

## Scott A. Shaffer, Ph.D.

### Curriculum vitae

#### PERSONAL

Date and Place of Birth: November 1966, San Diego, California, USA

#### Current Appointments:

Professor of Biology	Adjunct Professor	Phone: (408) 924-4871
Dept. of Biological Sciences	Ocean Sciences Dept.	Fax: (408) 924-4840
San Jose State University	University of California	E-mail: scott.shaffer@sjsu.edu
One Washington Square	Long Marine Lab	
San Jose CA 95192-0100 USA	Santa Cruz CA 95060-5730 USA	
OrCID: <a href="https://orcid.org/0000-0002-7751-5059">orcid.org/0000-0002-7751-5059</a>		

#### EDUCATION

1996-00	University of California, Santa Cruz, California	Ph.D.	Biology
1994-96	University of California, Santa Cruz, California	M.Sc.	Marine Science
1988-93	San Diego State University, San Diego, California	B.Sc.	Biology
1984-88	Grossmont College, El Cajon, California		General Education

**Ph.D. Dissertation:** Foraging ecology of Wandering Albatrosses (*Diomedea exulans*): Impacts on reproduction and life history. Advisors: Daniel P. Costa, Henri Weimerskirch, Terrie M. Williams, Kenneth A. Nagy, and Donald A. Croll

**M.Sc. Thesis:** Assessment of physiological and behavioral adjustments in diving and exercise of two cetacean species, *Delphinapterus leucas* and *Tursiops gilli*. Advisors: Daniel P. Costa, Terrie M. Williams, and Sam H. Ridgway

#### FUNDING (underlined awards are through UCSC)

Orben, R.A., Torres, L.G., and **Shaffer, S.A.** (2020) National Fish and Wildlife Foundation, \$216,904.  
Bonisoli Alquati, A., **Shaffer, S.A.**, and Cushing, L. (2020) CSU COAST – GDP, \$20,000  
**Shaffer, S.A.** (2019) College of Science, SJSU, \$2,000  
**Shaffer, S.A.** (2018) RSCA – SJSU, \$6,000  
Torres, L.G., Orben, R.O., **Shaffer, S.A.**, Adams, J. (2017) NOAA – BREP, \$73,051  
**Shaffer, S.A.** (2017) RSCA – SJSU, \$6,000  
**Shaffer, S.A.** (2016) RSCA – SJSU, \$6,000  
**Shaffer, S.A.** (2015) US Fish and Wildlife Service. \$10,000  
**Shaffer, S.A.** (2015) RSCA – SJSU, \$6,000  
Parades, R., Orben, R.A., **Shaffer, S.A.**, and Kitaysky, S. (2014) North Pacific Research Board. \$216,738.  
**Shaffer, S.A.** (2014) RSCA – SJSU. \$4,958  
Young, H.S. and **Shaffer, S.A.** (2013) National Geographic Society. \$13,980  
**Shaffer, S.A.** (2012) CESU – US Fish and Wildlife Service. \$23,500  
**Shaffer, S.A.** and Kelsey, E.M. (2012) CSUPERB. \$11,000  
**Shaffer, S.A.** and Clatterbuck, C.E. (2011) RSCA – SJSU. \$4,949  
**Shaffer, S.A.**, Hazen, E.L. (2011) Pacific Islands Climate Change Cooperative. \$77,867  
**Shaffer, S.A.** (2010) CESU – US Fish and Wildlife Service. \$53,378  
**Shaffer, S.A.** (2010) SJSU/CSU Research Mini-grant. \$4,678  
**Shaffer, S.A.** (2009) National Marine Fisheries Service, NOAA. \$10,000  
**Shaffer, S.A.**, Moore, J.W., Hayes, S.H. (2009) California Sea Grant supplement. \$3,000  
**Shaffer, S.A.** (2009) CESU – US Fish and Wildlife Service. \$29,081  
**Shaffer, S.A.** (2009) National Marine Fisheries Service, NOAA. \$4,000  
Dirzo, R., McCauley, D., Young, H., Raab, T., Mendoza, E., & **Shaffer, S.A.** (2008) Natl. Geogr. Soc. \$15,292  
**Shaffer, S.A.**, Moore, J.W., Hayes, S.H. (2008) California Sea Grant supplement. \$2,000  
Young, L.S., Hyrenbach, K.D., **Shaffer, S.A.**, and Suryan, R.M. (2008) USFWS. \$33,000  
**Shaffer, S.A.** and Henry, R.W. (2008) National Marine Fisheries Service, NOAA. \$32,000  
Costa, D.P. and **Shaffer, S.A.** (2008) Moore Foundation (subcontract from Stanford Univ.). \$539,932

