

Adventures in Tasmanian Zoology



Dr David Hocking

Senior Curator of Vertebrate Zoology and Palaeontology
Tasmanian Museum and Art Gallery

About Me

Evolutionary Biologist

I study animal behaviour and anatomy to help explain how life on Earth evolved.

- PhD from Monash University where I studied feeding behaviour in seals and sea lions
- Postdoctoral research with Museums Victoria studying the evolution of filter feeding in baleen whales.
- Exhibition curator at Melbourne Museum studying Australia's marsupial megafauna.



“What is my favorite animal and why?”

The background of the image is a close-up, slightly blurred view of a white, fluffy animal, likely a dog, with its fur filling most of the frame. In the lower portion of the image, there are several large, dark blue feathers, possibly from a bird, which are also slightly out of focus. The overall lighting is soft and natural.

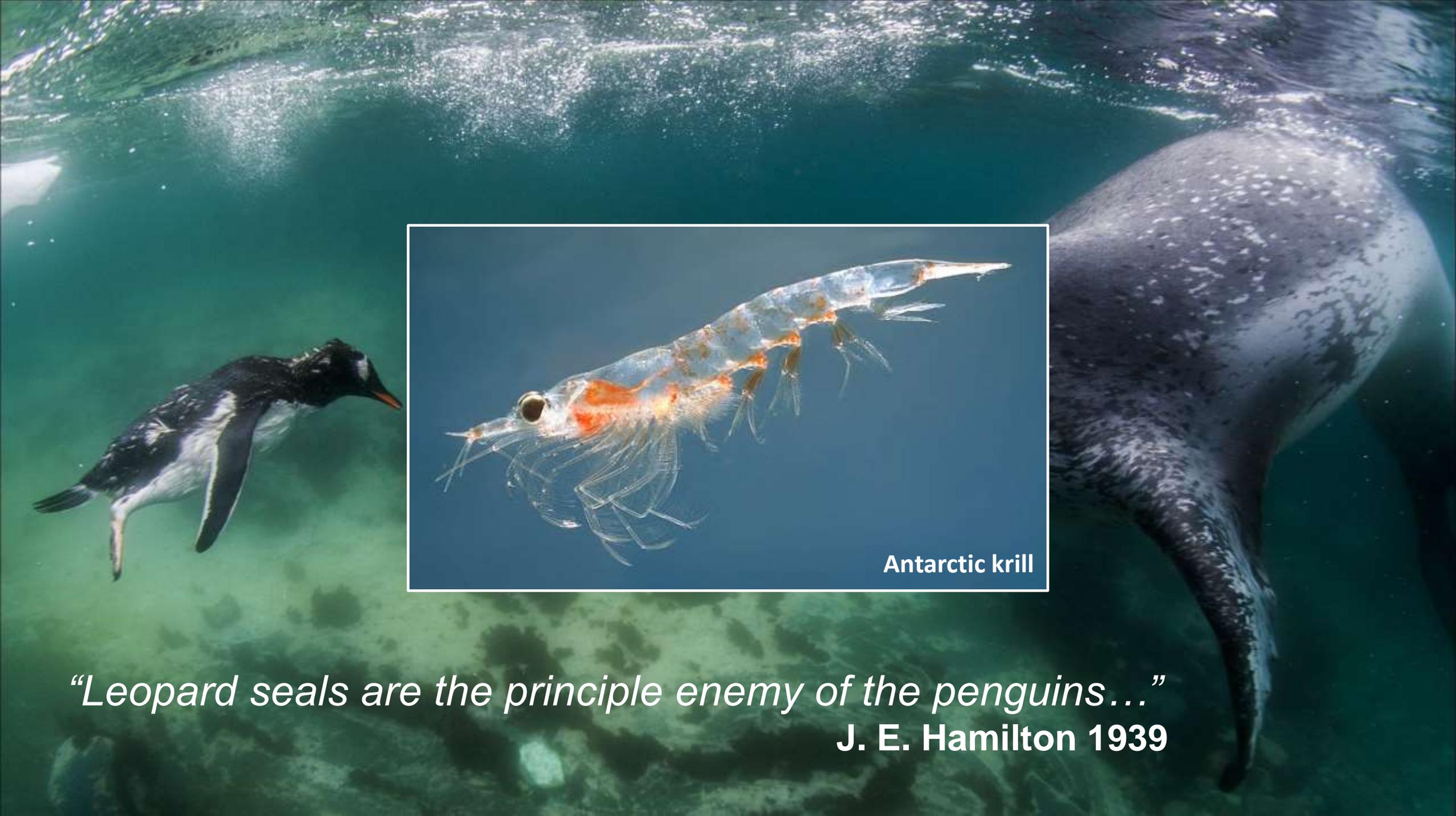
“What is my favorite animal **TO STUDY** and why?”

