



# Going Viral: An Environmental Activists Story

*Nathan J. Robinson, Ph.D*







# My Introduction To Ocean Conservation

- Life as a marine biology student did not match my expectation.
- Archelon – The Sea Turtle Protection Society of Greece.
- Evolved into my first conservation job.



## EXPECTATIONS



## REALITY



## EXPECTATION



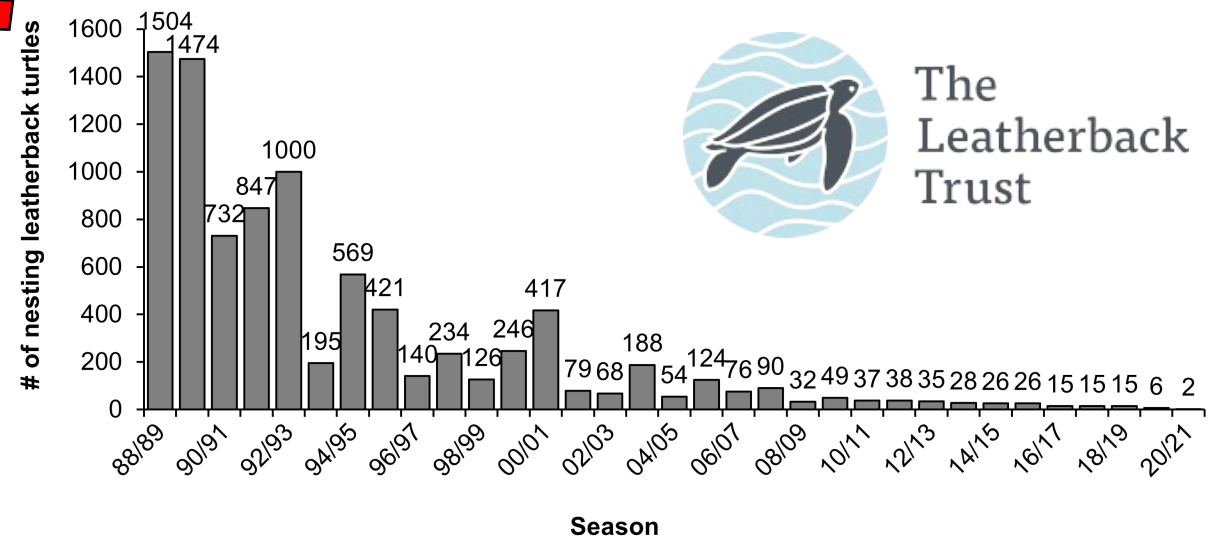
## REALITY





# Living the “Dream”

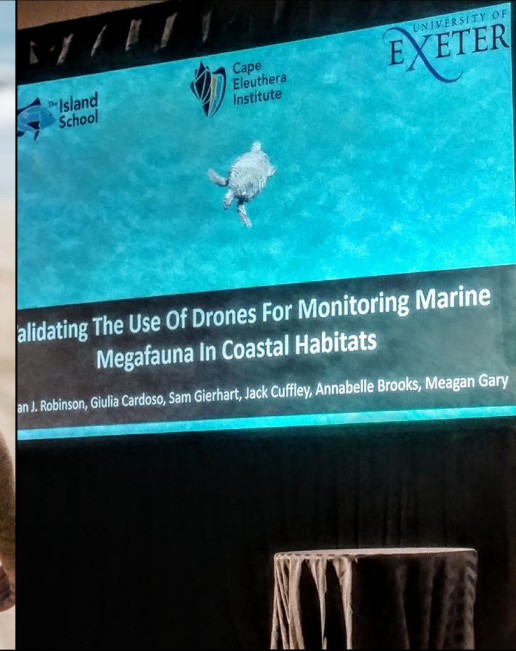
- Turtles took me to several different continents.
- Different locations, same population trends.
- None of these issues are addressed by protecting nests.





# How to Save Sea Turtles?

- Global threats:
  - Fisheries Bycatch.
  - Plastic Pollution.
  - Climate Change.
- Requires global solution.
- How to reach enough people?





# One Fateful Day...

- August 2015 – Expedition with Christine Figgner from Texas A&M University.
- Epibionts ( = the animals that live on the bodies of other animals).
- We found something else...







Credit: Christine Figgner



# Lightning Strikes Twice

- Two months later, I was working on another project in Costa Rica.
- ~ 50 km away from previous encounter.
- This time it was not a straw...







Credit: Sean Williamson



# What Was The Impact?

- Guilt.
- How did these items get there?
- Published in scientific journal.

## Marine Turtle Newsletter

Issue Number 147

October 2015

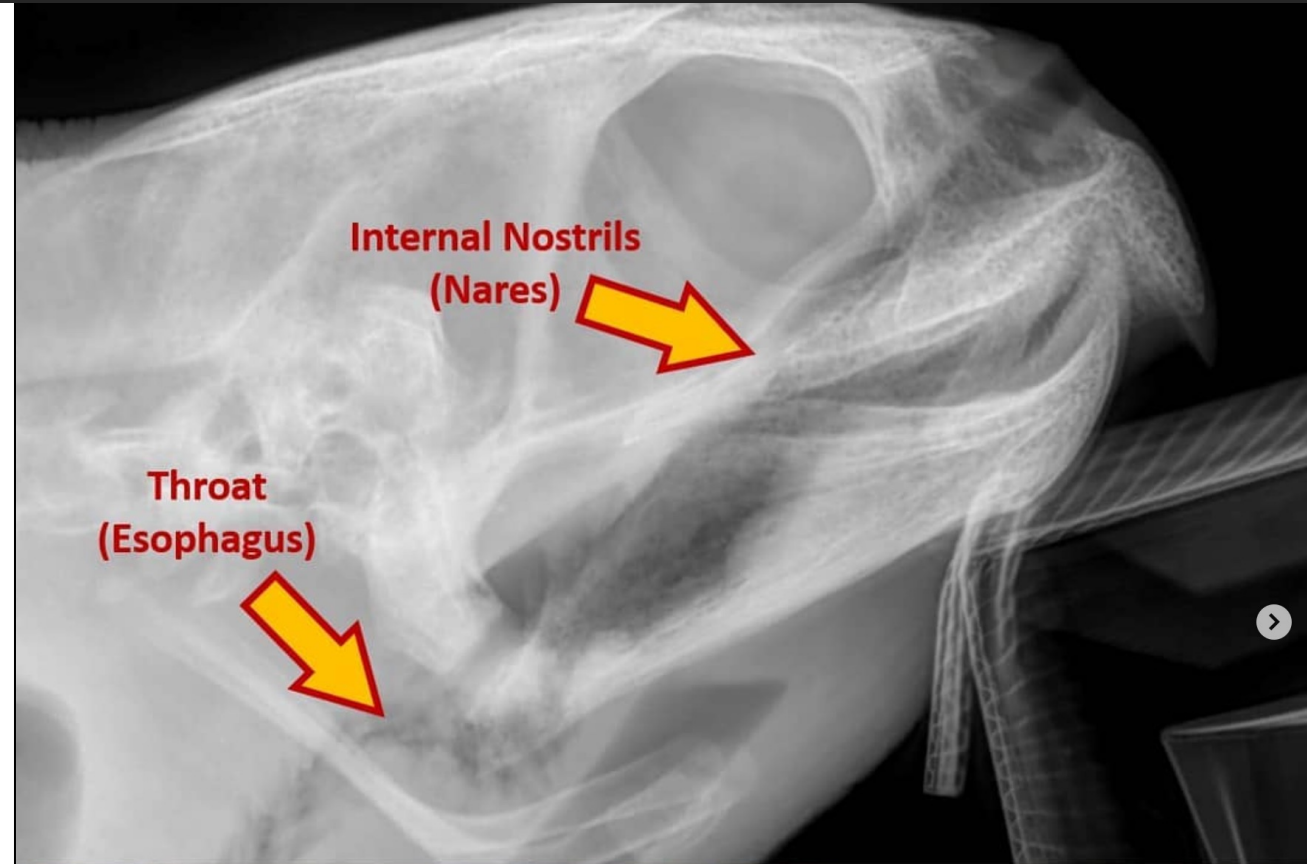
### Plastic Straw Found Inside the Nostril of an Olive Ridley Sea Turtle

