

Anne E. Simonis

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Self-motivated and dedicated ecological researcher with wide-ranging, international experience in research design, implementation, science education and policy. Comfortable in leadership roles with a commitment to mentoring students and supporting diversity in STEM education. Understands and implements the dynamic role of science and technology in policy decision-making. Effective communicator in both professional and informal settings, with an established publication record. Critical thinker, quick learner and insightful information analyst.

Education:

PhD Biol. Oceanography Scripps Institution of Oceanography, UCSD (2017)

Dissertation: "By the Light of the Moon: North Pacific Dolphins Optimize Foraging with the Lunar Cycle", advised by Dr. Simone Baumann-Pickering and Dr. John Hildebrand

B.S. Ecology Minnesota State University, Mankato (2006)

Research Experience:

- Detect, describe and apply machine learning methods to classify biological and anthropogenic signals in passive acoustic recordings
- Quantify relationships of marine mammal acoustic behavior, human activity and oceanography using mixed effects models
- Prepare, mobilize, and service autonomous and ship-based passive acoustics survey equipment
- Conduct visual and acoustic towed array surveys at sea with over 300 days at sea in the California Current, Hawaiian Archipelago, Gulf of Mexico, British Columbia fjords and Galápagos Islands
- Design and supervise authentic high school research experiences for students from diverse backgrounds using combined direct and virtual instruction
- Co-develop with San Diego teachers K12 NGSS-aligned science curricula including authentic data

Professional Experience

Adjunct Biology Professor, San Francisco State University, San Francisco, California (7/2022 – present)

Research Collaborator & Educator, Native Skywatchers (8/2022 – present)

Acoustic Ecologist Ocean Associates: NOAA/NMFS Southwest Fisheries Science Center, Marine Mammal and Turtle Division, La Jolla, CA (5/2019 – present)

Acoustic Ecologist Lynker Technologies: NOAA/NMFS Pacific Islands Fisheries Science Center Cetacean Research Program, Honolulu, HI (11/2018 – 12/2020)

Postdoc. Research Asst Greeneridge Sciences, Santa Barbara, CA (6/2018 – 5/2019)

Citizen Science Consultant National Academy of Sciences, Washington, DC (4-10/2018)

Mirzayan Science & Tech. Fellow National Academy of Sciences, Washington, DC (1-3/2018)

Graduate Research Asst Scripps Institution of Oceanography, La Jolla, California (2011-2017)

Staff Research Associate Scripps Institution of Oceanography, La Jolla, California (2010-11)

Field Biologist Ecuadorian Marine Mammal Foundation, Guayaquil, Ecuador (2009)

Ecologist & Educator Charles Darwin Research Station, Galápagos, Ecuador (9/2007-08)

Teaching Experience:

Seatech Coordinator & Mentor w/Mt Edgumbe High School, Sitka, AK (1/2017 - present)

Ocean Voices Sea & Stars Educator, Native Skywatchers, virtual w/global community (8/2021 - present)

UC Berkeley Fung Fellow Team Mentor, Berkeley, CA (1-5/2021)

Teaching Assistant, Marine Mammal Biology, UCSD, San Diego, CA (1-3/2015)

Lead Environmental Educator Southern Cross High School, Guayaquil, Ecuador (1-9/2009)

Student Mentoring: 2022 SFSU Master's Students (5), 2021 UC Berkeley Fung Fellows (9), Seatech Students (4 current; 32 over 2017-2022)

Language Skills: Proficient conversational Spanish

Peer-Review Contributions

PLOS ONE, Marine Mammal Science, Behavior, ICES Journal of Marine Science, Aquatic Mammals, Marine Environmental Research, Nature Scientific Reports

Invited Lectures and Presentations

SFSU, Rosenberg Institute Seminar	(2/22/2023)
Sir Francis Yacht Club, Yachting Luncheon Seminar	(2/22/2023)
SFSU, Foundations in Interdisciplinary Marine & Estuarine Science Guest Lecture	(9/21/2022)
SFSU, Marine Conservation Seminar Guest Lecture	(4/1/2022)
UCSD, Introduction to Marine Science	(10/29/2021; 2/23/2022)
SACNAS, NOAA Virtual Booth	(10/21/2020)
SFSU, Rosenberg Institute Seminar	(3/4/2020)
Beyond the Golden Gate Research Symposium	(1/20/2020)
UC Berkeley, Marine Mammals Guest Lecture	(11/25/2019)
American Cetacean Society, Cabrillo Marine Aquarium	(9/26/2017)