“What is my favorite animal *TO STUDY* and why?”

Photo by James Robbins

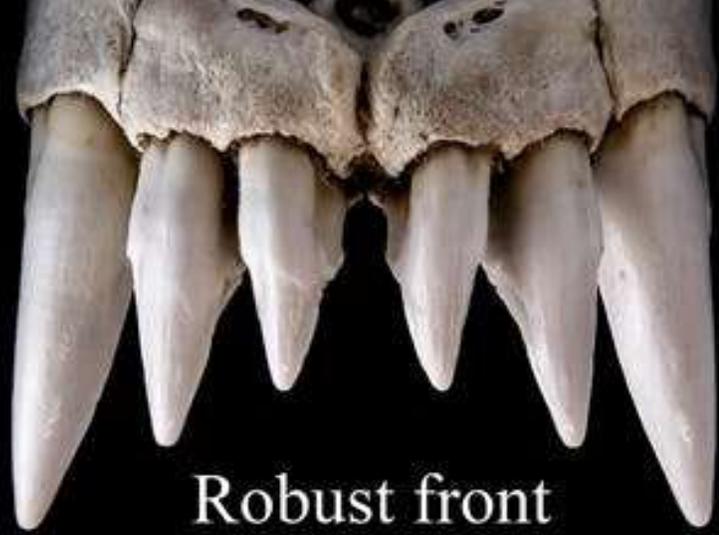


Antarctic leopard seal *Hydrurga leptonyx*



Antarctic krill

“Leopard seals are the principle enemy of the penguins...”
J. E. Hamilton 1939



Robust front
teeth for catching penguins



trident-shaped
cheek teeth for sieving krill





**Feeding strategies used by leopard seals
when targeting small and large prey**



Photo by Fiona Anderson

Polar bear paw



Harbour seal paw



Sea lion flipper

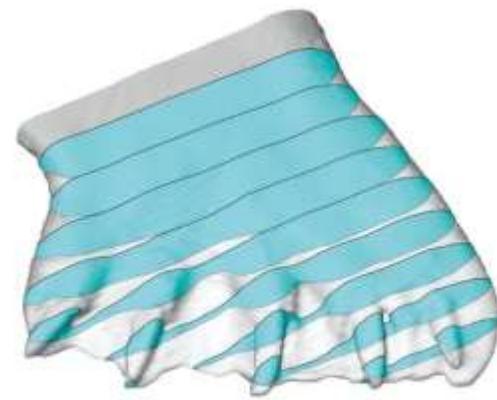




