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SE Region

Human–dolphin interactions, where are we, what are we doing, and so what?

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Illegal feeding and vessel based activities continue to increase and evolve throughout the Southeast Region.



Marine Mammal Protection Act

16USC 1372

It's illegal for any person, vessel, or conveyance to **take** any marine mammal

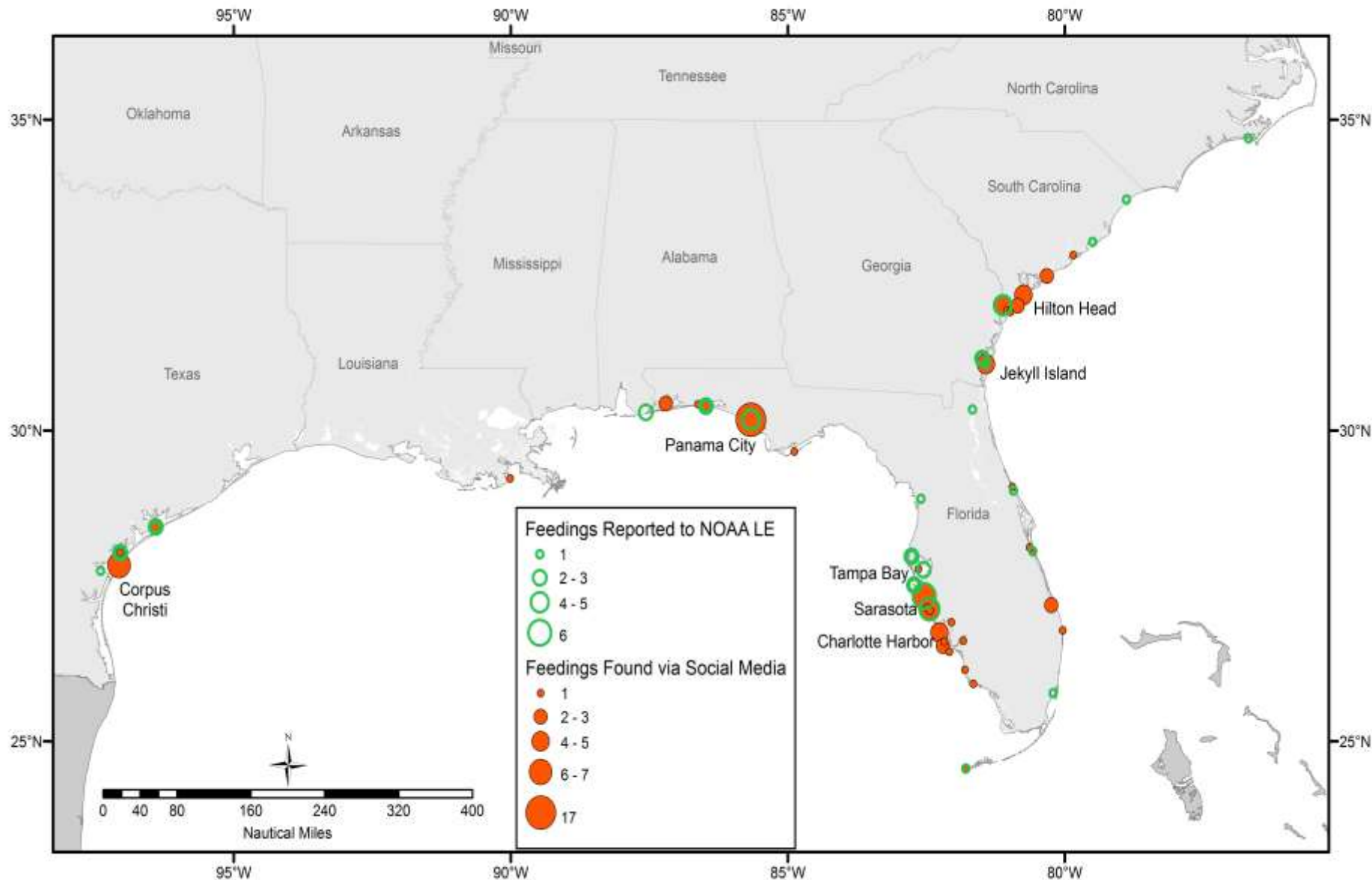
Take means to **harass**, hunt, capture, collect, or kill, or **attempt to harass**, hunt, capture, collect, or kill any marine mammal....

