

Can We Bring Back the Nassau Grouper?

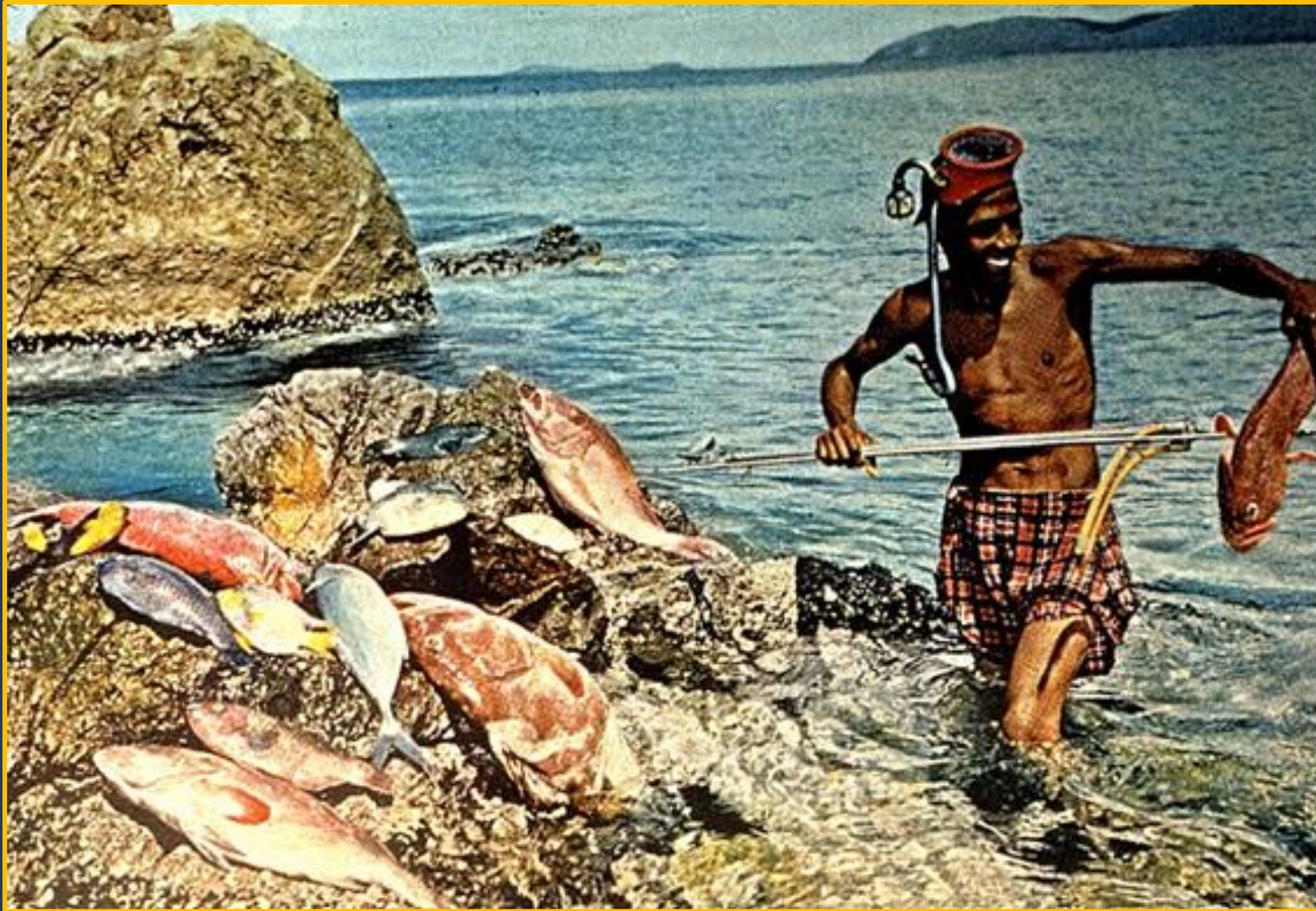


Status of Nassau Grouper on the Grammanik Bank FSA

Richard Nemeth, Elizabeth Kadison



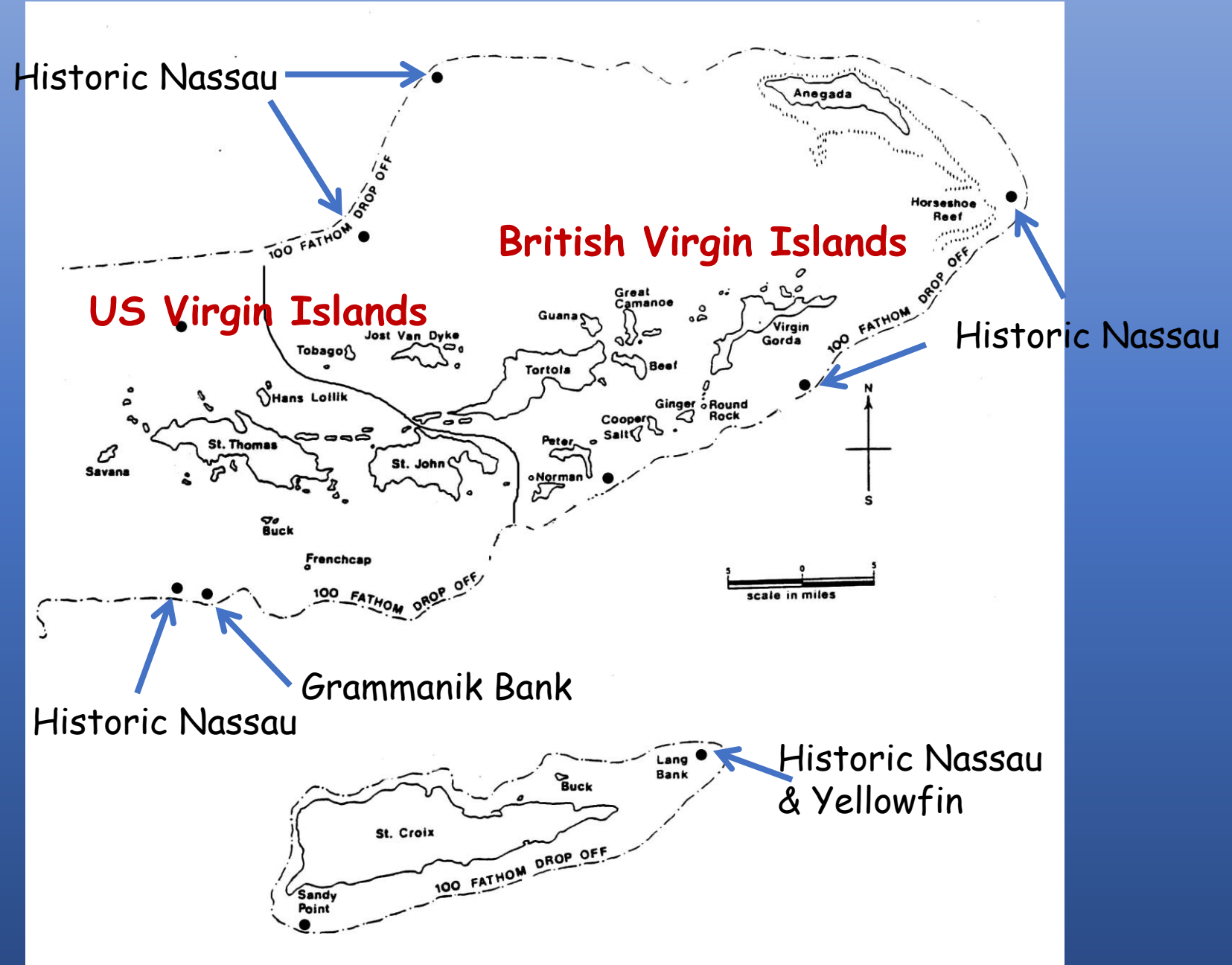
1960's: Nassau grouper are Locally Abundant!