Grey seal



Ben Burville



irregular cross-section

Leopard seal



David Hocking

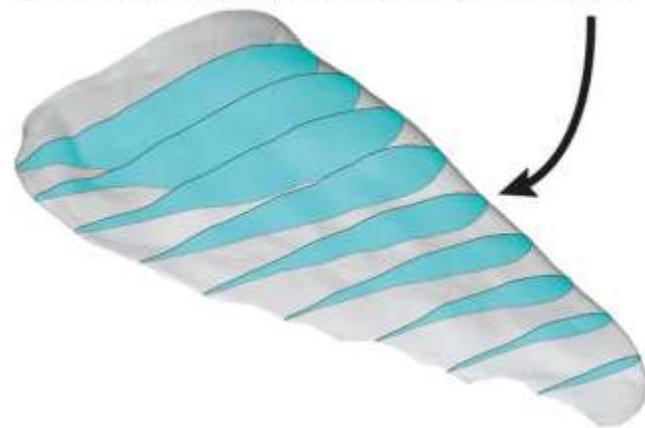


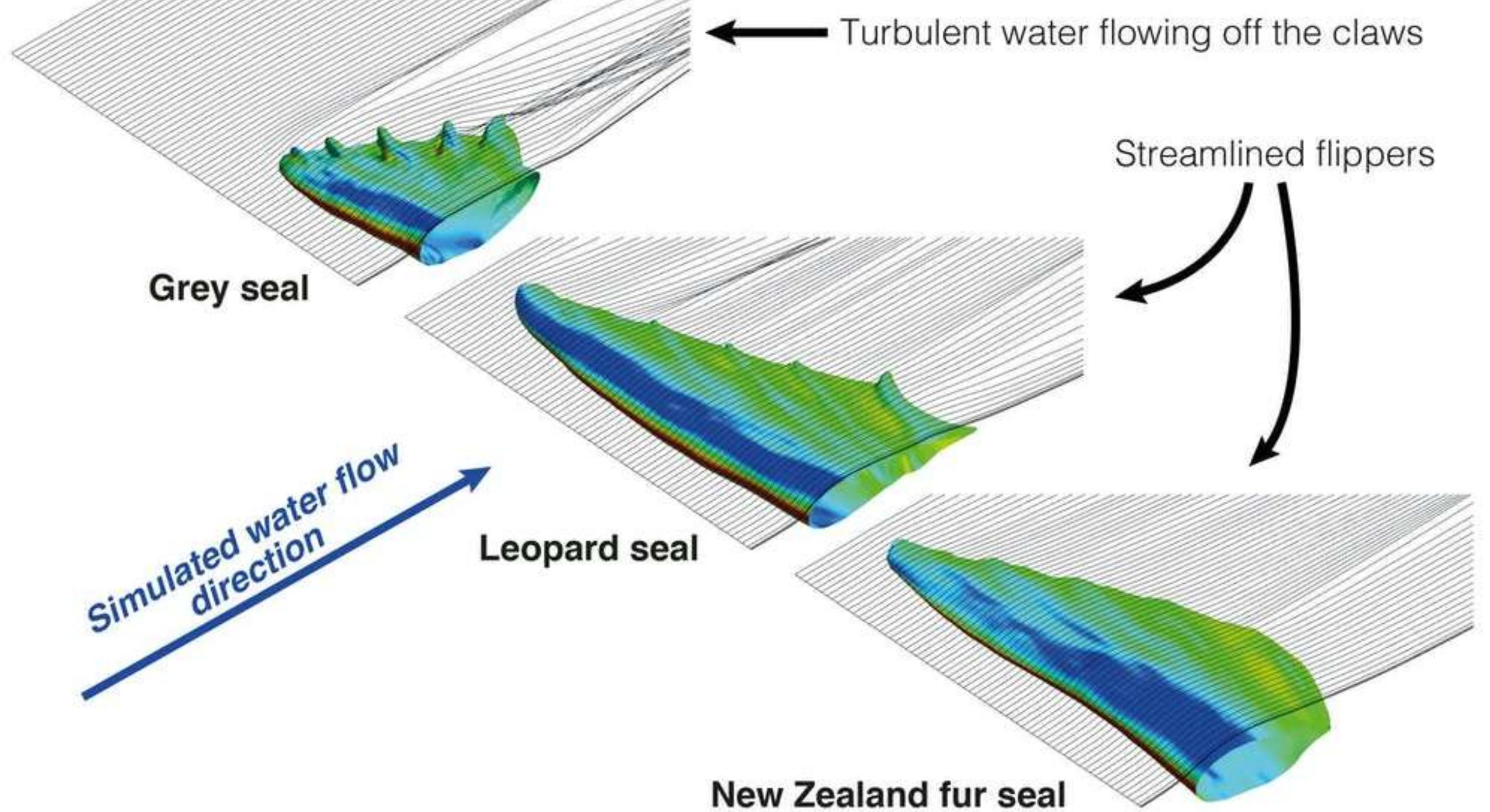
streamlined cross-sections

New Zealand fur seal



Robert Harcourt

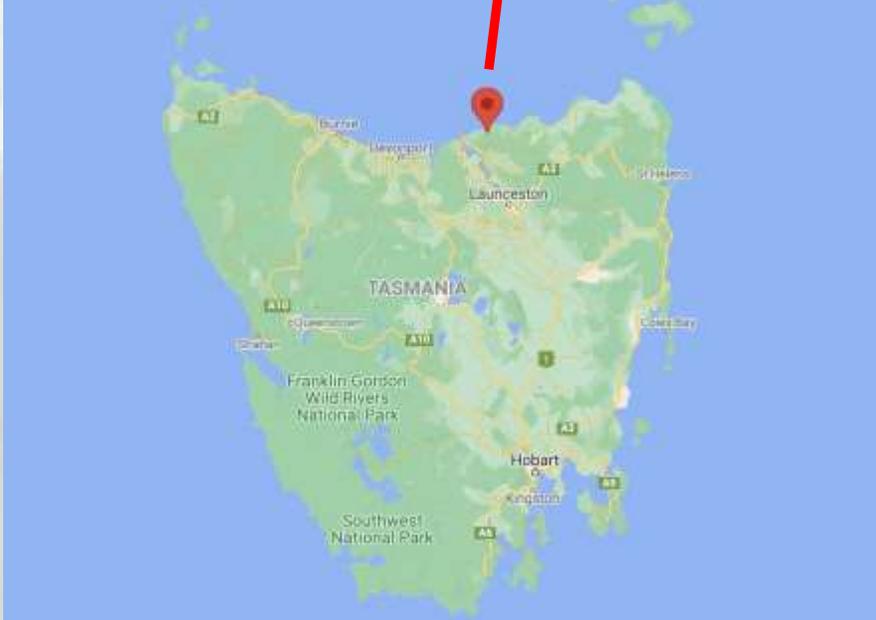




The background of the image is a close-up, slightly blurred photograph of a bird's wing and tail feathers. The feathers are primarily light brown and tan, with some darker brown and black feathers visible at the bottom. The lighting is soft, creating a natural and textured appearance.

