OCEANA

PROJECT ALACRANES

The secret life in the depths of the Gulf of Mexico

PTHOTO SHUTTERSTOCK

IN 2021, OCEANA EMBARKED ON ITS FIRST SCIENTIFIC EXPEDITION TO THE BAJOS DEL NORTE AND ALACRANES REEFS OFF THE COAST OF YUCATAN TO ASSESS THE HEALTH OF THESE IMPORTANT MARINE AREAS. HERE ARE THE KEY FINDINGS:

Deteriorating Corals

- The Alacranes Reef is the largest coral structure in the southern Gulf of Mexico. It gets its name from the Alacranes Reef National Park, a Natural Protected Area (NPA) that faces various threats such as tourism, overfishing, and pollution. Oceana analyzed 39 marine protected areas in 2021 and found Alacranes has the weakest protections.
- 4 of the 8 sites visited during the expedition presented recent coral mortality.
- 142 dead coral colonies were covered with algae, making it impossible to determine when the coral died.
- All the sites visited in the Bajos del Norte reef showed old mortality above 25%, while new mortality of the registered colonies was less than 0.1%.
- Corals with dark spot syndrome, which can be fatal, were found in most of the analyzed sites.
- Oceana recorded black band disease in two sites, which is characterized by a dark band that progresses over the coral and causes death.

- Polychaete worms, parasites that cause minor, non-lethal injuries, were found in more than half of the sampled sites.
- In both Bajos del Norte and Alacranes, Oceana found the presence of lionfish, a high risk invasive species that threatens the diversity and balance of the reefs.

A World to Discover

- Project Alacranes allowed Oceana to learn more about the species known to inhabit Bajos del Norte and Alacranes and find new species moving into these areas.
- 2,116 species were identified through the analysis of the DNA present in the waters of Bajos del Norte. Among them, Oceana identified groupers, sea bass, red snapper, curro shark, and common hammerhead shark.
- 26% of the DNA sequences found could not be identified in any of the existing databases, indicating that there are still new species to be discovered in the area.
- In addition to confirming the presence of 19 species of hard corals, Oceana also identified 87 new records of invertebrates in Bajos del Norte: 35 crustaceans, 30 mollusks, and 22 brittle stars.
- The analysis of the data shows that there are still unknown species, so these numbers will increase as more is learned about the area.
- Most of the mollusk species identified were snails and sea slugs or nudibranchs (63%).
- Oceana found a pair of organisms from the genus *Callistoma sp.*, which could belong to a new species. This could be confirmed with further genetic analysis.

Recommendations

Coral reefs occupy less than 1% of the ocean, but are home to almost 25% of the world's marine species. They have been compared to jungles in the terrestrial environment, but instead of trees there are coral colonies providing shelter, food, and the ideal conditions for the development of marine life. But coral reefs are in need of urgent protection as they continue to face threats including climate change.

The data collected from Project Alacranes highlights the need to protect the Bajos del Norte and Alacranes reefs, which is why Oceana proposes:

- To expand the area of the Alacranes Reef National Park, so that the reefs of Bajos del Norte are included within the Natural Protected Area. This will maintain the connection that exists between both zones and give refuge to hundreds of species, some of commercial interest.
- While the necessary processes are carried out to expand the NPA, new guidelines are needed to protect Bajos del Norte reefs, which do not have any protection.
- To implement permanent monitoring for the control/ eradication of lionfish before their numbers increase and cause irreversible damage to the reef ecosystem. For example, by promoting consuming lionfish throughout the year.