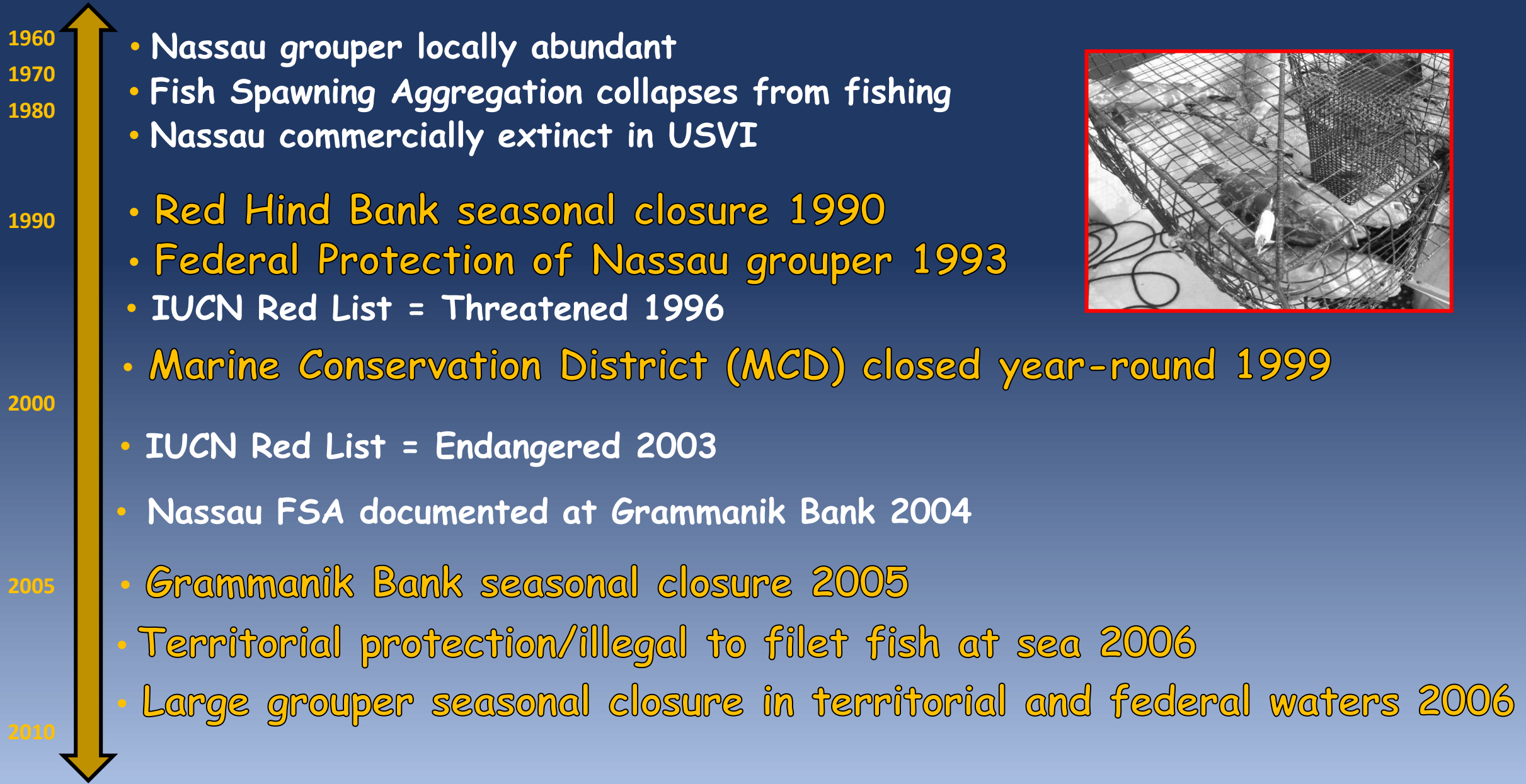


Nassau grouper

Virgin Islands: Historic Perspective



Nassau grouper fishery and management in the USVI



Transient Spawners

- Seasonal spawning
- Travel long distances to VERY SPECIFIC sites

Broadcast Spawners: External Fertilization

- More successful with larger aggregation sizes

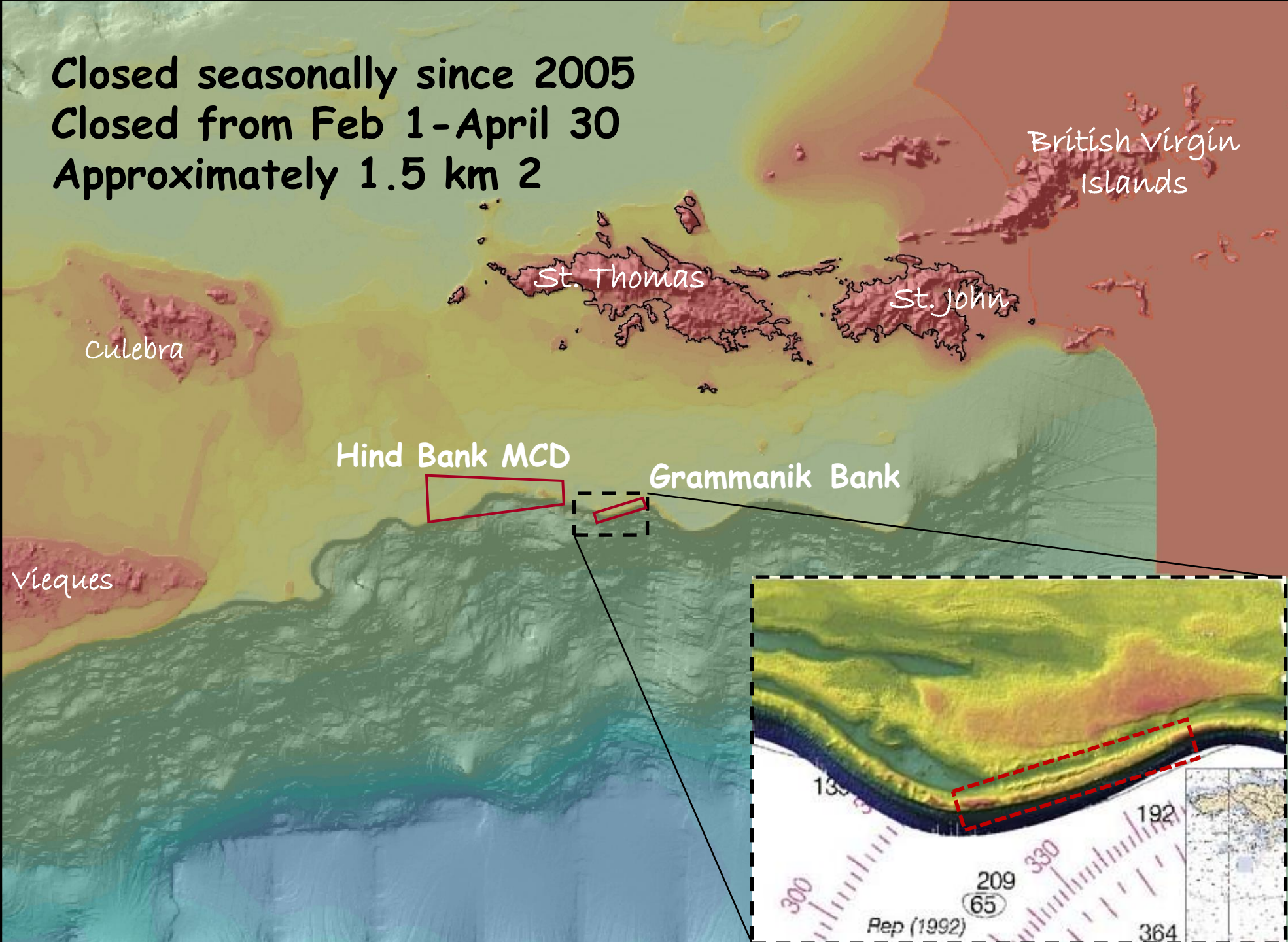


Dec 15-May 15


Water temp=78-79 F

Around/after the full moon

Closed seasonally since 2005
Closed from Feb 1-April 30
Approximately 1.5 km²



Grammanik Bank: A Multispecies Aggregation Site



Cero mackeral
Horseeye jacks
Bar jacks
Blue runners



Yellowfin grouper
Tiger grouper
Cubera snapper
Dog snapper
Mutton snapper
Bermuda chub

