

Vivienne Foroughirad

Curriculum Vitae

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<https://foroughiradlab.github.io>

RESEARCH INTERESTS

Behavioral ecology, evolution, social network analysis, marine mammals, conservation

PROFESSIONAL APPOINTMENTS

2024-	Assistant Professor	Texas A&M Galveston, TX, USA
2019-2023	Postdoctoral Fellow in Biology	Georgetown University, Washington, DC
2021-	Visiting Academic in Biological Sciences	University of Queensland, QLD, AUS
2020	Visiting Fellow in Animal Ecology	University of the Sunshine Coast, QLD, AUS

EDUCATION

Duke University, Durham, NC 2019
Doctor of Philosophy, Marine Science and Conservation
PI: Dr. Andrew Read

Georgetown University, Washington, DC 2010
Bachelor of Science, Biology and French Language (minor)

GRANTS

2022 Curriculum Enhancement Grant "Extremes in a Blue World: The Biology of Marine Mammals at the Smithsonian"	\$400
2021 co-PI NSF OISE Award #2106909 "IRES Track 1: The long-term impacts of extreme climate events on the behavioral ecology, fitness and population viability in wild bottlenose dolphins, Australia"	\$299599
2017 Duke Data Expeditions Grant "Satellite Tagging Records of Deep Divers off Cape Hatteras, North Carolina"	\$1500
2016 Duke Data Expeditions Grant "Shark Bay Dolphin Behavior & Distribution in Response to Ecotourism"	\$1500
2016 NSF Graduate Research Opportunities Worldwide (Australia) "Next-generation sequencing of the bottlenose dolphin mitochondrial genome to investigate matrilineal influence on fitness via group living tradeoffs"	\$12500
2015 Duke Data Expeditions Grant "Chimpanzees and Dolphins: Evolutionary Doppelgängers"	\$1500

FELLOWSHIPS AND AWARDS

2018 Duke Summer Research Fellowship	\$5500
2015 Duke International Dissertation Research Travel Award	\$2000
2017 Duke Mary Derrickson McCurdy Writing Fellowship	\$33681
2013 Robert W. Safrit Jr. Fellowship	\$3500
2013 NSF Graduate Research Fellowship Program	\$96000
2010 Georgetown Biology Medal	

2010 Outstanding Senior Thesis Presentation
2007-2010 Howard Hughes Undergraduate Research Scholar

\$10000

PUBLICATIONS

^ denotes undergraduate coauthor

16. McEntee, M.H.F., **Foroughirad, V.**, Krzyszczyk, E. & J. Mann. 2023. Sex bias in mortality risk varies with age and sex specific selection pressures across the lifespan of bottlenose dolphins. *Proc B*
15. Crystal-Ornelas, R., Edwards, B., Hébert, K., Hudgins, E.J., Sánchez-Reyes, L.L., Scott, E.R., Grainger, M., **Foroughirad, V.**, Binley, A., Brookson, C., Gaynor, K., Shafiei Sabet, S., Güncan, A., Hillemann, F., Weierbach, H., Gomes, D.G.E., Braga, P.H.P. 2023. Not just for programmers: How GitHub can accelerate collaborative and reproducible research in ecology and evolution. *Methods in Ecology and Evolution*. Preprint: doi:10.31222/osf.io/x3p2q
14. ^Dolezal, M., **Foroughirad, V.**, Fish, F., Jacoby, A.M., Collier, M., Murphy, C., Rittmaster, K., Bansal, S., Mann, J. (2023). Some like it hot: Temperature and hydrodynamic factors influence *Xenobalanus globicipitis* attachment to cetaceans. *Marine Mammal Science*. doi: 10.1111/mms.13022
13. **Foroughirad, V.**, Frère, C.H., Levengood, A.L., Kopps, A.M., Krzyszczyk, E. & J. Mann. (2023). Small effects of family size on sociality despite strong kin preferences in female bottlenose dolphins. *Animal Behaviour*. doi:10.1016/j.anbehav.2022.10.011
12. Gomes, D.G.E., Pottier, P., Crystal-Ornelas, R., Hudgins, E.J., **Foroughirad, V.**, Sánchez-Reyes, L.L., Turba, R., Martinez, P.A., Moreau, D., Bertram, M., Smout, C. & K. Gaynor. (2022). Why don't we share data and code? Perceived barriers and benefits to public archiving practices. *Proc B*. doi:10.1098/rspb.2022.1113
11. **Foroughirad, V.**, McEntee, M. H., Kopps, A.M., Levengood, A.L., Frère, C.H & J. Mann. (2022). Reproductive timing as an explanation for skewed parentage assignment ratio in a bisexually philopatric population. *Behavioral Ecology and Sociobiology*. 76, 129. doi:10.1007/s00265-022-03233-2
10. Levengood, A. L., Strickland, K., **Foroughirad, V.**, Mann, J., Cristescu R.H., Krzyszczyk, E.B., Frère, C. (2022). Heterogeneity of resource competition shapes individual variation in dolphin social behavior. *Behavioral Ecology*. Volume 33, Issue 4, July/August 2022, Pages 745–757, doi:10.1093/beheco/arac037
9. Strickland K., Mann J., **Foroughirad V.**, Levengood A.L., Frère C.H. (2021). Maternal effects and fitness consequences of individual variation in bottlenose dolphins' ecological niche. *Journal of Animal Ecology*. 2021; 00:1–13. doi:10.1111/1365-2656.13513
8. Mann, J., **Foroughirad, V.**, McEntee, M.H., Miketa, M.L., Evans, T., Karniski, C.B., Krzyszczyk, E.B., Patterson, EM., ^Strohman, J., Wallen, M.M. (2021). Elevated calf mortality and long-term responses of wild bottlenose dolphins to extreme climate events: Impacts of foraging specialization and human provisioning. *Frontiers in Marine Science*. 8:617550. doi:10.3389/fmars.2021.617550

