

New Diadema project aims to restore sea urchins in Saban and Statian waters

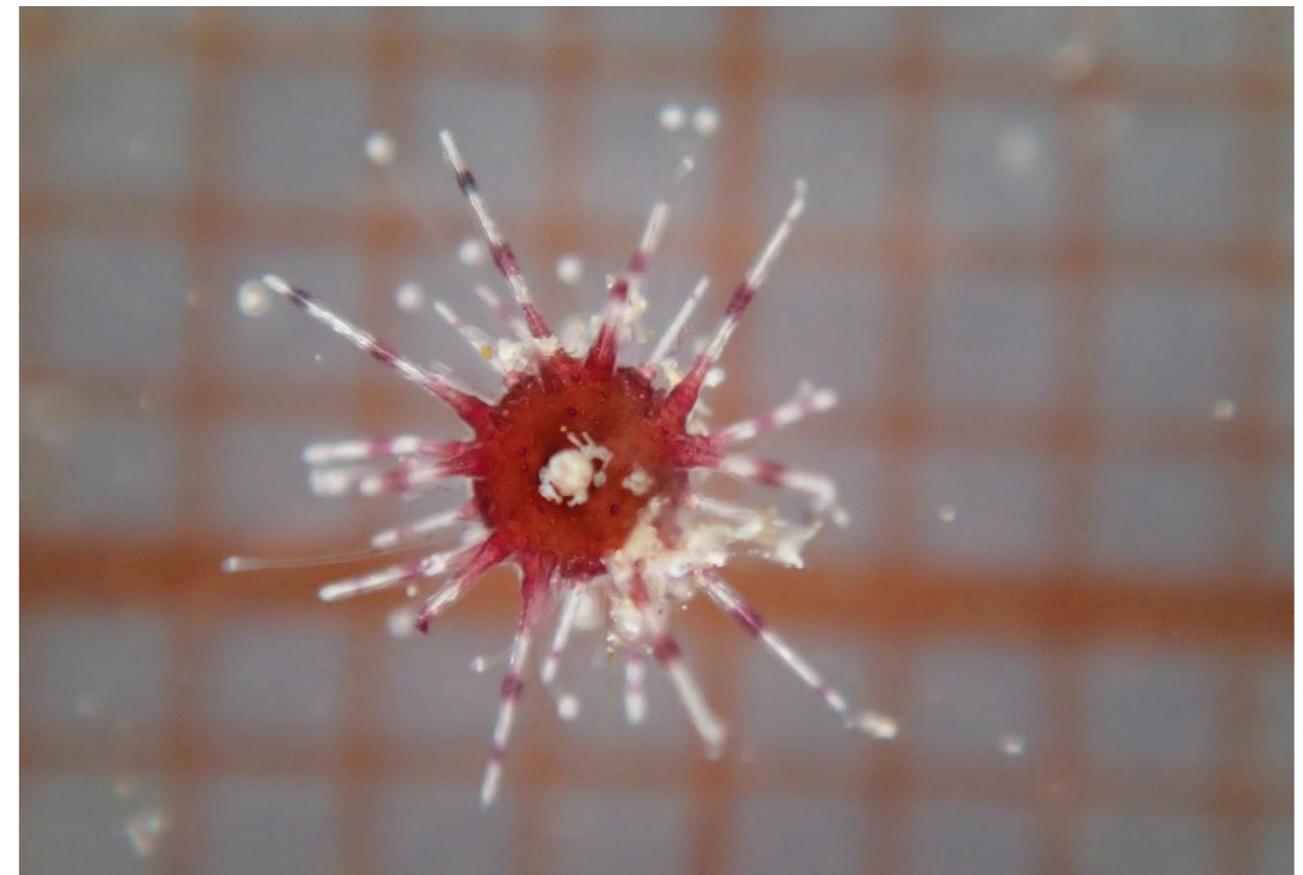
By Alwin Hylkema

The new RAAK PRO Diadema project aims to restore long spined sea urchin populations (scientific name *Diadema antillarum*) on the coral reefs around Saba and St. Eustatius. Long spined sea urchins were the most important herbivores on Caribbean coral reefs. In 1983, more than 95% of the sea urchins died, due to an unknown disease. Without the grazing of the sea urchins, the algae increased in abundance, smothering adult corals and inhibiting the settlement of juvenile corals. As a result, the reef became covered with algae instead of corals. Nowadays, more than 35 years after the die-off, long spined sea urchins are still very rare. They are sometimes abundant in shallow waters, such as harbors, but are seldom seen on the deeper coral reef.

Worldwide coral reefs face many threats that are difficult to tackle locally, like global warming and ocean acidification. This makes it even more urgent to remove as much local threats as possible. Restoring the sea-urchin populations will remove the overgrowing algae and will make the reefs more resilient to the other threats they face. To do this, University of Applied Sciences Van

Hall Larenstein, STENAPA, Saba Conservation Foundation, Wageningen Marine Research, Wageningen University, Caribbean Netherlands Science Institute, University of Applied Sciences HZ, ISER Caribe, Wortel Product Design and Golden Rock Dive Center work together in the new RAAK PRO Diadema project. The project is partly funded by the Dutch Organization for Scientific Research (NWO) and will run for four years, starting this September.

The first priority of the team will be to investigate why sea urchin populations on most reefs have not recovered. Pilot experiments show a high abundance of very small juvenile sea urchins, while no adults were observed on these reefs. This is an indication that there is potential for population recovery and research will therefore focus on the first steps in the sea urchins life cycle. The ultimate goal is to develop a new method to maximize settlement and survival of larvae and juveniles and, by doing this, restore the populations of this important herbivore. The sea urchins will, once more, graze away the algae and aid in the recovery of Sabas and Statias coral reefs.



Juvenile long-spined sea urchin are red with striped spines. The squares on the background are 1x1mm.

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