

Lionfish distribution yesterday, today and tomorrow

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Lionfish distribution is tracked by USGS as part of the Nonindigenous Aquatic Species (NAS) database.

- USGS-NAS database is the national repository for nonindigenous aquatic species siting data (fish, inverts, herps, plants)
- Publicly available online at: <http://nas.er.usgs.gov>
- Includes FactSheets with basic biology information and current distribution maps for each species
- Alert system

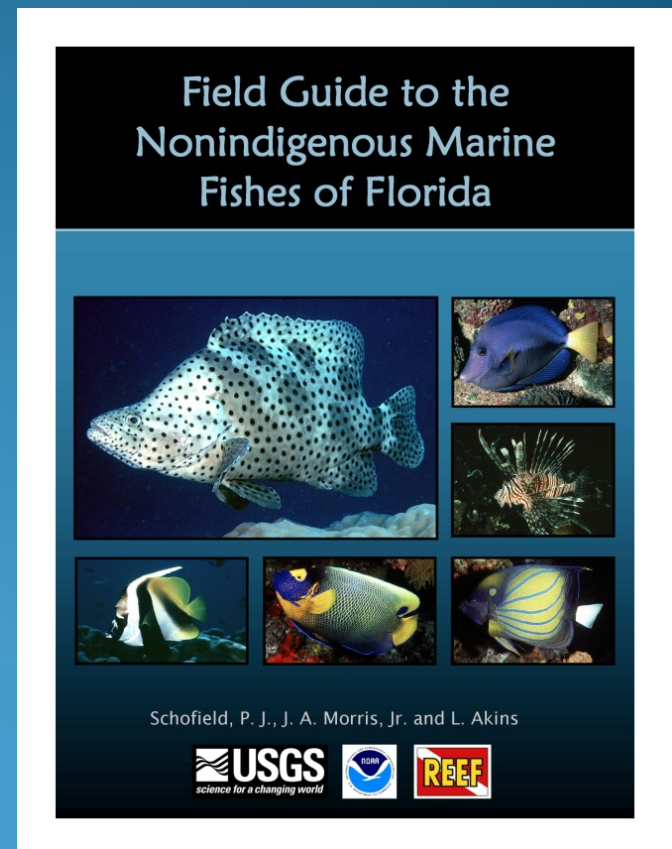


35 species of marine fish have been documented in coastal waters of the Southeastern USA.

For more information on non-native marine fish, see our (USGS/NOAA/REEF) field guide: http://fl.biology.usgs.gov/Marine_Fish_ID/index.html

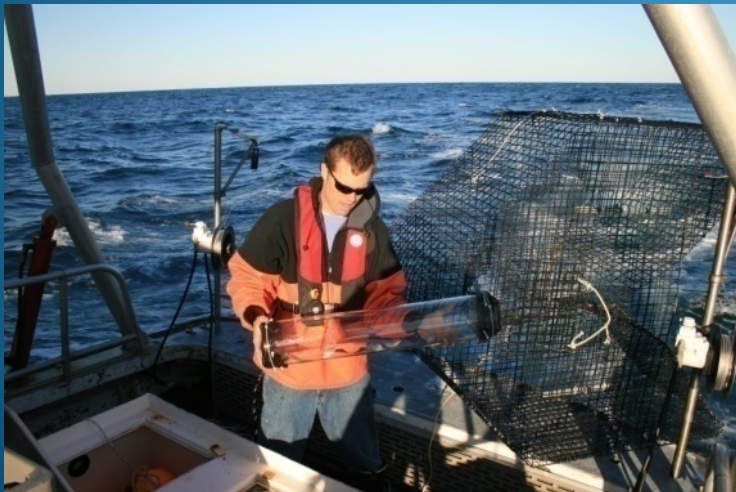


Epinephelus ongus



Lionfish tracking by USGS part of a large, joint research programme with our partners NOAA and REEF, focusing on:

Lionfish biology and ecology
Control techniques and assessment
Assessment of Impacts
Outreach and education
And much more . . .



