

The Lionfish Invasion in the Caribbean

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Pet to Pest



Undocumented Releases



1985















2013



2015



Future

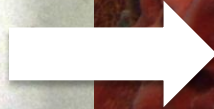
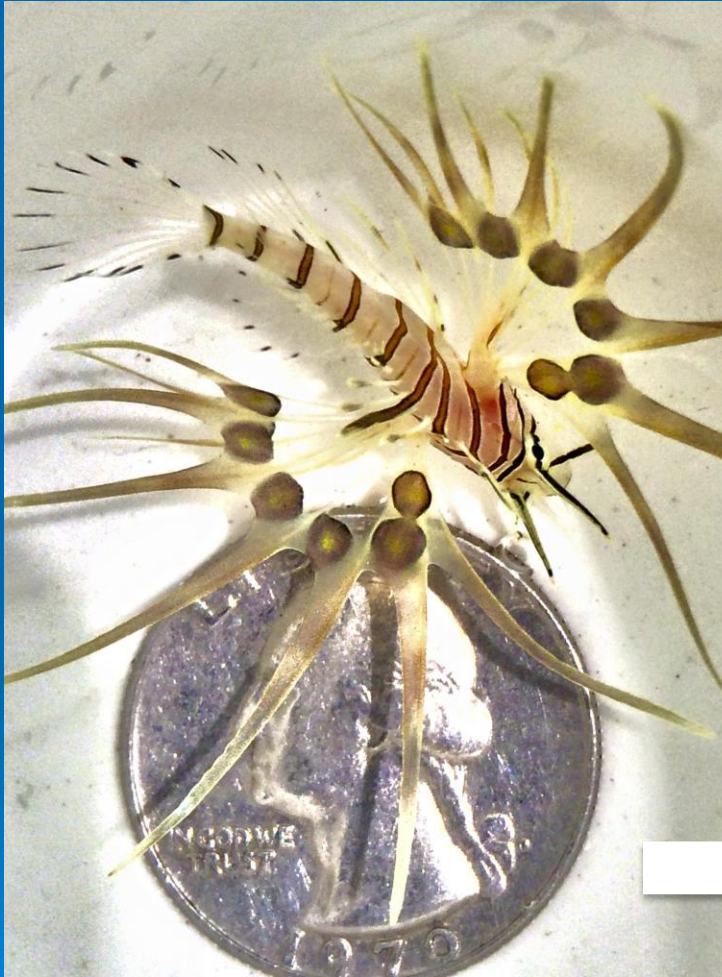
Potential future range
of lionfish based on the
lethal thermal
minimum of 10°C.



Whose Problem? Who Leads?