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Costa, D.P. and **Shaffer, S.A.** (2007) Sloan Foundation (subcontract from Stanford Univ.). \$342,227  
Costa, D.P. and **Shaffer, S.A.** (2007) Packard Foundation (as part of subcontract from Stanford Univ.). \$307,848  
**Shaffer, S.A.**, Moore, J. W., Hayes, S. H. (2007) California Sea Grant. \$256,870  
**Shaffer, S.A.** (2007) CESU – US Fish and Wildlife Service. \$26,438  
**Shaffer, S.A.** (2007) National Marine Fisheries Service, NOAA. \$9,000  
Austin, D., Croll, D.A., **Shaffer, S.A.**, Henry, W.R. and Kappes, M.A. (2006) UCSC Packard Endowment. \$10,600  
**Shaffer, S.A.**, Tremblay Y., Costa, D.P., Flint, E.N. and Kappes, M.A. (2006) National Geographic Society. \$18,000  
**Shaffer, S.A.** and Costa, D.P. (2003) Packard Foundation. \$2,500  
Costa, D.P. and **Shaffer, S.A.** (2003) Office of Naval Research. \$56,933  
**Shaffer, S.A.** and Costa, D.P. (2002) Packard Foundation. \$17,790  
Costa, D.P. and **Shaffer, S.A.** (2000) Office of Naval Research. \$175,000  
**Shaffer, S.A.** and Costa, D.P. (1999) National Science Foundation. \$10,000  
Costa, D.P. and **Shaffer, S.A.** (1998) National Science Foundation. \$15,763  
Costa, D.P. and **Shaffer, S.A.** (1998) National Geographic Society. \$16,610  
Costa, D.P. and **Shaffer, S.A.** (1994) Office of Naval Research. \$103,000

