

## Negative Effects on the Environment

- ◆ Disrupt marine reef ecosystems and their biodiversity
- ◆ Reduce native fish populations at alarmingly quick rates
- ◆ Increased algae coverage due to lack of native fish populations



## Human Impact

- ◆ Lionfish stings pose serious threat to general public
- ◆ Divers and swimmers encounter lionfish in popular tourist reef locations
- ◆ Even after death, lionfish's venomous spines can produce wounds
- ◆ Stings are extremely painful, and pain can last for hours or days



## What to do if you are Stung

1. Immediately place injured area in warm water for 30-90 minutes
2. Repeat if pain reoccurs

\*This treatment produces instant relief in over 50% of patients\*

## Learn More

For more information on the Lionfish Invasion, visit:

### Reef Environmental Education Foundation (REEF)

Lionfish Research Program  
<http://www.reef.org/programs/exotic/lionfish>



### National Oceanic and Atmospheric Administration (NOAA)

Ocean Service Education-  
The Lionfish Invasion  
<http://oceanservice.noaa.gov/education/stories/lionfish/welcome.html>

This flyer was designed and produced by students in the College of Agriculture and Life Sciences Honors Program at North Carolina State University as part of an extensive research study on the effects of the lionfish invasion.

More information on the effects of the lionfish invasion and the extent of our own efforts can be found on our website at:

<http://www.mbio.ncsu.edu/lionfish/>

# LIONFISH



# INVASION

# What are Lionfish?

- ◆ Pterois volitans, known as the red lionfish
- ◆ Invasive species native to the Indo-Pacific region
- ◆ Voracious predator- competes with native species
- ◆ Has poisonous spines filled with venom
- ◆ Stings are very painful but not fatal
- ◆ Can grow up to 3 pounds, and eats any smaller species
- ◆ Reproduce every 4 days throughout the year
- ◆ Produce 25,000 eggs at a time



## Why are there lionfish in the Caribbean?

- ◆ Believed to be first spotted along the Florida coastline in the 1990's
- ◆ Have since spread up the eastern coastline and southward throughout the Caribbean
- ◆ Continue to spread due to few natural predators, short reproductive cycle, and being non-specific hunters

# What's Being Done

## Regulation

- ◆ In some states lionfish must be registered and a permit must be obtained.
- ◆ Permits are required for the capture and divers must report nonnative species



## Rodeos and Spearfishing

- ◆ Lionfish derbies are organized to increase awareness among the public

## Consumption

- ◆ Organizations and cookbooks are promoting restaurants to serve lionfish



## Amnesty Days

- ◆ Some states arrange opportunities for people to surrender their exotic pets without any penalty

# What Can We Do?

Awareness is the 1st step in solving the lionfish invasion

## Pharmaceutical Investigations

- ◆ Fish venom is an untapped resource of potential pharmaceutical uses
- ◆ Currently there is research being done on the properties of Lionfish venom



## Teaching Sharks to Eat Lionfish

- ◆ Currently native sharks don't recognize lionfish as prey
- ◆ They are being taught to eat lionfish by divers feeding them dead lionfish

