

Online Resource 2 Pair-wise PERMANOVA results showing statistical significance of differences between Ecoregions (* indicates significance); however, due to heterogeneity, differences between communities cannot be attributed solely to *a priori* ecoregional classifications.

EcoRegion comparison	Pseudo t-statistic	P-value	Permutations
Oates, Central Indian- Prydz Bay	4.5634	0.0001*	9953
Oates, Central Indian- East Kerguluen	5.1816	0.0001*	9959
Oates, Central Indian- Wilkes	9.029	0.0001*	9949
Central Indian- Prydz Bay, Central Indian- East Kerguluen	2.3054	0.0002*	9957
Central Indian- Prydz Bay, Central Indian- Wilkes	4.6198	0.0001*	9941
Central Indian- East Kerguluen, Central Indian- Wilkes	5.1258	0.0001*	9954