What's happening in Vert Zoo at TMAG?

Stony Head Bush Blitz & TMAG Expedition of Discovery



Dr Judy Clarke and I at Stony Head ready to survey ALL the vertebrate wildlife!



Geology of Stony Head



Seabirds from Stony Head



Little black comorant
Phalacrocora sulcirostris



Masked lapwing
Vanellus miles



Pied oystercatcher
Haematopus longirostris



Tern ??



White-faced heron
Egretta novaehollandiae



Little pied comorant
Microcarbo melanoleucos



Pacific gull
Larus pacificus

Raptors of Stony Head



Wedge-tailed eagle
Aquila audax



White-bellied sea eagle
Accipiter novaehollandiae



Brown falcon
Falco berigora

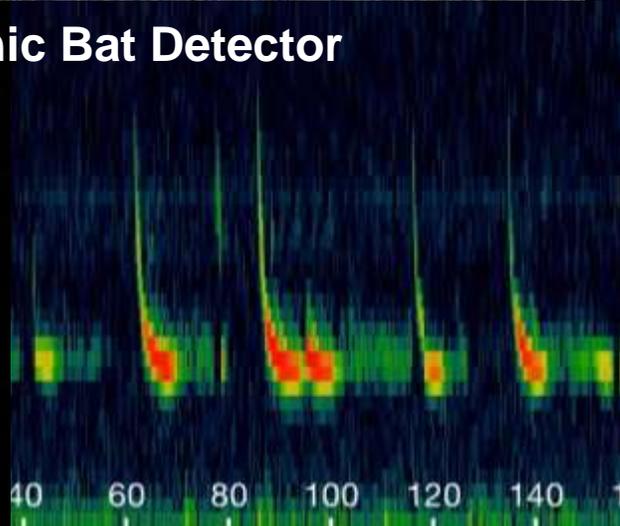
Recording Birdsong



Camera traps



Ultrasonic Bat Detector



An unexpected white-footed dunnart?



Trackway identification



Trackway identification



Devil paw



Devil print in soft mud



Plaster cast of devil track



Common wombat hind foot



Small macropod
(e.g. wallaby joey or pademelon)



cm
Wombat Scat
FLINDERS UNIVERSITY





Tasmanian Devil Scat



A game of cat and mouse...



Feral Cat tracks patrolling the beach



Rakali (water rat) tracks



📷 SAVE VIEW



SAVE VIEW



Common Wombat

? HD

What have we been up to since?

A.K.A. “My first 6 months at TMAG”

3D printing Hobart's Triassic terror *Tasmaniosaurus!*



3D printed reconstruction of the skeleton of
Tasmaniosaurus printed by Lucy Costello at
Monash University