Nathan J. Robinson<sup>1,2</sup> & Christine Figgner<sup>3</sup>

<sup>1</sup>The Leatherback Trust, Goldring-Gund Marine Biology Station, Playa Grande, Guanacaste, Costa Rica; <sup>2</sup>Department of Biology, Indiana University-Purdue University Fort Wayne, Fort Wayne, Indiana, USA (E-mail: nathan@leatherback.org); <sup>3</sup>Department of Oceanography, IDP Marine Biology, Texas A&M University, College Station, Texas, USA (E-mail: christine.figgner@tamu.edu)

ResearchGate

2,932 Reads · 12 Citations · 2 Recommendations





# Global Coverage



Nathan Robinson

11 August 2015 · 🌐



Earlier today, I removed a 10 cm (4 in) plastic straw that was entirely embedded into the nostril of an olive ridley sea turtle. Lamentably, this is a consequence of the world of single-use, non-biodegradable plastic that we currently live in.

There is a solution and it lies in our own decisions. Please say no to all single-use plastic. Every plastic straw, plastic bag, or plastic bottle that ends up in the oceans could mean the difference between life or death for any numb... [See more](#)



17K

2.5K comments 32K shares



# Global Coverage



Nathan Robinson

11 August 2015 · 🌐

...

Earlier today, I removed a 10 cm (4 in) plastic straw that was entirely embedded into the nostril of an olive ridley sea turtle. Lamentably, this is a consequence of the world of single-use, non-biodegradable plastic that we currently live in.

There is a solution and it lies in our own decisions. Please say no to all single-use plastic. Every plastic straw, plastic bag, or plastic bottle that ends up in the oceans could mean the difference between life or death for any numb... [See more](#)



👍 17K

2.5K comments 32K shares



> 60,000  
shares



# Global Coverage



Nathan Robinson

11 August 2015 · 🌐

...

Earlier today, I removed a 10 cm (4 in) plastic straw that was entirely embedded into the nostril of an olive ridley sea turtle. Lamentably, this is a consequence of the world of single-use, non-biodegradable plastic that we currently live in.

There is a solution and it lies in our own decisions. Please say no to all single-use plastic. Every plastic straw, plastic bag, or plastic bottle that ends up in the oceans could mean the difference between life or death for any numb... [See more](#)



17K

2.5K comments 32K shares



> 60,000  
shares



> 220,000,000  
views



# Global Coverage



Nathan Robinson

11 August 2015 · 🌐



Earlier today, I removed a 10 cm (4 in) plastic straw that was entirely embedded into the nostril of an olive ridley sea turtle. Lamentably, this is a consequence of the world of single-use, non-biodegradable plastic that we currently live in.

There is a solution and it lies in our own decisions. Please say no to all single-use plastic. Every plastic straw, plastic bag, or plastic bottle that ends up in the oceans could mean the difference between life or death for any numb... [See more](#)



17K

2.5K comments 32K shares



> 60,000  
shares



> 220,000,000  
views



The  
New York  
Times



The Washington Post

EL PAÍS

The Telegraph

THE  
HUFFINGTON  
POST



# Global Coverage



Nathan Robinson

11 August 2015 · 🌐

...

Earlier today, I removed a 10 cm (4 in) plastic straw that was entirely embedded into the nostril of an olive ridley sea turtle. Lamentably, this is a consequence of the world of single-use, non-biodegradable plastic that we currently live in.

There is a solution and it lies in our own decisions. Please say no to all single-use plastic. Every plastic straw, plastic bag, or plastic bottle that ends up in the oceans could mean the difference between life or death for any numb... [See more](#)



👍 17K

2.5K comments 32K shares



> 60,000  
shares



> 220,000,000  
views



The  
New York  
Times



The Washington Post

EL PAÍS

The Telegraph

THE  
HUFFINGTON  
POST



# Global Coverage



Nathan Robinson

11 August 2015 · 🌐

Earlier today, I removed a 10 cm (4 in) plastic straw that was entirely embedded into the nostril of an olive ridley sea turtle. Lamentably, this is a consequence of the world of single-use, non-biodegradable plastic that we currently live in.

There is a solution and it lies in our own decisions. Please say no to all single-use plastic. Every plastic straw, plastic bag, or plastic bottle that ends up in the oceans could mean the difference between life or death for any numb... [See more](#)



👍 17K

2.5K comments 32K shares



> 60,000  
shares



> 220,000,000  
views



The  
New York  
Times



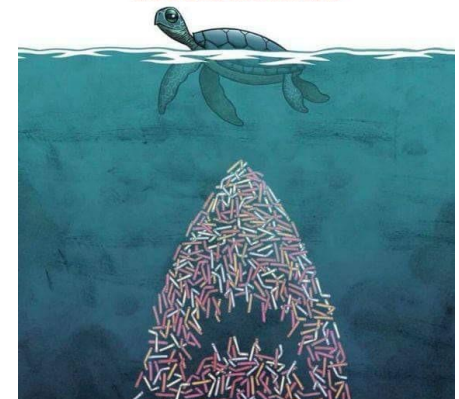
The Washington Post

EL PAÍS

The Telegraph

THE  
HUFFINGTON  
POST

**STRAWS**  
www.STRAWSfilm.com



# Meme-ified

\*straws were invented in 1888\*

Turtles in 1887:





# A New Direction

- A global conversation was started.
- #fortheturtles
- Using this knowledge as a Marine Biologist?
- Incorporating cameras into my research.



