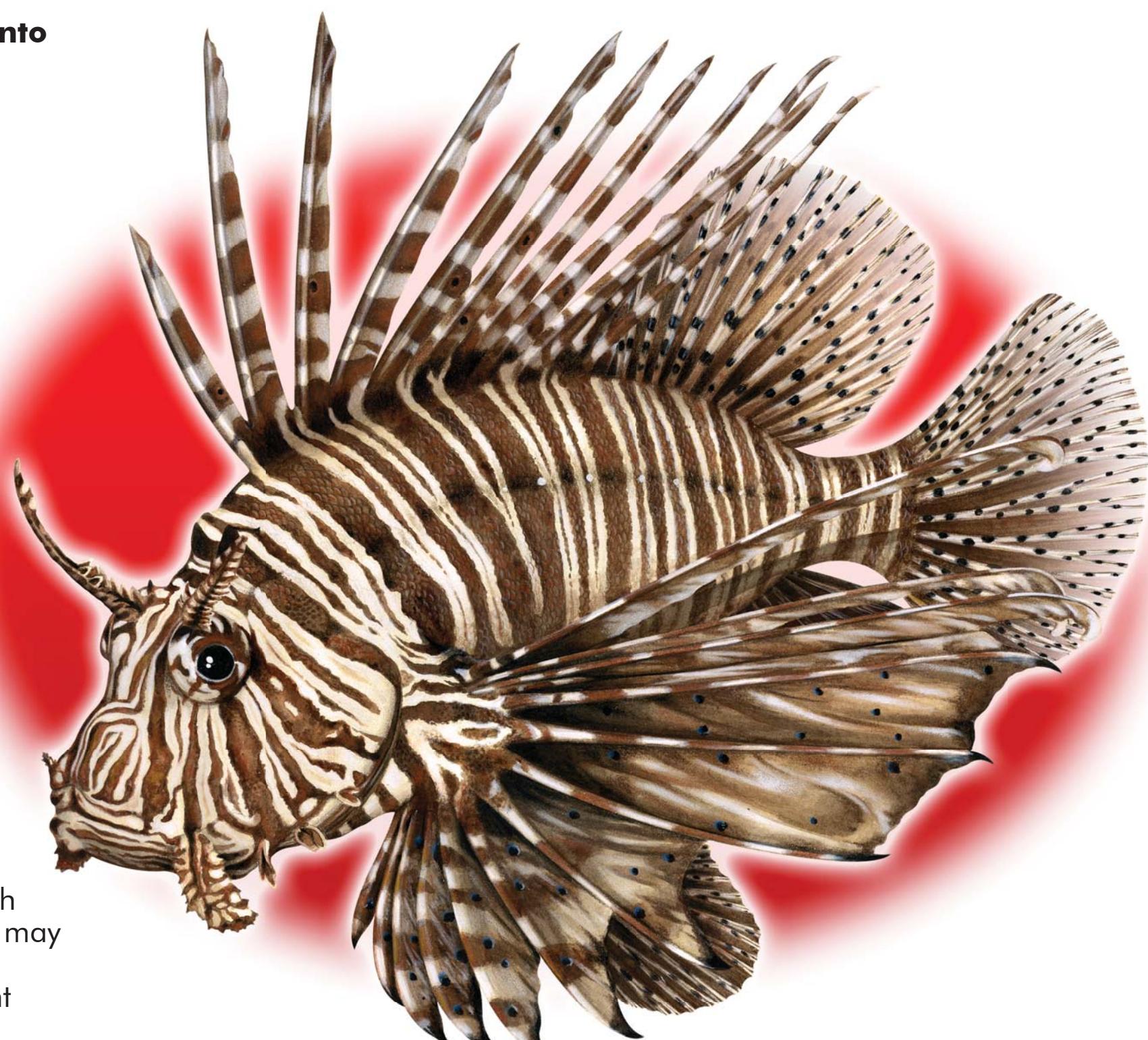


# Portrait of an Invasion

- Lionfish were introduced by humans into local waters.** The invasive lionfish quickly become established in Atlantic ecosystems.
- Invaders take advantage of an overfished sea.** Over-harvest of large predators that may eat lionfish, or compete with lionfish for prey, may have set the stage for proliferation.
- Lionfish are formidable.** Their venomous spines and unique appearance may deter potential predators and make them unrecognizable as prey.
- Lionfish reproduce quickly.** Lionfish are able to breed year-round, as frequently as every 4 days, and mature at a young age.
- Lionfish may out-compete native predators.** Native species, such as snappers and groupers, may not be able to compete with lionfish for food and habitat.
- Lionfish can decimate reefs.** With their voracious appetites, lionfish can reduce populations of juvenile and small fish on coral reefs by up to 90 percent. Lionfish may indirectly affect corals by overconsuming grazing parrotfishes, which normally prevent algae from growing over corals.



