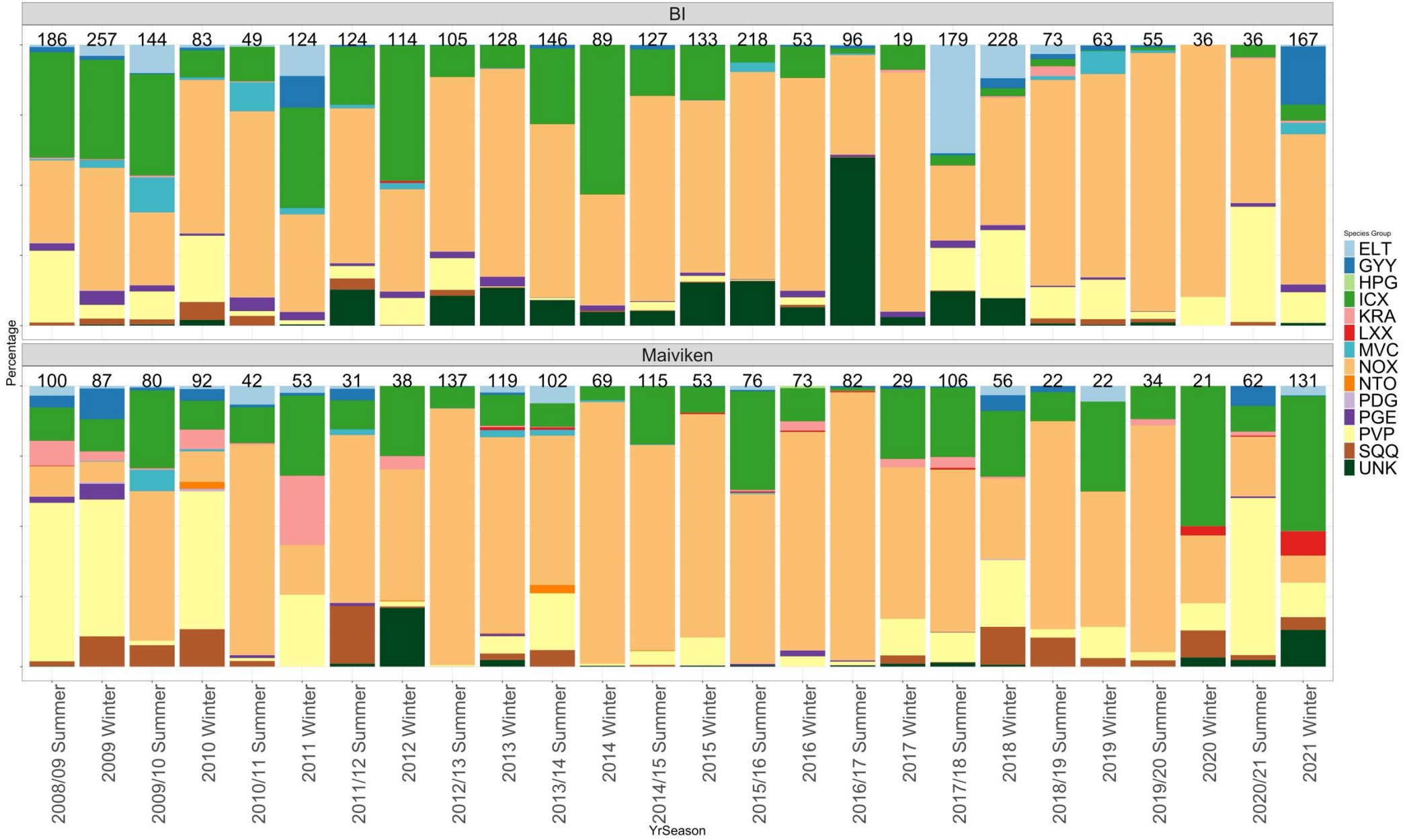
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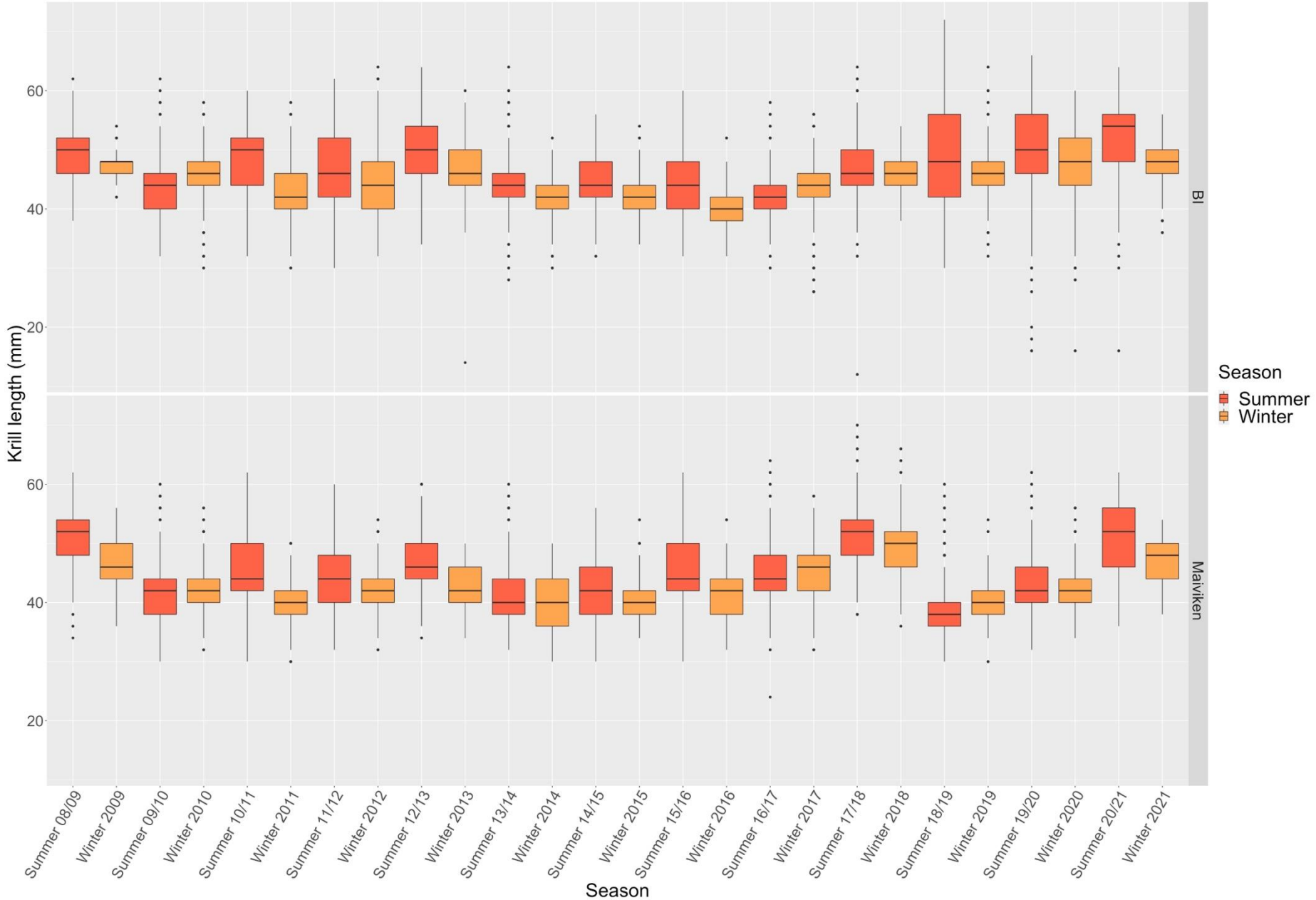
Title	Spatiotemporal variability in Antarctic krill (Euphausia superba) around South Georgia derived from Antarctic fur seal (Arctocephalus gazella) diets
Authors	Coleman, J.;Hollyman, P.;Ashburner, J.;Jessopp, M.;Forcada, J.;Owen, K.;Staniland, I.J.;Waluda, C.M.;Collins, M. A.;Trathan, P. N.
