

# GEORGIA AQUARIUM ANIMAL FACT SHEET

## Red Lionfish *Pterois volitans*

### Range/Habitat

- The red lionfish is an Indo-Pacific species that occurs in the eastern Indian Ocean from the Cocos-Keeling Islands to western Australia and in the Pacific from Polynesia to southern Japan and south to northern New Zealand.
- It was introduced into the western Atlantic in the early 1990s and has been reported from Long Island, New York to South Florida, as well as from Bermuda, the Bahamas and, recently, in Belize and several Caribbean islands.
- This lionfish is primarily a reef-associated species, but is also found in other warm, marine waters in the tropics, including estuaries.
- It may occur in lagoons, seaward reefs and wrecks to depths of 140 feet (50 m).
- This species glides along the rocks and coral during the night and hides out under ledges and in caves and crevices during the day.

### Physical Characteristics

- The red lionfish is conspicuous for its elongated fin elements and distinctive color pattern.
- Its coloration is highly variable depending on geographic location, habitat and water depth. It is zebra-banded with narrow reddish or golden brown vertical bars stretching across a whitish to yellow background. The soft dorsal, anal and caudal fins have dark rows of spots on a clear background.
- It has a fleshy "tentacle" above each eye and tentacles below the mouth.
- This lionfish ranges in length from 12 to 15 inches (30 - 38 cm). It can weigh 2.6 lbs. (1.2 kg).
- This species has venomous spines on the dorsal, anal and pelvic fins. The feather-like pectoral fins have no venomous spines.

### Diet/Feeding

- The red lionfish is one of the apex predators in the coral reef environment.
- Its diet consists of small fish, crustaceans (shrimp and crab) and other invertebrates.
- This species is a solitary, nocturnal hunter that stalks its prey and corners it using outstretched and expanded pectoral fins. The prey is seized in a lightening-quick lunge and is then swallowed whole.
- Cannibalism has been observed in this species.

### Conservation Status

- The red lionfish has not been evaluated for inclusion in the IUCN Red List.

### Additional Information

- The red lionfish is slow-moving and conspicuous and relies on its unusual coloration and venomous spines to discourage predators.
- It is one of the most venomous of all fishes. Its venom causes a severe reaction in humans including intense pain, inflammation and occasionally, serious systemic symptoms such as respiratory distress. A lionfish "sting" is rarely fatal.
- The venom can be deactivated by applying hot compresses or immersing the wound in water at temperatures above about 113°F (45°C).

- The adult is solitary and will fiercely defend its home range against other lionfish and individuals of other species. As juveniles and during breeding season the red lionfish lives in small groups.
- While courting, males are particularly aggressive and will attack interloping males fiercely with violent biting and with venomous dorsal spines pointed forward.
- During breeding, one male may aggregate with three to eight females. The male's coloration darkens and its stripes are less apparent. Females with ripening eggs become paler and, presumably, easier for the male to identify.
- Spawning takes place near the surface where the female releases eggs that are immediately fertilized by the male. The mass of planktonic eggs hatch in about 36 hours. The larvae, and later the juveniles, drift in the plankton for weeks before settling to the bottom. This accounts for the wide native distribution of the red lionfish and its rapid spread after its introduction into the western Atlantic.
- The red lionfish was first reported from Florida, North Carolina and Bermuda in 1990. Theories for its introduction include the transport and release of larvae or juveniles in ballast water of large cargo vessels and the release or escape from a home aquarium.
- The first documented release of red lionfish into the Atlantic occurred in 1992 when Hurricane Andrew destroyed a large private aquarium in a house in South Florida and six lionfish escaped into Biscayne Bay. These fish were observed alive in the adjacent habitat several days later.
- There is evidence that the lionfish that have invaded the coastal waters of the eastern U.S. and the Bahamas are causing significant changes to reef environments. This voracious predator has eliminated or displaced native species.
- The red lionfish is highly valued in the home aquarium trade. It is also consumed in many parts of its native range.

### **Sources**

<http://animaldiveristy.ummz.umich.edu>

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