**Pteropod populations stable or increasing according to long-term study along the Western Antarctic Peninsula**

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Shelled pteropods (open-ocean snails) have been heralded as bioindicators of ocean acidification given the susceptibility of their aragonitic shells to dissolution, which could ultimately lead to decreases in their abundance. However, the population dynamics of pteropods is understudied, particularly in the Southern Ocean which is a region predicted to be highly impacted by both warming and ocean acidification. A long-term study ([https://rdcu.be/baQvy](http://em.rdcu.be/wf/click?upn=lMZy1lernSJ7apc5DgYM8ZQMlrRILGguuKTYZ-2FcdkEg-3D_FAsKf2jaTmCHAdZrUyQXKtEuX-2FNLrOhaPw6sFRTv1qhzAJznK6yn5hxcwTmTdpgUQ6qr-2BCHyX-2B5941KenQnC5iK3tA2t38Q8khp6lIZkrxk7BAcVa93MnOKFwFPMVeYjxOruicZVs9PkCiXg8Fq-2BBKUUUghNoRbgZQdaad-2FIk-2FrD9Re1GIPpL9jDOWu2S4m0MlyU3LEXUf-2F9JE8xrmJ-2BsmHVoFD3H4KgBVZiNt2ypMPPRsoYcwVFxYd6Qzv0scksvh0Ea18iiLqGYwaVTbwkIw-3D-3D)) along the Western Antarctic Peninsula (WAP) indicates while there is considerable interannual variability in pteropod abundance, populations have remained stable over the past 25 years with some pteropod species even increasing long-term (Figure 1). Ice-free, warmer waters the previous year led to higher pteropod abundances, indicating pteropods may be more adapted than previously expected to warming conditions due to climate change. There was no significant influence of carbonate chemistry parameters (e.g., aragonite saturation state) on pteropod abundance, likely as the WAP has yet to experience prolonged conditions characteristic of ocean acidification. These results increase our understanding of pteropod response to environmental variability, which is important for predicting future effects of climate change on regional carbon cycling and plankton trophic interactions in the Southern Ocean.



Figure 1. Annual pteropod abundance anomalies for the entire PAL LTER study region along the Western Antarctic Peninsula. (a) *Limacina helicina antarctica*, (b) Gymnosomes (*p* = 0.007, r2 = 0.27), and (c) *Clio pyramidata*.