

DR. AMY BISHOP

Assistant Professor
Department of Biological Sciences
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Education

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| Durham University (UK) | Behavioral Ecology | Ph.D., 2015 |
| Duke University | Environmental Management | MEM, 2011 |
| Northern Michigan University | Zoology/Writing | B.Sc., 2009 |

Academic and Professional Positions

2022-current Assistant Professor, Dept. Biological Sciences, University of Alaska Anchorage

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| 2020-2022 | Centennial Postdoctoral Fellow | University of Alaska Fairbanks |
| 2019 | Adjunct Faculty | Inspiring Girls Expeditions University of Alaska |
| 2016-2020 | Assistant Research Scientist Assistant Science Department Head Postdoctoral Researcher | Alaska SeaLife Center |
| 2016 | Field Research Assistant | NOAA Marine Mammal Laboratory |
| 2015-2016 | Postdoctoral Researcher | University of Alaska Anchorage |
| 2015-2016 | Marine Mammal Necropsy Assistant | Alaska Veterinary Pathology Services |
| 2014-2015 | Senior Research Assistant | Sea Mammal Research Unit |
| 2011-2015 | Wildlife Research Assistant | Durham University, UK |
| 2009-2011 | Research Assistantship | Duke University Marine Lab |

Appointments

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| 2017-current | Scientific and Statistical Committee, North Pacific Fishery Management Council |
| 2022-current | Affiliate Faculty, University of Alaska Fairbanks, WERC/INE |
| 2019-2020 | IACUC Committee, Alaska SeaLife Center |
| 2018-2020 | Affiliate Faculty, University of Alaska Anchorage, Biology Department |
| 2017-2018 | Affiliate Faculty, Oregon State University, Department of Fisheries and Wildlife |

Publications

Smith T, **Bishop AM**, Guthridge J, Hocking R, Horning M, Lowe CG. (*In Press*) "Capture, husbandry, and oxygen consumption rate of juvenile pacific sleeper sharks (*Somniosus pacificus*). *Environmental Biology of Fishes*

Twiss SD, Shuert CR, Brannan N, Moss S, **Bishop AM**, & Pomeroy P. (2021). Validation and assessment of an external telemetry system for recording heart rate and resting heart rate variability in free-ranging large wild mammals. *PLoS ONE*.

Bishop AM, Brown CL, Sattler R and Horning M. (2020). An Integrative Method for Characterizing Marine Habitat Features Associated With Predation: A Case Study on Juvenile Steller Sea Lions (*Eumetopias jubatus*). *Frontiers in Marine Science*. 7:576716. doi: 10.3389/fmars.2020.576716

