



# Lionfish Stings in Divers in Quintana Roo Mexico

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# Lionfish Invasion

The venomous Indo-Pacific 'Lionfish' is now regularly observed in habitats within the southeast US region (Florida to North Carolina) the Bahamas, Bermuda and as far south as the south Caribbean. These fish are not native to Atlantic waters and may have a negative impact on marine life. Most of their spines are venomous and can cause extreme pain.



Hare, J.A., and P. E. Whitfield. 2003. An integrated assessment of the introduction of lionfish (*Pterois volitans/miles* complex) to the western Atlantic Ocean. NOAA Technical Memorandum NOS NCCOS 2. 21

The most probable explanation for the arrival of lionfish in the Atlantic Ocean is via the aquarium trade.

No one will ever know with certainty how lionfish gained entry to the coastal waters of the U.S.; however, as they are common aquarium fishes, it is possible they were released pets.

The well-publicized report of lionfish establishment due to a breakage of a large aquarium by Hurricane Andrew is probably erroneous.

*Whitfield et al. 2002; Semmens et al. 2004*

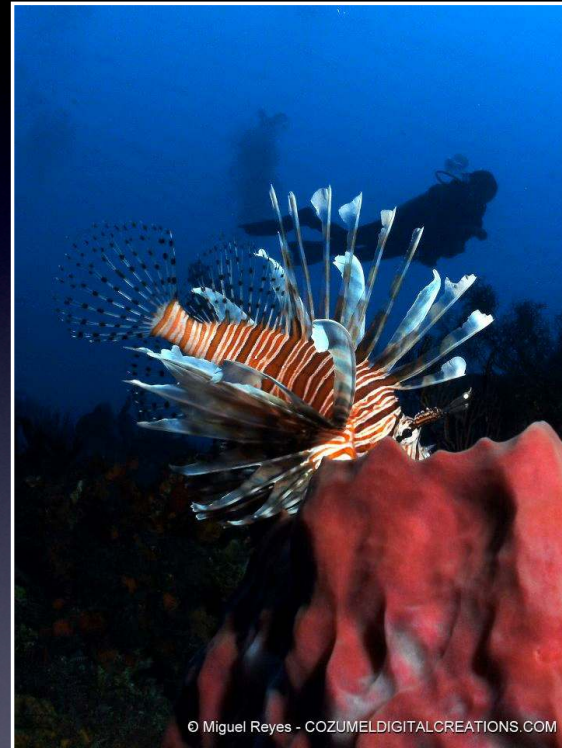


Lionfish inhabit natural (e.g., reef) and artificial structure (e.g., wrecks) at depths from just a few inches of water to over 300 m. In the invaded range, lionfish have been found in a variety of habitats, including reefs, wrecks, bridge pilings, seagrass and natural hardbottom.



# Lionfish Stings

The family of the lionfish (Scorpaenidae) represents a large array of fish characterized by the ability to envenomate with various types of specialized spines. This group of fish is responsible for the second most common piscine envenomation, after stingrays.



# Lionfish Stings

Injury and envenomation are reported in the natural environment (eg, accidental exposure to waders, divers, fishermen), as well as in the home setting (eg, handling by unwary marine aquarists).



# Epidemiology

This large family is widespread throughout the tropical, subtropical, and temperate regions and not all stings are reported and less frequent to be published.

The true number of Scorpaenidae envenomations is unknown. However, there are more than 100 reported cases of captive lionfish envenomations in the medical literature, nearly all of which occur on the hands of unwary marine aquarists



Classic envenomation reveals one or more puncture wounds, each discolored by a surrounding ring of bluish cyanotic tissue.

Subsequent edema, erythema, and warmth may involve the entire limb, although it rarely results in tissue necrosis in the absence of secondary infection (in marked contrast to stingray envenomation injuries).

Vesicle formation, particularly of the hands, may be followed by rapid tissue sloughing, cellulitis, and surrounding hypesthesia.

Systemic effects may be present (eg, nausea, muscle weakness, dyspnea, hypotension).



# Prehospital Care

Stings from lionfish can be serious, and should not be taken lightly.