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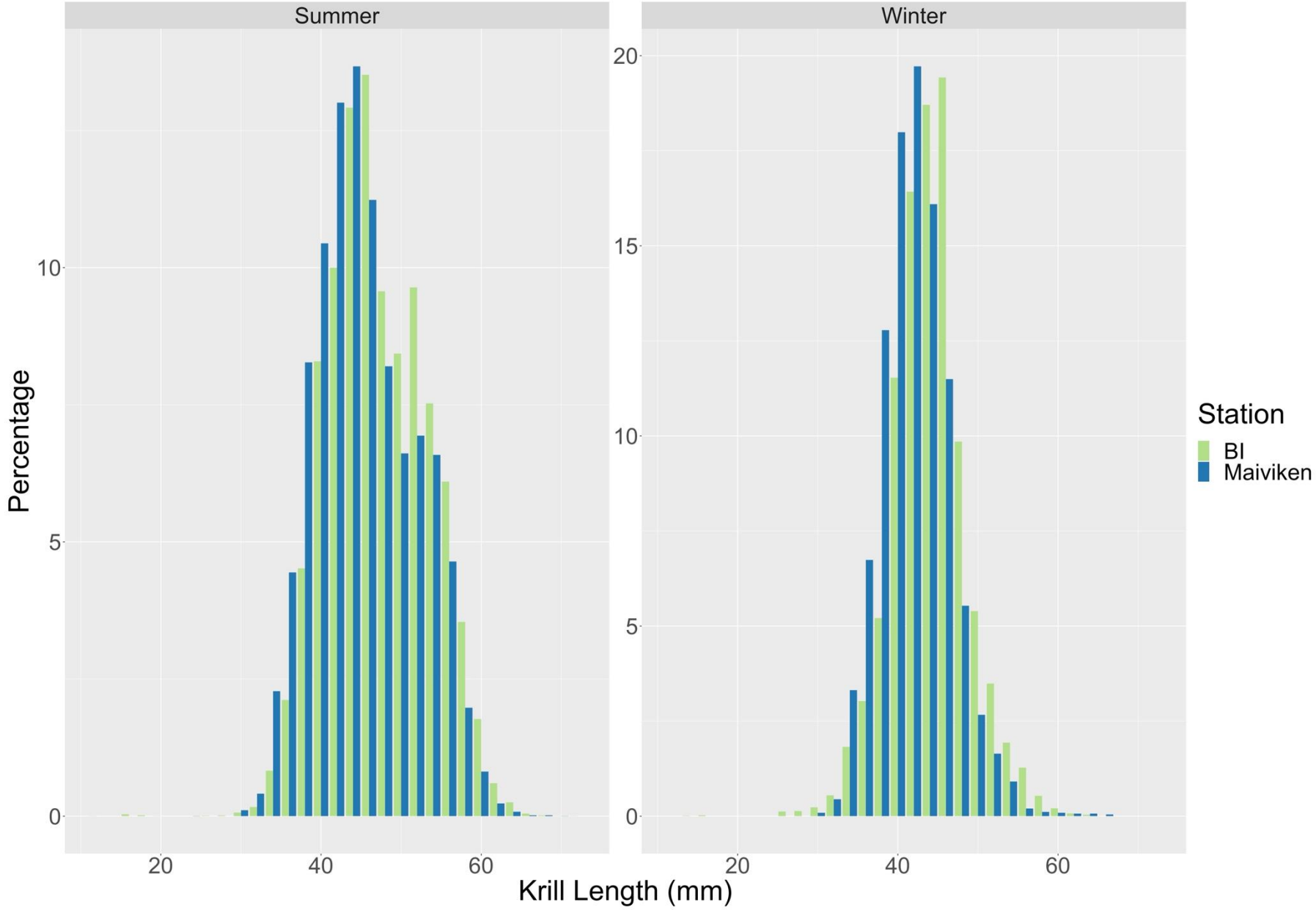
University College Cork, Ireland
Coláiste na hOllscoile Corcaigh



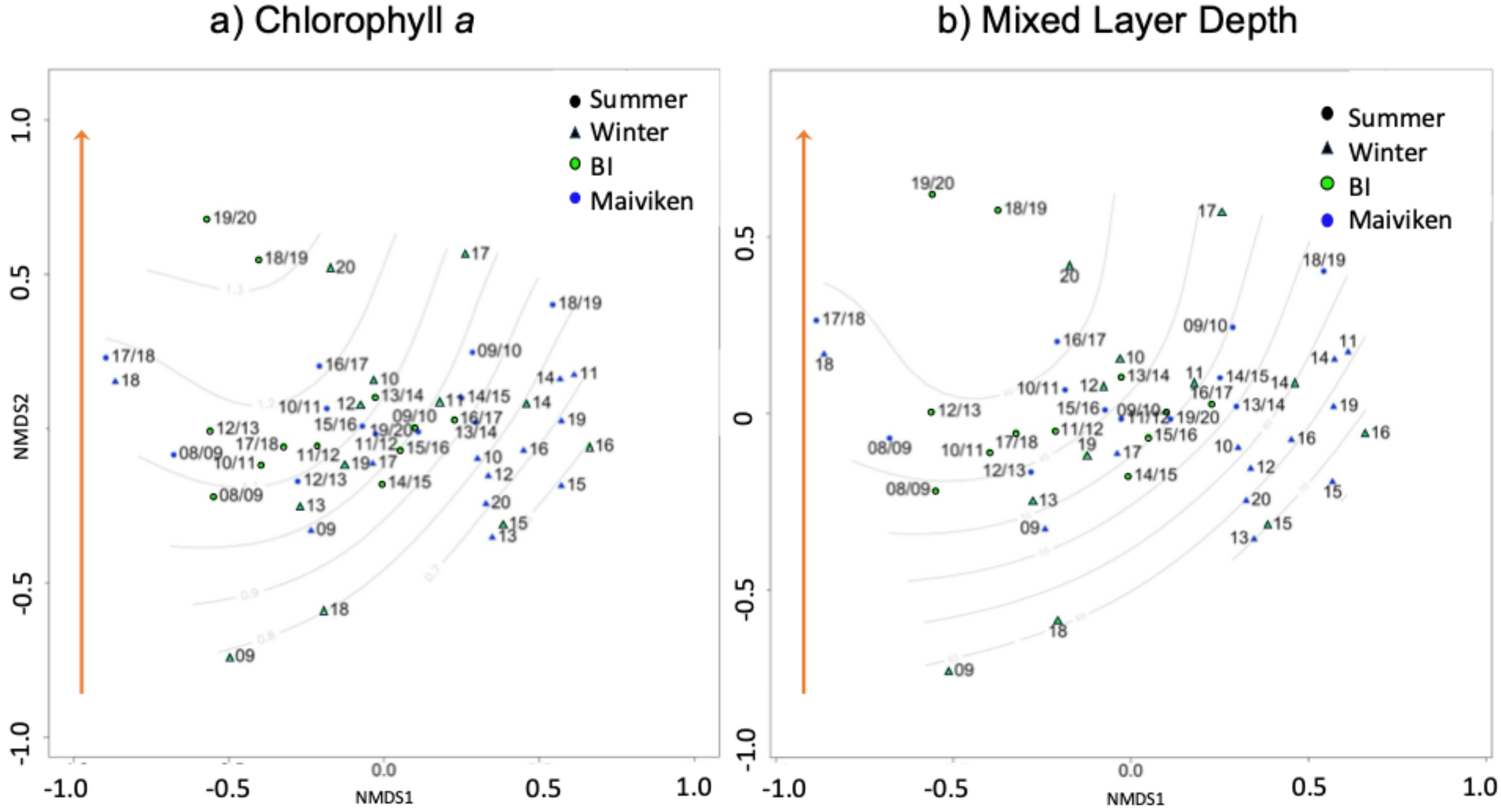
Online Resource 1. The proportion of different fish groups in the diet of fur seals; *Electrona* species (ELT), *Gymnoscopelus* species (GYY), *Harpagifer georgianus* (HPG) Channichthyidae spp. (ICX), *Krefftichthys anderssoni* (KRA) Myctophidae spp. (LXX), *Muraenolepis* spp. (MVC) Notothenioidae spp. (NOX) *Notolepis coatsi* (NTO), *Paradiplospinus gracilis* (PDG), *Parachaenichthys georgianus* (PGE), *Protomyctophum* spp. (PVP), Teuthoidea spp. (SQQ), unknown species (UNK). Total number of otoliths per season is listed above each column



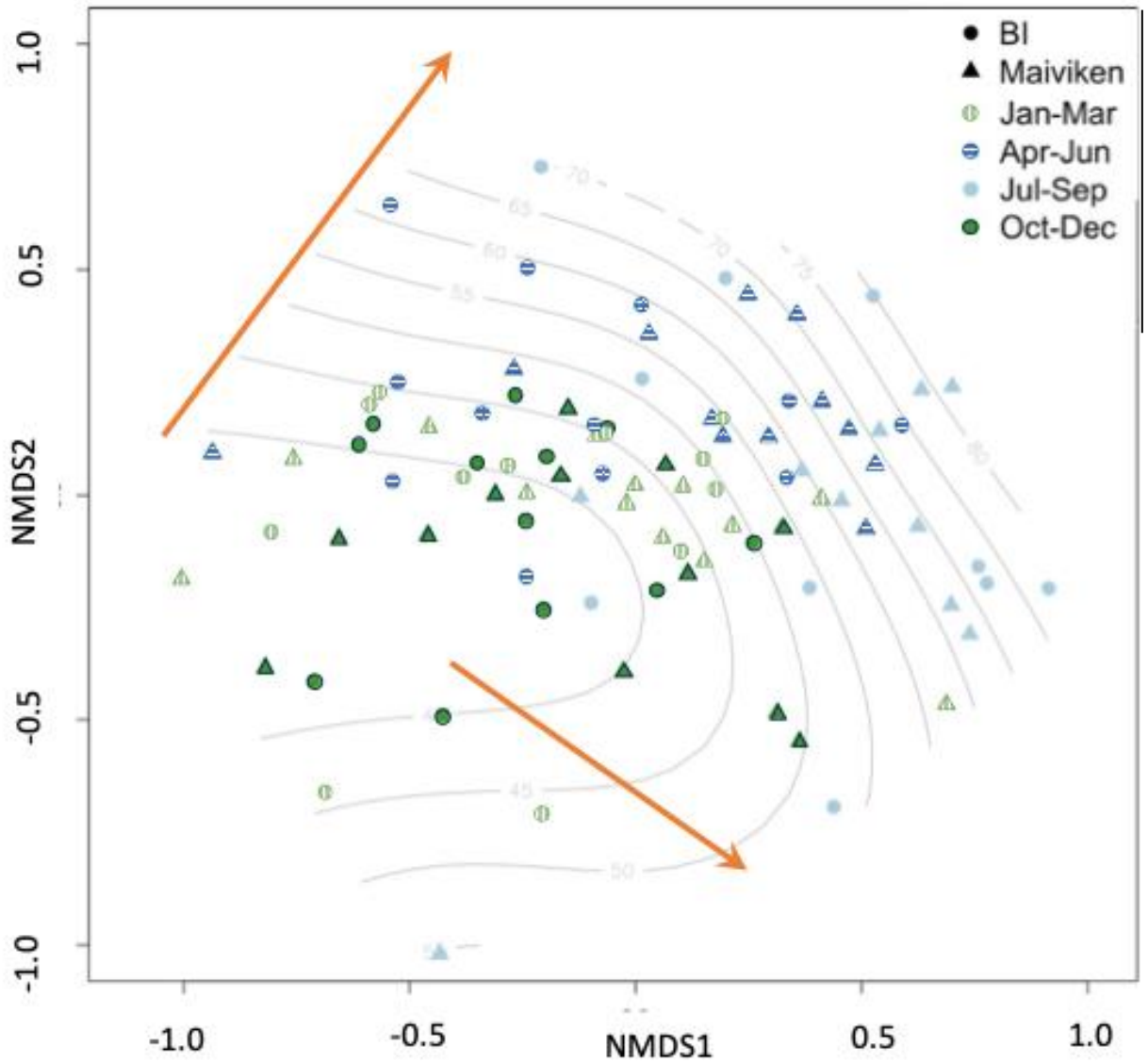
Online Resource 2. Boxplots of measured krill length between seasons at Bird Island (BI) and Maiviken from summer 2008/09 to winter 2021. Bars represent median, boxes the 25th and 75th percentile and whiskers the 1.5% interquartile range