MONASH
University

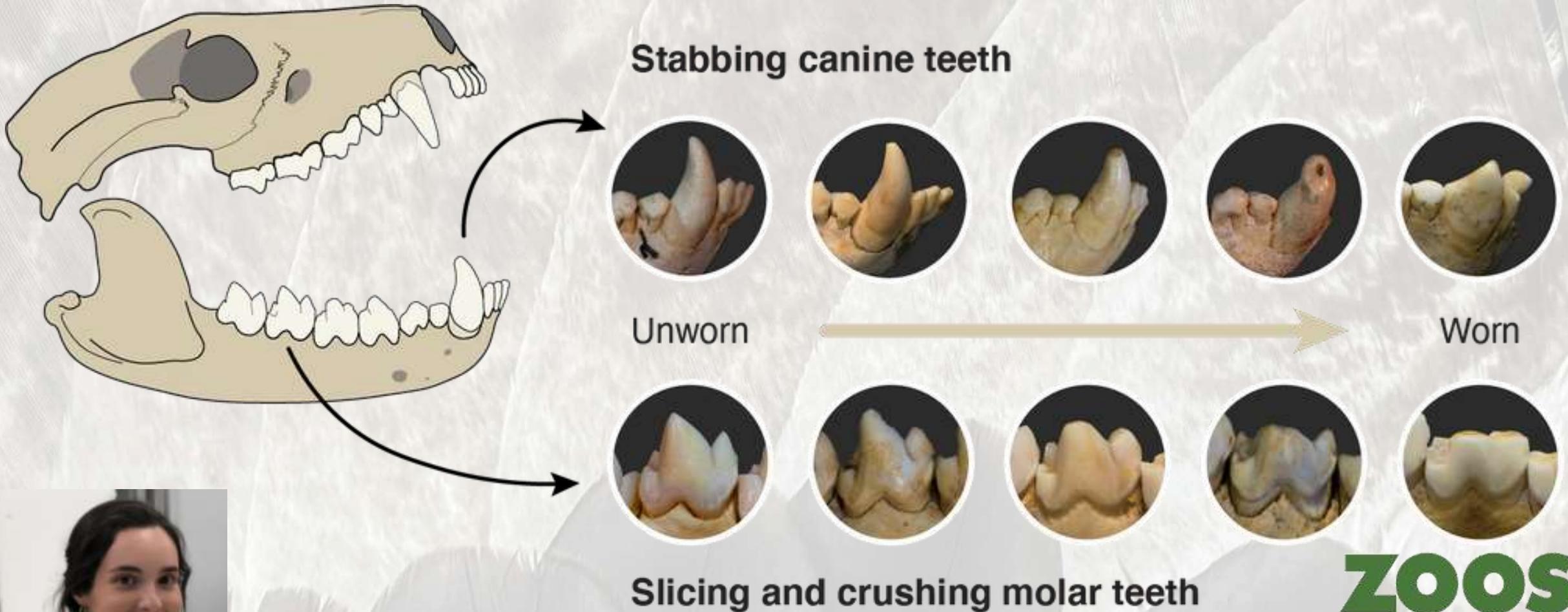


NOW ON DISPLAY!





Research with TMAG Specimens



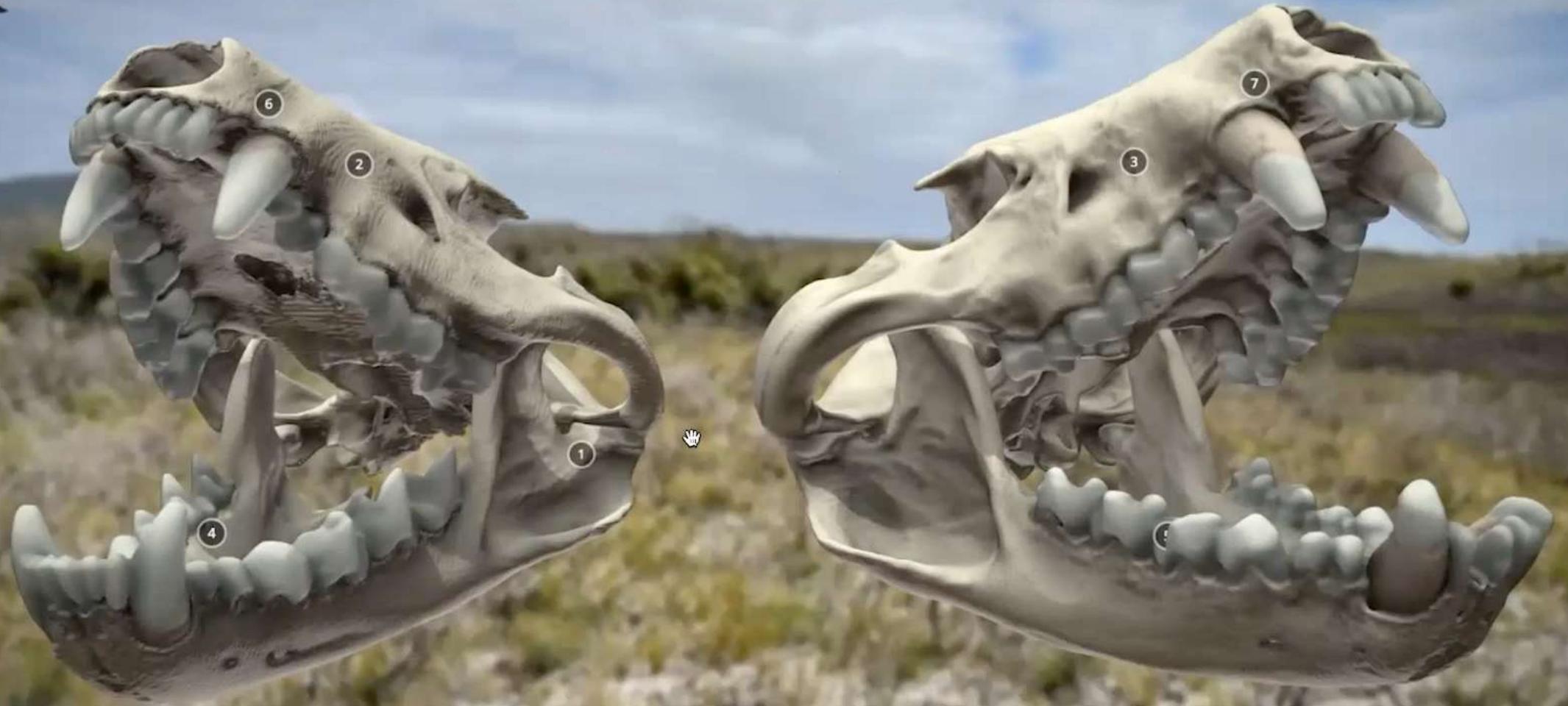
Tahlia Pollock et al. 2020. Wearing the devil down: Rate of tooth wear varies between wild and captive Tasmanian devils. *Zoo Biology*. DOI: 10.1002/zoo.21632