### PUBLICATIONS (H-index = 38, i10-index = 64, times cited 6,440+)

#### *Published Peer-reviewed Papers (papers written by students or postdocs I advised are underlined)*

88. Kroeger, C., Crocker, D.E., Orben, R.A., Thompson, D.R., Torres, L.G., Sagar, P., Sztukowski, L.A., Andreise, T., Costa, D.P. and **Shaffer, S.A.** (2020) Similar foraging energetics of two sympatric albatrosses despite contrasting life histories and foraging strategies in the wind. *Journal of Experimental Biology*, recently accepted.
87. Blévin, P., **Shaffer, S.A.**, Bustamante, P., Angelier, F., Picard, B., Herzke, D., Moe, B., Gabrielsen G.W., Bustnes, J.O., and Chastel, O. (2020) Contaminants, prolactin and parental care in an Arctic seabird: Contrasted associations of perfluoroalkyl substances and organochlorine compounds with egg-turning behavior. *General and Comparative Endocrinology*, 113420.
86. Wren, J.L.K., **Shaffer, S.A.**, Polovina, J.J. (2019) Variations in black-footed albatross sightings in a North Pacific transitional area due to changes in fleet dynamics and oceanography 2006-2017. *Deep-Sea Research Part II, Topical Studies in Oceanography* 169-170: 104605 (pp. 1-9).
85. Fleishman, A.B., Orben, R.A., Kokubun, N., Will, A., Paredes, R., Ackerman, J.T., Takahashi, A., Kitaysky, A., **Shaffer, S.A.** (2019) Wintering in the western Subarctic Pacific increases mercury contamination of red-legged kittiwakes. *Environmental Science & Technology* 53(22): 13398-13407.
84. Sequeira, A.M.M., Hays, G.C., Sims, D.W., Eguíluz, V.M., Rodriguez, J., Heupel, M., Harcourt. R., Callich, H., Queiroz, N., Costa, D.P., Fernández-Gracia, J., Ferreira, L.C., Goldsworthy, S.D., Hindell, M., Lea, M-A., Meekan, M., Pagano, A., **Shaffer, S.A.**, Reisser, J., Thums, M., Weise, M.J., Duarte, C.M. (2019) Overhauling ocean spatial planning to improve marine megafauna conservation. *Frontiers in Marine Science* 6: 639 (pp 1-12).
83. Gilmour, M.E., Trefry, S.A., Lamborg, C., Fleishman, A.B., Young, H.S., **Shaffer, S.A.** (2019) Tropical seabirds sample broad scale patterns of marine contaminants. *Science of the Total Environment* 691: 631-645.
82. Cockerham, S., Lee, B., Orben, R.A., Suryan, R.M., Torres, L.G., Warzybok, P., Bradley, R., Jahncke, J., Young, H.S., Ouverney, C., and **Shaffer, S.A.** (2019) Microbial ecology of the western gull (*Larus occidentalis*). *Microbial Ecology* 78: 665-676.
81. Gilmour, M.E., Lavers, J.L., Lamborg, C., Chastel, O., Kania, S.A., **Shaffer, S.A.** (2019) Mercury as an indicator of foraging ecology but not the breeding hormone prolactin in seabirds. *Ecological Indicators* 103: 248-259.
80. Kroeger, C., Crocker, D.E., Thompson, D.R., Torres, L.G., Sagar, P., and **Shaffer, S.A.** (2019) Corticosterone as a behavioral driver and nutrient response in two sympatric albatrosses. *Physiological and Biochemical Zoology* 92(2): 223-238.
79. Harrison, A.-L., Costa, D.P., Winship, A.J., Benson, S.R., Bograd, S.J., Carlisle, A.B., Dewar, H., Dutton, P.H., Jorgensen, S.J., Antolos, M., Kohin, S., Mate, B.R., Robinson, P.W., Schaefer, K.M., **Shaffer, S.A.**, Shillinger,