Online Resource 4. Length frequency histogram of Antarctic krill taken from fur seal scats at Bird Island (BI; green) and Maiviken (blue), throughout all summers and all winters between October 2008 and October 2021.



Online Resource 5. NMDS ordination of dissimilarity in krill community lengths between seasons (Summer = October-March, Winter = April-September) at (BI; green with black outline) and Maiviken (MV; blue) with a) chlorophyll *a* and b) mixed layer depth gradients.



Online Resource 6 nMDS ordination of krill community lengths at BI (circle) and Maiviken (triangle) in quarterly periods from October 2008 (2008-3) until March 2020 (2020-1) (January-March = green with vertical stripes, April-June = blue with horizontal stipes, July-September = light blue, October-December = green with black outline). Mixed layer depth gradients are plotted with arrows showing increased depths. Mixed layer depth explained 39% of the dissimilarities, with third quarter krill being associated with deeper MLD; the second quarter correlated with intermediate MLDs, and the 1st and 4th quarters were shallowest. Shallower MLD depths also isolated several outlier quarterly periods from the main clusters associated with the anomalous period (2017-2020.

Online Resource 7. Tag deployment metadata

Season	First Date	Last Date	Location	Number Deployed	Tag type	Published
Summer 2005/06	01/01/2006	21/02/2006	Bird Island	6	GPS	(Staniland et al., 2011b)
Summer 2007/08	05/01/2008	23/02/2008	Bird Island	19	PTT	(Staniland et al., 2020)
Summer 2008/09	21/12/2009	03/03/2010	Bird Island	14	PTT	(Staniland et al., 2020)
Summer 2009/10	03/12/2009	05/03/2010	Maiviken	16	GPS	Unpublished
Summer2010/11	02/12/2010	09/02/2011	Maiviken	14	GPS	Unpublished