12/26/2024

Dear Editorial Board,

We kindly request consideration of our manuscript "**Like mother like daughter: Northern elephant seals exhibit fine-scale philopatry**" for publication in *Oecologia* as a Research Article.

Northern elephant seals have long been known to practice cross-colony philopatry, with the majority of adult females returning to their natal colony to birth and nurse pups (Zeno et al., 2021). Philopatry is important for this pelagic species to reliably find mates and maintain familiarity with breeding sites (Condit et al., 2023). However, there exists a knowledge gap regarding rates of within-colony philopatry including mechanisms driving fine-scale straying. *Using 23 years of thorough mark-recapture data within the Año Nuevo seal colony, we discovered that female elephant seals give birth closer to their natal site than by random chance, and maintain philopatric plasticity in locations with rapidly shifting sand dunes.*

We build upon previous research on fine-scale breeding dispersal and habitat choice of female-philopatric species published in *Oecologia* , including:

1. Weitzman, J. et al., 2017. https://doi.org/10.1007/s00442-016-3764-5 (Factors influencing and consequences of breeding dispersal and habitat choice in female grey seals (*Halichoerus grypus*) on Sable Island, Nova Scotia)

2. Öst, M. et al., 2011. https://doi.org/10.1007/s00442-010-1855-2 (Causes and consequences of fine-scale breeding dispersal in a female-philopatric species.)

3. Wolf, J.B.W. et al., 2007. https://doi.org/10.1007/s00442-007-0665-7 (Beyond habitat requirements: individual fine-scale site fidelity in a colony of the Galapagos sea lion (*Zalophus wollebaeki*) creates conditions for social structuring.)

We believe our manuscript will add dimension to current understandings of philopatry by focusing on an understudied resolution (fine-scale, within-colony) of site fidelity. Additionally, understanding geographic drivers of site selection provides broad-scale context for future colonization trends for northern elephant seals and other pinniped species that return to land for breeding. None of the material has been published or is under consideration elsewhere. The authors declare no conflicts of interest.

Thank you for your consideration,
Sincerely,
Isabella Garfield

Sources:

Condit R, Hatfield B, Morris PA, Costa DP (2023) Quantifying dispersal between two colonies of northern elephant seals across 17 birth cohorts. PLoS ONE 18(11): e0288921. https://doi.org/10.1371/journal.pone.0288921

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Wolf, J.B.W., Trillmich, F. Beyond habitat requirements: individual fine-scale site fidelity in a colony of the Galapagos sea lion (Zalophus wollebaeki) creates conditions for social structuring. Oecologia 152, 553–567 (2007). https://doi.org/10.1007/s00442-007-0665-7

Zeno, R., Condit, R., Allen, S. G., & Duncan, G. (2021). Natal and adult dispersal among four elephant seal colonies. BioRxiv. https://doi.org/10.1101/2021.03.18.435977