

SESSION: Marine Mammals**MARS Themes:**

Ecosystems, biodiversity and biodiscovery – None provided, Mia picked this one

Title:

Canine morphometrics as a tool for distinguishing species, sex and age in Southern Ocean fur seals

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Abstract:

While museum specimens provide valuable information for scientific research, provenance is critical. Amongst primary information is the species, sex and age of the animal. When this is not available it may be possible to obtain it from preserved remains. The most durable of these are teeth. In this study, we assessed whether the external morphology of canines could be used to distinguish between the closely related, and partially sympatric, Antarctic fur seal *Arctocephalus gazella* and the Subantarctic fur seal *A. tropicalis*. We also tested whether external morphology could distinguish between sex, age class and location of origin. To achieve these eight external measurements were taken from the canines of 340 animals of known species, sex, age class and geographical origin. In addition, external annular ridges were counted and compared to the growth layer groups of sectioned teeth. While measurements distinguished between species, this was clearer in males than in females. In addition, measurements could distinguish between sexes, both within and between species. Furthermore, external annular counts gave a good estimate of age. However, the location of origin could only be characterised in adult male Antarctic fur seals. This study indicates that additional provenance can be obtained from preserved specimens, thus increasing the value of associated material.

Format:

Oral Presentation (5 min)

Keywords: (add ; between keywords)

Antarctic fur seal; Subantarctic fur seal; morphometrics; teeth; tooth growth layer; provenance