

EXPERIMENTAL APPROACH TOWARDS KRILL GROWTH AND REPRODUCTION

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Antarctic krill play a pivotal role in the Antarctic marine ecosystem being the major food source for marine predators. It is vital that the possible effects of environmental changes as well as the effects of the krill fishery on the krill population are correctly understood.

The growth rate, longevity, and reproduction of krill are known to be affected by environmental changes, and measurements of these life history parameters are also used to manage the growing krill fishery. Recent findings demonstrated that these parameters are heavily affected by the developmental state of the krill; the size, sex, maturity stage. However, current krill fisheries management under CCAMLR assumes a simple von Bertalanffy seasonal growth model with a fixed longevity.

The Australian Antarctic Division's Marine Research Aquarium, allows us to conduct experiments on live krill to improve knowledge of the important biological parameters for krill management. Experimental examination of the life history parameters, and the factors that affect them, will directly contribute to improvement of the fishery management as well as further understanding of the function of the krill centric ecosystem. In this presentation I briefly review the current understanding of krill growth and maturation and try to conceptualize them to show the way forward in our experimental approach.