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- G.L., Simmons, S.E., Weng, K.C., Gjerde, K.M., and Block, B.A. (2018) The political biogeography of migratory marine predators. *Nature Ecology & Evolution* 2(10): 1571-1578.
78. Blévin, P., **Shaffer, S.A.**, Bustamante, P., Angelier, F., Picard, B., Herzke, D., Moe, B., Gabrielsen G.W., Bustnes, J.O., and Chastel, O. (2018) Contaminants and incubation temperature in an Arctic seabird: insight from artificial egg loggers. *Environmental Toxicology and Chemistry* 37: 2881-2894.
77. Gilmour, M.E., Castillo Guerrero, J.A., Fleishman, A., Hernández-Vázquez, S., Young, H.S., and **Shaffer, S.A.** (2018) Plasticity of foraging behaviors in response to diverse environmental conditions. *Ecosphere* 9(7): e02301 (pp. 1-18).
76. Conners, M.G., Goetsch, C., Budge, S.M., Walker, W.A., Mitani, Y., Costa, D.P., and **Shaffer, S.A.** (2018) Fisheries exploitation by albatross quantified with lipid analysis. *Frontiers in Marine Science* 5: 113 (pp. 1-16).
75. Sequeira, A.M.M., Rodríguez, J.P. Eguíluz, V.M., Harcourt, R., Hindell, M., Sims, D.W., Duarte, C.M., Costa, D.P., Fernandez-Gracia, J., Ferreira, L.C., Hays, G.C., Heupel, M.R., Meekan, M.G., Aven, A., Bailleul, F., Baylis, A., Berumen, M.L., Braun, C.D., Burns, J., Caley, M.J., Campbell, R., Carmichael, R.H., Clua, E., Einoder, L., Friedlaender, A., Goebel, M.E., Goldsworthy, S.D., Guinet, C., Gunn, J., Hamer, D., Hammerschlag, N., Hammill, M., Hückstädt, L.A., Humphries, N.E., Lea, M-A., Lowther, A., Mackay, A., McHuron, E., McKenzie, J., McLeay, L., McMahon, C.R., Mengersen, K., Muelbert, M., Pagano, A.M., Page, B., Queiroz, N., Robinson, P.W., **Shaffer, S.A.**, Shivji, M., Skomal, G.B., Thorrold, S.R., Villegas-Amtmann, S., Weise, M.J., Wells, R., Wetherbee, B., Wiebkin, A., Wienecke, B., Thums, M. (2018) Convergence of marine megafauna movement patterns in coastal and open oceans. *Proceedings of the National Academy of Sciences* 115 (12): 3072-3077.
74. Taylor, G.T., Ackerman, J.T., and **Shaffer, S.A.** (2018) Egg turning behavior and incubation temperature in Forster's terns in relation to mercury contamination. *PLoS ONE* 13: e0191390 (pp. 1-12).
73. Wilkinson, B.P., Jahncke, J., Warzybok, P., Bradley, R.W., and **Shaffer, S.A.** (2018) Variable utilization of shelf break associated habitats by chick-brooding rhinoceros auklets in the California Current system. *Marine Ecology Progress Series* 590: 211-226.
72. Orben, R.A., Kokubun, N., Fleishman, A., Will, A., Yamamoto, T., **Shaffer, S.A.**, Paredes, R., Takahashi, A., Kitaysky, A. (2018) Persistent annual migration patterns of a specialist seabird. *Marine Ecology Progress Series* 593: 231-245.
71. **Shaffer, S.A.**, Cockerham, S., Warzybok, P., Bradley, R.W, Jahncke, J., Clatterbuck, C.A., Lucia, M., Jelincic, J., Cassell, A., Kelsey, E.C., and Adams, J. (2017) Population-level plasticity in foraging behavior of western gulls (*Larus occidentalis*). *Movement Ecology* 5: 27 (pp. 1-13).
70. Antolos, M., **Shaffer, S.A.**, Weimerskirch, H., Tremblay, Y., and Costa, D.P. (2017) Foraging behavior and energetics of albatrosses in contrasting breeding environments. *Frontiers in Marine Science* 4: 414 (pp. 1-12).
69. Clatterbuck, C.A., Young, L.C., VanderWerf, E.A., Naiman, A.D., Bower, G.A., and **Shaffer, S.A.** (2017) Data loggers in artificial eggs reveal egg turning behavior varies on multiple ecological scales in seabirds. *Auk* 134: 432-442.
68. Thorne, L.H., Conners, M.G., Hazen, E.L., Bograd, S.J., Antolos, M., Costa, D.P., and **Shaffer, S.A.** (2016) Effects of El Niño-driven changes in wind patterns on North Pacific albatrosses. *Journal of the Royal Society Interface* 13: 20160196 (pp. 1-13).
67. Hays, G.C., Ferreira, L.C., Sequeira, A.M.M., Meekan, M.G., Duarte, C.M., Bailey, H., Bailleul, F., Bowen, W.D., Caley, M.J., Costa, D.P., Eguíluz, V.M., Fossette, S., Friedlaender, A.S., Gales, N., Gleiss, A.C., Gunn, J., Harcourt, R., Hazen, E.L., Heithaus, M.R., Heupel, M., Holland, K., Horning, M., Jonsen, I., Kooyman, G.L., Lowe, C.G., Madsen, P.T., Marsh, H., Phillips, R.A., Righton, D., Ropert-Coudert, Y., Sato, K., **Shaffer, S.A.**, Simpfendorfer, C.A., Sims, D.W., Skomal, G., Takahashi, A., Trathan, P.N., Wikelski, M., Womble, J.N., and Thums, M. (2016) Key questions in marine megafauna movement ecology. *Trends in Ecology and Evolution* 31: 463-475.
66. Lascelles, B.G. Taylor, P.R., Miller, M.G.R., Dias, M.P., Opper, S., Torres, L., Hedd, A., Le Corre, M., Phillips,