Puerto Rico/Northern VI Insular Shelf

North Bank

Developed *Orbicella* reef

Grammanik Bank
Survey Area

Hard Bottom

Deep
Agaricea
reef

South Bank

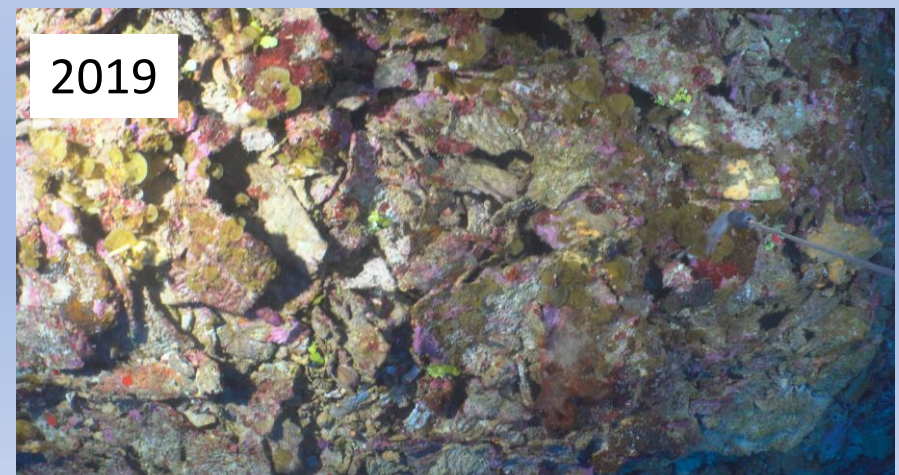
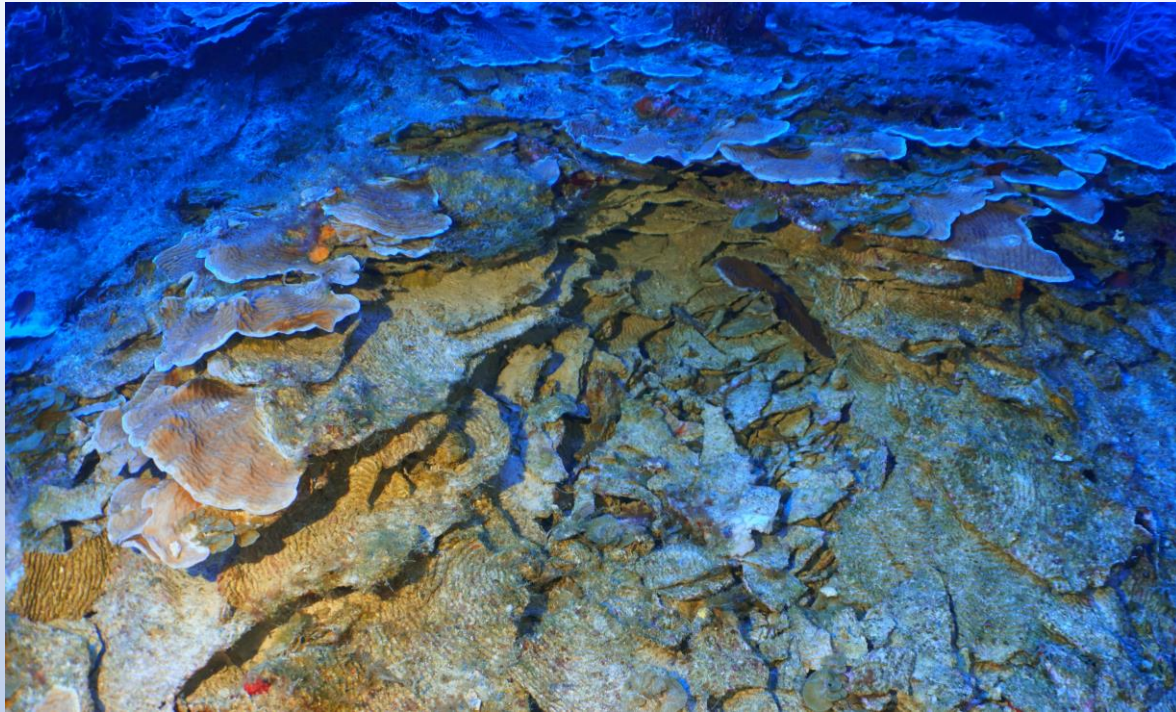


Ginsburg's Fringe

220 feet

Agaricea dominated reef

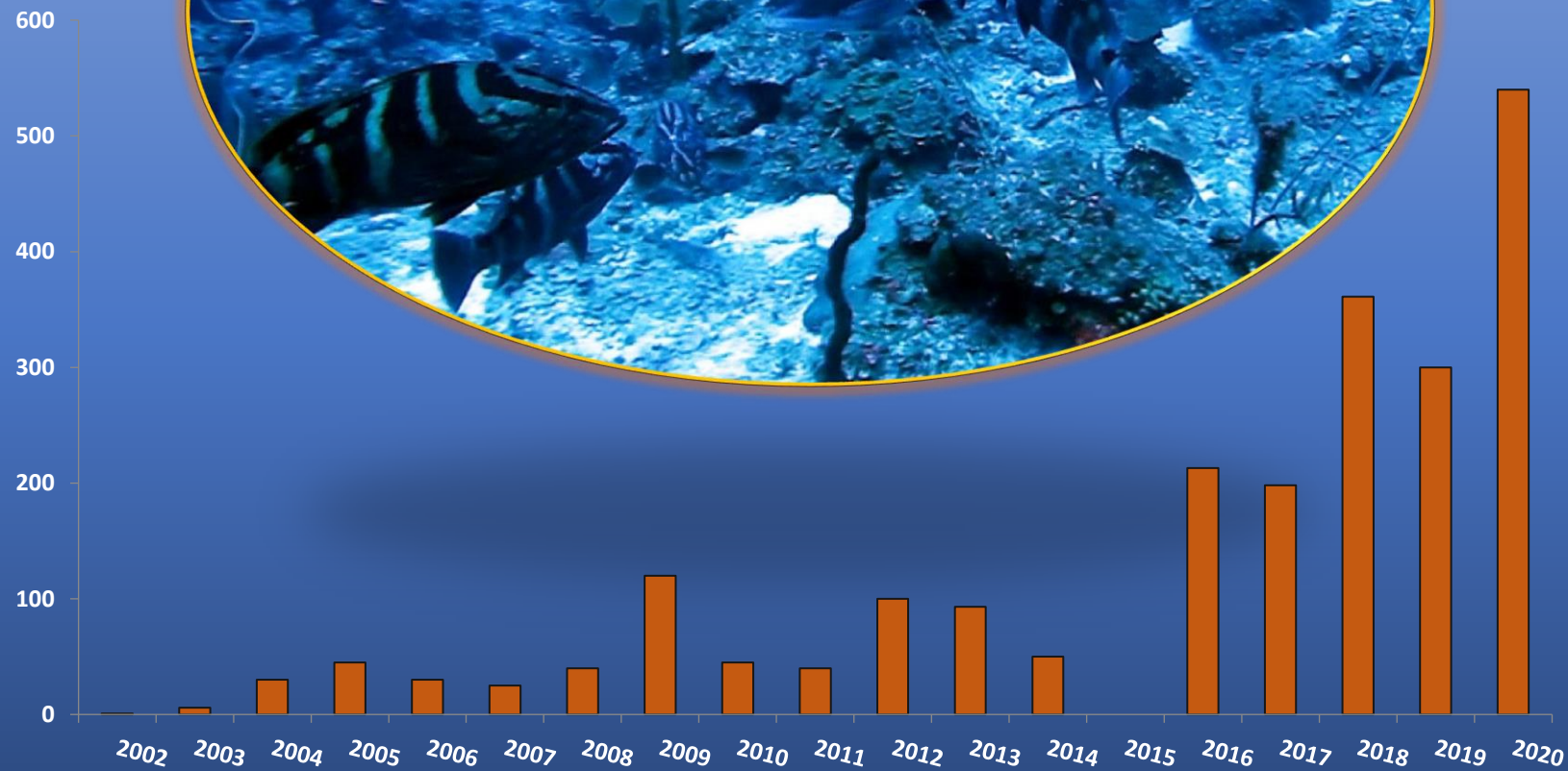




Surrogate Partners??