# Drones

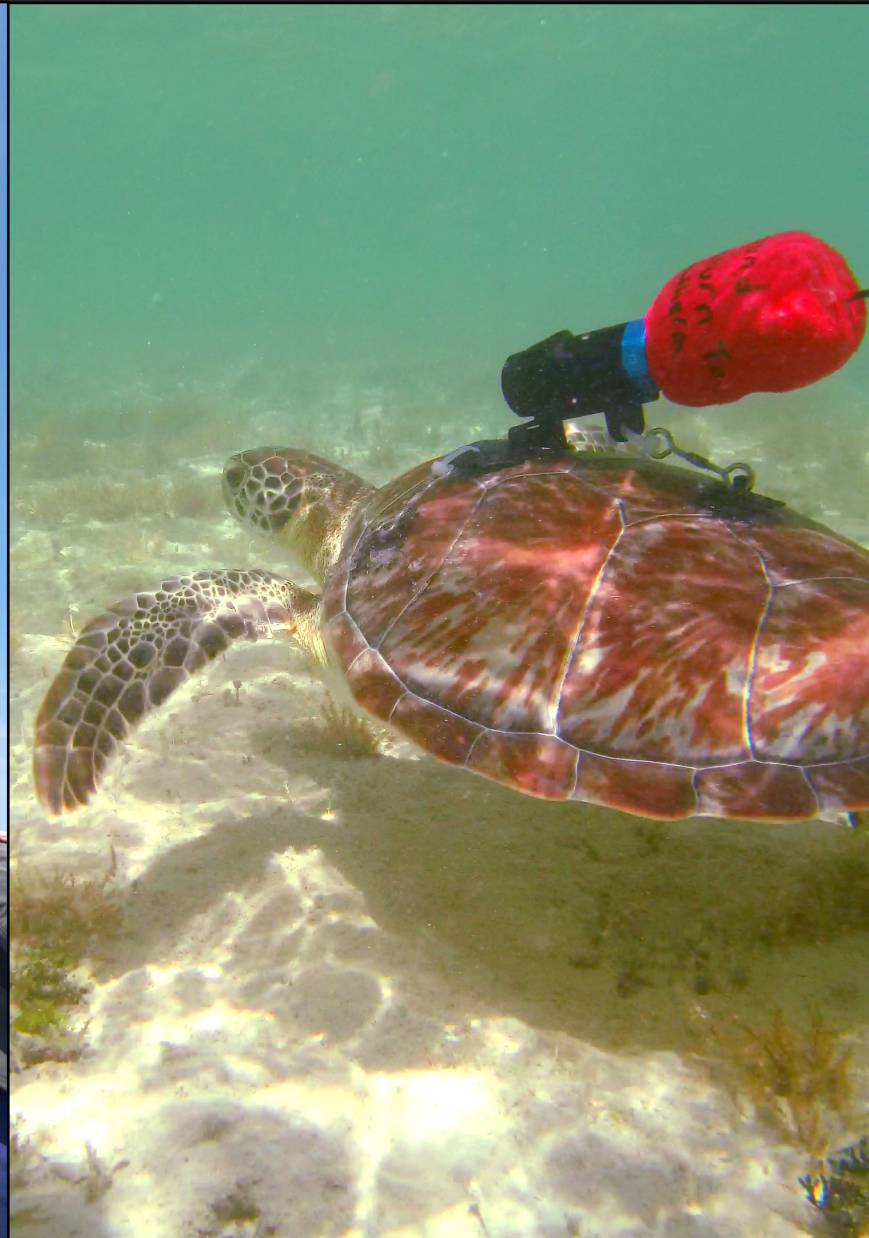




# Drones



# On Animals

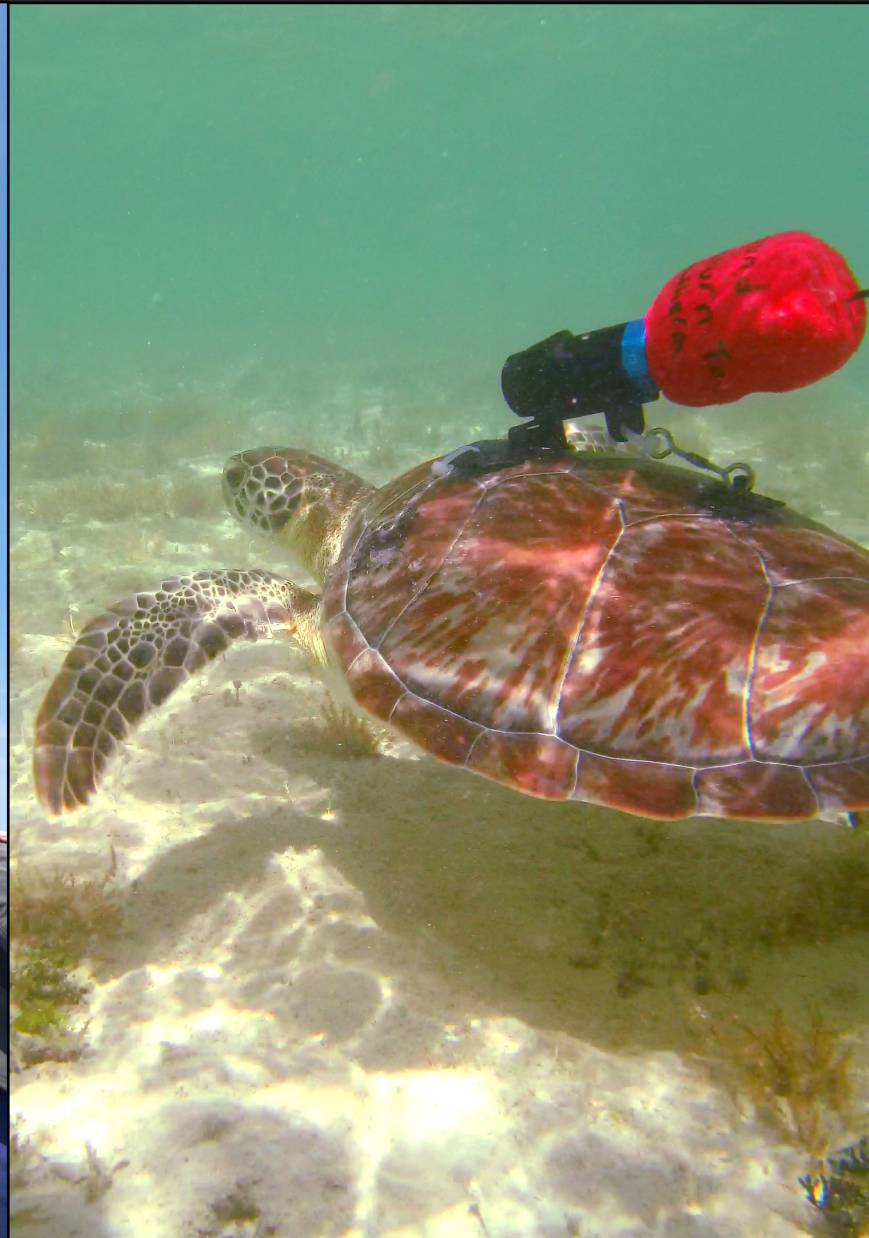




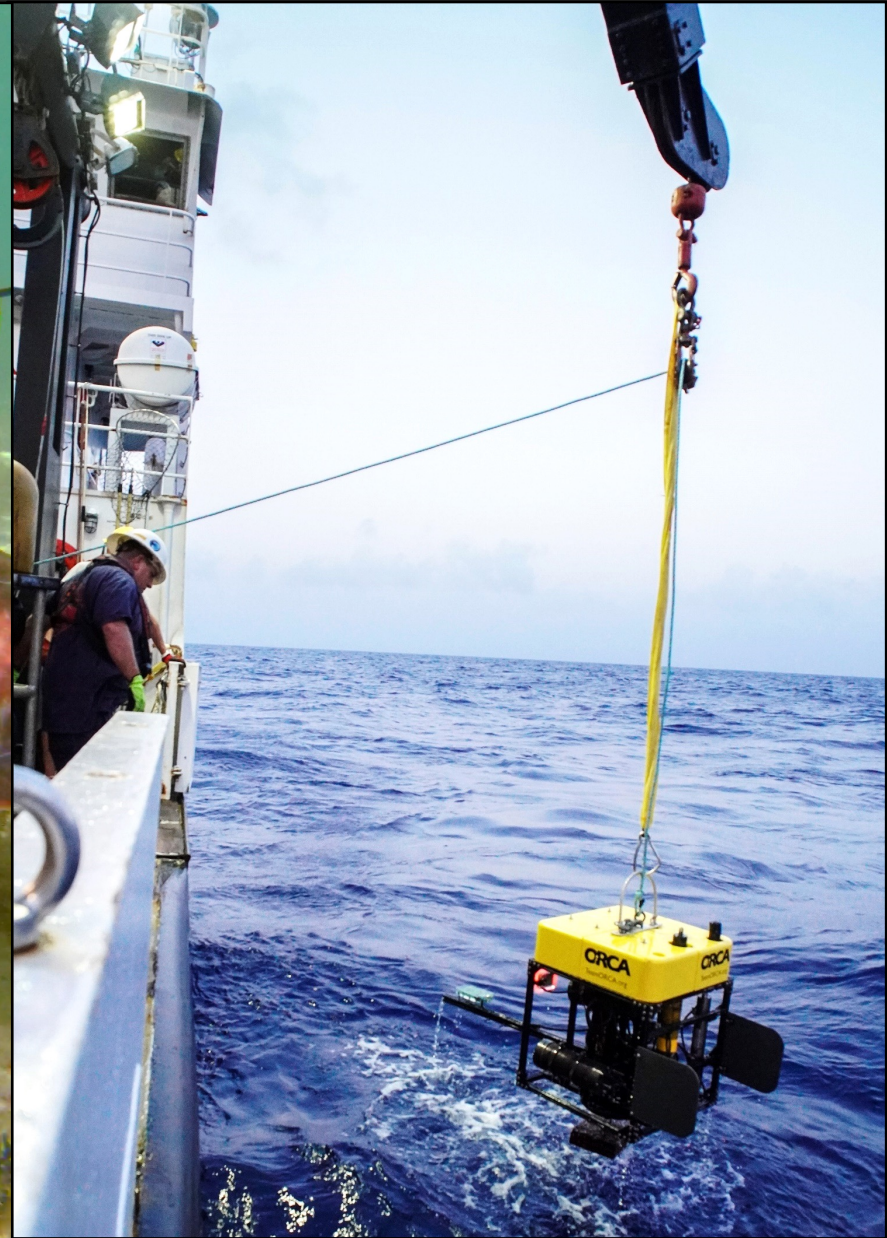
# Drones



# On Animals



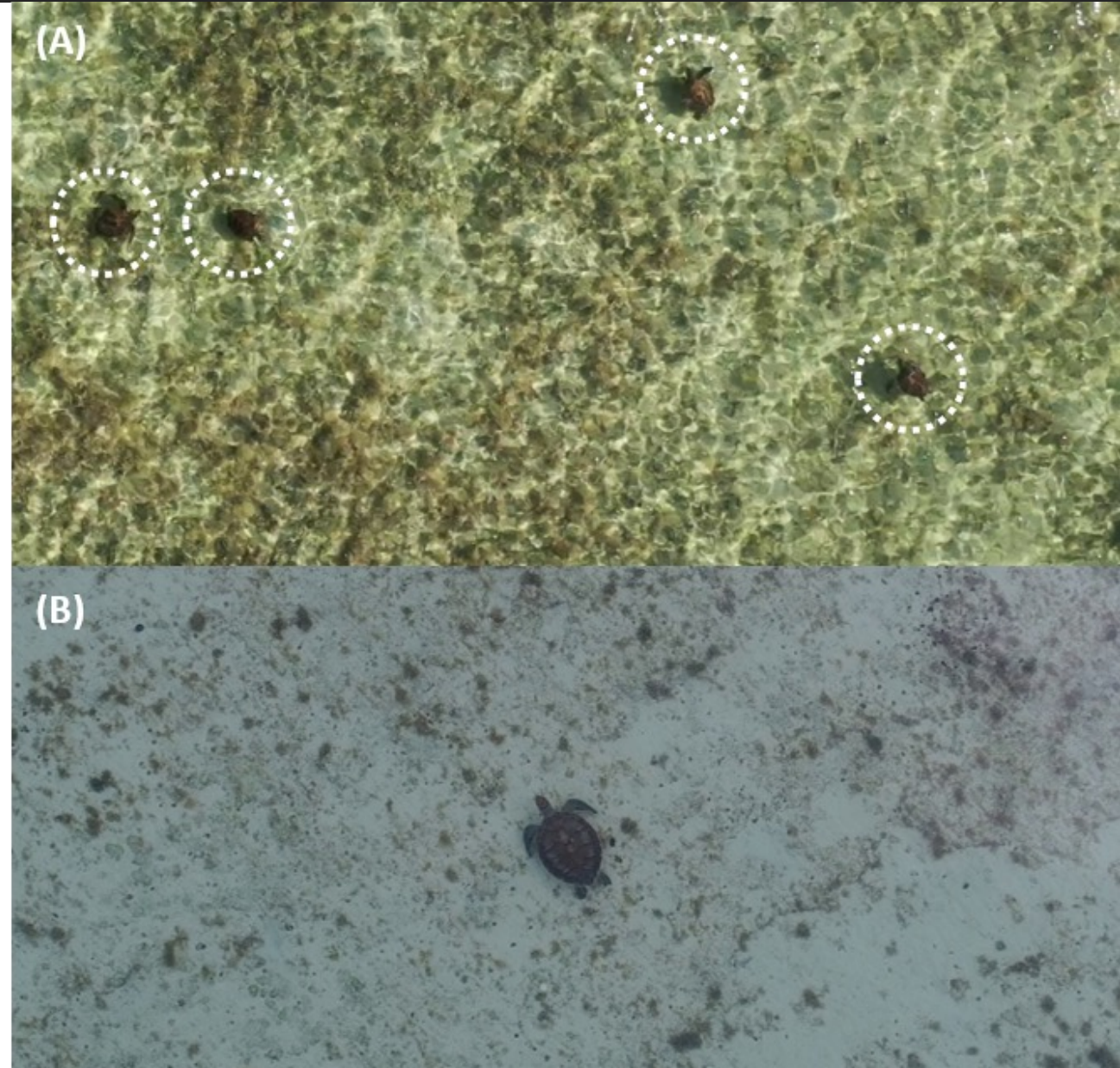
# Deep Sea





# Drones

- Unoccupied Aerial Vehicles.
- New tool for ecologists.