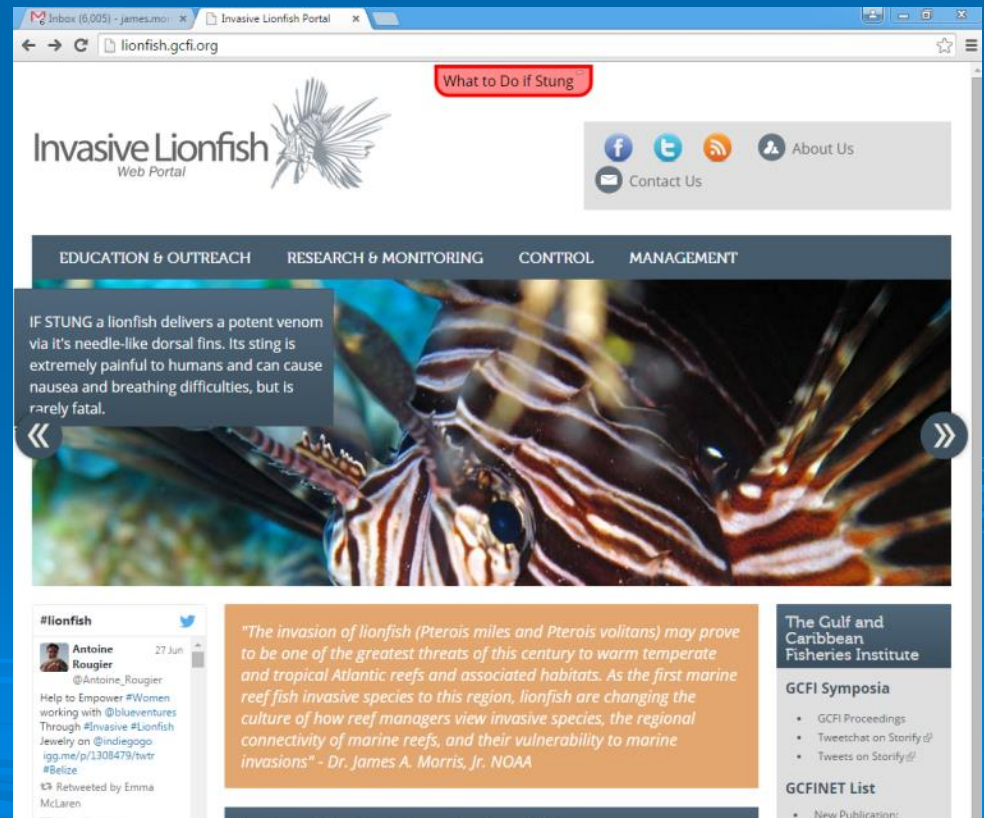


Implementation Inertia

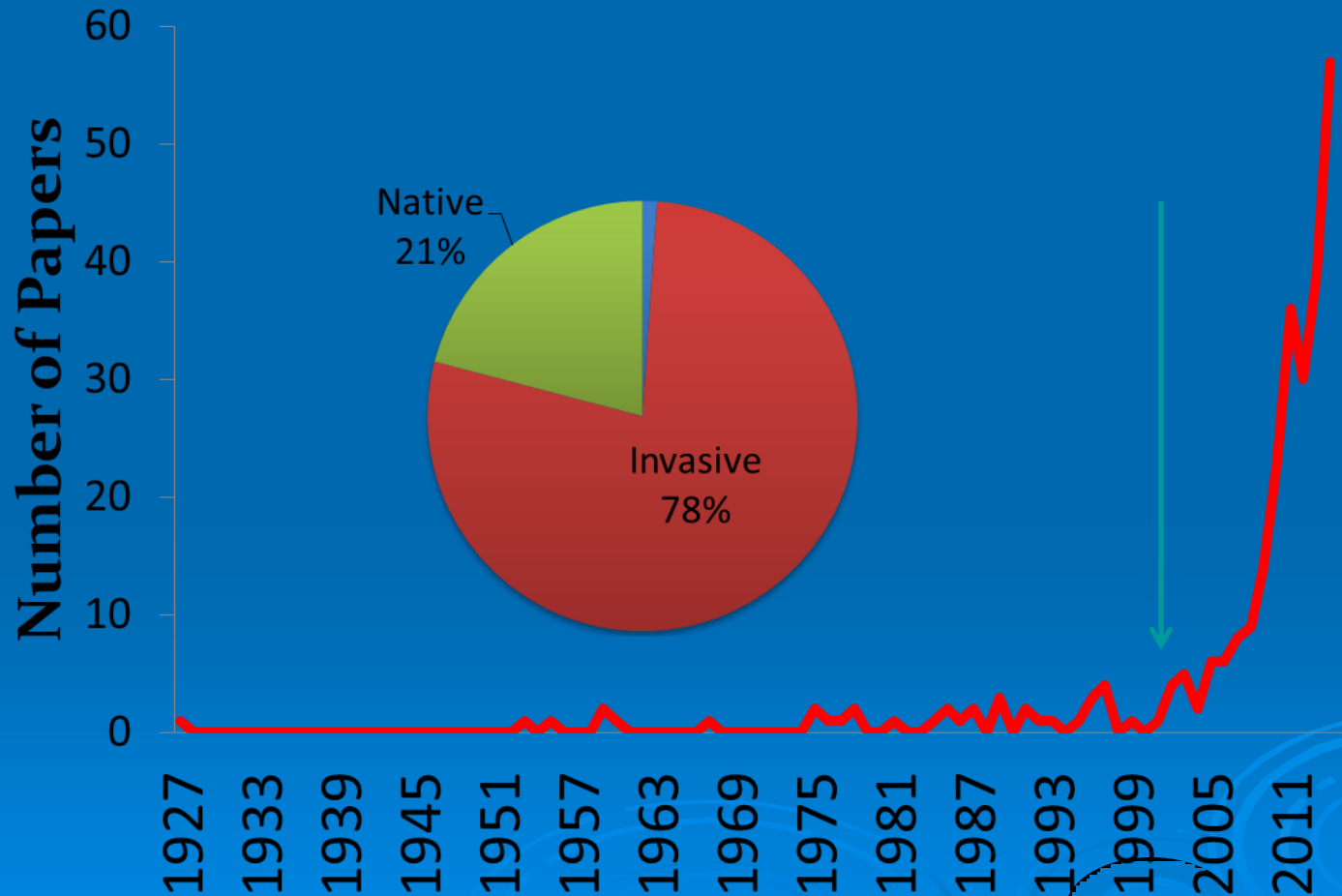


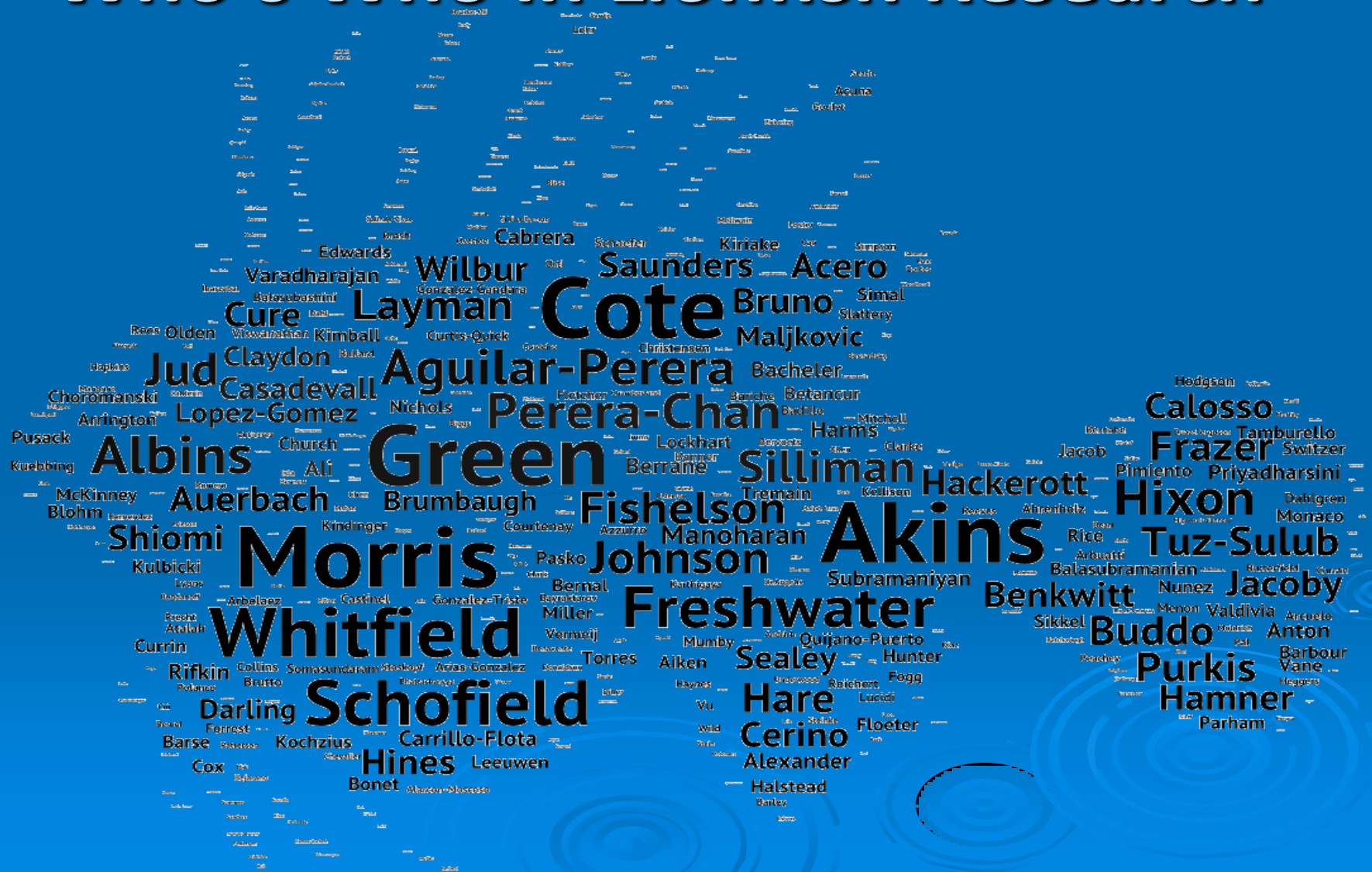
Lionfish: State of Science

Literature database on the lionfish web portal (<http://lionfish.gcfi.org>)
> 300 lionfish papers in database