Yellowfin spawning 2004: March and April



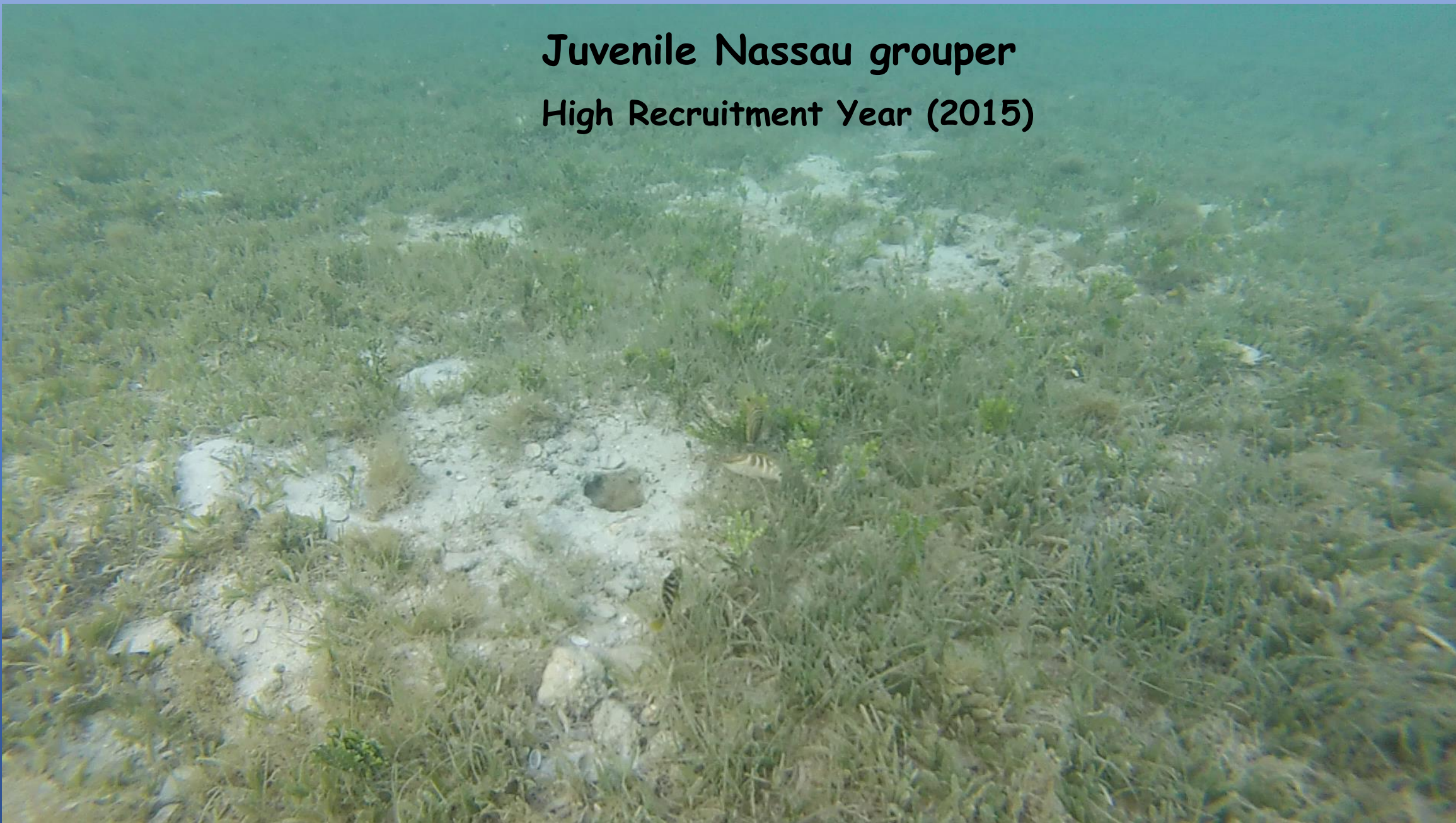
Maximum number of Nassau grouper seen per survey by year from 2002-2020

2015 Heavy Recruitment Year

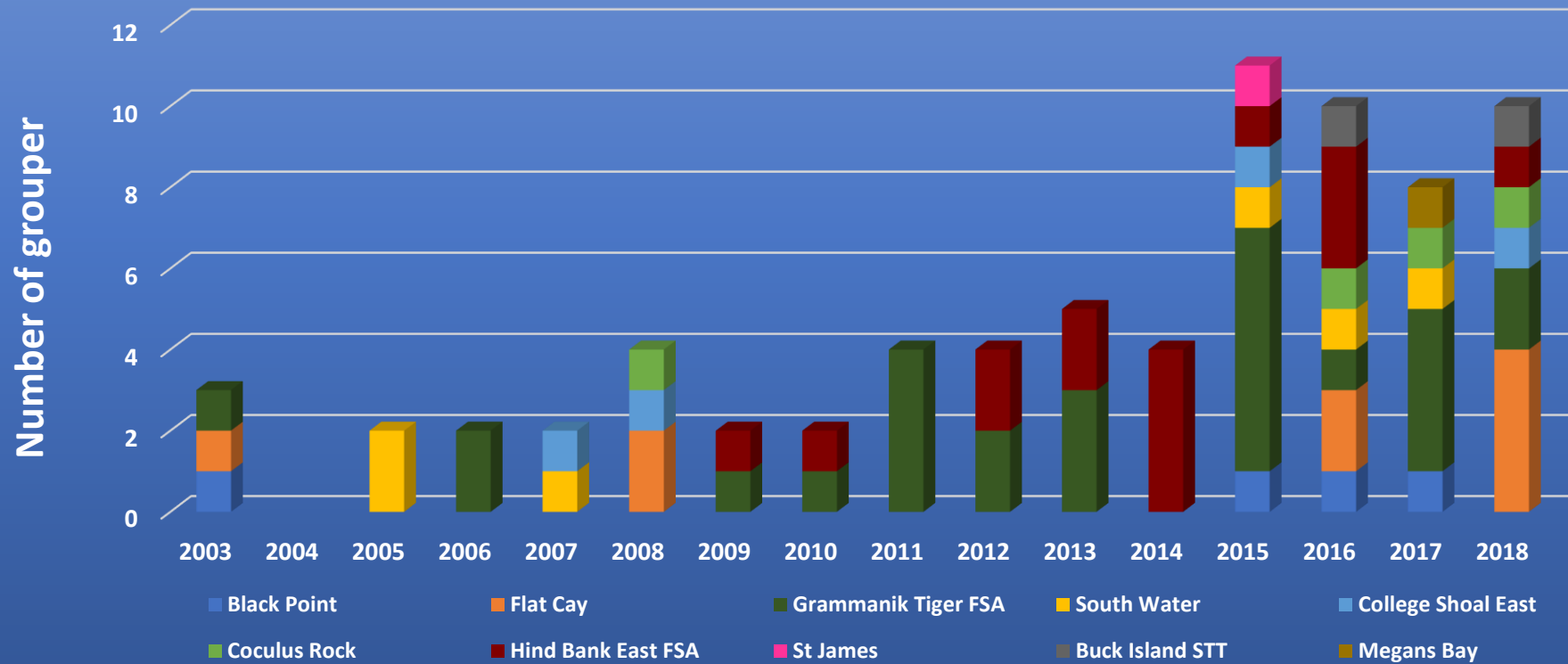


Juvenile Nassau grouper

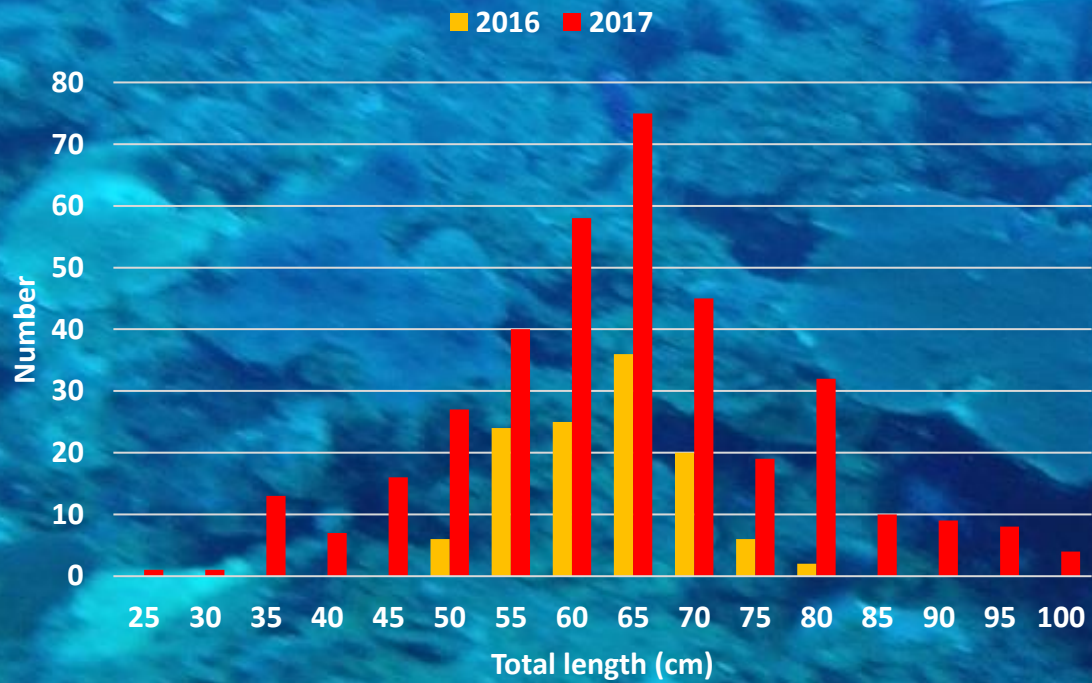
High Recruitment Year (2015)