- Twiss SD, Shuert CR, Brannan N, **Bishop AM**, Pomeroy P. (2020). Reactive stress-coping styles show more variable reproductive expenditure and fitness outcomes. *Scientific Reports*, 10, 9550. doi: 10.1038/s41598-020-66597-3.
- Sattler R, **Bishop A**, Polasek L. (2020) Cortisol levels for Steller sea lions in human care. *Aq. Mamm.*
- Bishop A**, Dubel A, Sattler R, Brown C, Horning M. (2019). Wanted Dead or Alive: Characterizing likelihood of juvenile Steller sea lion mortality from diving and space use patterns. *Endangered Species Research*. 40: 357-367
- Horning M, Andrews R, **Bishop A**. et al. (2019). Best practice recommendations for the use of external telemetry devices on pinnipeds. *Animal Biotelemetry*. 7:20
- Steingass S, Horning M, **Bishop A**. (2019). Space use of Pacific harbor seals (*Phoca vitulina richardii*) from two haulout locations along the Oregon Coast, *PLoS ONE* 14: e0219484. <https://doi.org/10.1371/journal.pone.0219484>
- Brown C, Horning M, **Bishop A**. (2019). Improving Emergence Location Estimates for Argos Pop-up Transmitters. *Animal Biotelemetry*. 7:4
- Bishop A**, Rehberg M, Torres L, Brown C and Horning, M. (2018). Investigating juvenile Steller sea lion (*Eumetopias jubatus*) utilization distributions in the Gulf of Alaska, *Movement Ecology*. 6:6
- Sattler R, **Bishop A**, Woodie K, Polasek L. (2018). Monitoring female sexual receptivity: testing the efficacy of identifying estrus by trans-abdominal ultrasounds, fecal estrone-3- glucuronide (E1G), and vaginal cytology in Steller sea lions (*Eumetopias jubatus*). *Theriogenology*. 120: 25-32
- Bishop A**, Stewart J, Pomeroy P, Twiss SD. (2017). Intra-seasonal temporal variation of reproductive effort for male grey seals. *Animal Behaviour*, 134, 167-175
- Brownlow A, Onoufriou J, **Bishop A**, Davison N, Thompson D. (2016). Corkscrew Seals: Grey Seal (*Halichoerus grypus*) Infanticide and Cannibalism May Indicate the Cause of Spiral Lacerations in Seals. *PLoS ONE*, 11(6): e0156464. doi:10.1371/journal.pone.0156464
- Bishop A**, Onoufriou J, Moss S, Pomeroy P, and Twiss SD. (2016). Cannibalism by a Male Grey Seal (*Halichoerus grypus*) in the North Sea. *Aquatic Mammals*, 42: 137-143.
- Bishop A**, Denton P, Pomeroy P, and Twiss SD. (2015). Good vibrations by the beach boys: Magnitude of substrate vibrations is a reliable indicator of male grey seal size. *Animal Behaviour*, 100:74-82
- Bishop A**, Pomeroy P, and Twiss SD. (2015). Variability in individual rates of aggression in wild grey seals: Fine-scale analysis reveals importance of social and spatial stability. *Behavioral Ecology and Sociobiology*, 69: 1663-1675.
- Bishop A**, Pomeroy P, and Twiss SD. (2015). Breeding male grey seals exhibit similar activity budgets across varying exposures to human activity. *Marine Ecology Progress Series*, 527:247-259.
- Bishop A**, Lidstone-Scott R, Pomeroy P, and Twiss SD. (2014). Body slap: an innovative aggressive display of breeding male grey seals (*Halichoerus grypus*). *Marine Mammal Science*, 30: 579-593.
- Hoover-Miller A, **Bishop A**, Prewitt J, Conlon S, Jezierski C, and Armato P. (2013) Efficacy of voluntary mitigation in reducing harbor seal disturbance. *Journal of Wildlife Management*, 77: 689-700.

Other Book Chapters, Publications, Technical Reports, and Communications

- Twiss, S., **Bishop, A.**, Culloch, R. (2022). The Gray Seal: 80 Years of Insight into Intrinsic and Extrinsic Drivers of Phocid Behavior. In: Costa, D.P., McHuron, E.A. (eds) *Ethology and Behavioral Ecology of Phocids*. *Ethology and Behavioral Ecology of Marine Mammals*. Springer, Cham. https://doi.org/10.1007/978-3-030-88923-4_9

Bishop A, Horning M, Rehberg M, Torres L. (2018). Steller sea lion habitat modeling. NPRB Project 1512 Final report. 38pp.

Thompson D, Onoufriou J, Brownlow A, and **Bishop A**. (2015). Preliminary report on predation by adult grey seals on grey seal pups as a possible explanation for corkscrew injury patterns seen in the unexplained seal deaths. Report to the Scottish Government.

Bishop, A., Hoover-Miller, A., and Prewitt, J. (2011). Marine Observational surveys in the Kenai Fjords: Final Report to the OASLC and the NPS. Alaska SeaLife Center. Seward, AK. 33p.

Hoover-Miller, A., J Prewitt, and **A. Bishop**. 2010. Harbor seal research in the Kenai Fjords, Alaska. 2010 Fall Report to the OASLC and the NPS. Alaska SeaLife Center. Seward, AK. 80p.