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- R.A., **Shaffer, S.A.**, Weimerskirch, H., and Small, C. (2016) Applying global criteria to tracking data to define important areas for marine conservation. *Diversity and Distributions* 22: 422-431.
65. Kelsey, E.C., Warzybok, P., Bradley, R., Jahncke, J., and **Shaffer, S.A.** (2016) Environmental temperatures, artificial nests, and incubation of Cassin's Auklet. *Journal of Wildlife Management* 80: 292-299.
64. Gutowsky, S.E., Leonard, M.L., Conners, M.G., **Shaffer, S.A.**, and Jonsen, I.D. (2015). Individual-level variation and higher-level interpretations of space use in wide-ranging species: An albatross case study of sampling effects. *Frontiers in Marine Sciences* 2: 3 (pp. 1-17).
63. Orben, R.A., Paredes, R., Irons, D.B., Roby, D.D., and **Shaffer, S.A.** (2015) Body size affects individual winter foraging strategies of thick-billed murres in the Bering Sea. *Journal of Animal Ecology* 84: 1589-1599.
62. Thorne, L.H., Hazen, E.L., Bograd, S.J., Foley, D.G., Conners, M.G., Kappes, M.A., Kim, H.M., Tremblay, Y., Costa, D.P., and **Shaffer, S.A.** (2015) Foraging behavior links climate variability and reproduction in North Pacific albatrosses. *Movement Ecology* 3: 27 (pp. 1-15).
61. Orben, R.A., Paredes, R., Roby, D.D., Irons, D.B., and **Shaffer, S.A.** (2015) Wintering North Pacific black-legged kittiwakes balance spatial flexibility and consistency. *Movement Ecology* 3: 36 (pp. 1-14).
60. Conners, M.G., Hazen, E.L., Costa, D.P., and **Shaffer, S.A.** (2015) Shadowed by scale: subtle behavioral niche partitioning in two sympatric, tropical breeding albatross species. *Movement Ecology* 3: 28 (pp. 1-20).
59. Osterback, A-M.K, Frechette, D.M., Hayes, S.A., **Shaffer, S.A.**, and Moore, J.W. (2015) Long-term shifts in anthropogenic subsidies to gulls and implications for an imperiled fish. *Biological Conservation*, 191: 606-613.
58. Kappes, M.A., **Shaffer, S.A.**, Tremblay, Y., Foley, D.G., Palacios, D.M., Bograd, S.J., and Costa, D.P. (2015) Reproductive constraints influence habitat accessibility, segregation, and preference of sympatric albatross species. *Movement Ecology* 3: 34 (pp. 1-24).
57. Frechette, D.M., Osterback, A-M.K, Hayes, S.A., Moore, J.W., **Shaffer, S.A.**, Pavelka, M., Clark Winchell, C., and Harvey, J.T. (2015) Assessing the relationship between gulls *Larus* spp. and Pacific salmon in central California using radiotelemetry. *North American Journal of Fisheries Management* 35: 775-788.
56. Thompson, D.R., Torres, L.G., Taylor, G.A., Rayner, M.J., Sagar, P.M., **Shaffer, S.A.**, Phillips, R.A., and Bury, S.J. (2015) Stable isotope values delineate the non-breeding distributions of sooty shearwaters *Puffinus griseus* in the North Pacific Ocean. *Marine Ecology Progress Series* 521: 277-282.
55. Young, H.S.<sup>1</sup>, Maxwell, S.M., Conners, M.G., and **Shaffer, S.A.**<sup>1</sup> (2015) Pelagic marine protected areas protect foraging habitat for multiple breeding seabirds in the central Pacific. *Biological Conservation* 181: 226-235. 1 - equal contribution as senior author.
54. Orben, R.A., Irons, D.B., Paredes, R., Roby, D.D., Phillips, R.A., and **Shaffer, S.A.** (2015) North or south? Niche separation of endemic red-legged kittiwakes and sympatric black-legged kittiwakes during their non-breeding migrations. *Journal of Biogeography* 42: 401-412.
53. Gutowsky, S.E., Gutowsky, L.F.G., Jonsen, I.D., Leonard, M.L., Naughton, M.B., Romano, R.D., and **Shaffer, S.A.** (2014). Daily activity budgets reveal a quasi-flightless stage during non-breeding in Hawaiian albatrosses. *Movement Ecology* 2: 23 (pp. 1-14).
52. Osterback, A-M.K, Frechette, D.M., Hayes, S.A., Bond, M.H., **Shaffer, S.A.**, and Moore, J.W. (2014) Linking individual size and wild and hatchery ancestry to survival and predation risk of threatened steelhead (*Oncorhynchus mykiss*). *Canadian Journal of Fisheries and Aquatic Sciences* 71: 1877-1887.
51. Carey, M.J., Phillips, R.A., Silk, J.R.D., **Shaffer, S.A.** (2014) Trans-equatorial migration of Short-tailed Shearwaters revealed by geolocators. *Emu* 114: 352-359.
50. **Shaffer, S.A.**, Clatterbuck, C.A., Kelsey, E.C., Naiman, A.D., Young, L.C., VanderWerf, E.A., Warzybok, P., Bradley, R., Jahncke, J., Bower, G.A. (2014) As the egg turns: Monitoring egg attendance behavior in wild birds using novel data logging technology. *PLoS ONE* 9: e97898. doi:10.1371/journal.pone.0097898.

