

**Martin Cox**

Australian Antarctic Division, Australia

***Acoustic assessment of micronekton distribution around the Kerguelen axis***

Cox M.J., Gastauer S., Bestley S., Brown C.T.A. and Constable, A.

Cox and Constable: Australian Antarctic Division, Kingston, Australia; Gastauer and Constable: Cooperative Research Centre for Antarctica and the Southern Ocean, Tasmania, Australia; Bestley: CSIRO, Hobart, Australia; Brown: School of Physics and Astronomy, University of St Andrews, Scotland

Micronekton distribution is believed to be strongly influenced by oceanographic conditions and bathymetry. Here, using high-resolution (10s metres, minutes) scientific echosounder data, we use correlative models to probe the spatial relationships between micronekton and examine the interplay with group distribution and oceanography and bathymetry. We use the relative frequency response of 38, 120 and 200 kHz acoustic data to classify acoustic records into three putative scattering groups; fish with swim bladders; crustaceans, and smaller animals, e.g. copepods. Using image analysis algorithms, we summarise group characteristics by calculating the horizontal and vertical distribution of each scattering group characteristic scale, temporal variance as well as group overlap.