- Record wildlife from the air.
- Perfect for spotting animals in shallow water habitats.
- Assessing abundance or behavior.





# Drones



The Telegraph

NATIONAL  
GEOGRAPHIC





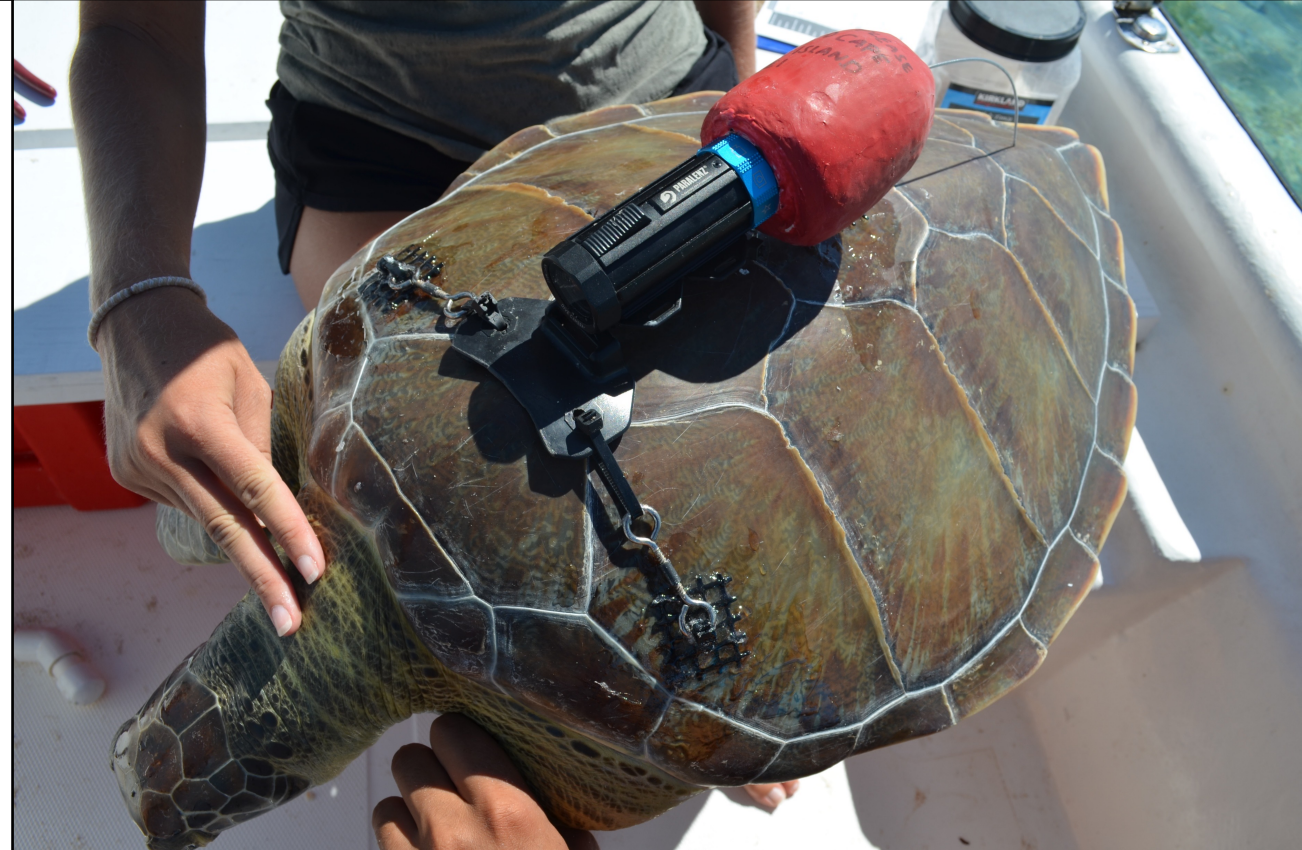
# Animal-Borne Cameras

- GoPro-style head mounts for turtles.
- 4k diving cameras.
- What it is like to swim through the oceans like a sea turtle?

FINDING OUR  
**WAY**



Cape  
Eleuthera  
Institute





# Seeing Through A Turtle's Eyes

- Seeing what a sea turtle sees reveals how they interact with their environment.
- Finding food / shelter?
- Do turtles interact with other turtles? And why?





