

# Red Sea epidemic kills off sea urchins, endangering coral

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**TEL AVIV:** A deadly epidemic that is spreading through the Red Sea has killed off an entire species of sea urchin in the Gulf of Aqaba, imperilling the region's uniquely resilient coral reefs, an Israeli research team has found.

The whole population of black sea urchins, a species known for helping keep coral reefs healthy in the waters also known as the Gulf of Eilat, was wiped out over a couple months, according to a team from Tel Aviv University.

Their findings, published in two peer-reviewed journals, cite mass mortality in other countries in the region, including Jordan,

Egypt and Saudi Arabia.

The probable culprit is a disease-causing ciliate parasite that causes a fast death, perhaps the same one that wreaked havoc on sea urchin populations in the Caribbean.

In just two days, a healthy *Diadema setosum* — a long-spined black sea urchin — becomes a skeleton with massive tissue loss, said lead researcher Omri Bronstein, from Tel Aviv University's Steinhardt Museum of Natural History and School of Zoology.

Some wash ashore dead. Others are eaten by fish, likely speeding up contagion. The first signs of trouble appeared in the Mediter-

anean Sea, where sea urchins have over the years invaded.

Bronstein said there were reports several months ago from Greece and Turkey of sea urchin deaths. While that was less concerning at first since they were an invasive species, the pathogen has now crossed back into the natural population in the Red Sea.

"There is nothing that can be done to stop this at the moment."

But there is a "very narrow window", he said, to create an isolated population, or broodstock, of the sea urchins remaining elsewhere that could hopefully be reintroduced later.

The researchers said a report to Israeli environmental authorities had been submitted and that emergency steps to protect the coral reefs were being examined.

Scientists studying the Eilat area consider it a coral refuge.

The corals that settled thousands of years ago had to pass through a narrow strait to the south that acted as a thermal barrier, ensuring they are more resistant to temperature increases that are threatening reefs globally.

Sea urchins play an important role by feeding on algae that would otherwise block sunshine and smother the reefs. **Reuters**