This includes, **feeding or attempting to feed** a marine mammal in the wild.



Photo: NMFS

DOCUMENTED ILLEGAL BOTTLENOSE DOLPHIN FEEDING: FOUND VIA SOCIAL MEDIA & REPORTED TO NOAA LAW ENFORCEMENT





Who feeds wild dolphins?



“To ensure there would be dolphins when we went out, the dolphins had to know we were coming to feed them. That way, they’d get used to seeing us the same time every day.” *P. Henderson, Clearwater, Florida, 1990*



“I don’t know of any angler that would intentionally feed dolphins”



Photo: The Dolphin Project



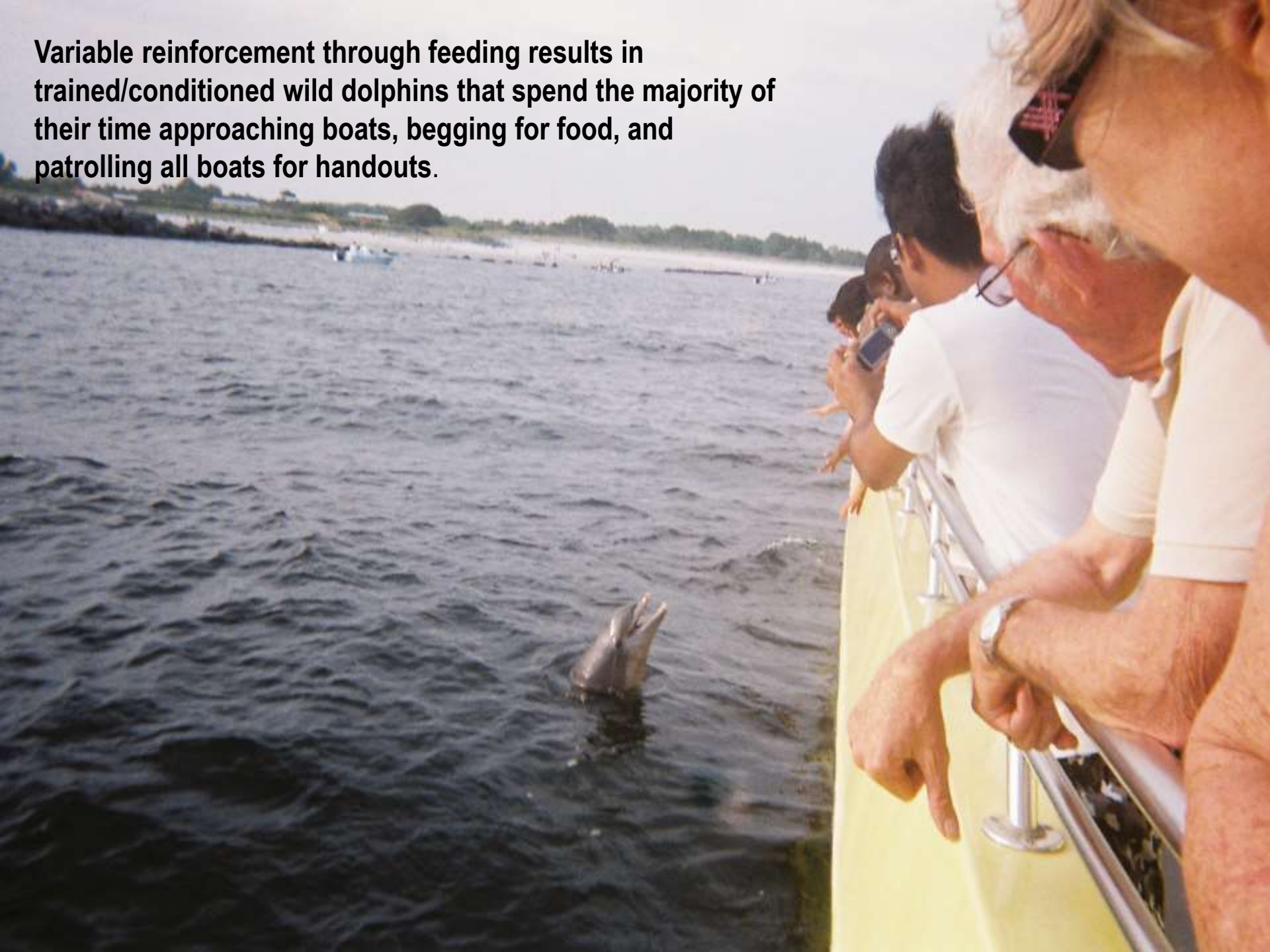
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So What?

