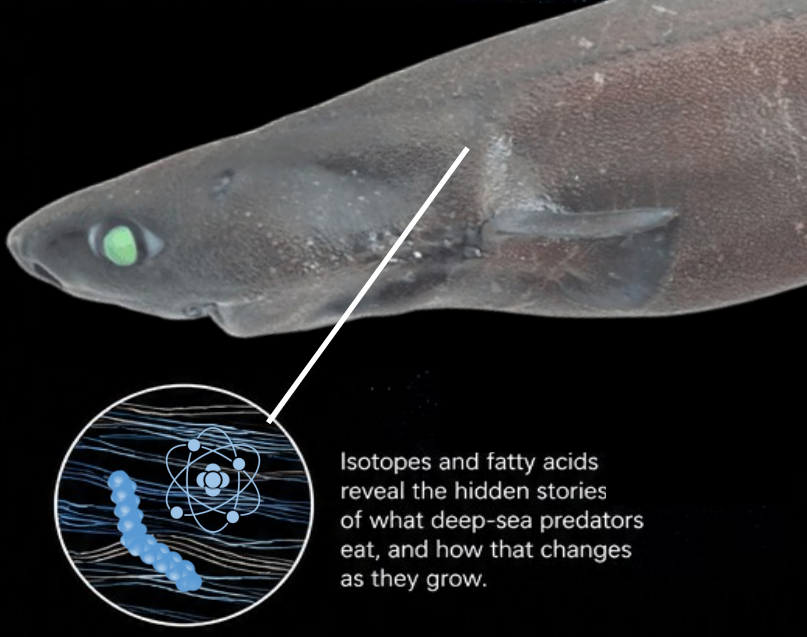
HONOURS PROJECT

ONTOGENETIC DIET SHIFTS

OF DEEP-SEA CHONDRICHTHYANS



Isotopes and fatty acids reveal the hidden stories of what deep-sea predators eat, and how that changes as they grow.

How do deep-sea sharks, skates and chimaeras change what they eat as they grow?

Join our lab to investigate life-stage dietary shifts using biochemical tools in the deep seas of Aotearoa New Zealand.

WHY DOES THIS MATTER?

Ontogenetic diet shifts are well established for many coastal sharks and rays.

In the deep sea, predators and food webs function differently – with sparse prey, limited nutrients, and presumably a reliance on scavenging over active predation.

Understanding how deep-sea elasmobranchs change their diet through life is essential for accurate food web models and sustainable predator and prey biomass management.

ABOUT THE PROJECT

This lab-based Honours project will use biochemical tools (fatty acids and stable isotopes) to investigate ontogenetic shifts in feeding ecology of co-occurring deep-sea chondrichthyans.

You will work with samples collected from deep-sea surveys in Aotearoa New Zealand, analyse chemical signatures in the lab, and contribute to a project that advances our understanding of deep-sea ecosystems and their management.

FATTY ACIDS

STABLE ISOTOPES

FOCUS SPECIES – DEEP-SEA CHONDRICHTHYANS OF AOTEAROA NEW ZEALAND

LONGNOSE VELVET DOGFISH *Centroscymnus crepidater*

BAXTER'S LANTERN DOGFISH *Etmopterus granulosus*

PALE GHOST SHARK *Hydrolagus bemisi*

SHOVELNOSE SPINY DOGFISH *Deania calcea*

LIFE STAGE (ONTOGENY)

YOU WILL GAIN EXPERIENCE IN

- Biochemical techniques (fatty acids & stable isotopes)
- Data analysis and statistical skills
- Deep-sea ecology and ecosystem function
- Scientific writing and communication
- Working in a collaborative, supportive research team

YOU WILL

- Process and analyse tissue samples
- Quantify fatty acids and stable isotope ratios
- Interpret dietary shifts across life stages
- Expand understanding of deep-sea ecology

SUPERVISORS

Teah Burke

Chloe Roberts

Dr Lauren Meyer

Dr Brit Finucci

PASSIONATE ABOUT THE DEEP SEA?

Join our team to uncover how deep-sea predators use resources through their lives – and why it matters for the future of our oceans.

INTERESTED?

Send your CV and academic transcript to
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SOUTHERN SHARK ECOLOGY GROUP

Earth Sciences New Zealand

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