



# **The Untold Story of Sharks with Jess Cramp**

## STUDENT PRESENTATION STUDY GUIDE

Werklund  
Centre





# Meet the Explorer



Dr. Jess Cramp is a shark researcher who specializes in conservation policy and engaging communities in the management of their ocean. Jess co-championed a grassroots campaign that resulted in the Cook Islands Shark Sanctuary in 2012, an area exceeding 770,000 square miles. Jess has since advised communities, national governments and international organizations on conservation policy, led marine research expeditions through various island nations, and mentored local youth interested in science. She is the founder and executive director of Sharks Pacific, a non-profit organization that conducts research, outreach, and advocacy throughout the Pacific Islands region. Her work focuses on improving fisheries management, human-wildlife conflict prevention, community empowerment, and the development of policies that consider people and the environment in equal measure.

## Jess Cramp Resources

- » Instagram [@jessandwater](#)
- » [Sharks Pacific](#)



## Turning Science into Action

Jess works for **real change, not just information**. She uses data to support conservation, works with governments, organizations and individuals, and codesigns policy that protect sharks and rays. Finally, she measures whether those rules are actually working.

Her work has:

- Helped create one of the **largest shark sanctuaries** in the world (Sharks Pacific)
- Evaluated whether protections are actually effective (National Geographic)
- Advised governments and communities on conservation policy (Sharks Pacific)
- Contributed to global evidence that good protections help shark populations

### Sharks Pacific

[Sharks Pacific](#) was created to fill gaps in shark research, outreach, and policy while working [alongside local people](#). To expand their impact and reach, Sharks Pacific communicates culturally-sensitive, scientifically-accurate, inspiring stories from the field. Jess Cramp's work focuses on understanding sharks and rays so they can be protected. Her work has the power to elevate humanity by not only training the next generation and protecting key species in the ocean, but also by telling the honest stories of the people who depend on it.

Her research helps us:

- Learn which species live in an area (baseline)
- Notice patterns in animal behaviour
- Understand how humans and sharks share space (for example, when sharks take fish from fishing lines)







# IT'S SHOWTIME

## The Show

### Jess Cramp: The Untold Story of Sharks

March 9, 2026 at 10:15 am

Jack Singer Concert Hall at Werklund Centre

## About the Show

Sharks have roamed the planet's waters since before the dinosaurs and have evolved into more than 500 species. But only recently have we begun to understand their lives and how our actions can threaten their survival. Fifty years after *Jaws* shocked audiences in theatres, Dr. Jess Cramp taps into the National Geographic archives to discover the work of 20th-century women leading shark science and storytelling before she dives into her own cutting-edge research and conservation. Swim alongside her under the vibrant waters of the South Pacific to find out what it truly means to save sharks.