# RED Lionfish

*Pterois volitans*

The red lionfish is an invasive species native to the Indo-Pacific Ocean. Their human-caused introduction and subsequent population increase are now causing negative impacts on marine ecosystems in the southeastern seaboard of the U.S. and the Caribbean Sea. Lionfish are efficient predators invading a variety of natural and artificial habitats, competing with native predator fish and consuming smaller fishes, including the young of large species. A similar species, the devil firefish, *Pterois miles*, has also been observed in the Atlantic.

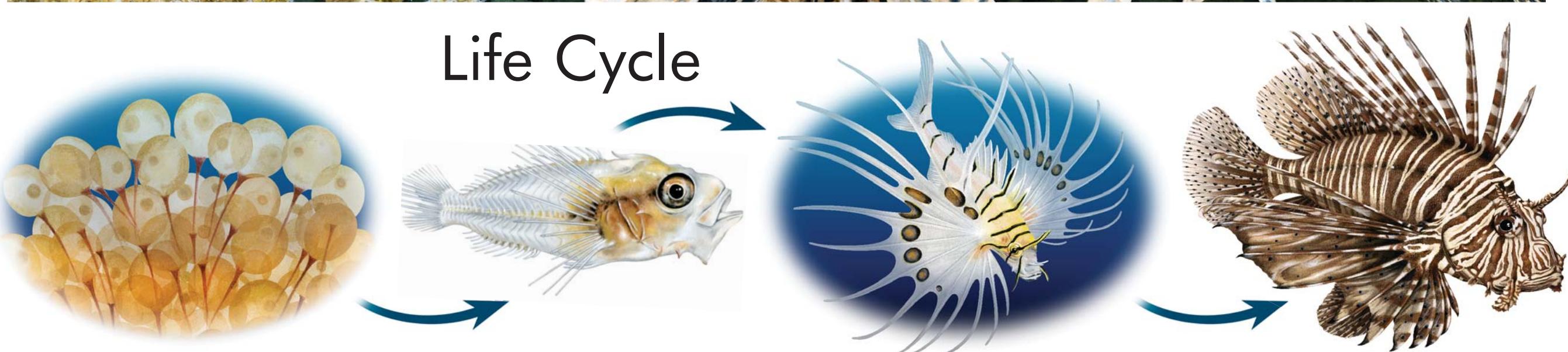


Lionfish are effective predators. Their techniques include ambushing prey, cooperative hunting, and "corralling" with their fan-like pectoral fins. Lionfish can consume substantial numbers of small fish and crustaceans in one feeding, reducing small fish populations by up to 90 percent.



## Affected Areas

Observations of red lionfish have been recorded on coral patch reefs and deep reefs (up to 1000 feet deep or 305 meters), wrecks, mangroves, seawalls, docks, and estuaries ranging from the northeastern U.S. and Bermuda to the western Gulf of Mexico and throughout the Caribbean Sea.



Eggs, 15,000–30,000 per spawning event.

Larval stage, 20–40 days less than 2 cm (0.8 in)

Juvenile, up to 10 months 2–10 cm (0.8–4 in)

Reproductive adult, 1 year 10–20 cm (4–8 in)

Every 4 days year-round the female releases two mucous-encapsulated egg masses that are fertilized by the male.

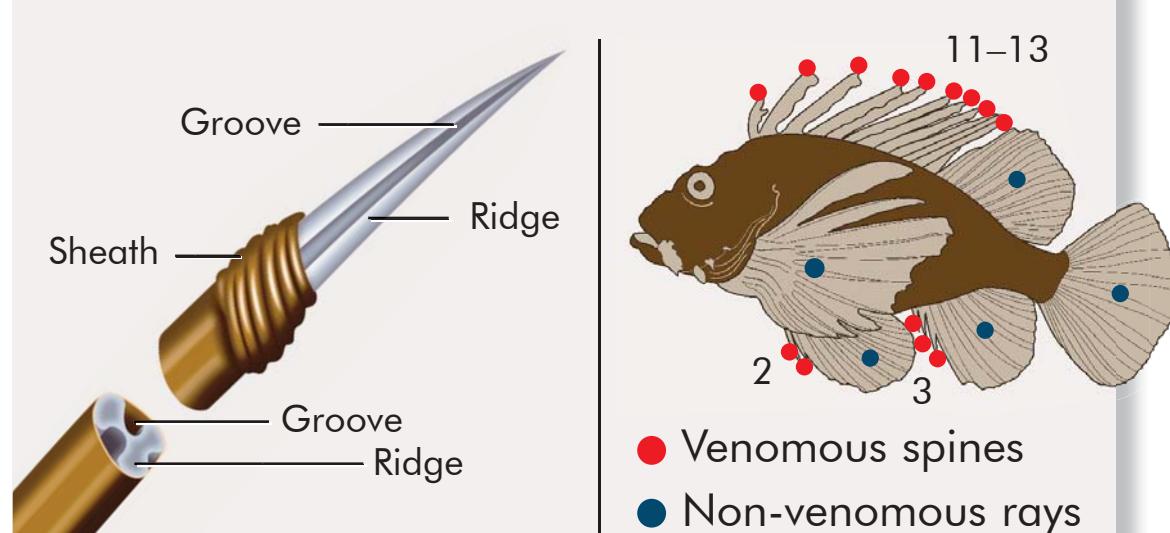
Approximately 36 hours later, the eggs hatch into larvae, which are dispersed by ocean currents.

