities. Currently, there are 42 species deemed by NMFS to be SOCs. Four of these 42 species occur in the Pacific Islands region: the Hawaiian reef coral (*Montipora dilatata*), the inarticulated brachiopod (*Lingula reevii*), the humphead wrasse (*Cheilinus undulatus*), and the bumphead parrotfish (*Bolbometopon muricatum*).

The purpose of the workshop was to have researchers and resource managers share their knowledge and research in order to compile updated information on the species, their habitat, threats, research, and conservation ideas. After the open discussion on the species, threats were prioritized, recovery actions/conservation efforts addressing each threat were identified, and data and research needs for each species were listed. These efforts contributed to the development of a draft conservation action plan for each species. This conservation action plan will be a living document that will aid NMFS PIRO to identify, prioritize, and fund conservation and research projects in the U.S. for Pacific Islands Region Species of Concern over the coming years.

The Hawaiian reef coral (*Montipora dilatata*) is a rare coral that has been reported only in Kaneohe Bay, Oahu, from the main Hawaiian Islands, and in the Northwestern Hawaiian Islands (NWHI) at Midway Atoll, Pearl and Hermes Atoll, Lisianski Island, Laysan Island, Maro Reef, and French Frigate Shoals. In addition to being a rare species, threats include vulnerability to coral bleaching due to high temperature (as observed in 2002 at Midway, Kure, and Pearl and Hermes); fresh water kills and exposure at extreme low tide; habitat degradation and modification as a result of sedimentation, pollution, alien algae species (*Gracilaria salicornia*, *Kappaphycus/Eucheuma* spp.) and invasive green alga (*Dictyosphaeria cavernosa*) (Kaneohe Bay); a limited distribution; and damage by anchors, fish pots, swimmers, and divers. Potential actions include extensive surveys to determine the presence/absence at these locations, as well as genetic sampling to determine if the species is in fact an individual species and not a hybrid. Further actions may include: developing underwater species identification cards to help researchers identify this species in the field; working towards developing a local action strategy to address invasive species and water quality issues; and partnering with facilities that are capable of genetic research and possible species propagation. In addition, upon further understanding of the threats to and vulnerability of this species, as

well as learning whether the existing environmental conditions are conducive to the survival of this species, in the future it may be possible to reintroduce propagated fragments of *M. dilatata* into Kaneohe Bay.

The inarticulated brachiopod (*Lingula reevii*) is endemic to Kaneohe Bay, Oahu, Hawaii. Threats to the species include habitat degradation and alteration; overexploitation; pollution and sedimentation; a vulnerable life history; and a limited distribution. In addition to extensive surveys in Kaneohe Bay to determine the presence/absence of this species, survey work can help determine habitat preferences and quality. Further actions may include: developing underwater species identification cards to help researchers identify this species in the field; developing a local action strategy to address invasive species and water quality issues; and partnering with facilities that are capable of captive husbandry with an ultimate goal of reproduction. In addition, upon further understanding of the threats to and vulnerability of this species, as well as learning whether the existing environmental conditions are conducive to the survival of this species, in the future it may be possible to reintroduce captive reproduced individuals into Kaneohe Bay.

The humphead wrasse (*Cheilinus undulatus*) is found in the U.S. territories of Guam, American Samoa, Commonwealth of the Northern Mariana Islands, Howland Island, Baker Island, Jarvis Island, Wake Island, and Palmyra Atoll. It has high juvenile mortality, late maturation, and low population doubling time. Threats to this species in U.S. waters include nighttime spear fishing and spear fishing tourism, habitat loss and degradation, and local consumption. Potential actions include: supporting genetic research to gather DNA samples to study individual populations; surveying areas in U.S. territories where the species is thought or known to occur and determining the extent of the species' home range; supporting acoustic research to verify whether the species has an acoustic signature profile and if that profile can provide presence/absence/trends/data; working with local resource agencies and managers to enforce species closure and restrictions; protecting sleeping areas; working with local dive and ecotourism companies to promote conservation of the species; and developing underwater species identification cards to help researchers and divers identify this species in the field.

The bumphead parrotfish (*Bolbometopon muricatum*) is found in the U.S. territories of Guam, American Samoa, Commonwealth of the Northern Mariana Islands, and Wake Island. The species is slow growing and long-lived, with delayed reproduction and low replenishment rates. Threats to this species include nighttime spear fishing and spear fishing tourism, habitat loss and degradation, and local consumption. Potential actions include: surveying areas in U.S. territories where the species is thought or known to occur and determining the extent of the species' home range; supporting acoustic research to verify whether the species has an acoustic signature profile and if that profile can provide presence/absence/trends/data; working with local resource agencies and managers to enforce species closure and restrictions; protecting sleeping areas; working with local dive and ecotourism companies to promote conservation of the species; developing underwater species identification cards to help researchers and divers identify this species in the field; and conducting a literature review of the scientific information currently available on the species.

In conclusion, the great efforts of researchers and resource managers present at the workshop and through communication with international individuals after the workshop, NMFS PIRO has developed a draft conservation action plan for each species. This document will be a living document for NMFS PIRO to identify, prioritize, and fund conservation and research projects in the U.S. for Pacific Islands Region Species of Concern over the coming years, as well as develop and foster regional relationships.