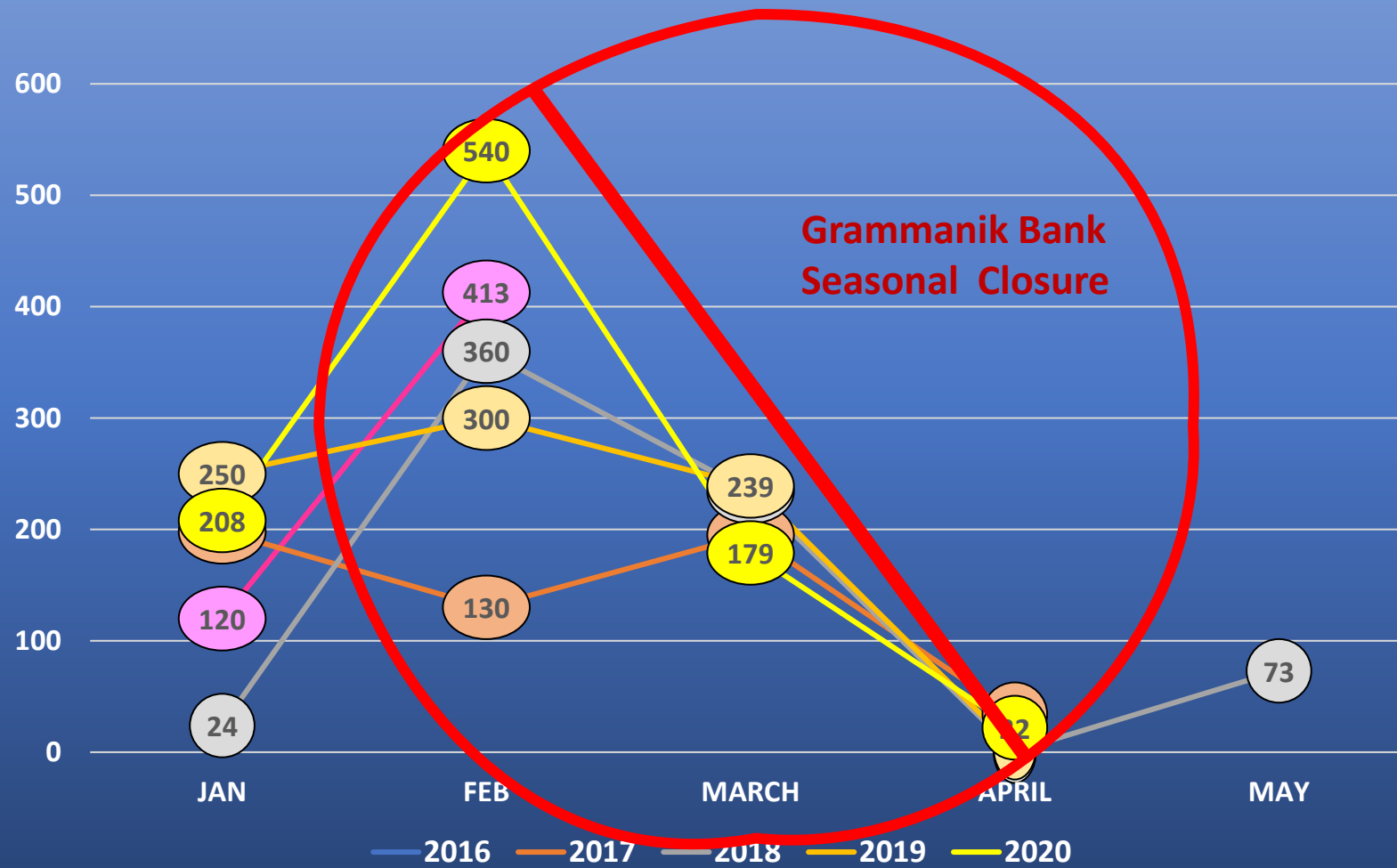
UVI Coral Reef Monitoring Program



Nassau size (on the Grammanik aggregation site):