If stung, immerse wound in hot water (100-113 degrees F or 38-45 degrees C) for 15-20 minutes, administration of analgesia and seek medical attention as soon as possible

Recognition of serious systemic symptoms and prompt institution of appropriate life-saving procedures, such as cardiopulmonary resuscitation (CPR) and treatment for anaphylaxis, should be paramount in the prehospital care setting.



# Case series



# Our experience

Cozumel and Riviera Maya

2 years of collecting data of stings

Recreational and commercial divers

Only cases attended on site or Cozumel General Hospital

29 cases



Age	Gender	Activity	Snorkel/Scuba	Stung Body Part	Circumstance	Treatment	Pain Scale 0-10	Approximate time of care	Complication	First time stung
22	Male	Recreational	Scuba	Right hand	Eventual	Hot water, NSAIDs	10	2h	None	Yes
43	Male	Comercial	Scuba	Left hand	Fishing	Hot water, NSAIDs	7	1h	Infection	No
19	Male	Comercial	Scuba	Right hand	Handling	Hot water, NSAIDs	5	1h	None	No
30	Male	Recreational	Scuba	Right hand	Fishing	Hot water, NSAIDs	9	1h	None	Yes
52	Male	Recreational	Scuba	Right hand	Handling	Hot water, NSAIDs	10	2h	None	Yes
18	Male	Recreational	Snorkel	Right hand	Eventual	Hot water, NSAIDs, Steroids	10	2h	None	Yes
24	Male	Fishing Tournament	Scuba	Left hand	Handling	Hot water, NSAIDs	10	45m	None	Yes
29	Female	Fishing Tournament	Scuba	Right hand	Handling	Hot water	10	1h	None	Yes
31	Male	Fishing Tournament	Scuba	Right hand	Handling	Hot water, NSAIDs	10	2h	DCS	Yes
43	Female	Fishing Tournament	Scuba	Left hand	Handling	Hot water	9	1h	None	Yes
22	Male	Comercial	Scuba	Right hand	Handling	Hot water	5	45m	None	No
25	Male	Recreational	Scuba	Right hand	Handling	Hot water	9	1h	None	Yes
38	Male	Fishing Tournament	Scuba	Left hand	Handling	Hot water, NSAIDs	10	2h	None	Yes
35	Male	Fishing Tournament	Scuba	Right hand	Handling	Hot water, NSAIDs	8	1h	None	No
27	Male	Recreational	Snorkel	Left Foot	Eventual	Hot water, NSAIDs	8	1h	None	No
20	Male	Recreational	Scuba	Right hand	Handling	Hot water, NSAIDs	10	2h	None	Yes
34	Male	Fishing Tournament	Scuba	Right hand	Handling	Hot water, NSAIDs	10	2h	None	Yes
26	Male	Fishing Tournament	Scuba	Right hand	Fishing	Hot water, NSAIDs	9	1h	None	Yes
21	Male	Fishing Tournament	Scuba	Right hand	Fishing	Hot water, NSAIDs	10	1h	None	Yes
29	Male	Fishing Tournament	Scuba	Right hand	Handling	Hot water, NSAIDs	10	1h	None	Yes
44	Male	Fishing Tournament	Scuba	Right hand	Handling	Hot water, NSAIDs, Steroids	9	1h	None	Yes
35	Male	Fishing Tournament	Scuba	Right hand	Handling	Hot water, NSAIDs	8	2h	None	No
29	Male	Fishing Tournament	Scuba	Right hand	Handling	Hot water, NSAIDs	10	1h	None	Yes
23	Female	Fishing Tournament	Scuba	Right hand	Handling	Hot water, NSAIDs	10	1h	None	Yes
26	Male	Fishing Tournament	Scuba	Right hand	Handling	Hot water, NSAIDs	9	1h	None	Yes
39	Male	Fishing Tournament	Scuba	Right foot	Eventual	Hot water, NSAIDs	8	1h	None	No

Male

Recreational

Fishing tournaments

Scuba

Right hand

Handling



Hot water, NSAIDs

Pain 8.9 av

1.17 min

No complications

30% re-stung

DCS



video



Questions?



Thanks

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