



IV ROSS SEA CONFERENCE 2023

Università degli Studi di Napoli "Parthenope"

Via Amm. F. Acton, 38 - 80133 Napoli, ITALY

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Topic: Marine biology and ecology

Iole Leonori

ABSTRACT Subject :

Krill dynamics in the Ross Sea pelagic ecosystem

Abstract 01/03/2023 17:31:21

Krill is a core resource for aquatic animals in the Ross Sea, being food basic element for whales, seals, penguins and many other marine birds and mammals. They are among the most important pelagic animals constituting the Middle Trophic Level that substantially link primary producers to top predators in the local pelagic ecosystem. Since 1989, with intervals of around 5 years in average between one campaign to another, acoustic surveys were held in western Ross Sea to estimate the biomass and spatial distribution of *Euphausia superba* and *Euphausia crystallorophias*, the two main krill species in the area and their evolution in relation to environmental changes. The results have shown that *E. superba* is by far the most abundant species over time and that the spatial distribution of the two species is more similar in austral spring (November), but tends to show separated patterns during austral summer (December-January), with *E. superba* moving northwards, reaching the border with the Southern Ocean, allowing a reduction of competition for food between the species. A different behaviour in relation to the environmental conditions was also observed in the two pelagic species.

