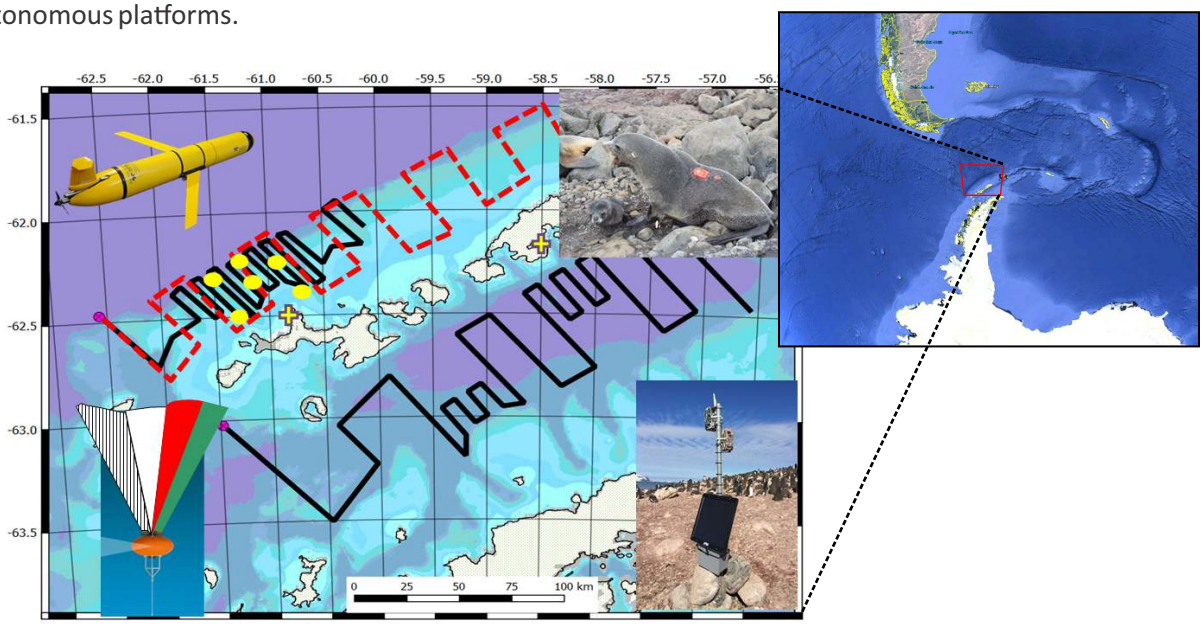
NOAA to Use ASL's Acoustic Zooplankton Fish Profiler in Proposed Strategy to Examine Spatial and Temporal Distribution of Krill in Antarctic

The Antarctic Ecosystem Research Division (AERD), of the NOAA Fisheries Service has managed and implemented the U.S. Antarctic Marine Living Resources (AMLR) Program since 1986. Data collected from this Program are used to advise the Commission for the Conservation of Antarctic Marine Living Resources (CCAMLR) on establishing catch limits and the spatial distribution of these limits for the Antarctic krill fishery.

Climate changes have altered the distribution, intensity and timing of the krill fishery when compared to historical data. The fishery season, for example, has expanded as both sea-ice extent and distribution have declined. This expansion leads to a potential negative impact on ecosystem health such as known areas of krill-dependent predators.

Several fishing companies such as those from Norway, China and South Korea have worked through the Association of Responsible Krill harvesting companies (ARK) to provide acoustic surveys to estimate krill biomass prior to and during the fishing season. Although these data have been useful, the acoustic data collected come from a variety of vessels and may have varying quality, making it difficult to compare datasets year to year. In an effort to systematically provide research-based independent surveys outside of the commercial fishery, and over a longer sampling season, the U. S. AMLR Program has implemented a krill research program that will utilize an array of moorings and gliders around the Antarctic Peninsula. Data collected from this research will replace traditional ship-based surveys and will provide standardized spatial and temporal data to better understand the consequences of overlap among krill, predators, and the krill fishery, and provide other dynamic oceanic attributes of the study area. Along with ADCPs and CTDs, the gliders will be equipped with ASL Environmental Sciences' Acoustic Zooplankton Fish Profilers (AZFP) using three acoustic frequencies (38, 67 and 125 kHz) to record backscatter of krill biomass. This sampling Program will commence in October of 2018, and is expected to provide the framework for sustained ecosystem monitoring using autonomous platforms.



Research program consisting of three gliders (tracks indicated), six moorings (yellow dots), camera systems and tagging of predators to understand their foraging locations and behaviour.

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