Lionfish invasion of Western N Atlantic, GOM and Caribbean Sea

Two species: *Pterois volitans* (widely distributed throughout Indo-West Pacific Ocean) and *Pterois miles* (Red sea and Indian Ocean)

First record in Western N Atlantic: 1985, South Florida (Morris and Akins 2009)

As of 1 April, over 2500 lionfish records in USGS-NAS database



Photo by Don DeMaria

1992



2/28/2011

1993



2/28/2011

1994



2/28/2011

1995



2/28/2011

1996



2/28/2011

1997



2/28/2011

1998



2/28/2011



Bermuda



Carolinas



New York,
Georgia

2002



2/28/2011



New Jersey



Bahamas



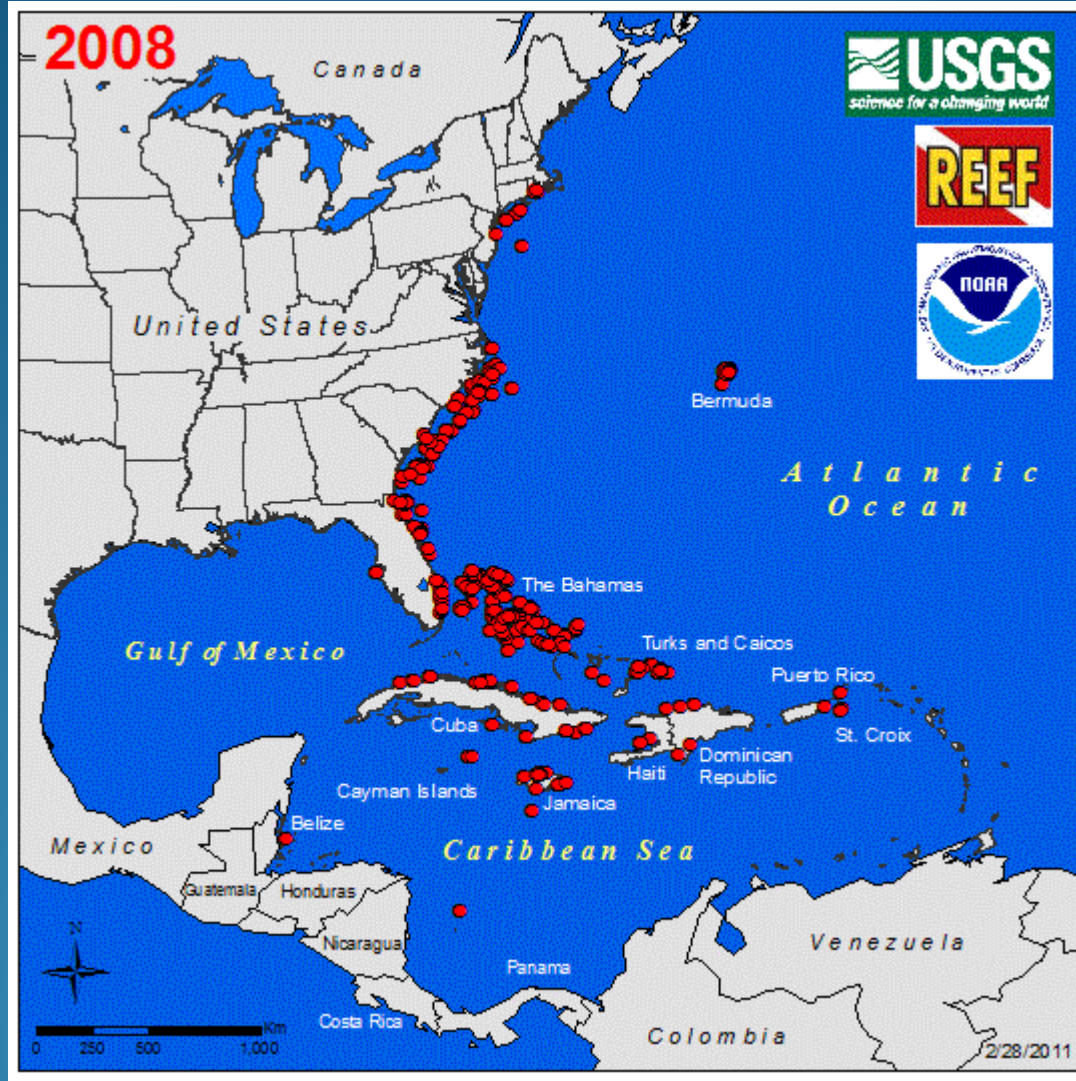
Rhode Island



GOM (dead)