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49. Gutowsky, S.E., Tremblay, Y., Kappes, M.A., Flint, E.N., Klavitter, J., Laniawe, L., Christenson, B., Costa, D.P., and **Shaffer, S.A.** (2014). Divergent post-breeding distribution and habitat associations of fledgling and adult black-footed albatrosses *Phoebastria nigripes* in the North Pacific. *Ibis* 156: 60-72.
48. Frechette, D., Osterback, A-M.K., Hayes, S.H., Bond, M.H., Moore, J.W., **Shaffer, S.A.**, and Harvey, J.T. (2013) A bioenergetics approach to assessing potential impacts of avian predation on juvenile steelhead during freshwater rearing. *North American Journal of Fisheries Management* 33: 1024-1038.
47. Osterback, A-M.K, Frechette, D.M., Shelton, A.O., Hayes, S.A., Bond, M.H., **Shaffer, S.A.**, and Moore, J.W. (2013) High predation on small populations: avian predation on imperiled salmonids. *Ecosphere* 4, article 116.
46. Maxwell, S.M., Hazen, E.L., Bograd, S.J., Halpern, B.S., Breed, G.A., Nickel, B., Teutschel, N.M., Crowder, L.B., Benson, S., Dutton, P.H., Bailey, H., Kappes, M.A., Kuhn, C.E., Weise, M.J., Mate, B., **Shaffer, S.A.**, Hassrick, J.L., Henry, R.W., Irvine, L., McDonald, B.I., Robinson, P.W., Block, B.A., and Costa, D.P. (2013) Cumulative human impacts on marine predators. *Nature Communications* 4, 2688-2697.
45. Hazen, E.L., Jorgensen, S., Rykaczewski, R., Bograd, S.J., Foley, D.G., Jonsen, I.D., **Shaffer, S.A.**, Dunne, J., Crowder, L.J., Costa, D.P., Block, B.A. (2013) Predicted habitat shifts in Pacific top predators in a changing climate. *Nature Climate Change* 3: 234-238. DOI: 10.1038/NCLIMATE1686.
44. Frechette, D., Osterback, A-M.K., Hayes, S.H., Bond, M.H., Moore, J.W., **Shaffer, S.A.**, and Harvey, J.T. (2012) Assessing avian predation of juvenile salmonids using PIT tag recoveries and mark-recapture methods. *North American Journal of Fisheries Management* 32: 1237-1250.
43. Rayner, M.J., Taylor, G.A., Gummer, H.D., Phillips, R.A., Sagar, P.M., **Shaffer, S.A.**, and Thompson, D.R. (2012) The breeding cycle, year-round distribution and activity patterns of the endangered Chatham Petrel (*Pterodroma axillaris*). *Emu* 112: 107-116.
42. Costa, D.P. and **Shaffer S.A.** (2012) Seabirds and Marine Mammals. In *Metabolic Ecology: A scaling approach* (R.M. Sibly, J.H. Brown, and A. Kodric-Brown, Eds). Wiley & Sons, Ltd, West Sussex, UK., 225-233.
41. Winship, A.J., Jorgensen, S.J., **Shaffer, S.A.**, Jonsen, I.D., Robinson, P.W., Costa, D.P., and Block, B.A. (2012) State-space framework for estimating measurement error from double-tagging telemetry experiments. *Methods in Ecology and Evolution* 3: 291-302.
40. Block, B.A., Jonsen, I.D., Jorgensen, S.J., Winship, A.J., **Shaffer, S.A.**, Bograd, S.J., Hazen, E.L., Foley, D.G., Breed, G.A., Harrison, A.-L., Ganong, J.E., Swithenbank, A., Castleton, M., Dewar, H., Mate, B.R., Shillinger, G.L., Schaefer, K.M., Benson, S.R., Henry, R.W. and Costa, D.P. (2011) Tracking Apex Marine Predator Movements in a Dynamic Ocean. *Nature* 475: 86-90, doi:10.1038/nature10082.
39. Rayner, M.J., Taylor, G.A., Thompson, D.R., Torres, L., Sagar, P.M., and **Shaffer, S.A.** (2011) Migration and diving activity in three non-breeding Flesh-footed shearwaters *Puffinus carneipes*. *Journal of Avian Biology* 42: 266-270.
38. Rayner, M.J., Hauber, M.E., Steeves, T.E., Lawrence, H.A., Thompson, D.R., Sagar, P.M., Bury, S.J., Landers, T.J., Phillips, R.A., Ranjard, L., and **Shaffer, S.A.** (2011) Contemporary and historical separation of transequatorial migration between genetically distinct seabird populations. *Nature Communications* 2: 332, DOI: 10.1038/ncomms1330.
37. Verrier, D., Guinet, C., Authier, M., Tremblay, Y., **Shaffer, S.A.**, Costa, D.P., Groscolas, R., Arnould, J.P.Y. (2011) The ontogeny of diving abilities in subantarctic fur seal (*Arctocephalus tropicalis*) pups: developmental trade-off in response to extreme fasting? *Functional Ecology* 25: 818-828, DOI: 10.1111/j.1365-2435.2011.01846.x.
36. Žydelis, R, Lewison, R.L., **Shaffer, S.A.**, Moore, J.E., Boustany, A.M., Roberts, J.J., Sims, M., Dunn, D.C., Best, B.D., Tremblay, Y., Kappes, M.A., Costa, D.C., Crowder, L.D. (2011) Dynamic habitat models: Using telemetry data to understand fisheries bycatch. *Proceedings of the Royal Society of London B* 278: 3191-3200, DOI:10.1098/rspb.2011.0330.
35. **Shaffer, S.A.** (2011) A review of seabird energetics using the doubly labeled water method. *Comparative*