Visual Survey Data 2016-2020 by Month



HYDRO-ACCOUSTIC TAGGING

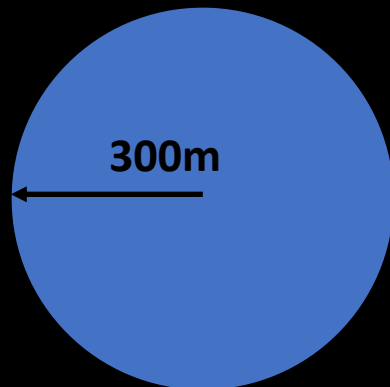
V16 and V13 transmitters

Single frequency

Unique codes

Detection limits from 300m

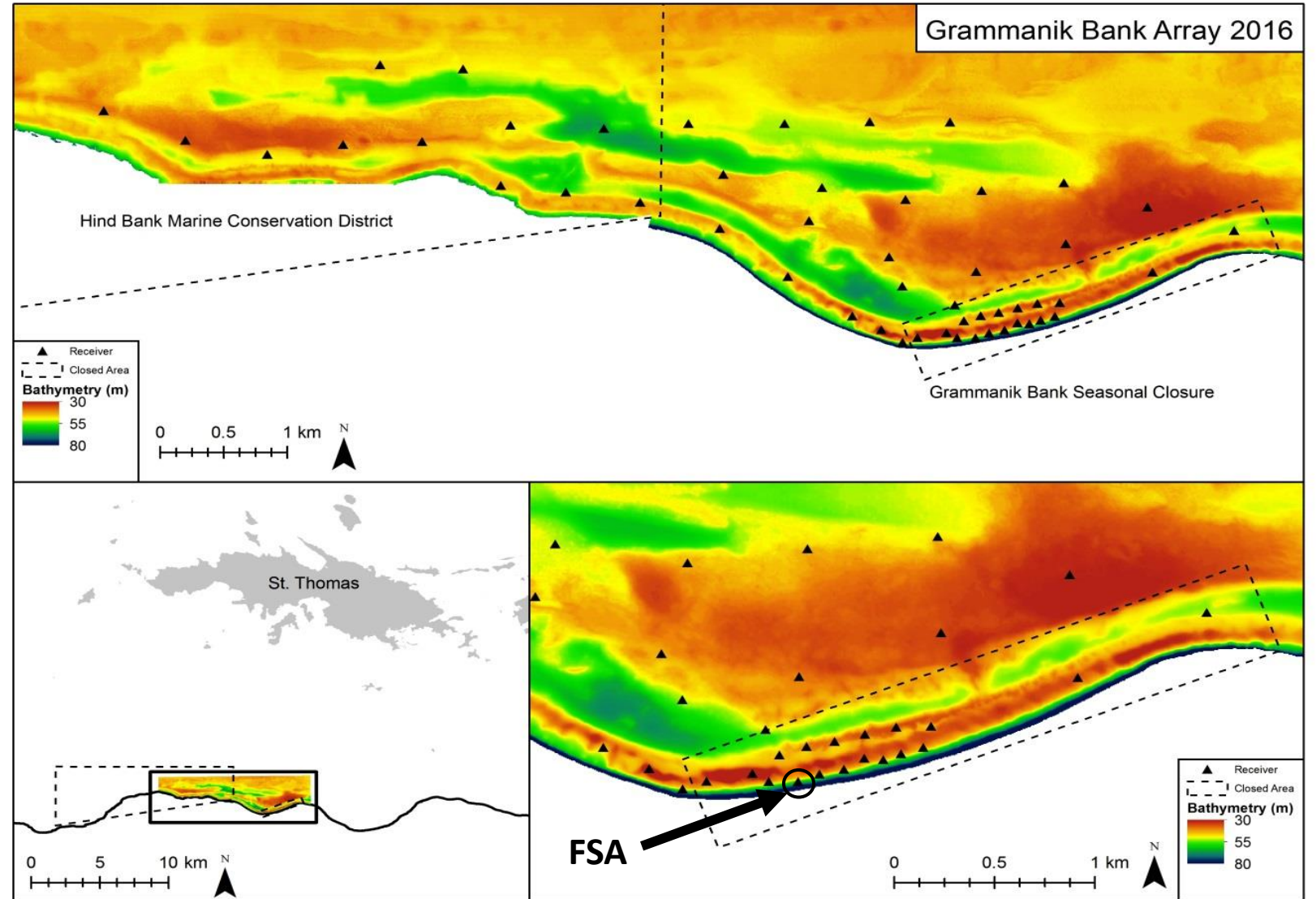
Life span = ~18 months

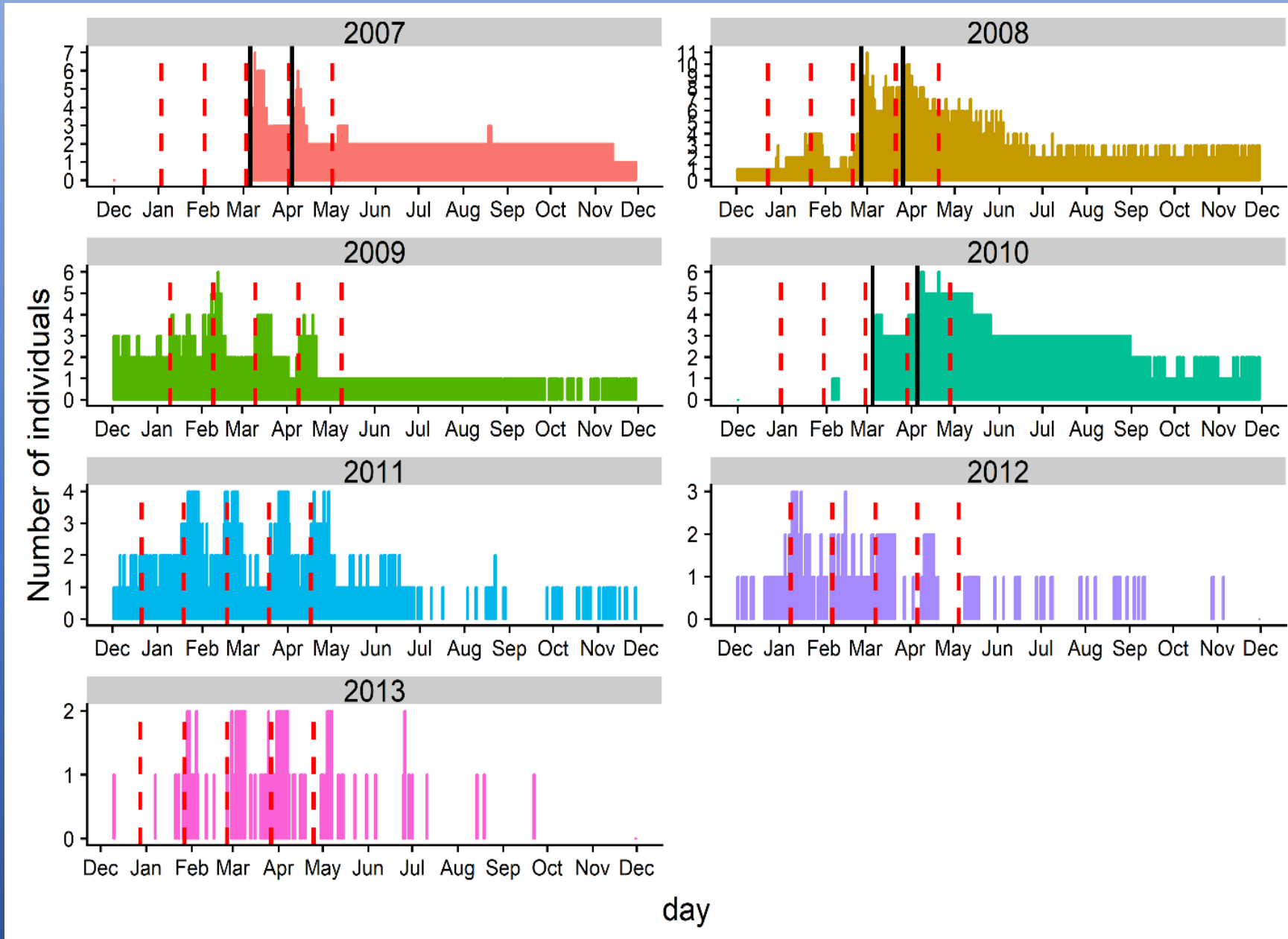




52 Receivers Deployed

25 Nassau grouper tagged
2007-2010

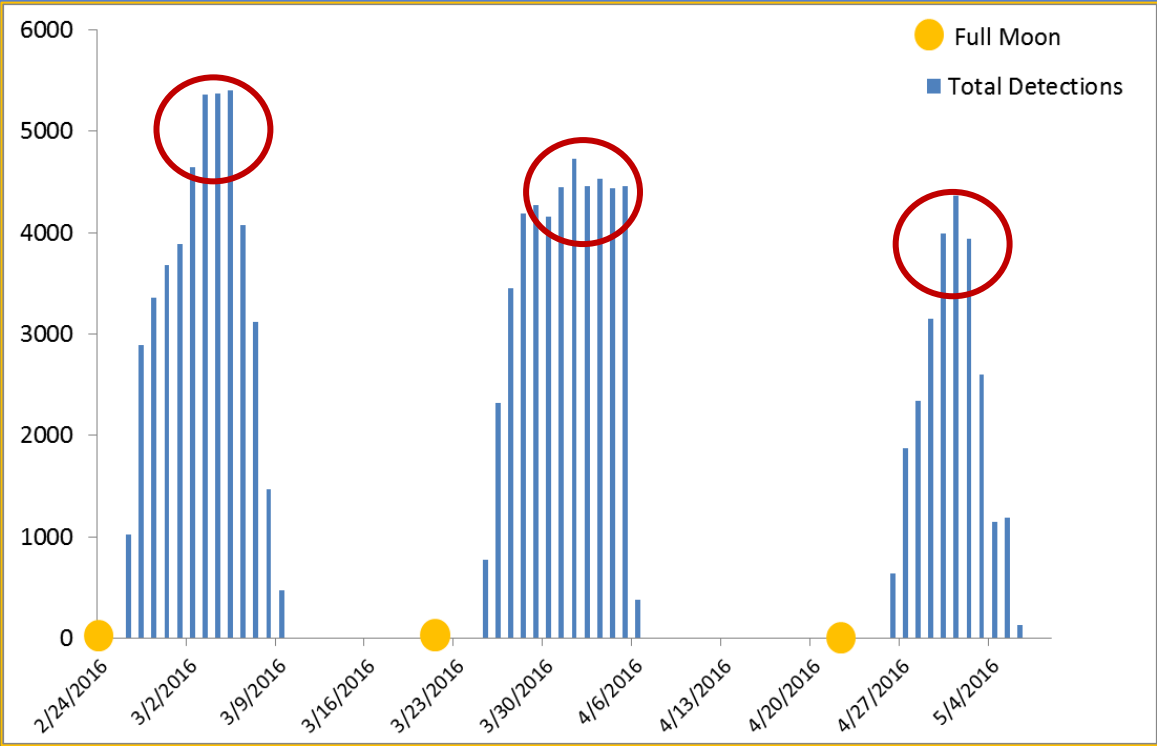




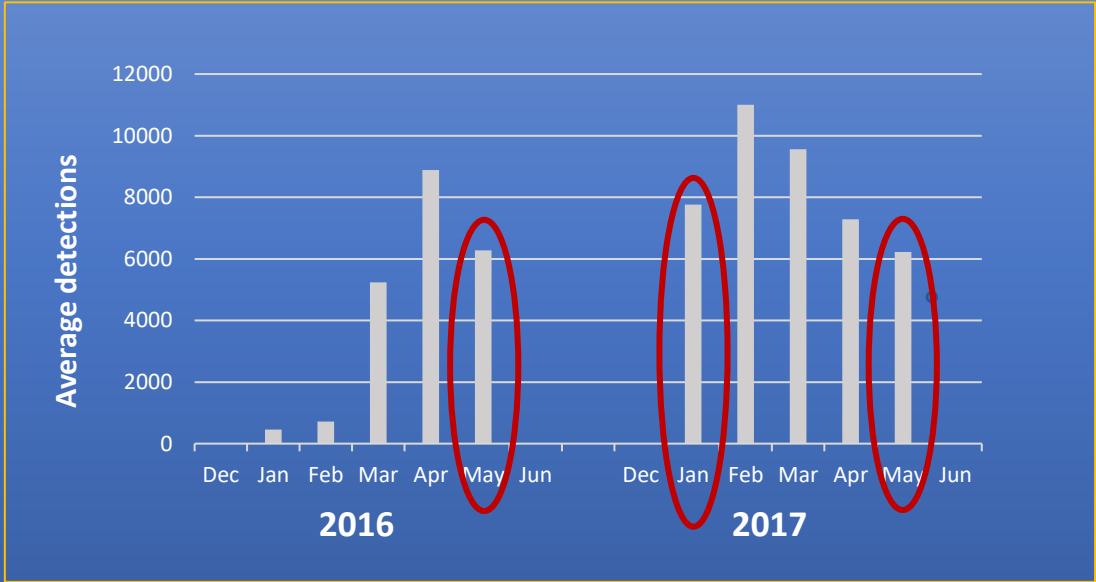
Daily Presence of Nassau Grouper on the Grammanik Bank Array