# Animal-Borne



INDEPENDENT

60

SECOND

DOCS

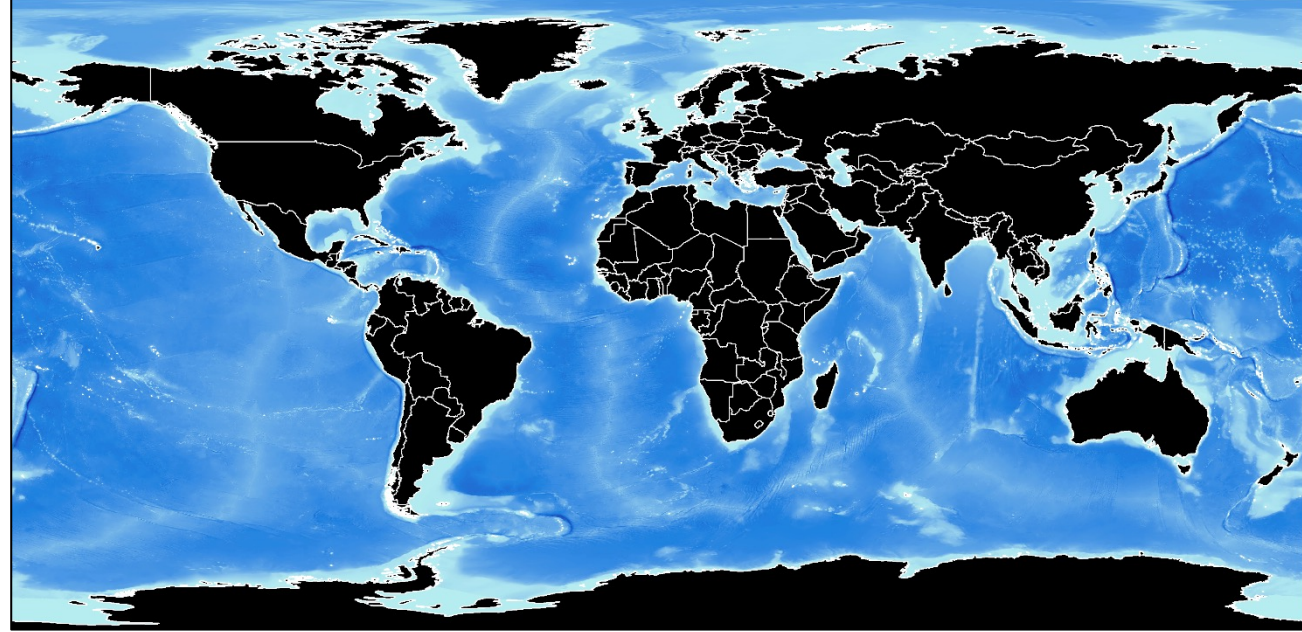


GREAT BIG STORY



# Deep Sea

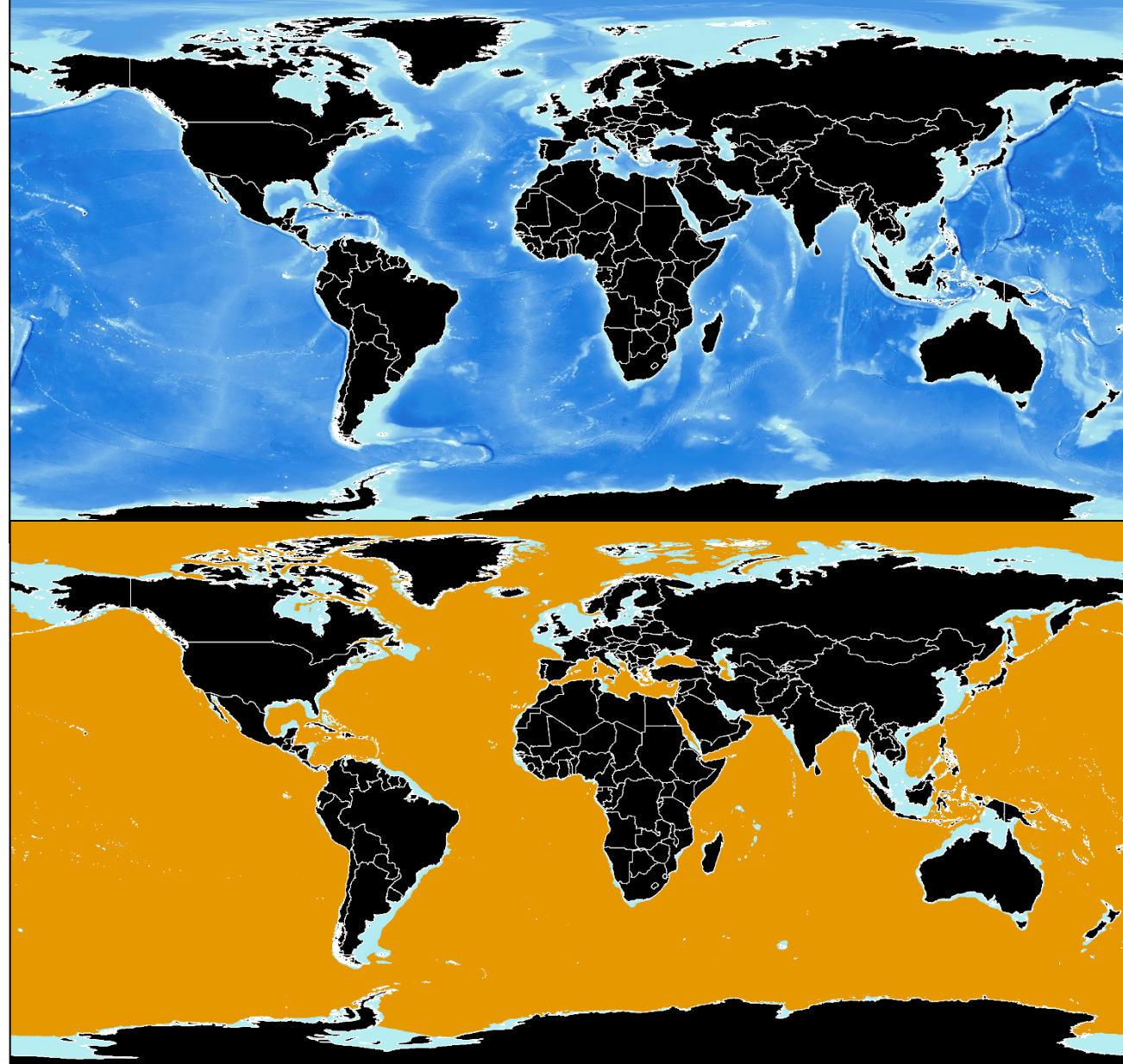
- The Earth's surface is 71 % water.
- ~ 93 % is deeper than 200 m.
- Over half the planet is deep sea!
- Little explored, little understood.