Cuba, Haiti,
T&C

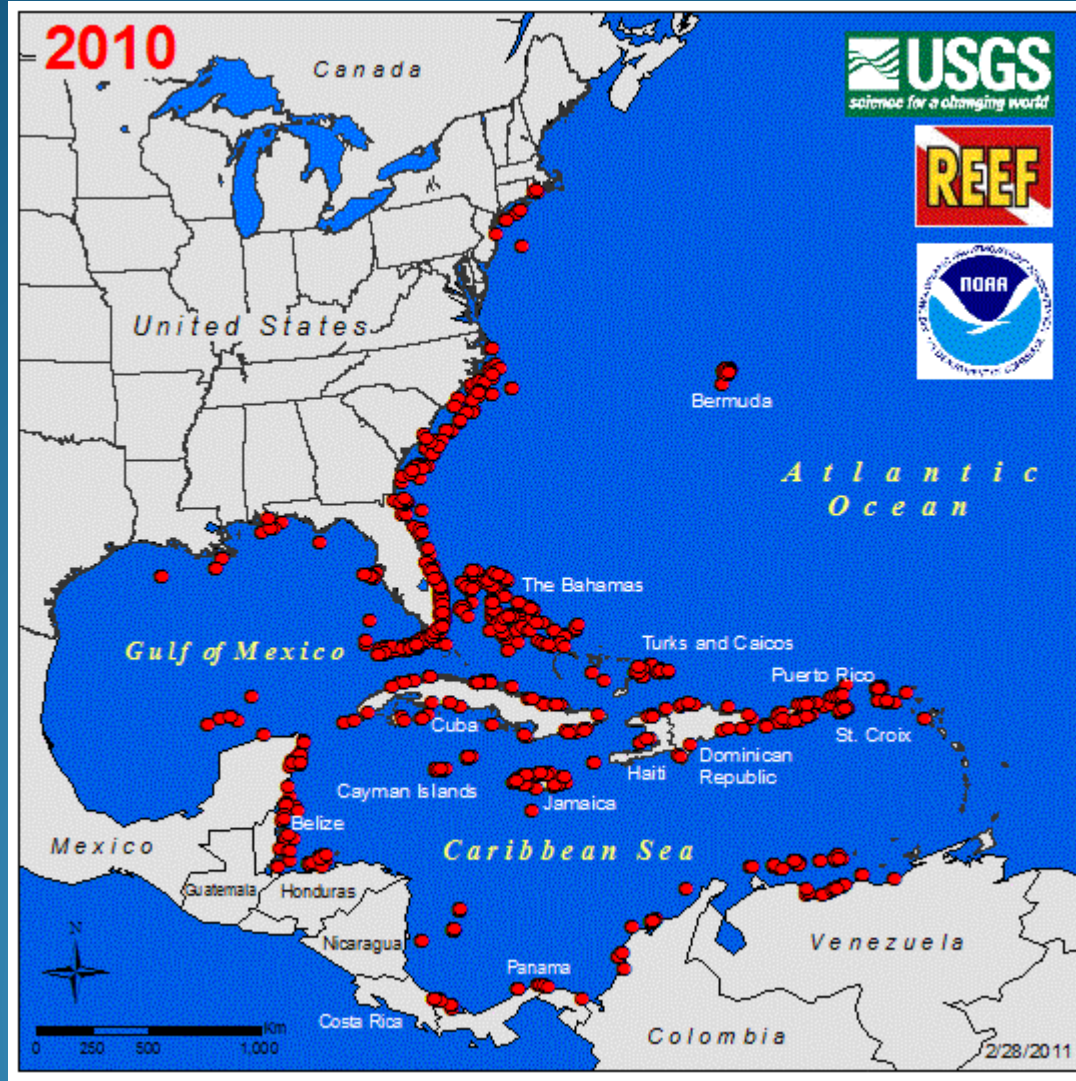


Belize,
Colombia,
DR,
Jamaica,
Caymans,
USVI, PR



Neth Ant,
Mexico, CR,
Honduras,
Nicaragua,
Panama,
Venezuela

Louisiana,
Alabama



BVI,
Eastern
Neth Antil
(St. Antia,
Saba, St.
Maarten),
St. Kitts &
Nevis, FWI
(St. Martin)



FWI
(Martinique,
Guadeloupe)

Two journal articles available online:

Schofield, P.J. 2009. Geographic extent and chronology of the invasion of non-native lionfish (*Pterois volitans* [Linnaeus 1758] and *P. miles* [Bennett 1828]) in the Western North Atlantic and Caribbean Sea. *Aquatic Invasions* 4: 473-479. Available online:

http://www.aquaticinvasions.net/2009/AI_2009_4_3_Schofield.pdf

Schofield, P.J. 2010. Update on geographic spread of invasive lionfishes (*Pterois volitans* [Linnaeus 1758] and *P. miles* [Bennett 1828]) in the Western North Atlantic Ocean, Caribbean Sea and Gulf of Mexico. *Aquatic Invasions* 5: S117-S122.

http://www.aquaticinvasions.net/2010/Supplement/AI_2010_5_S1_Schofield

Predicted range of future expansion, based on sea-surface temperatures

Morris, J.A., Jr., and P.E. Whitfield. 2009. Biology, Ecology, Control and Management of the Invasive Indo-Pacific Lionfish: An Updated Integrated Assessment. NOAA Technical Memorandum NOS NCCOS 99. http://coastalscience.noaa.gov/documents/lionfish_%20ia2009.pdf

