Where are they now? Tracking the Mediterranean lionfish invasion

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INTRODUCTION

Invasive species are rising globally

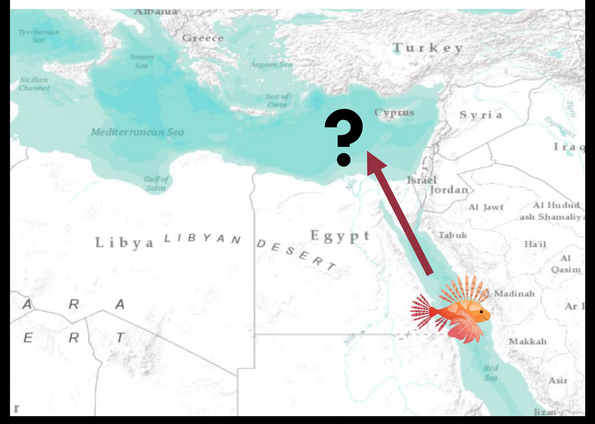
Behavior and cognition may be important pathway through which species become and remain invasive

Lionfish (*Pterios miles*) are one of the most successful marine invaders

- Currently invading the Mediterranean from the Red Sea

To study **"invasive cognition"** in lionfish, we first need to know their current invasive distribution

This project aims to track the spread of invasive lionfish in the Mediterranean Sea



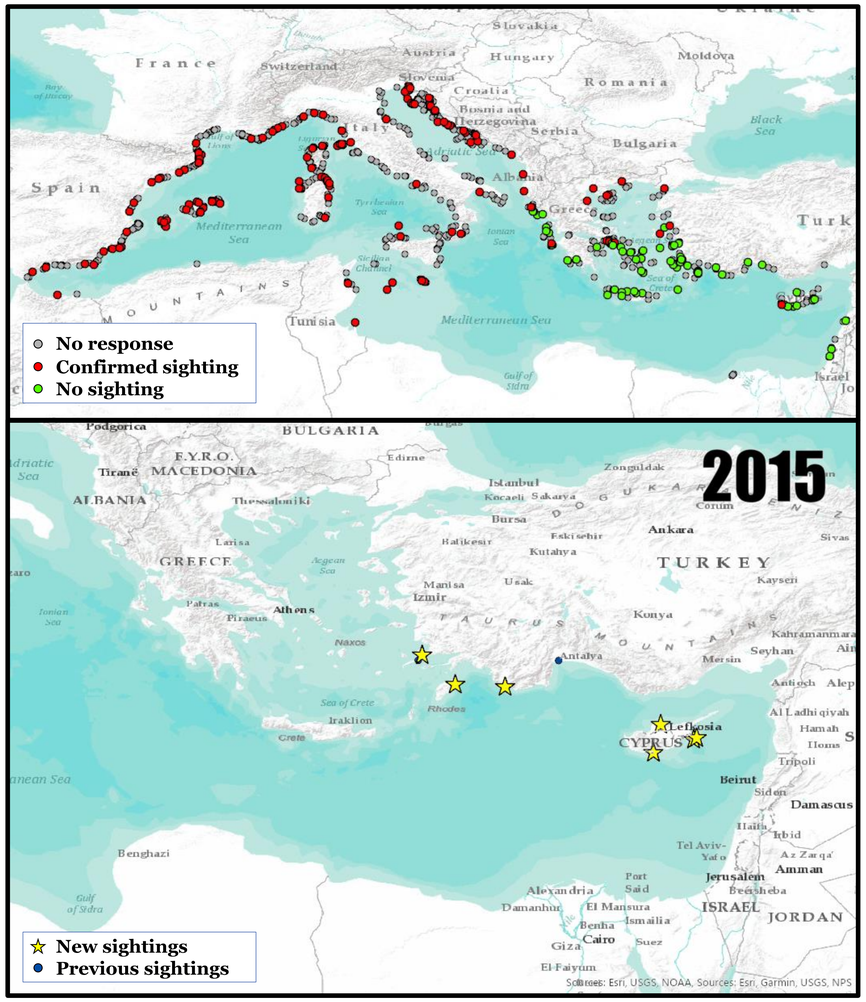
METHODS & RESULTS

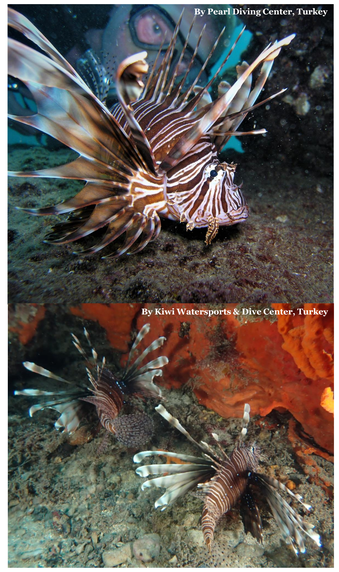
Methods

Contacted 1132 individual dive centers via email, asked:

1. Have you seen lionfish in your area?
2. If so, what year were they first sighted?

Responses were collected from 213 dive centers





Results

Similar distribution and spread to previous reports

Sighting boom in 2015 with subsequent westward movement of invasion front

Furthest sighting: Corfu, Greece

Western half of Mediterranean largely untouched

DISCUSSION

CONCLUSIONS

Disagreement between invasion models and real spread

- Predicted limited establishment further than Levantine Coast

Invasive Cognition could account for the discrepancy between models and reality

FURTHER DIRECTIONS

Investigate invasive cognition in lionfish

- Compare **behavior and cognitive abilities** of invasive and native lionfish
- Examine **brain morphology** as it relates to invasive cognition

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Questions? Contact Elizabeth Phillips at elizabeth.phillips@wur.nl @lizwphillips17