Selected Publications

1. Krumpel, A., Rice, A., Frasier, K. E., Reese, F., Trickey, J. S., **Simonis, A. E.**, ... & D'Spain, G. L. (2021) Long-Term Patterns of Noise From Underwater Explosions and Their Relation to Fisheries in Southern California. *Journal of the Acoustical Society of America*, 150(3), 1821-1829.
2. McCullough, J.L.K., **Simonis, A. E.**, Sakai, T., & Olson, E. M. (2021) Acoustic classification of false killer whales in the Hawaiian Islands based on comprehensive vocal repertoire. *JASA Express Letters*, 1(7), 071201
3. **Simonis, A. E.**, Trickey, J., Barlow, J., Rankin, S., Urban, J. Rojas-Bracho, L. & Moore, J.E. (2020) Passive Acoustic Survey of Deep-Diving Odontocetes in the California Current Ecosystem 2018: Final Report. *NOAA Tech Memo: NMFS-SWFSC-630*.
4. **Simonis, A. E.**, Forney, K. A., Rankin, S., Ryan, J., Zhang, Y., DeVogelaere, A., ... & Baumann-Pickering, S. (2020). Seal Bomb Noise as a Potential Threat to Monterey Bay Harbor Porpoise. *Frontiers in Marine Science*, 7, 142.
5. **Simonis, A. E.**, Brownell Jr, R. L., Thayre, B. J., Trickey, J. S., Oleson, E. M., Huntington, R., & Baumann-Pickering, S. (2020). Co-occurrence of beaked whale strandings and naval sonar in the Mariana Islands, Western Pacific. *Proceedings of the Royal Society B*, 287(1921), 20200070.
6. **Simonis, A.E.**, Roch, M.A., Baily, B., Barlow, J., Clemesha, R.E.S, Iacobellis, S., Hildebrand, J.A., Baumann-Pickering, S. (2017). Lunar cycles affect common dolphin (*Delphinus delphis*) foraging in the Southern California Bight. *Marine Ecology Progress Series*.
7. Reyes Reyes, M.V., Baumann-Pickering, S., **Simonis, A.E.**, Trickey, J., Melcon, M., Hildebrand, J.A., Iniguez, M. (2017). High-frequency modulated signals recorded off Antarctic area: Are killer whales emitting them? *Australian Acoustics*.
8. Bayless, A.R., Oleson, E.M., Baumann-Pickering, S., **Simonis, A.E.**, Marchetti, J., Martin, S., and Wiggins, S.M. (2017). Acoustically Monitoring the Hawaii Longline Fishery for Interactions with False Killer Whales. *Fisheries Research*, 190, 122-131.
9. Baumann-Pickering, S., **Simonis, A.E.**, Oleson, E. M., Baird, R. W., Roch, M. A., and Wiggins, S. M. (2015). False killer whale and short-finned pilot whale acoustic identification. *Endangered Species Research*, 28(2), 97-108.
10. Rankin, S., Oswald, J. N., **Simonis, A.E.**, and Barlow, J. (2015). Vocalizations of the rough-toothed dolphin, *Steno bredanensis*, in the Pacific Ocean. *Marine Mammal Science*, 31(4), 1538-1548.
11. Samarra, F.I., Deecke, V.B., **Simonis, A.E.** and Miller, P.J., (2015). Geographic variation in the time-frequency characteristics of high-frequency whistles produced by killer whales (*Orcinus orca*). *Marine Mammal Science*, 31(2), 688-706.
12. Baumann-Pickering S., Roch M.A., Brownell Jr R.L., **Simonis A.E.**, McDonald M.A., et al. (2014). Spatio-Temporal Patterns of Beaked Whale Echolocation Signals in the North Pacific. *PLoS ONE*, 9(1)
13. Baumann-Pickering, S., McDonald, M.A., **Simonis, A.E.**, Berga, A.S., Merkens, K.P., Oleson, E.M., Roch, M.A., Wiggins, S.M., Rankin, S., Yack, T.M. and Hildebrand, J.A., (2013). Species-specific beaked whale echolocation signals. *The Journal of the Acoustical Society of America*, 134(3), 2293-2301.
14. Baumann-Pickering, S., **Simonis, A.E.**, Wiggins, S.M., Brownell Jr, R.L. and Hildebrand, J.A., (2013). Aleutian Islands beaked whale echolocation signals. *Marine Mammal Science*, 29(1), 221-227.
15. **Simonis, A.E.**, Baumann-Pickering, S., Oleson, E., Melcon, M.L., Gassmann, M., Wiggins, S.M. and Hildebrand, J.A., (2011). High-frequency modulated signals of killer whales (*Orcinus orca*) in the North Pacific. *The Journal of the Acoustical Society of America*, 130(4), 2322-2322.