Variable reinforcement through feeding results in trained/conditioned wild dolphins that spend the majority of their time approaching boats, begging for food, and patrolling all boats for handouts.



***“It’s getting a lot worse-
it wasn’t like this 10-15 years ago ”***

**Interactions between recreational anglers and dolphins are
increasing and occur in coastal and offshore waters**

In Sarasota Bay, dolphin-human interactions increased from 2% of the population in 2000 to >14% in 2007
(Powell & Wells 2011)

Interactions occurred on 36% of 76 deep sea fishing trips and 17% of 100 pier visits *(Shippee et. al., 2010)*

St. Petersburg, FL fishing pier- over 10 days = 141 observations of dolphins taking bait or catch *(NMFS unpublished)*



Photo: Sarasota Dolphin Research Program

VESPA



C791



F109



C793



C794



C795



F266



C797



C798



1091



1092



1093



○ UNNATURAL BEHAVIOR

Credit: CZS/Sarasota Dolphin Research Program, NMFS permit # 15543



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Illegal Feeding (including teasing)



Depredation (Zollet and Read 2006)



Scavenging (Powell and Wells 2011)



Impacts to dolphins

- Entanglement
- Ingestion of gear
- Boat strikes
- Gunshot or harm



Impacts to rec fishermen may cause

- Decreased catch
- Increased mortality rates released fish
- Diminished experience
- Damaged or lost fishing gear
- More dolphins approaching

Intentional Harm = Impaled with Screwdriver

The Whale and Dolphin Conservation Society (WDCS) is offering a \$3500 reward for information leading to the identification, arrest and conviction of the person or persons responsible for the illegal and cruel acts that led to the death of a protected bottlenose dolphin. NOAA's Fisheries Service received reports of a live dolphin swimming with a screwdriver lodged in its head near the [Florida-Alabama](#) state line in Perdido Bay. On Friday, June 22nd, the dolphin was found dead just west of Dupont Point, Alabama.



