

Cyprus on frontline against lionfish invasion of Mediterranean

April 11 2018, by Isabelle Wesselingh



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Equipped with harpoons and waterproof notebooks, Louis, Carlos and

Antonis dive deep into the crystal clear waters of Konnos Bay in Cyprus on a mission to capture predatory lionfish.

After colonising parts of the Atlantic on the east coast of the United States and the Caribbean, lionfish are now invading the Mediterranean.

After two dives, the marine biologists from the Enalia Physis Environmental Research Centre surface with nearly 20 brown-and-white striped specimens.

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The reef fish, whose sting is painful but not deadly, is native to the Indian Ocean.

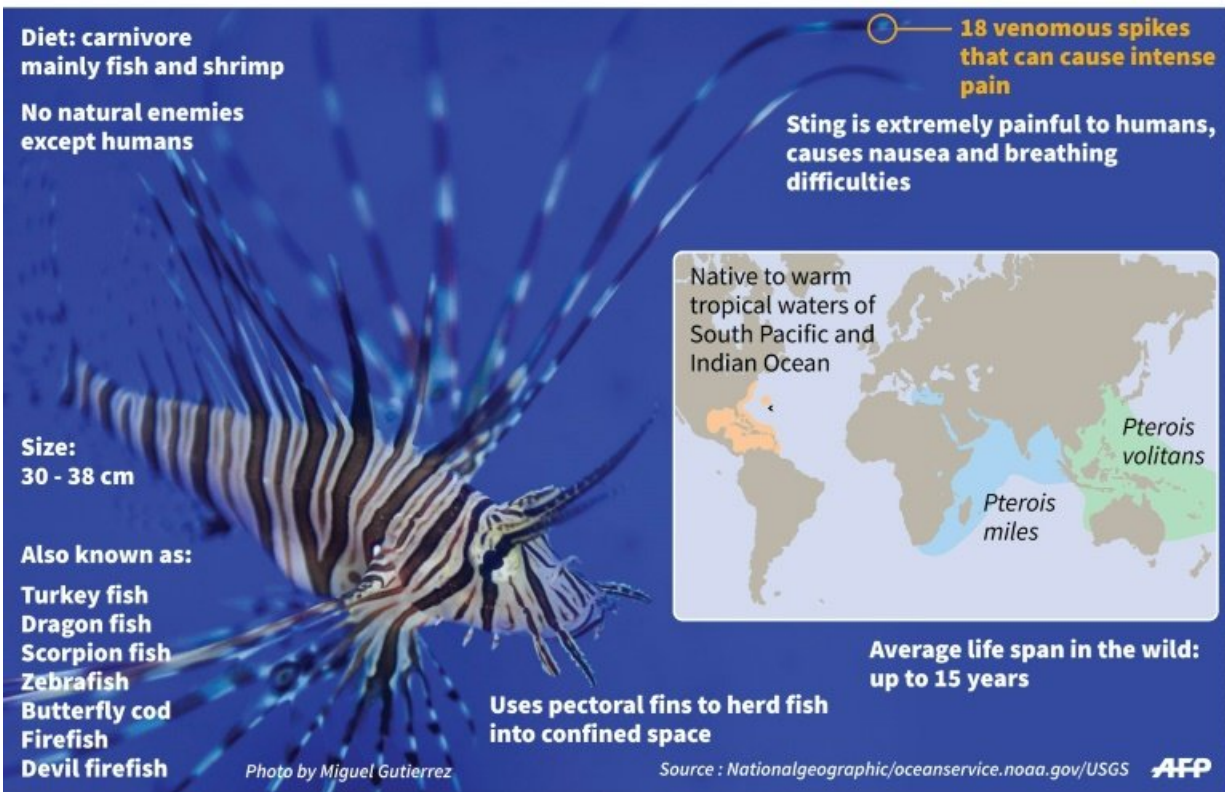
But an outbreak in the Mediterranean has scientists, fishermen and divers so worried that they have launched a campaign to reduce its numbers.

The lionfish first appeared in the waters off Cyprus in 2012, Louis Hadjioannou, research director at Enalia, told AFP.

"Since then it has spread everywhere," he said. "All over the island, almost wherever you dive you can now see the lionfish in masses."

