



Fun Fact Sheet - Lionfish: A Perfect Invader

1. Lionfish are native to the tropical South Pacific Indian Oceans and the Red Sea. These fish were first recorded in western Atlantic Ocean in the mid-1980s, and have spread throughout the Gulf of Mexico and the Caribbean Sea (Schofield 2009, Schofield 2010). There is also a concurrent invasion in the Mediterranean Sea.
2. Lionfish are popular aquarium fish, and were mostly likely introduced through aquarium owners releasing their fish into the wild (Semmens et al. 2004).
3. Invasive lionfish in the Atlantic and Caribbean are made up of two species: *Pterois volitans* (the red lionfish) and *Pterois miles* (the devil fire fish) (Schofield 2009).
4. Red lionfish (*Pterois volitans*) is actually a hybrid of *P. miles* (Indian Ocean) and *P. russelii* (Pacific Ocean) (Wilcox et al. 2017).
5. Lionfish can tolerate an impressive range of temperatures, pressure, and salinity. This allows them to occupy a range of habitats including coral reefs, seagrass meadows, mangrove forests, and artificial reefs (Morris and Whitfield 2009).
6. Bacteria associated with lionfish exhibit antibacterial activity against known fish pathogens, which may help lionfish avoid infection (Stevens et al. 2016).
7. Recent research at CCMI shows that lionfish can reproduce year-round, with a single female being able to release thousands of eggs every 1.5-3 days. A single female can produce approximately two-million eggs per year (Albins and Hixon 2010).
8. Lionfish are part of the family *Scorpaenidae*, which means they are related to the common rock fish or scorpionfish (Schofield 2009).
9. Lionfish hunt by herding prey with their large pectoral fins into a confined spot and then quickly swallowing them whole in a vacuum like motion.
10. Lionfish also blow jets of water directed toward their prey. These jets may confuse or distract prey, and often result in prey fish facing the attacking lionfish, increasing the probability of head-first capture and swallowing. (Albins and Lyons 2012)
11. Lionfish have been found to eat more than 40 different species of reef fishes as well as crustaceans, mollusks, and other lionfish (Morris and Whitfield 2009).
12. Lionfish are a venomous fish with 13 dorsal spines, 3 anal spines, and one spine on each of their ventral fins which hold a neurotoxin. Stings can cause extreme pain, sweating, respiratory distress, and in cases even paralysis (Badillo et al. 2012)
13. The venom is produced in venom sacs located under the fish's dorsal spines and does not come into contact with the meat of the fish.
14. As lionfish are venomous and not poisonous, their light, white, flakey meat is edible. There are now lionfish cookbooks available and they have been described as a delicious, delicately flavored fish similar in texture to grouper (Williams 2010)
15. In an effort to reduce lionfish densities, many countries have started removal programs via spearfishing, hand-netting, or trapping (de León et al 2013). CCMI coordinates a Little Cayman Community Cull every week, after which the fish get dissected and then returned sent to the resorts on island to sell to guests. Over 19,000 lionfish have been removed from Little Cayman since the start of the invasion.