

New study tracks feeding behaviour of Antarctic fur seals in winter

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During the Antarctic Summer female fur seals feed in the waters around their breeding breaches. In winter, when their pups have weaned and the local food supply is depleted, they have to look elsewhere. The problem is that ocean currents provide a moveable feast making it difficult to find food. Seals must balance the time and energy they use searching for food against the energy they gain from feeding.

British Antarctic Survey (BAS) scientists and engineers have developed micro-global sensing loggers (GLS), which by recording times of local sunrise and sunset, can be used to estimate an animal's location. The tiny size of these loggers (2.5-3.6 g) and their longevity (+5 years) means they can be used to track an animal's movements over several years. In collaboration with researchers at the Universities of Tasmania and Pretoria, the scientists used these GLS tags to record the winter feeding trips of just over 100 female Antarctic fur [seals](#), including eight individuals over multiple years, from two important breeding sites on the sub-antarctic island of Bird Island and South Atlantic island of Marion Island.

Not only did individual seals feed in different areas from each other but, within a winter, individuals changed their feeding locations between successive foraging trips. This suggests that the seals' [food](#) is much scarcer in the winter and that these animals must search over wider areas to find enough. However, when the team compared individual seal's movements over several years a pattern did emerge; with much greater degree overlap. Most of the seals visited areas they had used in previous

years exploiting areas of the ocean that were potentially more productive and predictable.

BAS seal ecologist and co-author Dr Iain Staniland says, "This work is really important as we know very little about what Antarctic fur seals do in the winter, a critical time when their food is scarce. Understanding how these animals and other large predators such as penguins and albatrosses find enough food to survive the Antarctic [winter](#) will help us conserve these important populations."

More information: "Return Customers: Foraging Site Fidelity and the Effect of Environmental Variability in Wide-Ranging Antarctic Fur Seals." *PLoS ONE* 10(3): e0120888. [DOI: 10.1371/journal.pone.0120888](#)

Provided by British Antarctic Survey

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