

KRILL READER



Issue. 3

INSIDE ISSUE 3

Welcome to the third installment of The Krill Reader. In this issue you can find outcomes from the 2022 CCAMLR meetings, information about our upcoming workshop, and much more!



[Click here to get to know
Nicole](#)

SKEG'S "KNOW YOUR SWARM" INTERVIEW SERIES CONTINUES!

Featuring Nicole Hellessey

ANNOUNCING THE 2023 ANNUAL SKEG WORKSHOP

Mark your calendars for the second annual SKEG workshop, March 20th to March 24th from 1800 to 2100 UTC. The theme of this year's workshop will be "Developing a Krill Stock Hypothesis". SKEG aims to coordinate the science among various krill interest group. This year's workshop topic is in response to discussion at CCAMLR about the future needs of krill management. We look forward to engaging, insightful discussions from the krill community. [Learn More Here!](#)

NEWS

[Krill CCAMLR 41 Recap](#)

[Krill Stock Hypothesis
Workshop](#)

HAPPENINGS

[2nd Annual SKEG Workshop](#)

[AWR Proposal Call](#)

HOT OFF THE PRESS

The latest in krill research
from our members.



CCAMLR NEWS

For the first time since the pandemic began, CCAMLR members attended in person meetings for the Scientific Committee and the Commission in late 2022. As usual, the largest issue facing the Scientific Committee and the Commission was the ongoing revision of the krill management approach.

Outcomes

This year, the Scientific Committee failed to reach the consensus required to enact new regulations for the krill fishery. Specifically, they were unable to reach consensus as to whether the newly derived catch limits and spatial and temporal allocation of krill catch should be implemented in the 2022/23 season.

Though the commission was unable to revise regulations on the krill fishery due to lack of consensus, they were able to accomplish some broader positive changes:

- Members agreed to the first resolution on climate change in 13 years to better incorporate climate change into CCAMLR decision-making and to encourage research, collaboration and engagement to tackle the climate crisis.
- Eight new benthic areas were added to the Vulnerable Marine Ecosystem list which restricts fishing using gear that contacts the seafloor.

What Happens Next?

In the past, work on the revision only explicitly involved efforts from all Working Groups of the Scientific Committee. As of this past set of meetings, SKEG has now been recognized as a key scientific resource to CCAMLR, specifically on the development of a krill stock hypothesis.

Not caught up on CCAMLR?

Check out our first two issues of [The Krill Reader](#).

You can also learn more about CCAMLR's [approach to managing the krill fishery by clicking here](#).

If you're really curious about the fishery, check out [CCAMLR's fishery report tool](#) or jump straight to [the fishery summary for 2021](#).

Lastly, [watch this space](#) for copies of the full meeting reports when they are finalized.

SKEG CALLED ON BY CCAMLR

Precautionary catch limits for the krill fishery are set using stock assessment models.

Parameterization of stock assessment models are critical for effective management of the fishery and require studies into krill life history parameters such as growth, recruitment, reproduction, as well as understanding the effects of environmental drivers on krill biology.



To develop a stock hypothesis that provides understanding dynamics of population and different contributions of recruitment from adjacent areas, information is needed on seasonal distribution and migration for various krill life stages, and connectivity of krill population between regions, and its dynamics is important for deciding upon the best spatial and temporal scale for the management.

In March of this year, SKEG will host the first workshop focused on developing a KSH. The aim of the workshop is to start developing a working krill stock hypothesis that captures the spatial and temporal dynamics of the stock. A KSH is a holistic approach to understanding krill across all subareas. A krill stock hypothesis would provide a framework for interpreting patterns observed in survey and fishery data, and provide a crucial tool to direct surveys and analytical efforts (e.g. surveys designed to investigate recruitment in hypothesized source areas). This task can only be achieved through bringing the scientific krill community together.

During the workshop, participants will discuss how CCAMLR has utilized stock hypotheses for its management in the past (i.e., Toothfish), and how a similar approach can be applied to krill to describe drivers of krill habitat, and krill stock-recruitment relationship.

Our objective is to establish a working scientific consensus on the state of our understanding, existing knowledge gaps, hypothesis development, and data collection to improve management of the krill fishery.

HAPPENINGS/OPPORTUNITIES

SKEG's Upcoming Workshop:

Development Krill stock hypothesis (KSH) for CCAMLR 48

20th to 24th March 2023 from 18:00 to 21:00 UTC

[Click here to register before March 24th](#)

Are you an ECR? This workshop will feature a Science Day dedicated to recent and on-going research that is relevant to the workshop aims. A large part of this day will be dedicated to highlighting work from early career researchers. We are looking for ECR's to give short presentations on their research and how it could:

- be utilized or applied by the krill stock hypothesis
- inform the development of the krill stock hypothesis
- be adapted to the development of the krill stock hypothesis

If this sounds like you, or if you know an ECR doing relevant work, please contact the SKEG board with a paragraph explaining how your recent research could contribute to the broader aims of the workshop. We look forward to hearing from you!

Call for Antarctic Wildlife Research Fund Project Proposals

If you are doing work on the following research topics, submit a proposal! [Click here](#) to learn more about the call for proposals.

- 1) Krill biology and ecology to inform krill fishery management
- 2) Krill-Predator-Fishery Interaction
- 3) Supporting 'spatial overlap analysis' (previously known as risk assessment) framework for krill fishery management
- 4) Cutting edge science to monitor krill for fishery management

DEADLINE FOR 9TH CALL FOR PROPOSALS IS 5 APRIL 2023

HOT OFF THE PRESS

- Bernard KS, Steinke KB, Fontana JM (2022) Winter condition, physiology, and growth potential of juvenile Antarctic krill. *Frontiers in Marine Science* DOI [9:990853](https://doi.org/10.3389/fmars.2022.990853)
- Steinke KB, Bernard KS, Fontana JM, Copeman LA, Garcia LM (2022) The energetic cost of early reproductive development in juvenile Antarctic krill at the Western Antarctic Peninsula. *Frontiers in Marine Science* DOI [9:1009385](https://doi.org/10.3389/fmars.2022.1009385)
- Hudson K, Oliver MJ, Kohut J, Dinniman MS, Klinck JM, Cimino MA, Bernard KS, Statscewich H, Fraser W (2022) A subsurface eddy associated with a submarine canyon increases availability and delivery of simulated Antarctic krill to penguin foraging regions. *Marine Ecology Progress Series* 702: 105-122 DOI [10.3354](https://doi.org/10.3354)
- Logan J. Pallin, Nick M. Kellar, Debbie Steel, Natalia Botero-Acosta, C. Scott Baker, et al (2023) A surplus no more? Variation in krill availability impacts reproductive rates of Antarctic baleen whales *Global Change Biology* 2023;00:1–14. DOI [10.1111/gcb.16559](https://doi.org/10.1111/gcb.16559)
- Bairstow F, Gastauer S, Wotherspoon S, Brown CTA, Kawaguchi S, Edwards T and Cox MJ (2022) Krill biomass estimation: Sampling and measurement variability. *Front. Mar. Sci.* 9:903035. DOI [10.3389/fmars.2022.903035](https://doi.org/10.3389/fmars.2022.903035)

Hey SKEG Members, you can promote your latest publication here. Just send the publication information (Title, Authors, Journal info, DOI) to SKEG Communications Chair Ryan Driscoll (ryan.driscoll@awi.de) and we will be sure to include it.

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