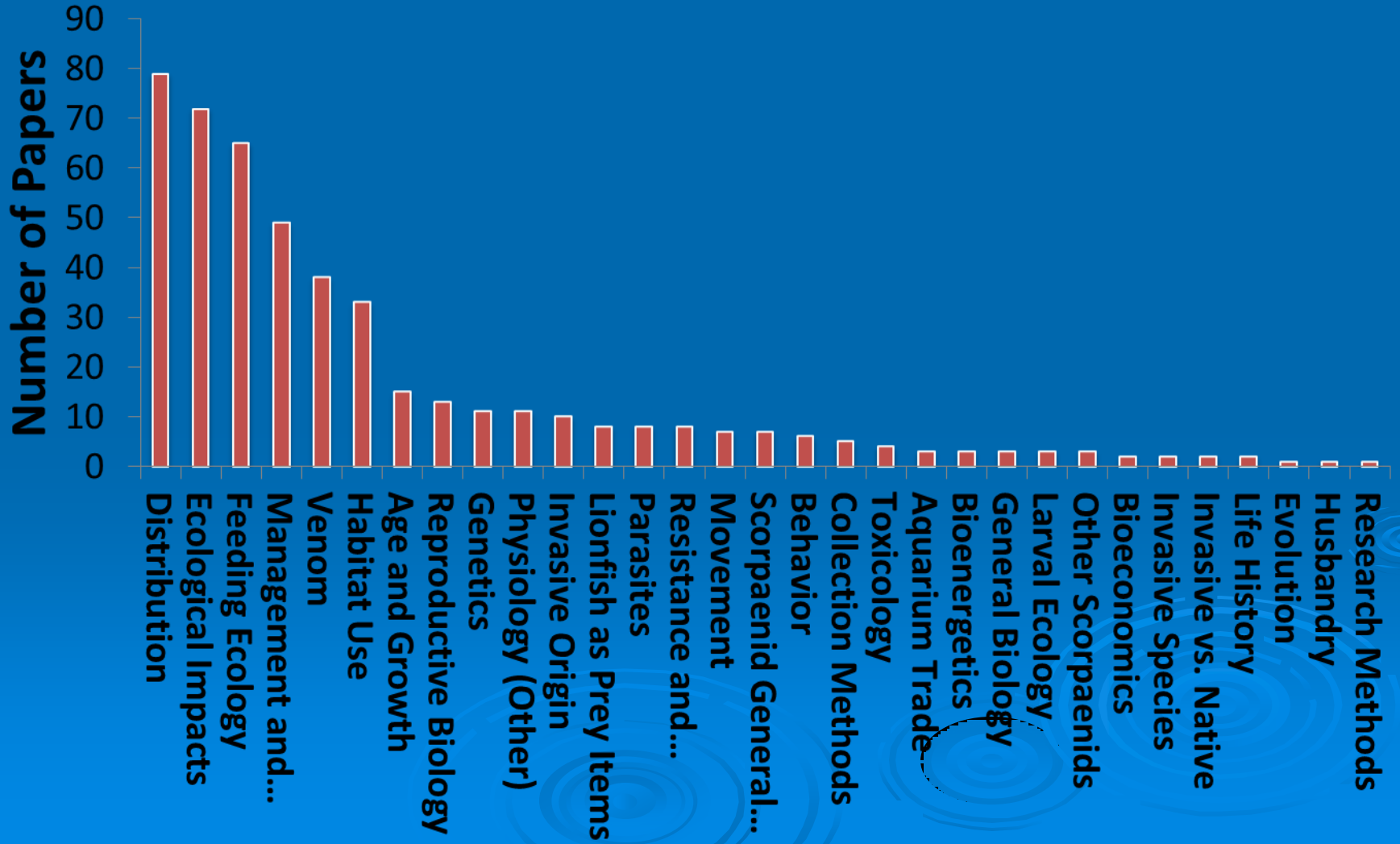


Lionfish papers to date





Research topics



Current State

- Some countries have reported a decline in numbers, especially in managed areas (local areas)
- Population explosion is slowing down
- Problem still exists, and numbers still require significant reduction

Passive Capture (UWI-CMS)

	Discovery Bay	Oracabessa
# of Lionfish Caught	50	625
# of By-catch	529	631
# of Retrievals	160	178
Avg. Soak Time (days)	7	3
Most Lionfish caught (Bait used)	8 (Breadfruit)	40 (Breadfruit & Pickled Mackerel)
Avg. Depth	20m	90m

Passive Capture Mechanism

Experimental phase: BAIT STUDY

- Cycle 1- completed (Sept – Oct 2012)
- Bait that caught lionfish:
 - Live lionfish
 - Orange
- Cycle 2- completed
- Cycle 3 - completed



Photo: K. Aiken

UWI MSc Course

Title: Marine Invasive Alien Species in Tropical and Temperate Climates (UWI/SUNY)

- Students from both climatic regions taught together in both regions – Field Intensive
- Case Study driven = Management and Policy
- Creating new Researchers in MIAS

Regional Lionfish Manual



Authors:

- ❑ Dr. James Morris (NOAA)
- ❑ Mr. Lad Akins (REEF)
- ❑ Dr. Dayne Buddo (UWI)
- ❑ Dr. Stephanie Green (SFU)
- ❑ Mr. Ricardo Lozano (CONANP)
- ❑ Link: www.gcfi.org

NOAA, REEF, ICRI, UNEP-CEP, CAR-SPAW-RAC, GCFI

Lionfish Web Portal

Link: www.gcfi.org

Invasive Lionfish Web Portal

What to Do if Stung

