

PROTECTED AREAS MATTER TO BUMPHEAD PARROTFISH

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The bumphead parrotfish of Nicobar islands. | Photo Credit: [Vardhan Patankar](#)

The survival of the threatened bumphead parrotfish in the Andaman and Nicobar Islands hinges on the persistence of coral reefs and presence of marine protected areas. Implementing fishing regulations could help its population bounce back, say researchers.

Bumpheads are the world's largest parrotfish. Ramming its enormous green head against corals to dislodge them, a single bumphead can nibble up to five tonnes of coral every year. Though seemingly destructive, this activity promotes coral growth and keeps reef ecosystems healthy. However, numbers of bumphead parrotfish have decreased worldwide. Overfishing is a concern, for the fish are highly prized catches. But how are India's bumpheads in the Andaman and Nicobar Islands doing?

In an effort to generate baseline data, a team comprising Vardhan Patankar (Wildlife Conservation Society-India) surveyed 75 coral reef sites off 51 islands to obtain information on the distribution of bumpheads. Diving underwater, they counted the numbers of bumpheads and quantified benthic cover (such as live coral, algae, sand and rubble) there. Their results, published in *Oryx*, reveal that the fish occurred only patchily in these waters at densities of just 0.0032 per hectare. The team spotted no juveniles, only 59 adults at merely nine islands.

"The low densities are shocking, very similar to those of bumphead populations in southeast Asia where they are legally protected," said Dr. Patankar.

Live coral cover and the presence of marine protected areas – where fishing is banned – emerged as crucial factors for bumphead presence. To supplement this information with local knowledge, the team also conducted 99 interviews with fishermen in the South and Middle Andaman islands and Central Nicobar. Most fishers were aware of the presence of bumpheads in their waters; and all fishermen in Central Nicobar and Middle Andaman had seen the fish feeding and aggregating (bumpheads tend to aggregate in numbers larger than 10). Most fishers had hunted the fish all their lives, using hand-held wooden spears or harpoons.

Currently, this hunting is only opportunistic. However, if this changes to targeted fishing it could endanger bumpheads which could be easily conserved as a 'flagship species', says Dr. Patankar. "Bumpheads are not legally protected in India though the IUCN categorises them as Vulnerable," he says. "Now would be a good time to protect them legally and implement some fishing restrictions so their numbers can improve. Natural catastrophes such as bleaching may have already affected these large fish."

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