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- Biochemistry and Physiology** 158: 315-322.
34. Young, H.S., McCauley, D.J., Dirzo, R., Dunbar, R.D. and **Shaffer, S.A.** (2010) Niche partitioning among and within sympatric tropical seabirds revealed by stable isotope analysis. **Marine Ecology Progress Series** 416: 285-294.
  33. Raymond, B., **Shaffer, S.A.**, Sokolov, S., Woehler, E., Costa, D.P., Einoder, L., Hindell, M., Hosie, G., Pinkerton, M., Sagar, P.M., Scott, D., Smith, A., Thompson, D.R., Vertigan, C., Weimerskirch, H. (2010) Winds and prey availability determine shearwater foraging distribution in the Southern Ocean. **PLoS ONE** 5: e10960, (pp. 1-14).
  32. Kappes, M.A., **Shaffer, S.A.**, Tremblay, Y., Foley, D.G., Palacios, D.M., Robinson, P.W., Bograd, S.J., and Costa, D.P. (2010) Hawaiian albatrosses track interannual variability of marine habitats in the North Pacific. **Progress in Oceanography** 86: 246-260.
  31. Young, H.S., **Shaffer, S.A.**, McCauley, D.J., Foley, D.G., Dirzo, R. and Block, B.A. (2010) Resource partitioning by sympatric boobies in the Central Pacific Ocean. **Marine Ecology Progress Series** 403: 291-301.
  30. Young, L.C., Vanderlip, C., Duffy, D.C., Afanasyev, V. and **Shaffer, S.A.** (2009) Bringing home the trash: do differences in foraging lead to increased plastic ingestion in Laysan Albatrosses? **PLoS ONE** 4: e7624, (pp. 1-9).
  29. González-Solís, J. and **Shaffer, S.A.** (2009) Introduction and synthesis: spatial ecology of seabirds at sea. **Marine Ecology Progress Series** 391: 117-120.
  28. Tremblay, Y. Sophie, B., Henry, R.W., Kappes, M.A., Costa, D.P., and **Shaffer, S.A.** (2009). Analytical Approaches to Investigate Seabird-Environment Interactions: a review. **Marine Ecology Progress Series** 391: 153-163.
  27. **Shaffer, S.A.**, Weimerskirch, H., Scott, D., Pinaud, D., Thompson, D.R., Sagar, P.M., Moller, H., Taylor, G.A., Foley, D.G., Tremblay, Y., and Costa, D.P. (2009) Spatio-temporal habitat use by breeding sooty shearwaters (*Puffinus griseus*). **Marine Ecology Progress Series** 391: 209-220.
  26. Weimerskirch, H., **Shaffer, S.A.**, Tremblay, Y., Costa, D.P., Gadenne, H., Kato, A., Ropert-Coudert, Y., Sato, K., Auriolos, D. (2009) Species and sex specific differences in foraging behaviour and foraging zones in two sympatric boobies. **Marine Ecology Progress Series** 391: 267-278.
  25. Adams, J., Scott, D., McKechnie, S., Blackwell, G., **Shaffer, S.A.**, and H. Moller (2009) Effects of geolocation archival tags on reproduction and adult body mass of Sooty Shearwater (*Puffinus griseus*). **New Zealand Journal of Zoology** 36: 355-366.
  24. Costa, D.P. and **Shaffer, S.A.** (2008) Physiological constraints on the foraging ecology and energetics of albatrosses and other large seabirds. 4<sup>th</sup> CPB Meeting in Africa: Mara 2008. Molecules to Migration: The pressures of life (Eds S. Morris & A. Vosloo). Medimond Publishing Co. via Maserati, 40124 Bologna Italy. Pages 497-506.
  23. Suryan, R.M., Anderson, D.J., **Shaffer, S.A.**, Roby, D.D., Tremblay, Y., Costa, D.P., Sato, F., and Ozaki, K. (2008) Wind, waves, and wing loading: Their relative importance to the at-sea distribution and movements of North and Central Pacific albatrosses. **PLoS ONE** 3(12): e4016, (pp. 1-8).
  22. Burger, A.E. and **Shaffer S.A.** (2008) Perspectives in Ornithology: Application of tracking and data-logging technology in research and conservation of seabirds. **Auk** 125(2): 253-264.
  21. Robinson, P.W., Tremblay, Y., Antolos, M., Crocker, D.E., Kuhn, C.E., **Shaffer S. A.**, Simmons, S., and Costa, D.P. (2007) A comparison of ARGOS-tracking-based indirect measures of foraging behavior. **Deep-Sea Research II** 54: 356-368.
  20. Angelier, F., **Shaffer, S.A.**, Weimerskirch, H., Trouvé, C. and Chastel, O. (2007) Corticosterone and foraging behaviour in a pelagic seabird. **Physiological and Biochemical Zoology** 80: 283-292.