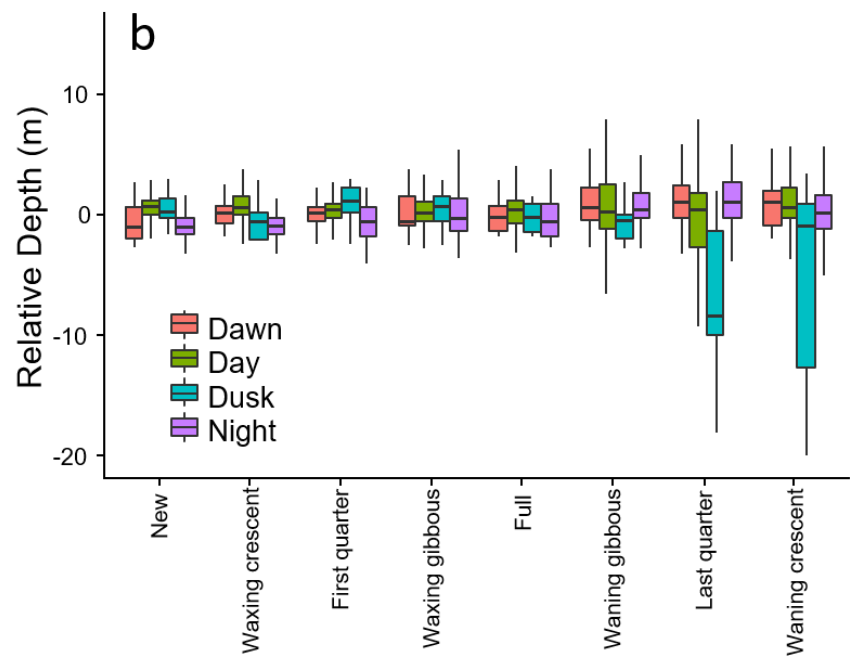
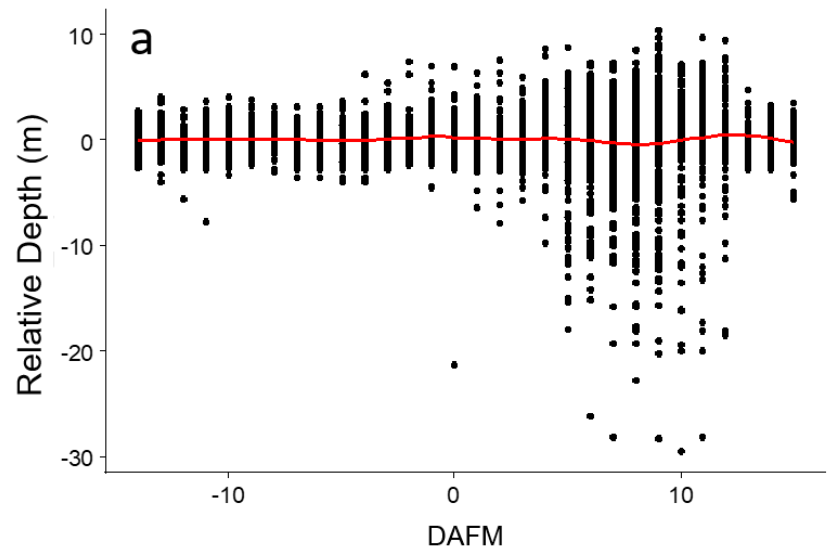
Receiver on the FSA

Nassau detections peak 6-8 dafm
Fish are gone by the new moon



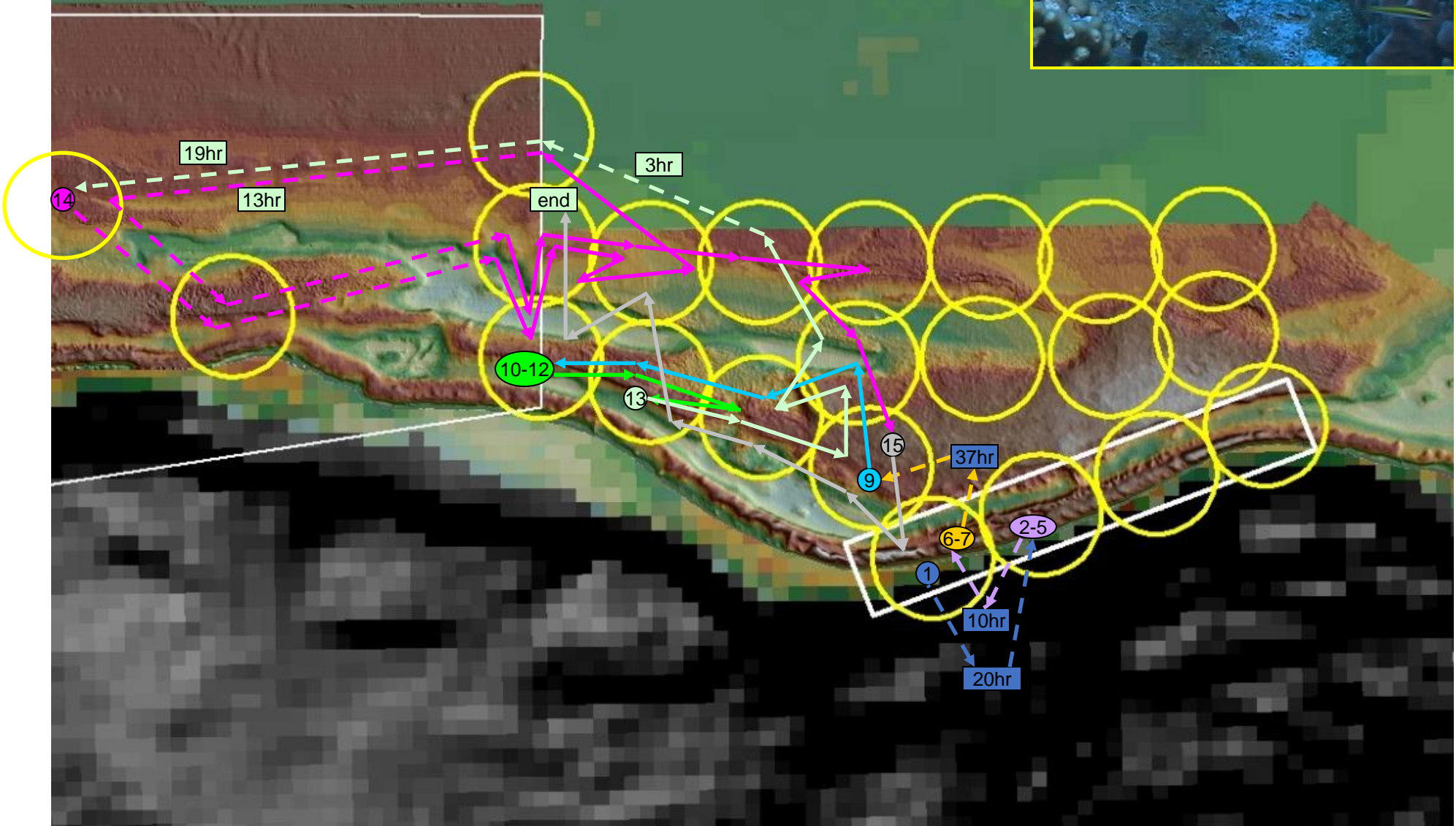
Nassau arrive at the Grammanik Bank
in January and stay through May



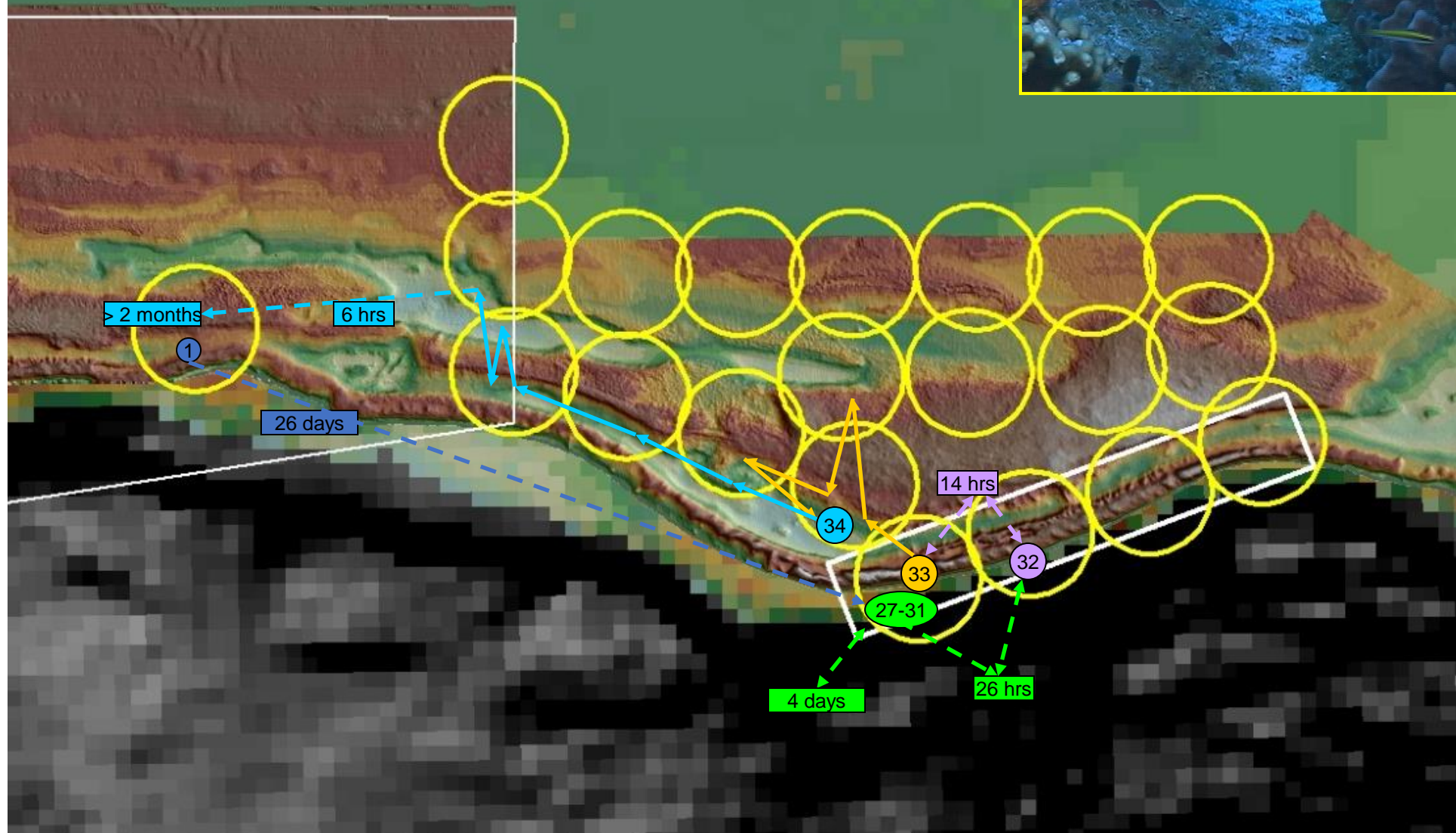


Nassau grouper ♂ 7556b

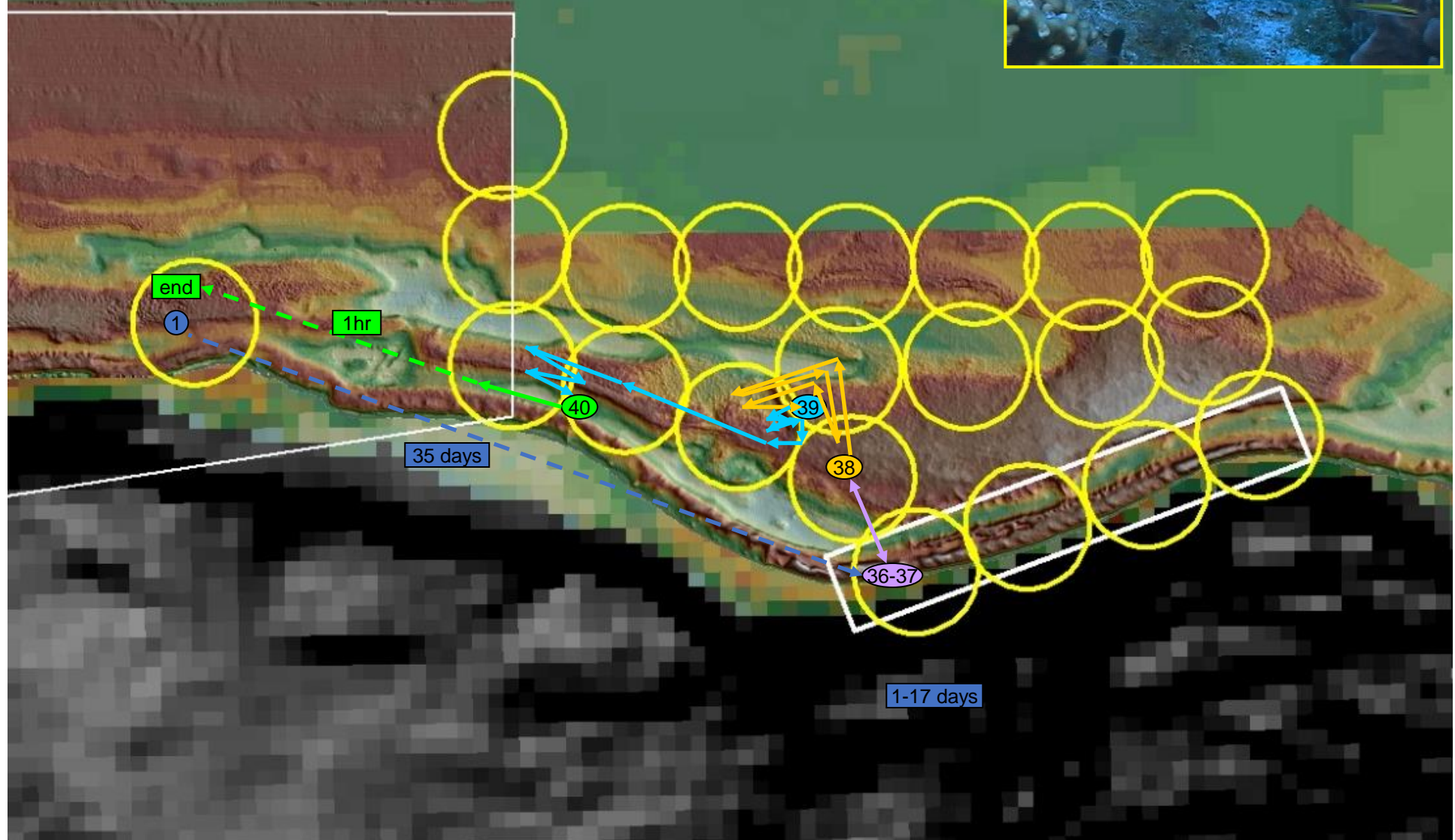
2008 Study

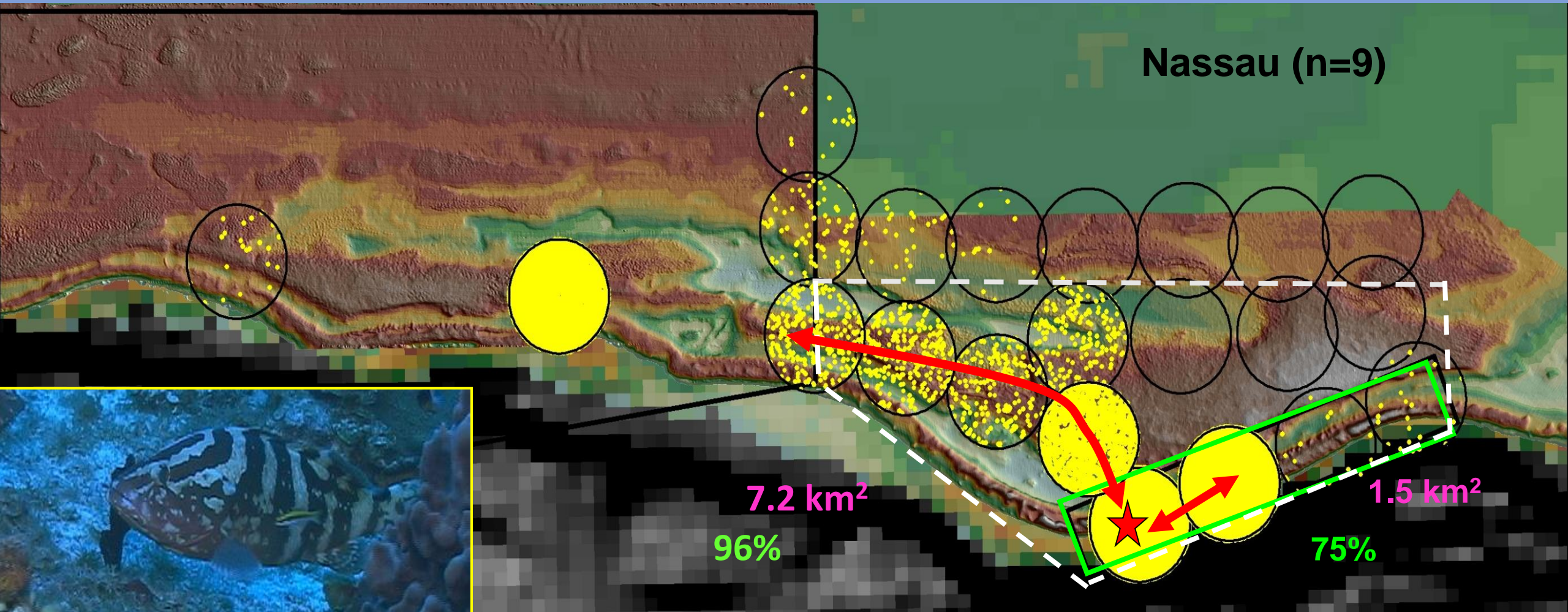


Nassau grouper ♀ 7559



Nassau grouper ♀ 7557





Dot density map (yellow dots) within receiver detections range during the spawning season.

Can We Bring Back the Nassau Grouper?

Continued Protection
Continued Compliance

Up for Discussion:

Extending closure to include January and May?

Extending closure boundaries to the west?