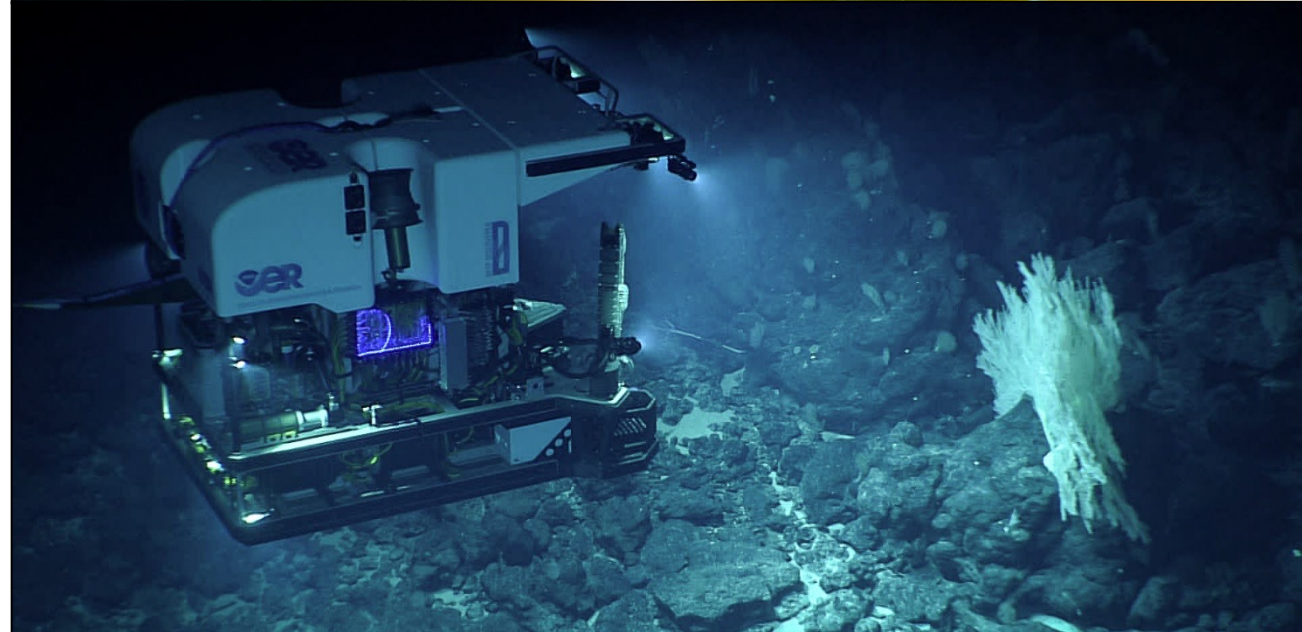
# Deep Sea

- The Earth's surface is 71 % water.
- ~ 93 % is deeper than 200 m.
- Over half the planet is deep sea!
- Little explored, little understood.



# Delving Into The Deep

- Pressure increases with depth.
- 1 atmosphere per 10 meters.
- Exploring the deep needs technology.
- Submersibles / submarines / ROVs.





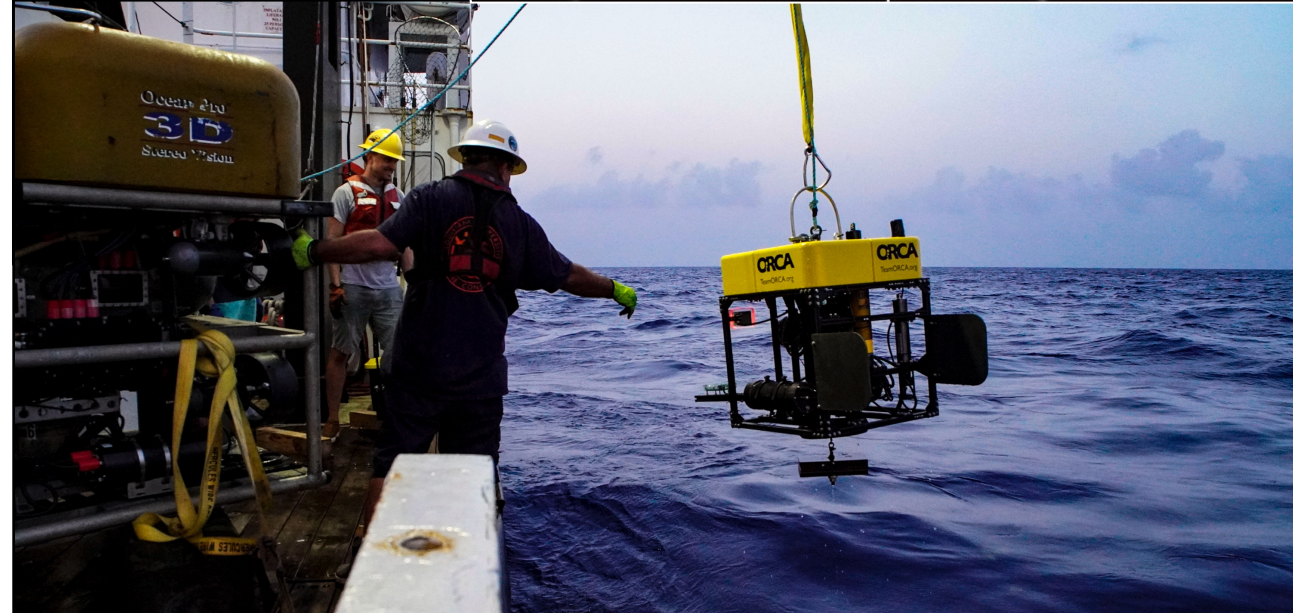
# Into Darkness...

- Sunlight decreases with depth.
- We need lights to see.
- Evolved in low light conditions.
- Maybe they see us before we see them?



# Eyes In The Sea

- Dr. Edith Widder
- “Stealth Camera” – Medusa
- Far red illuminators.
- No moving parts.
- Bioluminescence mimicking lure.





**Stunning giant squid captured on video in US waters for first time**

**RYAN W. MILLER** | USA TODAY

ENCUENTRO INSÓLITO

## Graban por primera vez un calamar gigante en el Golfo de México

• Este cefalópodo, que vive en las profundidades del océano, es esquivo a cualquier contacto pero en esta ocasión se acerca y juega con una cámara subacuática

SCIENCE

## Giant Squid Caught On Video In Gulf Of Mexico For First Time Ever

"The old maps often showed serpents at the edge, with the warning 'here be monsters.' However, the 'monsters' are here, in our own backyard."