7. ^Galezo, A., **Foroughirad, V.**, Krzyszczyk, E., Frère, C. & Mann, J. (2020). Juvenile social dynamics reflect adult reproductive strategies in bottlenose dolphins. *Behavioral Ecology*. doi:10.1093/beheco/araa068
6. ^Powell, S.N., Wallen, M.M., Miketa, M.L., Krzyszczyk, E., **Foroughirad, V.**, Bansal, S. and Mann, J., (2019). Sociality and tattoo skin disease among bottlenose dolphins in Shark Bay, Australia. *Behavioral Ecology*. doi:10.1093/beheco/arz207
5. **Foroughirad, V.**, Levensgood, A., Mann, J. & Frère, C. (2019). Quality and quantity of genetic relatedness data affect the analysis of social structure. *Molecular Ecology Resources*. doi:10.1111/1755-0998.13028.
4. Miketa, M., Patterson, EM., Krzyszczyk, E., **Foroughirad, V.**, & Mann, J. (2018) Calf age and sex affects maternal diving behavior in Shark Bay bottlenose dolphins. *Animal Behaviour*. doi:10.1016/j.anbehav.2017.12.023
3. Strickland, K., Levensgood, A., **Foroughirad, V.**, Mann, J., Krzyszczyk, E., & Frère, C. (2017) A framework for the identification of long-term social avoidance in longitudinal datasets. *Royal Society Open Science*. 4(8) doi:10.1098/rsos.170641
2. Karniski, C.B., Patterson, E.M., Krzyszczyk, E., **Foroughirad, V.**, Stanton, M.A. & Mann, J. (2015) A comparison of survey and focal follow methods for estimating individual activity budgets of cetaceans. *Marine Mammal Science*. doi:10.1111/mms.12198.
1. **Foroughirad, V.** & Mann, J. (2013) Long-term Impacts of fish provisioning on the behavior and survival of bottlenose dolphins. *Biological Conservation*. 160:242-249.

Preprints

- Collier, M.A, Jacoby, A., **Foroughirad, V.**, Patterson, E.M., Krzyszczyk, E., Wallen, M.M., Miketa, M., Karniski, C., Wilkin, S., Mann, J., & S. Bansal. *preprint*. Breathing in sync: how a social behavior structures respiratory epidemic risk in bottlenose dolphins. *bioRxiv*, 2023.12.01.569646
- Rankin R.W., **Foroughirad V.**, Krzyszczyk E.B., Frère C.H., Mann J. *preprint*. Changes in Social Position Predict Survival in Bottlenose Dolphins. *bioRxiv*, 2022.08.25.505273. doi:10.1101/2022.08.25.505273

Book chapters

- Foroughirad, V.**, McEntee, M.HF., Mann, J. *in revision*. Causes and consequences of female kinship and social bonding. In *Evolution of Cetacean Societies*, Eds. Foote, A., King, S.L. Garland, E., Croft, D.

Scientific Reports:

- Mann, J. & **Foroughirad, V.** (2016). Data Analysis on Commercial Jetty, Dolphin Interaction Area and Impact on Dolphin Mother-Calf Behavior. Reported Submitted to Shire of Shark Bay and Department of Parks and Wildlife.

Selected Conference Presentations:

^ denotes undergraduate coauthor

^Bock, E., **Foroughirad, V.**, Mann, J. (2023). Effects of sociability on the reproductive success of wild bottlenose dolphins following a marine heatwave. South East and Mid-Atlantic Marine Mammal Symposium, Mobile, AL. March 17th-March 19th

Foroughirad, V., Patterson, E.M., Kopps, A.M., Frère, C., Krzyszczyk E., Mann, J. (2022). Changing rates of tool use in bottlenose dolphins over the course of a long-term study. Society for Marine Mammalogy. Palm Beach, Florida, August 1st-5th *poster*

^Dolezal, M., **Foroughirad, V.**, Jacoby, A.M., Collier, M., ^Murphy, C., Fish, F., Mann, J. (2022) Some like it hot: Temperature and hydrodynamic factors influence *Xenobalanus globicipitis* attachment to cetaceans. Society for Marine Mammalogy. Palm Beach, Florida, August 1st-5th