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EDUCATION & OUTREACH RESEARCH & MONITORING CONTROL MANAGEMENT

RESEARCHERS DISSECT lionfish to see what they are eating, if they are reproducing, and how quickly they are growing. This information can help to understand the impacts of the invasion and how best to respond.



NOAA

#lionfish

Guy Harvey Shirts
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*"The invasion of lionfish (*Pterois miles* and *Pterois volitans*) may prove to be one of the greatest threats of this century to warm temperate and tropical Atlantic reefs and associated habitats. As the first marine reef fish invasive species to this region, lionfish are changing the culture of how reef managers view invasive species, the regional connectivity of marine reefs, and their vulnerability to marine invasions" - Dr. James A. Morris, Jr. NOAA*

Timeline of the Lionfish Invasion (from USGS)

1985



The Gulf and Caribbean Fisheries Institute

GCFI Symposia

- GCFI Proceedings
- Tweetchat on Storify!!
- Tweets on Storify!!

GCFINET List

- Press Release: 24th Meeting of the Executive Committee of the Caribbean Fisheries Forum to be...
- CANARI Publications on

Citizen Science

- Training and Public Awareness go a long way!
- UWI, REEF, NOAA and other organizations developed training programmes and implemented regionally

Citizen Science crucial to the success in this war!