ZOOS
VICTORIA
Fighting Extinction

 **MONASH**
University

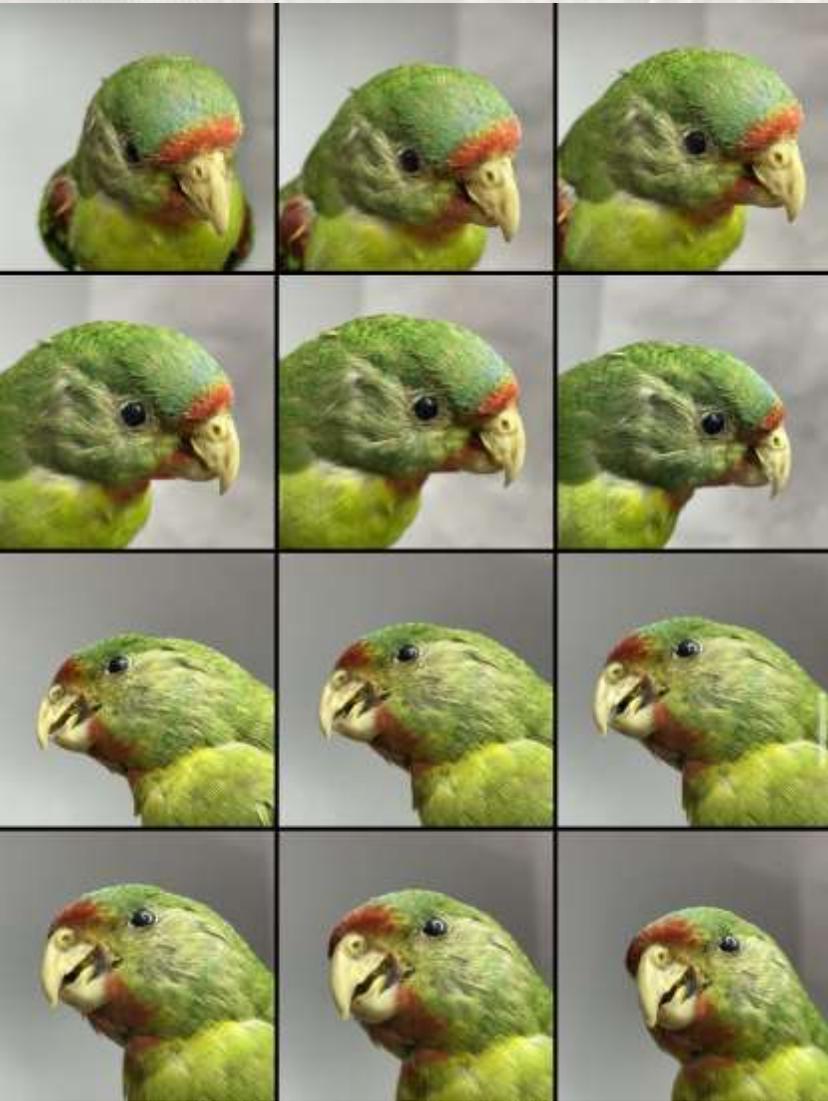


Tasmanian devil (*Sarcophilus harrisi*)





3D Wildlife ID Guide



Hundreds of photographs were combined via Photogrammetry to create this 3D model of a swift parrot

Tasmania's Swamp Monster

Zygomaturus trilobus!



3D surface scan of the skull of TMAG's *Zygomaturus* skeleton created by Ben Myers (Thinglab)

Acquisitions and Donations

Evidence of Tasmania's lost elephant seals:



Photo by Shelley Graham

Elephant seal tooth found by Shaun McKay on Bruny Island.