The same is true in Lebanon where Alain Najem, who runs a diving club north of Beirut, told AFP he sees greater numbers with each trip to the sea.

Lionfish invasion



Diet: carnivore
mainly fish and shrimp

No natural enemies
except humans

Size:
30 - 38 cm

Also known as:
Turkey fish
Dragon fish
Scorpion fish
Zebrafish
Butterfly cod
Firefish
Devil firefish

18 venomous spikes
that can cause intense pain

Sting is extremely painful to humans,
causes nausea and breathing difficulties

Native to warm tropical waters of
South Pacific and Indian Ocean

Pterois miles

Pterois volitans

Average life span in the wild:
up to 15 years

Uses pectoral fins to herd fish
into confined space

Photo by Miguel Gutierrez

Source : Nationalgeographic/oceanservice.noaa.gov/USGS **AFP**

Graphic on the invasive lionfish, now found in the eastern Mediterranean.

The lionfish has also been sighted off the coasts of Greece, Turkey and Tunisia.

"The invasion is under way" in the eastern Mediterranean, said Demetris Kletou, director of the Cyprus-based Marine and Environmental Research Lab.

The lionfish's "exponential rise" in the area was facilitated by the widening of the Suez Canal—completed in 2014—and warming regional water temperatures, according to Jason Hall-Spencer, a marine biology

professor at Britain's University of Plymouth.

The cooler waters of the western Mediterranean, he said, have largely been spared for the moment.

First line of defence

Together with Enalia and several other partners, including the University of Cyprus and the Department of Fisheries and Marine Research, the two scientists are running a pilot project called "Relionmed" funded by LIFE, the European biodiversity protection programme.

Their aim is to make Cyprus "the first line of defence" against the lionfish invasion



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Along with habitat loss and overexploitation, invasive species are among the top five leading causes of biodiversity loss across the globe, according to the International Union for Conservation of Nature.

Such a loss disrupts ecosystems and the human activities that depend on them.

Since the 1980s, the lionfish has caused "significant damage" to the US and Caribbean coastlines, said marine biologist Carlos Jimenez, a senior research coordinator at Enalia.

Environmental research firm VertigoLab estimates the lionfish invasion in the French West Indies—a string of seven small islands in the Caribbean—has cost "more than 10 million euros (\$12 million) per year".

Local fish are easily caught off guard by the adept predator.

In two years, lionfish in the western Atlantic have reduced 40 species of coral reef fish by about 65 percent, according to a 2012 study funded by Canada's Natural Sciences and Engineering Research Council.

Fishermen's catches of certain species, including grouper, have slumped accordingly.



The entrails of the dissected fish are analysed to determine their favourite Mediterranean prey

'Voracious'

Fear is rife across the Mediterranean, a "small sea" in relative terms but a veritable jewel of biodiversity with some 17,000 species.

"We are worried because they are so voracious," said Jimenez, as he dissected lionfish in his Nicosia office.

"They'll put additional pressure on ecosystems that have already been disrupted" by over-exploitation of marine resources, pollution and

tourism.

The entrails of the dissected fish are analysed to determine their favourite Mediterranean prey.

Biologists also examine their otoliths—tiny mineral concentrations in their ears, akin to black boxes revealing their age and other data.

Cypriot fisherman are also concerned because many of them have been stung. Aside from the pain, the pricks can cause allergic reactions.



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But Theo Koutsavakis, who runs a diving club and has lived by the sea his entire life, said the lionfish, a favourite among divers, rarely attacks humans.

He is, however, concerned by the impact on marine life in Cyprus, "already limited" by fishing and tourism.

Koutsavakis is an avid supporter of efforts by the EU-funded Relionmed project to raise public awareness and monitor how the species is spread.

Inspired by similar projects in the United States, the group also plans to organise events—including harpoon fishing contests—aimed at reducing the species' population and to find economic incentives for fishermen.

If chefs learn how to cook them without pricking their fingers, restaurants could put [lionfish](#) on the menu, while the spines could be used in jewellery.

"We know it's nearly impossible to end the invasion at this point," said Louis Hadjioannou, the biologist. "The aim of the project is not to eradicate but to control."

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