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Saving corals: Batangas dive spots under siege



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JUNE 6, 2021

6 MINUTE READ



Volunteer diver Daniel Abulag removes a huge crown-of-thorns starfish during a dive on May 23 at the famed Sepoc Wall, a dive spot in Mabini, Batangas.

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For diving enthusiasts, seeing one or two crown-of-thorns starfish (COTS) in their favorite dive spots is tolerable. But a hundred of these large starfish with venomous thorn-like spines covering a bed of corals is considered alarming.

Situations like this call for an immediate action.

Volunteer divers did just that on May 23 when they launched a “search and destroy” operation to save the corals in some of the popular dive spots in Batangas.



A coral infested with crown-of-thorns starfish.

Outbreak amid a pandemic

A COTS outbreak can sometimes be beneficial, but most of the time, it can be harmful to coral reefs if it is caused by anthropogenic pressures. Such an outbreak can destroy a healthy reef in a matter of days.

“It takes 20 to 30 years for a reef to recover from severe COTS infestation,” said Danny Ocampo, an ocean conservation advocate.

A dive master and underwater photography expert, Ocampo led a small team of volunteer divers and took a dive at Sepoc Wall, a dive site in Tingloy and Mabini. Infestation was also observed at a dive spot in the nearby town of Bauan.

Ocampo explained that travel restrictions brought about by the Covid-19 pandemic have compelled the diving resorts in the area to strictly limit their diving activities. Consequently, little was known about the proliferation of the COTS in Batangas.

In a voice call by BusinessMirror over Facebook Messenger last June 2, Ocampo said that it was a fellow diver, Yvette Lee, who informed him about the COTS infestation.

“We also heard from other divers about it,” he said. “When they went to Bauan, our group decided to go to Sepoc Wall, where we discovered the massive infestation.”

Dive to save corals

Along with Gladys Guy, Maria Angeles, John Kenneth Gines; and brothers Nixon and Daniel Abulag—who are both Ocampo’s dive scholars and now dive masters themselves) the group took time out from their usual “sight-seeing” activities underwater to save the affected corals.

They have since managed to haul over 300 COTS.

According to Ocampo, within an hour that day, they were able to remove a total of 140 COTS at an average depth of 4-6 meters covering an area less than 100 square meters. They also managed to remove an additional 165 for a total of 306 COTS.

“Collecting COTS should be done properly and carefully to avoid damaging corals and ensure they do not release eggs while being removed from the reef due to stress,” he explained.

In Bauan, over 300 COTS were removed by another group of volunteer divers.

A serious threat

Marine scientists and experts say that COTS pose a serious threat to coral reefs.

In her master thesis, Mar Saniano, a marine scientist working for Oceana Philippines, an ocean conservation non-governmental organization, said she that had been removing COTS from the reefs since 2008.

She described the potential devastation impact to the coral reefs in the country as “alarming.”

Saniano told the BusinessMirror via Facebook Messenger on May 24 that she had been disseminating information about the adverse effects of COTS and was glad that it is “finally getting attention.”

However, she noted that COTS can also be beneficial to marine ecosystems.

She explained: “They are natural inhabitants of the reef across the Indo-Pacific, [helping] balance the population in a reef ecosystem. Juveniles feed on planktons and algae, while adults feed on corals. They actually prefer weak corals that cannot protect themselves from the seastars. However, they are devastating or deleterious when they are in an outbreaking population as they can wipe out an entire reef in days.”

Monitoring COTS

Saniano underscored the importance of monitoring COTS in the country’s coral reefs, while noting that a COTS outbreak is a result of a bigger problem.

“COTS infestation is due to [an] imbalance in the ecosystem,” she said.

She shared: “We need to see the interconnection of these organisms. For example, removing benthic feeders like parrot fishes, i.e., those feeding on algae that smother corals, means high food availability for the cryptic and numerous juveniles (I have seen benthic feeding juveniles smaller than a P5 coin). Over exploiting the parrot fishes increases the survival of the juveniles. With this high survival rate, you can definitely expect an outbreak in two to three years.”

Meanwhile, Saniano said that other stressors, such as the increase in nutrient input into the sea and habitat destruction that weakens corals, can lead to an increase in the survival of COTS. This can also result to COTS outbreak populations.

“We must keep our reefs healthy to avoid the deleterious effect of an outbreak,” she pointed out.

Prey and predator

Jimely Flores, a marine scientist working for the Environmental Defense Fund, agrees with Saniano.

“If there are too many [COTS], they can wipe out corals,” she said. “Usually, if the coral reef is healthy, they can be controlled naturally at a young age by predators, such as mollusks and some parrot fishes.”

Unfortunately, there were a few predators left in that part of Batangas where COTS infestation was reported.

“At a young age, they [COTS] are very prolific. Once they mature, they can resist predation. That’s why natural control is important while they are still young,” she said.

Flores said the shell craft industry is aggravating the problem that besets the country’s healthy marine ecosystem, including the coral reefs.

“Harvesting [too much means] there are almost no more shells in the coral reef areas left,” she said. “Triton is the most famous predator [of COTS]. Wrasses and parrot fishes are also high-value fishes, but they are almost gone.”

She added: “But when COTS are still young, they can be preyed upon by crabs, shrimps, fishes and other generalist feeder predators.”

According to Flores, even while the Philippines still has plenty of protected coral reefs, they are “empty.”

Restoring balance

Flores said the best way to get rid of COTS and prevent infestation is restoring balance in the marine ecosystem.

“What we are doing before, which I think some resorts [still do], is to pick them up and place them on land to dry,” she said.

She explained: “The first line of defense is to ensure that the adults are picked up and destroyed on land. The long-term objective is to help restore balance. Resort owners may need resident or partner scientists to do that. Restoration of (marine) biodiversity means ensuring that even the generalist will also not become too many.”

A COTS outbreak may eventually affect fishery and other seafood, according to Flores.

She said: “They mainly attack the corals, but we know the importance of corals in the life cycle of our fish in the ocean, so in the long term, this would result in seafood insecurity.”

Government intervention needed

Saniano said to address the potential adverse impact of massive COT outbreaks, the government must act with dispatch.

“Unlike climate change, increasing temperature, sea-level rise, which we [cannot] control, the COTS infestation problem can be mitigated or totally avoided,” Saniano said, explaining that since an increase in temperature also triggers spawning among COTS.

In preventing future COTS outbreaks, she said there is a need to remove man-induced stressors in the country’s reefs, such overfishing or destructive fishing activities, and proper waste management.

Saniano added that establishing more Marine Protected Areas (MPA) is more effective.

“Establishing MPA and effectively managing them can lead to healthier and balanced reef ecosystems that can control the population of COTS [to avoid] outbreaks,” she said.

But this is easier said than done, Saniano said, noting that the MPA require a concerted effort by the national and local governments and individuals.

“A lot of my diver friends are actively collecting COTS in infested areas,” she said. “Others contribute by simply avoiding products that are harmful to corals or those that weaken them. [They can also] avoid stepping on corals that can cause habitat destruction and dumping trash into our seas that [cause] nutrient loading.”

For now, Ocampo said the best that divers like him can do is to rally other divers to search for COTS-infested reefs and take action.

Image courtesy of Danny Ocampo

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