All Hands on Deck



BIZARRE FOODS

WITH
ANDREW ZIMMERN



Filmed in 2010

LIONFISH CONSUMPTION NOT SO BIZARRE ANYMORE

RAISING MONEY...USING LIONFISH



(NEW KID ON THE BLOCK)

Asian Tiger Shrimp

P. monodon

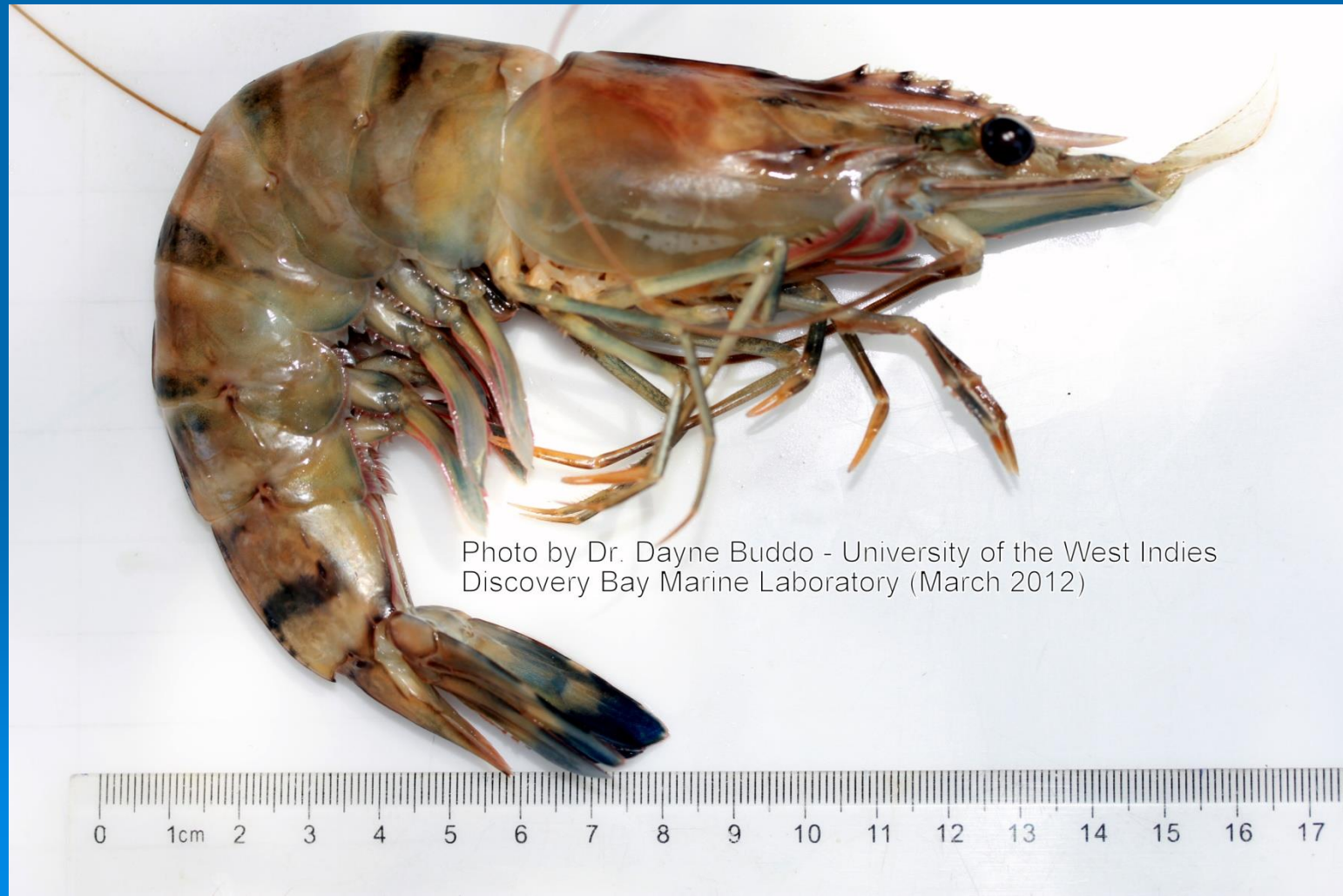


Photo by Dr. Dayne Buddo - University of the West Indies
Discovery Bay Marine Laboratory (March 2012)



Steps to Deal with Invasive Species

PREVENTION

**EARLY
DETECTION and
RAPID
RESPONSE**

**MANAGEMENT
AND CONTROL**

INCREASE IN EXPENDITURE

ECOLOGICAL IMPACT OF INVASIVE SPECIES
ON THE ECOSYSTEM