## Before the Show

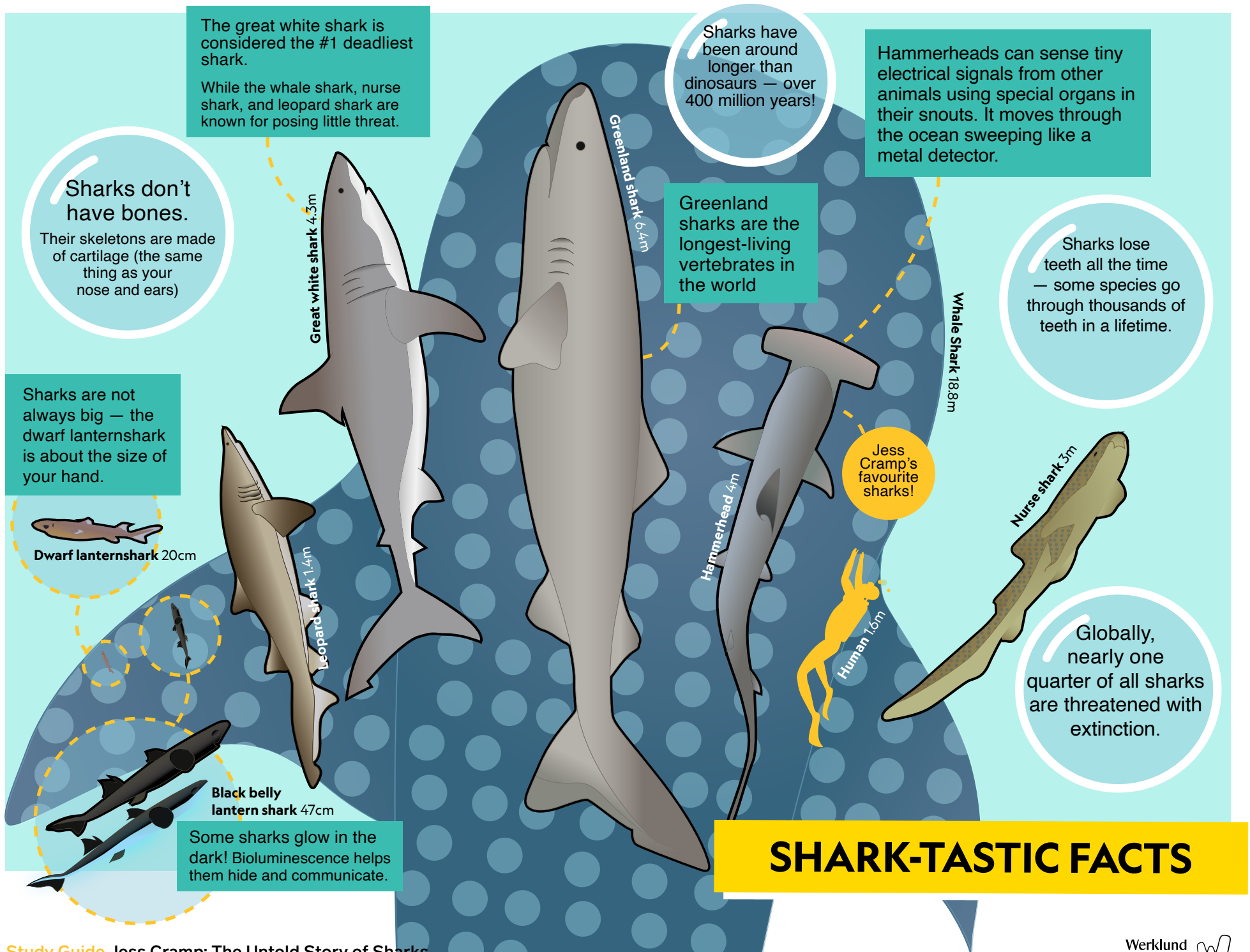
### Group Discussion

- How do human actions affect species and ocean habitats?
- What might happen if scientists only collect data but never use it to influence policy?
- How is climate change affecting the health of oceans and ecosystems?
- Why is having a baseline of sharks important?

## After the Show

### Discussion Questions

- What baselines do scientists study in Alberta's ecosystems?
- What are Alberta's keystone species?
- What actions can we take locally that will have a positive impact on our oceans?



### Mating & Fertilization

Adults are largely solitary, open-ocean predators that gather in specific, deep-water locations during the early summer months to find a mate.

### Adulthood & Reproduction:

Adults may live 36 years, but their lifespan in the wild is often shorter due to bycatch (unintentional capture by fishing operations). The danger posed by fishing operations paired with their slow reproduction rate has led to oceanic whitetip sharks being Critically Endangered.

### Gestation

A 10-12 month period where embryos develop inside the mother. Oceanic whitetip sharks are viviparous. This means that the pups grow inside the female shark.

### Growth & Maturation

Pups grow quickly, with females reaching sexual maturity around 6-9 years old, while males mature earlier.

## SHARK CYCLE

### LIFECYCLE OF WHITETIP SHARKS

In the Pacific Ocean, several shark species act as keystone species by maintaining the delicate balance of diverse marine environments. Their presence prevents any single species from dominating the food web, which protects habitats like coral reefs and seagrass meadows. Sharks are crucial for ocean health as they regulate prey, maintain food web balance, and promote biodiversity by preying on weaker animals, preventing overpopulation and disease spread in marine ecosystems.

### Birth

Females give birth to litters of 1-15 live pups

### Pups

Born fully independent, and though much smaller than their parents (60-79 cm in length) they are large enough to avoid smaller predators and be fully capable predators.



