Starfish get shock treatment

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It didn’t take long after the first crown-of-thorns starfish plague was detected on the Great Barrier Reef for public opinion to fall into two distinct camps. There were those who believed the spiky invertebrates were going to gobble the reef into extinction, and those who believed they were not. It was like an underwater version of the climate change debate.

The coral-munching starfish were scientifically described in the 1700s but have been around for millions of years.

The first recorded outbreak in Australia was at Green Island, off Cairns, in 1962. Within five years they were turning up on reefs as far south as Innisfail and as far north as Cooktown.

Initially scuba divers tried spearing them. The huge mounds of dead starfish which began piling up on Green Island and elsewhere looked impressive, but the divers knew they were hardly making a dent in their numbers.

Others tried injecting the pests with copper sulphate and in 1969 University of Queensland zoologist Robert Endean showed off the starfish equivalent of the Taser.

Invented by Maryborough electrical engineer Roy Rufus, it was basically a big lead acid battery with two leads carrying powerful electrodes. Dr Endean had earlier tried to come up with his own version, but even though it generated 2800 volts it didn’t harm the marine killers.

He was more hopeful about Mr Rufus’s improved model, which also featured better insulation so divers were less likely to electrocute themselves.

“Should the instrument be a success, then I feel 20 divers armed with them could kill 100,000 starfish a day,” Dr Endean said.

Alas, like an attempt to lure starfish to their deaths using pheromones, and many other schemes, it did not work.

Even if you believed starfish were a big problem, there was much debate about why they had suddenly become so.

Some said outbreaks had always occurred but were not noticed until scuba diving took off in the 1960s. Others, like Dr Endean, blamed over-hunting of starfish predators like the giant triton.

Recently, studies have found very strong evidence that fertilisers and other nutrients washed off from farms on the mainland increase the chances of the survival of starfish larvae, and therefore the numbers of adults.

While the reef hasn’t yet been eaten into extinction, a 1985 Australian Institute of Marine Science survey of 228 reefs found massive damage to more than two-thirds of the central third of the Great Barrier Reef, between Lizard Island and Townsville.