^Collins-Pisano, C., **Foroughirad, V.**, Krzyszczyk E., Karniski, C., Mann, J. (2021). The Effect of Sex, Age, and Calf Presence on the Rate of Shark Injury in Bottlenose Dolphins (*Tursiops aduncus*). Animal Behavior Society. Virtual, August 3rd-6th

Foroughirad, V., Cioffi, W.R., Swaim, Z.T., Waples, D.M., Foley, H.J., Quick, N.J. & A.J. Read. (2019). Short-finned pilot whale population and social structure off Cape Hatteras, North Carolina, USA. World Marine Mammal Conference, Barcelona, Spain, December 9th-12th.

Foroughirad, V., Levengood, A. L., Krzyszczyk, E., Mann, J., Frère, C.H. (2017). An Application of a Spatially Explicit Null Model to Control for Natal Philopatry When Examining the Effect of Relatedness on Social Associations. Society for Marine Mammalogy Biennial. Halifax, NS, Oct 22nd-27th.

Foroughirad, V. (2014) A synthesis of ecological and anthropogenic contributions to modularity in animal social networks. 51st Annual Meeting of the Animal Behavior Society. Princeton, NJ. August 9th – 13th. *poster*

Foroughirad, V., Stanton, M.A., Krzyszczyk, E., Patterson, E.M., Singh, L.O., Wei, Y., Bejder, L. & J. Mann. (2013) Quantifying disturbance to bottlenose dolphin social networks with increasing tour vessel activity in Shark Bay, Western Australia. 20th Biennial Conference on the Biology of Marine Mammals. Dunedin, New Zealand, December 9th – December 13th.

Foroughirad, V. and Mann, J. (2011) The impact of human provisioning on bottlenose dolphin calf mortality, maternal care, and activity budgets: Do management practices matter? 19th Biennial Conference on the Biology of Marine Mammals. Tampa, FL. November 27th – December 2nd.

TEACHING EXPERIENCE

Instructor of Record

Bio 442 – Data Analysis in R, Georgetown	2020, 2022
Bio 019 – Biology of Marine Mammals, Georgetown	2022
Bio 326 – Animal Behavior, Georgetown	2022

Teaching Assistant

Graduate Teaching Assistant, Marine Megafauna, Duke	2014
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Graduate Teaching Assistant, Marine Mammals, Duke 2018

Data Analysis Workshops

Sociobiology – Early Social Networks and Survival in Chimpanzees 2014
Primate Ecology – Early Social Networks and Survival in Chimpanzees 2015
Marine Mammals – Ecotourism impacts on Social Networks in Bottlenose Dolphins 2016
Marine Mammals – Deep Diving Behavior in Pilot Whales and Beaked Whales 2017

Guest Lectures

Marine Megafauna, Duke -Putting Marine Megafauna in Context 2014
Special Topics in Metapopulations, Duke - Genetic Connectivity 2017
Special Topics in Metapopulations, Duke - Spatial Analyses in R 2017
Marine Mammals, Duke - Social Behavior of Cetaceans 2017
Marine Mammals, Duke - Genetic Data and Social Structure in Cetaceans 2018
Extreme Blue Worlds, Georgetown – Aging, Ranging and Social Networks in R 2019
Marine Mammals, U. Maine – Social Learning in the face of Climate Change 2020

INVITED LECTURES

Johns Hopkins University – Social & Cognitive Origins Group 2023
Future of Foraging – Season 3 Episode 4 2023
Texas A&M – Galveston, Department of Marine Biology 2023
William & Mary, Virginia Institute of Marine Sciences 2023
Old Dominion University, Department of Biology 2023
Jacksonville University, Department of Biology 2023
George Mason University, Department of Biology 2020

SERVICE & OUTREACH

Reviewer: *Behaviour*, *PLoS One*, *Marine Mammal Science*, *Biological Conservation*,
Scientific Reports, *Animal Conservation*, *Tourism in Marine Environments*,
Mammalian Biology, *Behavioral Ecology and Sociobiology*, *Journal of Ethology*,
Animal Behaviour

Animal Behavior Society Genesis Competition Judge 2021
Animal Behavior Society Mentor 2021
Technical Coordinator, Growing Equity in Science and Technology 2017-2018
Co-Coordinator, South East and Mid-Atlantic Marine Mammal Symposium 2017
Georgetown Biology Justice, Equity, Diversity and Inclusion Committee 2021-2023
Western Australia Dept. Parks and Wildlife Public Research Seminar 2022
Skype a Scientist presenter 2022-
Graduate Women in Science Fellowship Reviewer 2023

PROFESSIONAL SOCIETIES

Sigma Xi 2010-
Animal Behavior Society 2010-
Society for Marine Mammalogy 2010-
Society for Open, Reliable, & Transparent Ecology and Evolutionary Biology 2020-