By Ryan Grenoble

## Giant squid with blue blood and three hearts captured on video for first time in US waters

Sea creature measuring at least 3m has largest eye of any known animal and beak that rips flesh

## Giant squid filmed attacking a lure 750 metres under the surface of the Gulf of Mexico

Posted Mon 24 Jun 2019 at 3:00am, updated Mon 24 Jun 2019 at 3:24am

## Giant squid seen in Gulf of Mexico for the first time ever

## Graban por primera vez a un calamar gigante en el Golfo de México

• El calamar gigante, habitualmente esquivo a cualquier clase de encuentro, se aproximó cauteloso a la cámara subacuática, que llegó finalmente a palpar con sus tentáculos

## Rare giant squid filmed for the first time hunting pray 2,500ft under the sea - watch

A GIANT SQUID on the prowl has finally been caught on camera in the Gulf of Mexico, thanks to a little bit of luck and trickery.

The New York Times

# *Giant Squid Reappears on Video, This Time in U.S. Waters*

Seven years after scientists caught the elusive deep-sea cephalopod on video, they saw another. Then lightning struck a third time.

# #1 – Global Outreach Needs Global Communication

- Science shared in a bubble, stays within that bubble.
- Most people don't read scientific journals!
- Social media, blogs, podcast, etc...
- Reach the audience your work deserves!





# #2 – Emotional Connection Promotes Engagement

- Science is commonly communicated in terms of statistics and facts.
- An emotional platform can provide the engagement to communicate these facts.
- E.g. turtles as a platform for ocean plastic.
- E.g. giant squid as a platform for deep-sea.

## Science Plastic waste inputs from land into the ocean

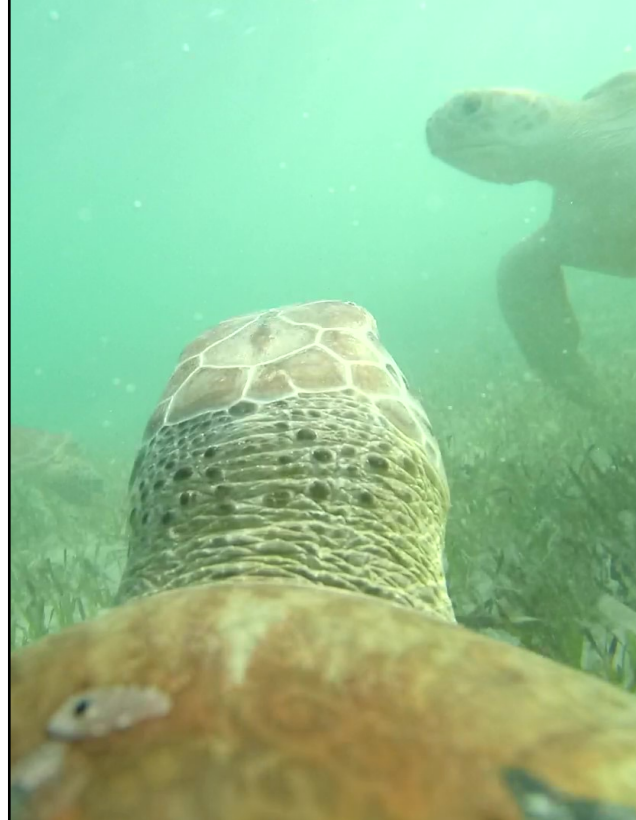
Jenna R. Jambeck,<sup>1\*</sup> Roland Geyer,<sup>2</sup> Chris Wilcox,<sup>3</sup> Theodore R. Siegler,<sup>4</sup>  
Miriam Perryman,<sup>1</sup> Anthony Andrady,<sup>5</sup> Ramani Narayan,<sup>6</sup> Kara Lavender Law<sup>7</sup>

of land-based plastic waste entering the ocean. We calculate that 275 million metric tons (MT) of plastic waste was generated in 192 coastal countries in 2010, with 4.8 to 12.7 million MT entering the ocean. Population size and the quality of waste management



# #3 – Positivity Is As Powerful As Negativity

- Conservation stories are overwhelmingly negative.
- Negative stories can be highly effective.
- “Apocalypse ” fatigue.
- Positive stories can be just as effective.





# #4 – Promote Individual Action

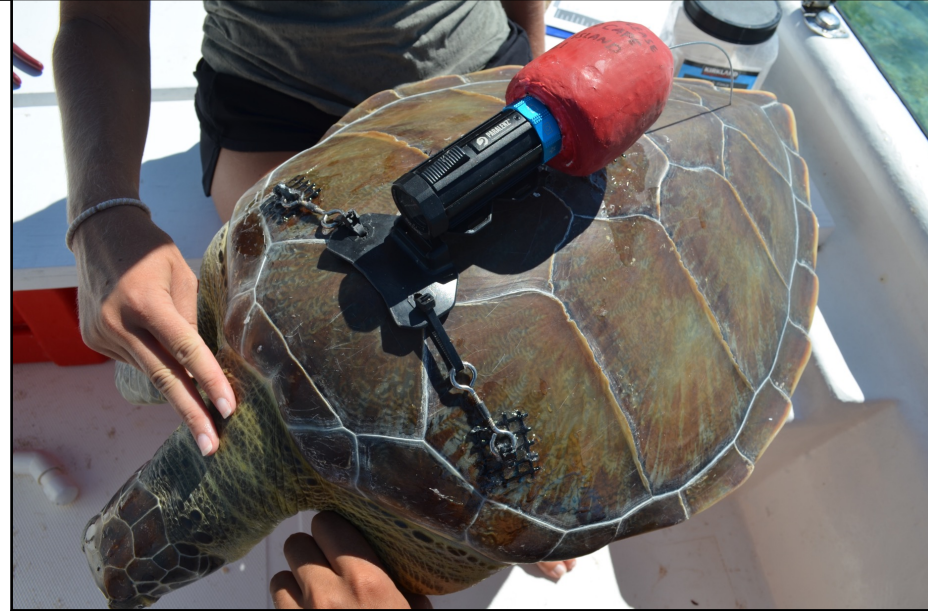
- The success of the straw video lied in individual agency.
- One less plastic straw doesn't save the ocean, but it's a step in the right direction.
- What about indirect effects?





# #5 – You Have Everything You Need

- My story focused on marine biology.
- (Almost) Everyone now has a smart phone with a camera.
- Technology put the power to change the world in your pocket.
- How you will use your story to change the world?





# Acknowledgements



VICTORINOX



NELSON  
MANDELA  
UNIVERSITY



# Thank you! Questions?



nathanjackrobinson@gmail.com



wild.blue.science



wild.blue.science