
Let's Talk
Sharks!

SAFE®
SAVING ANIMALS
FROM EXTINCTION

SHARK AND RAY



Facilitators:

Paul Cox, CEO Shark Trust, Vice Program Lead
Windy Arey Kent, Program Manager
Candice Marcos, Shark Reef Mandalay Bay
Colleen Shytle, NC Aquarium Society

AGENDA

12:00-12:05 - Welcome, Introduce Team/Presenters

12:05-12:10 - Quick Intro to SAFE Shark and Ray

12:10-12:20 - Review of Messaging Framework

12:20-12:25 - Science Spotlight

12:25-12:45 - Breakout Rooms

- **Shark & Ray Awareness Day** Toolkit, Resources, and Event
- **Human/Shark Interactions** Talking with the Media

12:45-12:55 - Policy Spotlight

12:55-1:00 - Wrap-up, Questions



Conservation Action Plan

Year 3 of our current plan

Focus on four areas of work

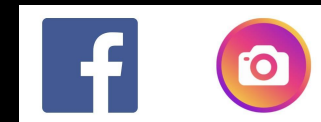
- International Engagement
- Sustainable Fisheries
- Supporting Research
- **Community Connections**

Thirteen Working Groups

Messaging Working Group

Resources

- SAFEsharks.org
- AZA Network Communities
- Newsletter
- Social Media Channels





Messaging





Messaging Group Actions

Started in 2016

Why?

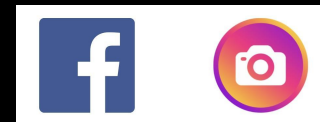
- Consistency in messages to public
- Alignment with science

How?

- Research
- Consultation with science community

What?

- Messaging Framework
- Do's and Don'ts
- Messaging Audit
- Speaking up for the Ocean Toolkit
- Webinars!





Messaging Framework

Sharks and Rays are Amazing

- Highlight diversity
- Promote ecosystem benefits

Sustainable Shark and Rays

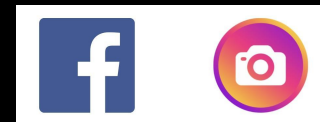
- Threat clarity - overfishing
- Highlight solutions

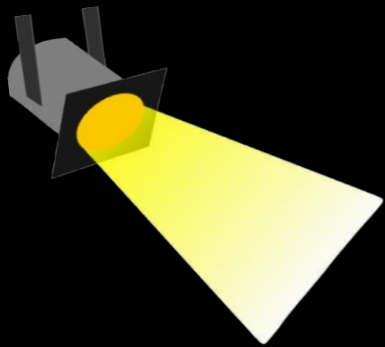
Sharks and Rays Need Love and Attention

- Positive messaging
- Avoid myth-busting

Working Together

- Collective action & collaboration
- Get involved!





Science Spotlight

Shark Cognition and a Human Mediated Driver of a Spate of Shark Attacks

Marie Levine^{1,2*}, Ralph S. Collier^{2,3}, Erich Ritter², Moustafa Fouda⁴, Vincent Canabal^{1,2}

¹Shark Research Institute, Princeton, USA

²Global Shark Attack File, Princeton, USA

³Shark Research Committee, Chatsworth, USA

⁴Nature Conservation Sector, Egyptian Environmental Affairs Agency, Cairo, Egypt

Email: marie@sharks.org, sharkresearch@aol.com, erichritter@att.net, foudamos@hotmail.com, vcanabal@comcast.com

Received 19 July 2014; revised 4 September 2014; accepted 22 September 2014

Copyright © 2014 by authors and Scientific Research Publishing Inc.

This work is licensed under the Creative Commons Attribution International License (CC BY).

<http://creativecommons.org/licenses/by/4.0/>



Abstract

Five unprovoked shark attacks are reported from Sharm-El-Sheikh, Egypt, between 30 November and 5 December 2010. Three of the five attacks are attributed to an oceanic whitetip shark, *Carcharinus longimanus* with a distinctive crescent-shaped notch in the upper lobe of the caudal fin. The shark was observed during the first attack on a snorkeler and photographed underwater during the second shark attack on a swimmer. In a video taken several months prior to the attacks, the same shark is hand-led underwater by a divemaster with additional fish in a pack over his buttock. The shark can be seen swimming behind the divemaster while he removed additional fish from this pack. In Victims 1, 2 and 5, the shark removed an extensive amount of tissue from the victims' buttock. The three victims also lost a hand and/or a portion of their forearm, suggesting the injuries were inflicted by a shark conditioned to associating food with hand-feedings and the human form. The remaining two attacks, Cases 3 and 4, were attributable to the shortfin mako shark, *Isurus paucus*. This was determined from a unique dental pattern of the right side of the upper jaw due to a prior injury. This same "misalignment" dental pattern was observed in the injuries sustained by Victims 3 and 4. We conclude that the shortfin mako shark was responsible for the attacks on Victims 3 and 4, and the oceanic whitetip shark was the causal species of attacks on Victims 1, 2, and 5.



Shark Cognition and a Human Mediated Driver of a Spate of Shark Attacks

Levine et al. (2014)

- 5 case studies of unprovoked shark attacks (bites) in shallow waters in Egypt between Nov 30-Dec 5, 2010.

Methods:

- Established timeline of the interactions.
- Reviewed medical records of the victims.
- Assessed photos and video footage of the shark interactions with divers and swimmers from tourists.
- Reviewed environmental factors (sea surface temps and lunar cycles).



Shark Cognition and a Human Mediated Driver of a Spate of Shark Attacks

Levine et al. (2014)

Findings:

- Identified specific sharks involved in the interactions (oceanic whitetip and shortfin mako).
- Necropsy of the sharks showed malnourishment.
- Sea surface temps: 82.4- 84.2°F
- Overfishing of the Red Sea reduced the # of natural prey.