Seal born on King Island in 2015

Acquisitions and Donations

Ancient beaked whales from the Southern Ocean:



Partial fossil skull from a beaked whale discovered by long-line fishers off Heard Island

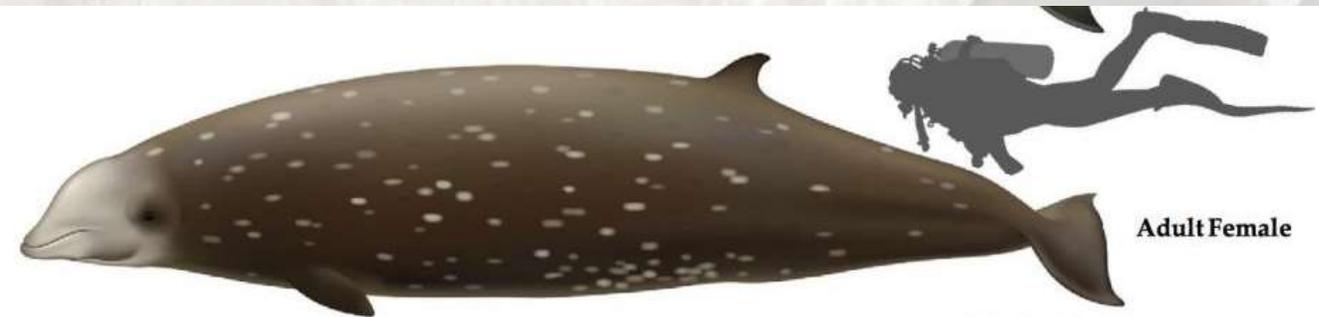


Illustration of living Cuvier's Beaked whale





TMAG Presents

The Pirates Bay Great White Shark

Dr. David Hocking
Senior Curator of Vertebrate Zoology & Palaeontology



Background

In 1975 shark hysteria captured global attention with the release of JAWS.



JAWS



Background

In 1975 shark hysteria captured global attention with the release of JAWS.

In 1981 (6 years later) local fisherman Hank Lange set out from **Pirates Bay** in his 4 m runabout boat to discover he had captured a **3.4 m long Great White Shark!**

Towed back to Pirates Bay to extract it from the net.



Pirates Bay, May 1981.

Picture: Co

Ocean “curiosity” displayed at Constitution Dock

“The shark’s carcass was exhibited outside the Mako fresh fish punt on Hobart’s waterfront where it drew curious crowds throughout the weekend”



Constitution Dock Hobart, May 1981.

Picture: The Mercury

“Among Hobart’s fish vendors, such displays of unusual marine life were a time honored device for drawing the interest and potential custom of passers-by to their operations.”

White Pointer South, Second Edition by Chris Black

Mr. Tom Jenkins

- Award winning game fisherman.
- Founding member of the Tuna Club of Tasmania

“Dissatisfied with the traditional method of creating plaster moulds of trophy fish, Tom pioneered and perfected the casting of fibreglass moulds from his subjects.”

“Among the many astonishing creatures from local waters immortalised in three dimensions by Tom Jenkins were giant southern bluefin tuna, mako sharks, blue and black marlin, broadbill swordfish, even a newborn dolphin and an immature minke whale.”

White Pointer South, Second edition by Chris Black



Original fiberglass mould of the Pirates Bay Shark:





SHARK BITE MENU

ITEM	PRICE
SHARK BITE SANDWICH	7.99
SHARK BITE BURGER	8.99
SHARK BITE TACO	6.99
SHARK BITE PIZZA	10.99
SHARK BITE PASTA	9.99
SHARK BITE SALAD	7.99
SHARK BITE SMOOTHIE	4.99
SHARK BITE MILKSHAKE	5.99
SHARK BITE ICE CREAM	3.99
SHARK BITE SODA	2.99
SHARK BITE WATER	1.99
SHARK BITE TEA	2.99
SHARK BITE COFFEE	3.99
SHARK BITE JUICE	4.99
SHARK BITE MILK	3.99
SHARK BITE BUTTER	2.99
SHARK BITE OIL	2.99
SHARK BITE VINEGAR	2.99
SHARK BITE SALT	2.99
SHARK BITE PEPPER	2.99
SHARK BITE SPICE	2.99
SHARK BITE HERB	2.99
SHARK BITE GARLIC	2.99
SHARK BITE ONION	2.99
SHARK BITE POTATO	2.99
SHARK BITE CARROT	2.99
SHARK BITE CELERY	2.99
SHARK BITE BROCCOLI	2.99
SHARK BITE CAULIFLOWER	2.99
SHARK BITE SPINACH	2.99
SHARK BITE KALE	2.99
SHARK BITE CUCUMBER	2.99
SHARK BITE TOMATO	2.99
SHARK BITE PEPPER	2.99
SHARK BITE ONION	2.99
SHARK BITE GARLIC	2.99
SHARK BITE SPICE	2.99
SHARK BITE HERB	2.99
SHARK BITE GARLIC	2.99
SHARK BITE ONION	2.99
SHARK BITE SPICE	2.99
SHARK BITE HERB	2.99

