

# **EXOTIC SPECIES ALERT:**

## **Lionfish (Family Scorpaenidae)**



Red Lionfish *Pterois volitans* Photo by J.E. Randall



Devil Firefish *Pterois miles* Photo by D. First

**OVERVIEW (GENERAL BACKGROUND):** Lionfish are native to the warm waters of the South Pacific and Indian Oceans. They are usually associated with coral or rocky reefs but can also be found in bays, estuaries, and harbors. Lionfish are solitary and will defend their home ranges from all other fish. They can spawn whenever it is environmentally suitable with females maturing at about 6 inches and males at about 5 inches.

**INTRODUCTIONS:** Lionfish are believed to have been introduced through aquarium releases into waters along the mid-Atlantic in the early to mid-1980's. Lionfish have been collected in waters from Rhode Island and throughout the Caribbean and are progressing through the Gulf of Mexico.

**CONCERNS:** Since there are no known Atlantic or Gulf predators, lionfish have quickly expanded their range throughout the Caribbean and Gulf of Mexico. Lionfish are voracious predators and may compete with other important reef fish such as groupers and snappers. Studies indicate they can eat fishes half as long as themselves and on one reef ate up to 70% of the year's young fishes.

The spines are venomous; however, the first quarter of the spine does not contain the venom gland. Though not considered to be life threatening, human exposure to lionfish venom has been compared to that of a severe wasp sting. The obvious effects of the lionfish venom are severe pain and swelling in the area around the wound. Other symptoms can include nausea, dizziness, muscle weakness, shortness of breath, hypotension and headache. Lionfish venom is denatured easily with heat. First aid techniques are to immerse the wound in hot water for 30 to 40 minutes or until pain diminishes. Medical attention is strongly advised to minimize risks of secondary infection.

**DESCRIPTION AND IDENTIFICATION:** Lionfish are distinctive in their appearance having brown or maroon and white stripes or bands covering the head and body. All species possess relatively long, fan-like dorsal and pectoral fins. Two species of lionfish have been reported off the east coast of the United States: red lionfish and devil firefish. The two species are similar but can be distinguished by the relative length of the pectoral fin and relative size of dorsal fin spots. Devil firefish have fewer dorsal and anal rays.

Red lionfish are variable in coloration, usually mimicking the habitat in which it resides. Specimens collected close to shore are usually darker in coloration, sometimes almost black in estuaries. Individuals of this species often have large tentacles above the eyes.

Devil firefish are usually reddish to tan or gray in color, with numerous thin dark bars on the body and head. The tentacle located above the eye may be faintly banded. Adults have a band of small spines along the cheek and small spots in the median fins.

### **TO REPORT SIGHTINGS:**

Please report any lionfish sightings to Leslie Hartman ([leslie.hartman@tpwd.state.tx.us](mailto:leslie.hartman@tpwd.state.tx.us)), 361-972-6253 or Brenda Bowling ([brenda.bowling@tpwd.state.tx.us](mailto:brenda.bowling@tpwd.state.tx.us)), 281-534-0100, Texas Parks and Wildlife Department, Coastal Fisheries Division.