

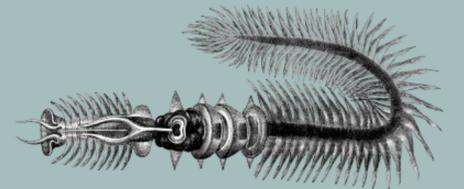
SPECIES OVERVIEW OF THE PARCHMENT WORM *CHAETOPTERUS* SP.

SIZE: TYPICALLY 15-25 CM IN LENGTH.

SHAPE: LONG, SEGMENTED, CYLINDRICAL BODY.

TUBE: CONSTRUCTS U-SHAPED TUBES OFTEN CAMOUFLAGED WITH SAND, SHELL AND ALGAE.

COLOUR: GENERALLY, PALE WITH A TRANSLUCENT APPEARANCE NEAR EACH OPENING.



INTRODUCTION

Chaetopterus sp., commonly known as 'parchment worms,' are named for the distinctive parchment-like tubes they construct and inhabit throughout their lives. In New Zealand, two species are identified: *Chaetopterus Chaetopterus-A* and *Chaetopterus Chaetopterus-B*, both of which are located in the Top of the South region. There remains some uncertainty regarding their impacts and whether these species are native to New Zealand or if they were introduced.



Chaetopterus bed in East Bay, Queen Charlotte Sound. Photo credit: Thomas Scott-Simmonds & Rob Davidson

HABITAT

Chaetopterus are found globally, inhabiting environments from intertidal zones to the deep sea. They prefer sandy or muddy substrates in shallow coastal waters. In New Zealand, *Chaetopterus* thrives in areas less than approximately 16 m deep, particularly in substrates composed of a mix of sand and broken shells. Higher concentrations are typically observed in calm waters with soft sediments, such as sheltered bays and harbours.

IMPACTS

- *Chaetopterus* enhances species richness and diversity by providing refugia and influencing larval settlement. However, their colonisation can also negatively impact native fauna.
- The species plays a crucial role in carbon, nutrient, and energy flow in the subtidal benthic community.
- Dense mats stabilise sediments and can potentially alter sediment dynamics and species composition.
- There is the potential for human-mediated spread through hull fouling, fishing disturbance and transfer of aquaculture stock and equipment.

WHAT WE DON'T KNOW YET

- Whether they are invasive or native to New Zealand.
- Information regarding community dynamics and their broader impact on native fauna.
- Their impact on seafloor functioning, including their influence on the physical and chemical properties of the benthos.
- Information on population dynamics including growth rates and reproductive cycles.
- Their risk to commercial and recreational fisheries and other marine industries.

KEY FEATURES

- *Chaetopterus* can be classified into infaunal species with U-shaped tubes buried in the substrate and epifaunal species with irregular tubes attached to solid surfaces.
- They can form dense mats covering the seafloor.
- *Chaetopterus* do not have fans, instead they trap and filter plankton using a mucous net.
- Their tubes can be up to 50 cm long, with vertical arms reaching up to 22 cm above the seafloor.
- *Chaetopterus* can regenerate all body segments from a single segment, even forming two individuals if the body is cut into two pieces.
- In temperate regions like New Zealand, spawning typically occurs in early summer.
- Various fish species in New Zealand, including blue cod and snapper, feed on *Chaetopterus*.

KNOWN LOCATIONS

