

Lionfish Biology and Venomology Understanding of Risk

Overview

Lionfish (*Pterois volitans/miles*) are members of the scorpionfish family native to the Indo-Pacific. They are now also found in the waters throughout the Western Atlantic from Rhode Island through the Bahamas Caribbean and Gulf of Mexico. Lionfish are predators reaching a size of more than 470 mm and reproducing year-round in the southern portion of their Atlantic range. They also possess venomous spines and potentially represent both ecological and human health risks. Significant study, public education/outreach and control efforts are now being planned and implemented throughout the region.

Need for specimens

In order to predict the spread and impact of this invasive species, data are needed to determine populations and distribution, age and growth, reproduction, predation, larval disbursement, recruitment, mortality, genetics and changes to native fish communities. Obtaining this information requires the collection of many samples and appropriate preservation of these samples. There is little funding and few field operations available to collect the number of samples required for statistically robust analysis. REEF is working with U.S. state, federal, and university researchers in addition to Caribbean nations to obtain the necessary samples as well as educate the public and key government officials about the lionfish issue. As part of this effort, we are also collaborating with the dive community to gather samples and data from their regularly dived sites.

Venomology

Lionfish spines, like those of many other scorpionfishes, contain venom. Spines located within the dorsal, ventral, and anal fins contain venomous tissue along the length of the spine. A sheath or skin covers the spine and glandular tissue which, when exposed in the act of puncture, releases venom into the wound. Severities and reactions to stings can vary however lionfish stings are not known to be lethal. Reactions to venom typically include localized, moderate to severe, pain and swelling, which normally subsides within hours and with first-aid treatment. Complications or increased severity of reactions could result from allergic reactions or severe punctures. Heat and time reduce the effect of this venom. As with any wound, cleaning and sterilization of the affected area is important to prevent infection.

Participation

While the likelihood of coming in contact with a lionfish in the water or on the vessel is extremely small for those wanting to avoid contact, there never-the-less exists the possibility of being stung. No participants wishing to avoid collection, dissection or any other physical contact with lionfish will be asked to handle or in any other way physically engage themselves with any lionfish. All contact with lionfish, direct or otherwise, is voluntary in nature as is participation in this project, knowing the venomous nature of the subject.

I understand these risks and am willing to take part in this project anyway.

Printed Name of Participant: _____

Signed: _____

Date: _____

Signature and date of legal guardian required if participant is under 18.

Legal Guardian Printed Name: _____

Signed: _____