SHARK BITE SANDWICH 7.99
SHARK BITE BURGER 8.99
SHARK BITE TACO 6.99
SHARK BITE PIZZA 10.99
SHARK BITE PASTA 9.99
SHARK BITE SALAD 7.99
SHARK BITE SMOOTHIE 4.99
SHARK BITE MILKSHAKE 5.99
SHARK BITE ICE CREAM 3.99
SHARK BITE SODA 2.99
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SHARK BITE HERB 2.99



SHIMMY



Casts made from this mould:

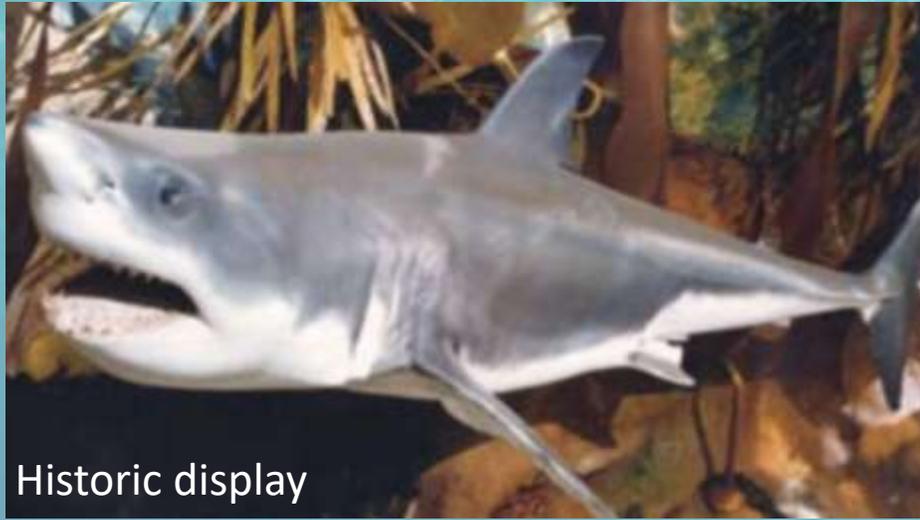


Original teeth
mould and cast:

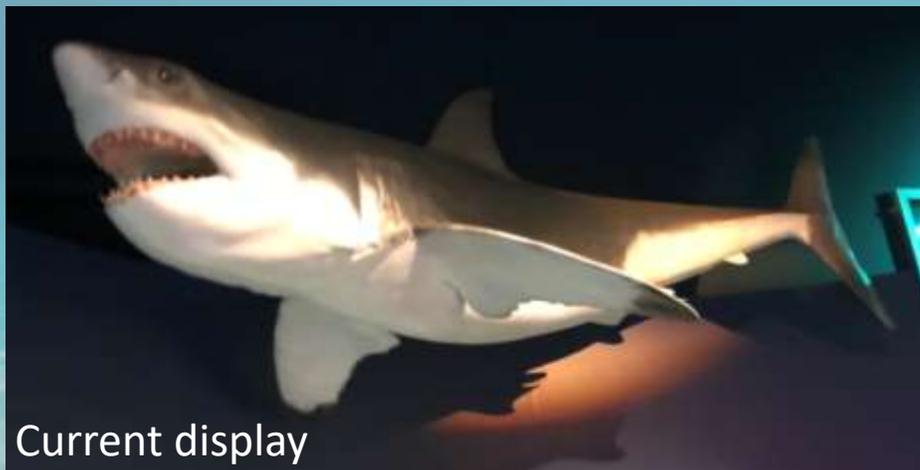


How to display a great white shark

Great white shark cast displayed at Melbourne Museum (also from Tasmania):



Historic display



Current display

Cast of Great white shark displayed in the foyer at Melbourne Museum alongside mounted fur seals:



“We’re gonna need a bigger camera!”

Modern Audience

IF JAWS WAS MADE...



IN 2021



Opportunity to present sharks as they really are...



An essential part of our ocean ecosystem!

The background of the slide features a close-up, low-angle shot of a white feathered bird, likely a parrot, with its wings partially spread. The feathers are predominantly white with some blue and green accents. The lighting is soft and natural, creating a serene and textured appearance. The text is centered over this background.

Any questions?