Awards and Fellowships

2020: Centennial Postdoctoral Fellowship, University of Alaska Fairbanks

2017: President's Award, Alaska SeaLife Center

2015: Best Student Oral Presentation Award, European Cetacean Society

2014: Best Oral Presentation Award, Mammal Society Student Conference

2011: Durham Doctoral Studentship, Durham University

2009: Harden Scholarship, Northern Michigan University

Mentoring Graduate and Undergraduate Students

- B. Padayachee, UAF/Colorado State U (2022), Veterinary student researcher
- M. Peterson, University of Alaska Fairbanks BLaST (2020-21), Undergraduate
- A Neithercoat, University of Alaska Anchorage, (2019), Undergraduate
- J. Wagner, University of Alaska Anchorage, (2019), Undergraduate
- Sheanna Steingass, Oregon State University, (2016-2018), PhD Committee Member
- Amy Klink, University of Alaska Anchorage, (2017-2020), MSc Committee Member
- Raven Spencer, University of Miami, (2017), Master of Professional Science Committee Member
- Research mentor for 8 undergraduate fellowships/internships, Alaska SeaLife Center (2011-2019).

Recent Conference Presentations (selected)

Horning M, Olsen D, Wildes S, Lowe C, Smith T, Tribuzio C, **Bishop A**, Sattler R, Guthridge J, Hocking R. 2019. Consummate and Consumed Predators: Evidence from Telemetry and Observations for Offshore Killer Whale Predation on Pacific Sleeper Sharks in an Alaskan Glacial Fjord. Alaska Marine Science Symposium. Poster

Bishop A, Dubel A, Sattler R, Brown C, Horning M. 2019. Characterizing the Likelihood of Juvenile Steller Sea Lion Mortality from Behavioral and Space Use Patterns. Alaska Marine Science Symposium. Poster

- Sattler R, Brown C, **Bishop A**, Horning M. 2019. Seascapes of Fear: Characterizing the Habitat Associated with Predation Locations of Juvenile Steller Sea Lions. Alaska Marine Science Symposium. Poster
- Richardson P, **Bishop A**, Horning M. 2019. Leveraging Information Literacy Lessons in Science Communication: Modification of the ACRL Framework for Information Literacy for Science Outreach. Alaska Marine Science Symposium. Poster
- Dubel A, **Bishop A**, Brown C, Horning M. 2018. Diving behavior of juvenile Steller sea lions in relation to predation. Alaska Marine Science Symposium. Poster.
- Bishop A**, Brown C, Torres L, Rehberg M, Horning M. 2017. Risky Business: Developing a habitat use model with inclusion of predation risk. Biologging Symposium 6. Konstanz, Germany. Poster.
- Brown C, **Bishop A**, Horning M. 2017. A quantitative approach for identifying spatially explicit distribution of Steller sea lion predation events. Biologging Symposium 6. Konstanz, Germany. Poster.
- Steingass S, Horning M, Rea L, **Bishop A**. 2017. You are what you eat: correlating spatial habitat use and dietary preference in the Pacific harbor seal. Biologging Symposium 6. Konstanz, Germany. Poster.
- Bishop A**, Torres L, Rehberg M, & Horning M. 2017. Spatial and temporal trends in juvenile Steller sea lion (*Eumetopias jubatus*) utilization distributions in the Gulf of Alaska: 2000-2014. Alaska Marine Science Symposium. Poster.
- Bishop A**, Bortz E, Bryant J, Hoover-Miller A, Olson L, and Burns JM. 2016. American Society for Circumpolar Health, Arctic Health Science Seminar. Anchorage AK. Oral.

Science Communication and Outreach

Developed science communications portfolio, including websites, science blog, ESRI storymaps, interactive aquarium exhibits, teacher workshops, and videos. Selected examples:

- Teleaquarium ASLC YouTube Education Series: “Diving into Data” [part 1](#), [part 2](#), [part 3](#)
- 60N Science Blog – Developer, Editor, Writer ([2017-2020](#))
- Ocean Alaska Science Learning Center (NPS), Teacher Workshop: “Ocean Tech”
- Road Scholars, “Habitat Modeling, predators and predation”
- National Scholar Program, Clemson University. “Seals, Ships, and Science”
- Seward Science Café –Planning and Development Committee