Gunshot



Photo: Hubbss-Sea World

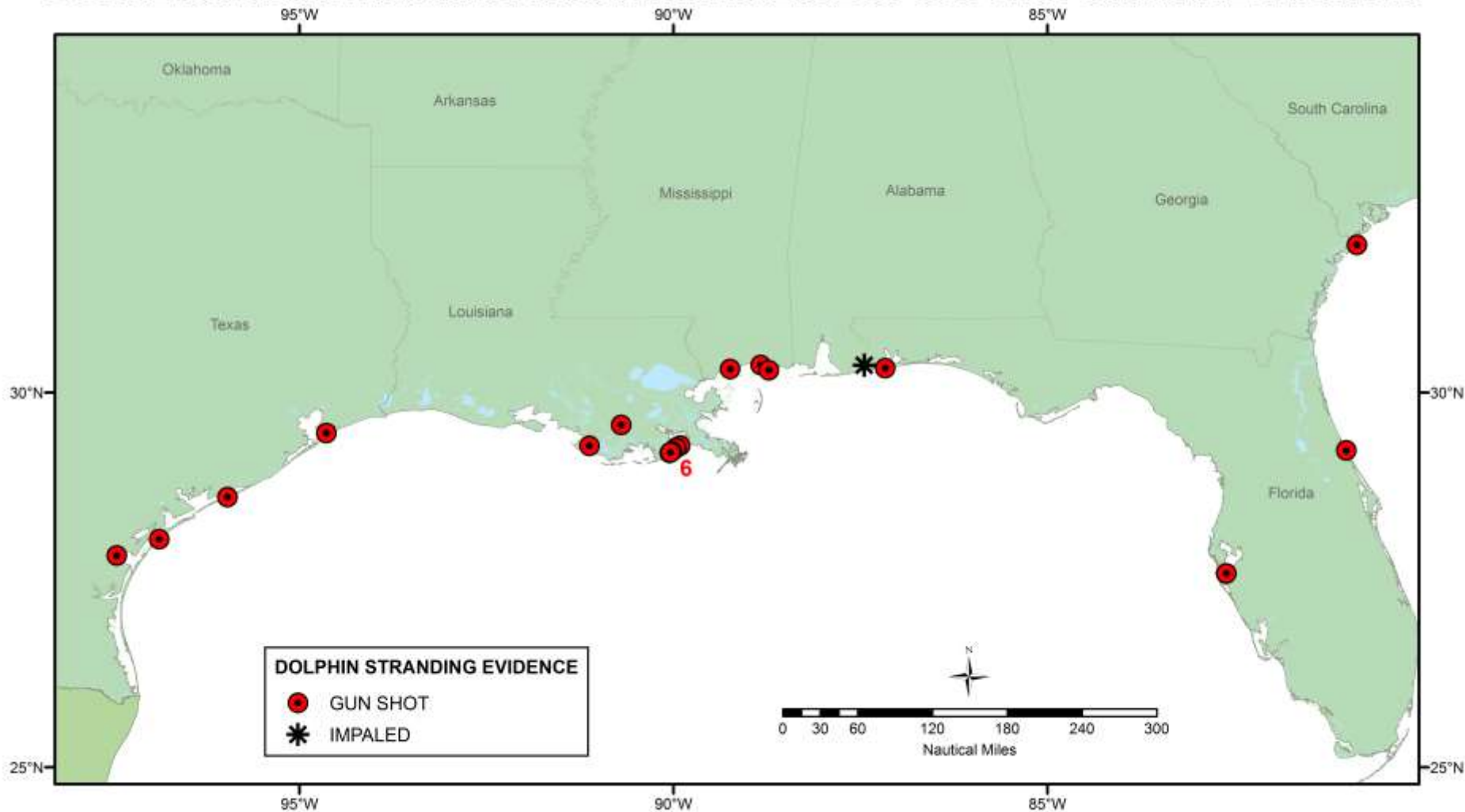


Bottlenose dolphin, *Tursiops truncatus*
MML-0610, female, 250 cm



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BOTTLENOSE DOLPHIN STRANDINGS WITH EVIDENCE OF GUN SHOT OR IMPALED 2002-2013



Blow dart guns



Bows and Arrows



Texas- July, 2014



Florida- December, 2014



Dangers to humans



Agency Regulations- Harassment Definition

50 CFR 216

Level A Harassment means any act of pursuit, torment, or annoyance which has the **potential to injure** a marine mammal or marine mammal stock in the wild.



Photo: NMFS

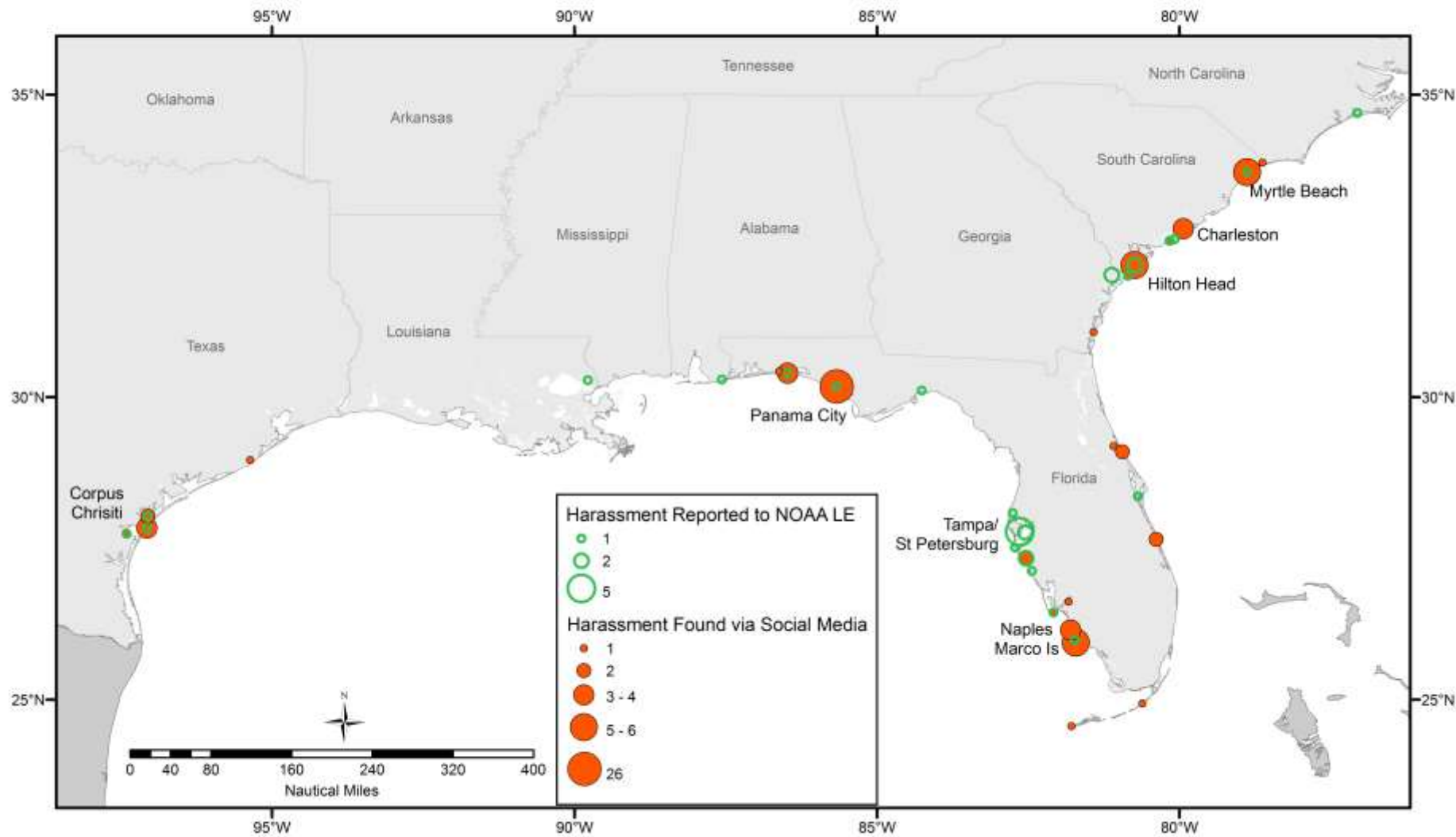
Harassment Definition continued...

- *Level B Harassment* means any act of pursuit, torment, or annoyance which has the **potential to disturb** a marine mammal or marine mammal stock in the wild by causing disruption of behavioral patterns, including, but not limited to, migration, breathing, nursing, breeding, feeding, or sheltering **but which does not have the potential to injure** a marine mammal or marine mammal stock in the wild.



Photo: NMFS

DOCUMENTED BOTTLENOSE DOLPHIN HARASSMENT: FOUND VIA SOCIAL MEDIA & REPORTED TO NOAA LAW ENFORCEMENT



“Hot Spots” in the Southeast Region

Location	Number of operators	Feeding	Swim-with	Wake-riding
Corpus Christi, TX	14	X	X	
Orange Beach, AL	44	X	X	X
Destin/Pensacola, FL	15	X	X	X
Panama City, FL	37	X	X	X
Key West, FL	29	X	X	
Clearwater/St. Pete, FL	23	X	X	X
Indian River Lagoon, FL	23	X		
Skidaway, Jeckyll Island, GA	10	X		
Hilton Head, SC	22	X	X	
Charleston/Kiawah, SC	22	X	X	



What is a Hotspot?

- >10 operators
- Operate in bays and estuaries that are in close proximity to human development/waterfronts
- CHRONIC-- Target the same areas, often year round with peak seasons.
- Conduct multiple trips per day often 2-4x a day starting at 9:00am and ending after sunset.
- Vessels range in size from personal watercraft, small six-packs to larger vessels
- Competition among operators to get close to animals



Types of activities that have the potential to harass



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Swim-with, Touching, and Petting



Wake-riding





Land based viewing of strand feeding



Charter fishing boats



What are we doing to address illegal feeding and harassment?

Media, Outreach, Education and Partnerships



Enforcement



Evolution of feeding in Panama City, FL



Evolution of feeding in Panama City, FL (cont.)



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Research

Social Science

Panama City Residents' Visitors' and Business operators' attitudes toward the illegal feeding and harassment of wild dolphins. Responsive Management (2011)

Attitudes toward the protection of wild dolphins and dolphin-human interactions 2013
Responsive management report. Responsive Management (2013)

Corpus Christi's Visitors' and Business operators' attitudes toward the illegal feeding and harassment of wild dolphins (2013)



Photo: NMFS

Research

Other research

Determining the factors contributing to human-dolphin interactions in a long-term resident inshore bottlenose dolphin community (in progress). Katie McHugh and Randall S. Wells, Sarasota Dolphin Research Program/Chicago Zoological Society.

Evaluating the Effectiveness of a Voluntary Program in Reducing Vessel Based Harassment in Key West, Florida, U.S.A. (2013) Jessica R Powell, Laura K Engleby, Nicholas A Farmer

Assessment of depredation by bottlenose dolphins in the Northwest Florida and Alabama sport fishery Steve F. Shippee, UCF, Randall S. Wells, Sarasota Dolphin Research Program/Chicago Zoological Society



Photo: NMFS



Photo: L. Bejder

Fifteen Years Later: An Updated Evaluation of the Impacts and Evolution of Marine Mammal Tourism with a focus on Human-Dolphin Interactions in Panama City, Florida

Jessica R. Powell, Abigail F. Machernis, Laura Engleby, and Trevor R. Spradlin
(In progress)



Literature Review of Human Impacts

Literature review of newly available scientific literature (post Samuels *et al.* 2000)

- **Species Included:** whales, dolphins, seals, sea lions, and manatees
- **Chapters:** vessel interaction, swimmer interaction, land-based interaction, and feeding
 - highlight the major response themes related to behavior, habitat use, health, and reproduction
 - conclusions summarize the overall effects and risks from disturbances at the individual and population level
 - Includes management strategies as recommended throughout the literature



So What?

Impacts to Dolphins based on scientific literature

- **Risks caused by vessel & swimmer presence and/or movements:**

- Conditioned to humans
- Injury or death from boat strikes
- Separation of mother and calf
- Behavior disturbance/ activity shifts
- Changes to social structure
- Increased predation risk
- Acoustic changes
- Abandonment of habitat or habitat shift
- Decline in abundance



Photo: NMFS

- **Short term behavior changes can have long term biological consequences for individuals or populations**

(Wells & Scott 1997; Constantine, 2001, Lusseau *et al.* 2002; Lusseau 2003; Allen & Read 2001; Constantine *et al.* 2004; Samuels & Bejder 2004; Lusseau 2004, 2005 & 2006; Bejder *et al.* 2006 a & b; Lusseau *et al.* 2006 a & b; Strensén and Berggren, 2007, Courbis and Timmel, 2008, Bechdel *et al.* 2009; Christiansen *et al.* 2010; Jensen *et al.* 2009)

Challenges

- So what?
- Constant evolving and expansion of issues
- Limited enforcement capabilities
- Perception that the MMPA is vague and these activities are not harmful
- Lack appropriate messaging
- Reaching opinion leaders in various user groups
- Need to develop more partnerships

What can the Commission do to help?

- How can we better articulate the “so what” to community leaders, managers, academics, etc..? Particularly for a non-endangered species?
- How might we better engage community leaders among user groups?
- How do we convey how these activities contribute to cumulative effects?
- How do we determine where to prioritize these issues, compared to all the other threats we are dealing with?
- What other ways might we leverage partnerships?
- How can we engage the scientific community in these issues?





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