# WHY DOES DATA MATTER?

## HOW DO SCIENTISTS CREATE A BASELINE?

Sharks Pacific is conducting the first shark research and trying to create baseline data, meaning scientists want to know which species are where. These sharks are currently overfished; Dr Jess Cramp is hoping the data will help design better policies to protect them.

A **baseline** is the first set of information scientists collect and help scientists:

- Understand what an area or species is like right now
- Track changes over time
- See if conservation actions are working

Source: [Sharks4Kids](#)

## LOCAL CONNECTION

Just as Jess Cramp studies shark lifecycles to protect ocean ecosystems, Alberta scientists collect data to protect the different ecosystems across the province.

Some methods they use are:

- **Fish tagging** in rivers and lakes
- **Camera traps** for wildlife
- **Satellite tracking** for birds
- **Water-quality sensors** in rivers, lakes, and reservoir



## INVESTIGATE

Just like Jess Cramp's work supports ocean policies, **local data supports provincial and national decisions.** Data collected in Alberta helps:

- Set fishing limits
- Protect habitats
- Decide where development can happen
- Measure whether conservation efforts are working

## RESOURCES

- » [Ducks Unlimited. Wetland Classification System Field Guide \[Youtube\]](#)
- » [Jess Cramp | My Life as a Shark Scientist \[Youtube\]](#)
- » [Shark Researcher Shares Experience at La Jolla Music Society Speaker Series \[Youtube\]](#)
- » [Sharks4 Kids Meet Marine Conservationist Jess Cramp \[website\]](#)
- » [Bow Habitat Station \[website\]](#)





# BE A BACKYARD SCIENTIST

## ACTION

Exploration starts with curiosity, you can't tell if something is changing unless you know what it looked like before.

You can:

- Observe local wildlife
- Track seasonal changes
- Interview Elders or community members
- Collect simple data in schoolyards or nearby parks

## INDIGENOUS CONNECTION

Jess Cramp learns from coastal communities in the Pacific. Scientists in Alberta learn from First Nations, Métis, and Inuit knowledge holders.

- Knowledge of fish migrations, spawning times, and water changes
- Long histories with rivers like the Bow, North Saskatchewan, Athabasca, Hay and Peace rivers
- Stories and teachings passed over generations that describe environmental change

## EXPLORE

Jess Cramp studies how people and sharks share space. Explore the following local environment and ecosystems

- How fishing affects lakes and rivers
- How farming and cities affect water quality
- How dams change fish movement
- How climate change affects snowpack and river flow

## SCIENCE OR ART? (OR BOTH)



## MIA & ERIC

Mia & Eric are an interdisciplinary artist duo from Calgary. Their art practice includes work in visual art, performance, writing, multi-species ethnography, and public policy. They work in art that shares ideas and collaborations that focus on connecting communities and people with the landscapes and nature around them over years.

Mia & Eric's project 3 Woods asks people in 3 different forests to go into the woods and record a piece of their experience in writing, pictures, photos, videos, audio, or however they want.

[Learn more.](#)



# SHARK-TASTIC VOCAB

Shark	Sharks are fish, but their skeletons are made of cartilage, not bone like most fish.
Baseline	A starting point. It helps scientists compare what is happening now to what happens in the future.
Cephalofoils	The unique, wing-like, flattened head structure of a hammerhead shark.
Data	Information scientists collect to answer questions.
Abundance	How many of a species are in an area.
Ecosystem	All the living and non-living things in an environment and how they work together.
Conservation	Protecting nature so it can stay healthy for the future.
Traditional knowledge	Knowledge passed down through generations by people who live close to the land or sea.
Species	A group of animals or plants that are the same kind and can have babies together.
Apex Predator	An animal at the top of the food chain with no natural predators.
Camera Trap	A camera that takes pictures of animals when they pass by.
Overfished	When too many fish are caught and populations cannot recover.
Ecosystem	All the living and non-living things in an area and how they work together.
Policy	Rules or laws that help protect people, animals, and the environment.
Wetland	Land that is often wet and helps clean water and support wildlife.
Stewardship	Taking care of the environment and making responsible choices.
Evidence	Information or facts that support an idea.
Bioluminescence	When an animal can glow in the dark using its own light.
Viviparous species	Give birth to live young, unlike many fish.
Denticles	Toothlike structured skin that covers sharks.
Pups	Juvenile sharks.



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