Shark Cognition and a Human Mediated Driver of a Spate of Shark Attacks

Levine et al. (2014)

Conclusions:

- Poor physical condition of shark suggests it may have been seeking atypical prey.
- Sea surface temps were higher than usual:
 - Temps at time of incidences: **82.4 - 84.2°F**
 - Normal seasonal temps: **66.2-73.4°F**
-  Temps =  Metabolic Rates for many shark species
- Higher metabolic rates contributes to sharks' necessity to feed more frequently to meet their energy demands. "The need to feed".



Shark Cognition and a Human Mediated Driver of a Spate of Shark Attacks

Levine et al. (2014)

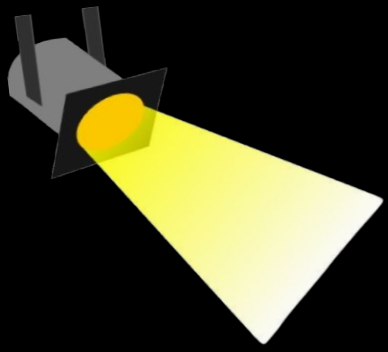
Based on these findings, what are the major factors that impact unprovoked shark bites?

1. Overfishing = less prey for sharks

2. Increase temps (Global Warming) = increases metabolism and the need to feed.

3. Humans were observed hand-feeding sharks = sharks associated humans with food.





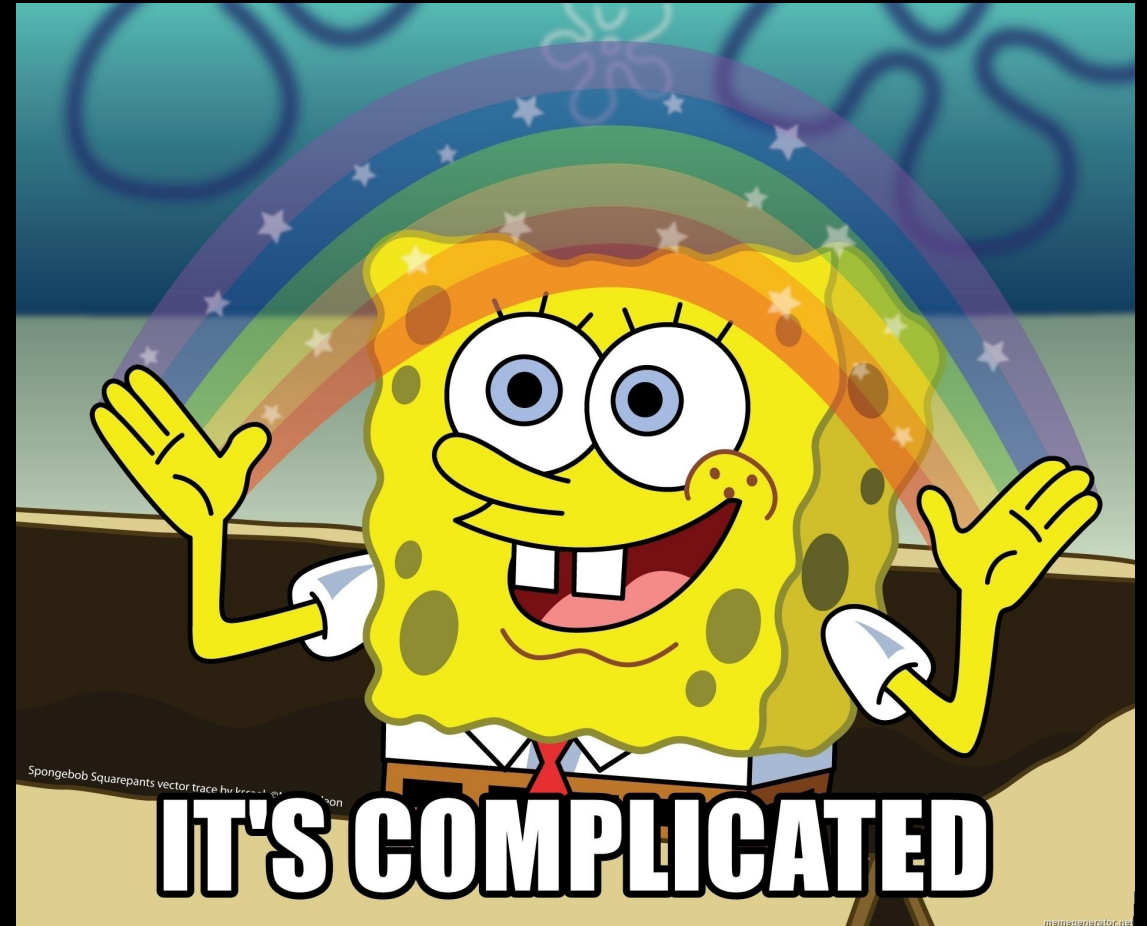
Policy Spotlight



© 2004 Blackwell Publishing Ltd *Journal of Internal Medicine* 255: 103–110



Shark Policy



KISS: 3 Key Tools

1. CITES

2. Spatial Protection

3. Fisheries Management



What Can You Do?

1. Learn More:

Shark Trust Podcast Series

2. Support Sign On Letters

Oceanic Whitetip Prohibition

3. Come to next Webinar!

4. Engage Visitors

Big Shark Pledge





Thank you for joining
us to *talk sharks!*

Next webinar:
Sept. 6, Noon ET



WindyKent@safesharks.org
Paul@sharktrust.org
Canmarcos@mandalaybay.com
Colleen.shytle@ncaquariums.com