## Scott A. Shaffer, Ph.D.

### Curriculum vitae

19. **Shaffer, S. A.**, Tremblay, Y., Weimerskirch, H., Scott, D., Thompson, D.R., Sagar, P.M., Moller, H., Taylor, G.A., Foley, D.G., Block, B.A., and Costa, D.P. (2006) Migratory shearwaters integrate oceanic resources across the Pacific Ocean in an endless summer. *Proceedings of the National Academy of Sciences USA* 103: 12799-12802.
18. Angelier, F., **Shaffer, S.A.**, Weimerskirch, H., and Chastel, O. (2006) Effect of age, breeding experience and senescence on corticosterone and prolactin levels in a long-lived seabird: the wandering albatross. *General and Comparative Endocrinology* 149: 1-9.
17. **Shaffer, S.A.**, Gabrielsen, G.W., Verreault, J. and Costa, D.P. (2006) Validation of water flux and body composition in Glaucous gulls (*Larus hyperboreus*). *Physiological and Biochemical Zoology* 79: 836-845.
16. **Shaffer, S.A.** and Costa, D.P. (2006) A database for the study of marine mammal behavior: Gap analysis, data standardization, and future directions. *IEEE Journal of Oceanic Engineering* 31 (1): 82-86.
15. Tremblay, