

Using conventional and molecular methods to do a deep study into the diet of two deep-sea flying squid species *Todarodes angolensis* and *Todarodes fillipovae*

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Biodiversity can mean the number of species within a defined area but also refers to the number of functional relations in an area (functional diversity) or the number of feeding relations (trophic diversity) in the environment. New Zealand marine biodiversity is understood to be among the highest in the world but is currently under threat from anthropogenic disturbances such as overfishing and pollution. Our wellbeing depends on the ecosystem services that rest on the different types of biodiversity that are threatened by ecosystem disturbances. To ensure the continuation of ecosystem services will require an understanding of the different types of biodiversity. One aspect of New Zealand trophic diversity that is poorly understood is the trophic ecology of the two species of flying squid: the Angolan flying squid (*Todarodes angolensis*) and the Southern flying squid (*Todarodes fillipovae*). These species' feeding habits have been difficult to analyse in part because they live in the deep-sea environment, which is hard to access without a scientific research vessel. This poster presentation aims to present preliminary genetic data on soft tissue stomach contents from 20 specimens that were collected from the Chatham Rise in the 2020-2021 Tangaroa expedition, in addition to explaining how lipid analyses and compound specific isotope analyses (CSIA) can help describe the trophic ecology of these deep-sea species.

Keywords

Flying squid; diet; biodiversity; isotope ecology; fatty acid analysis