Juveniles spend most of their time in one small area but can live in a wide range of habitats.

Although lionfish in their native range can live to 15 years, little is known about the lifespans of Atlantic invaders.

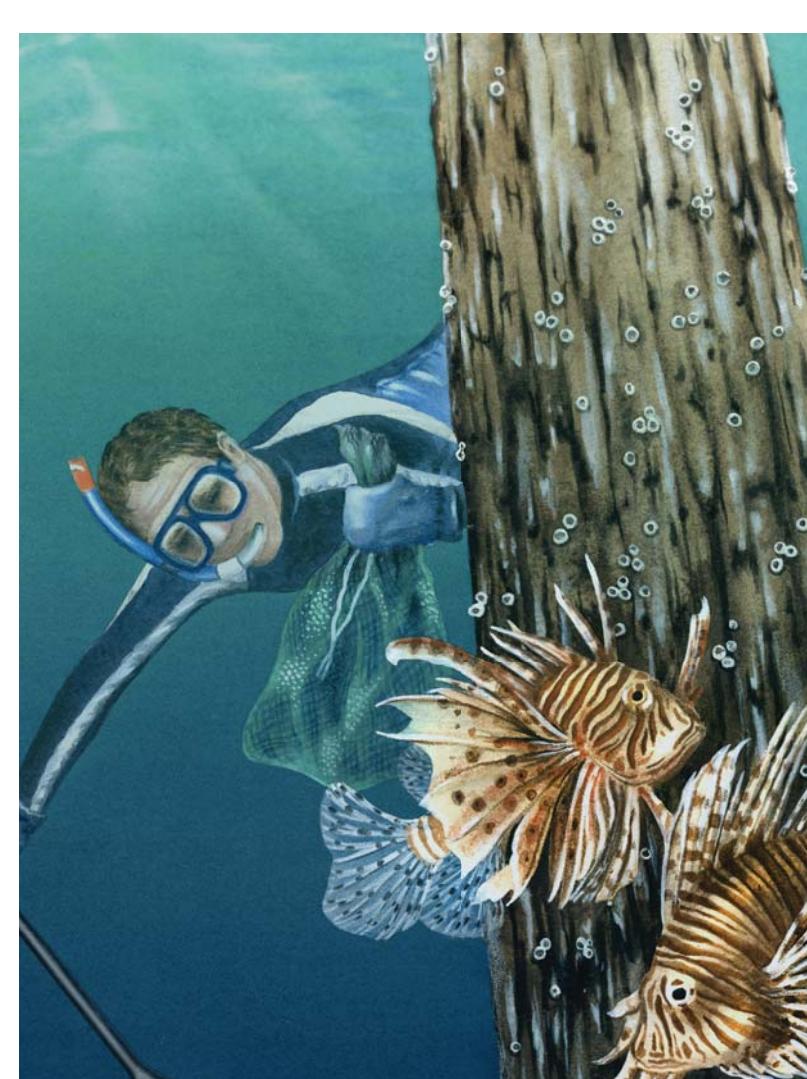
## The Venomous Spines

Lionfish have two grooves on each spine. These grooves are filled with venom-producing tissue. After the spine punctures the skin, the venom glands release a potent neurotoxin that travels up the grooves into the wound. First aid for stings: Take a pain reliever and soak the wound in hot water. Consult a physician as soon as possible.



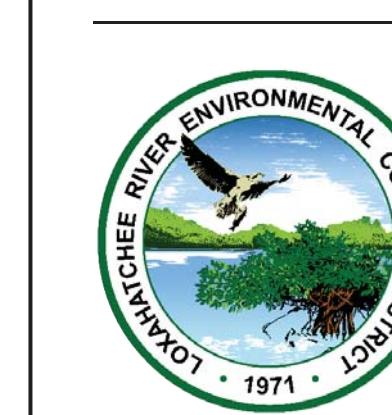
## How to Help

- Never release aquarium fish into the wild.
- Report lionfish sightings to your local or national marine regulatory agency.
- Participate in lionfish tournaments to reduce local lionfish populations.
- Eat more lionfish. Their white, flaky meat is delicious.
- Wear thick gloves when handling to prevent injury. Venomous spines can be removed by carefully cutting with shears, making it easier to handle the fish safely.



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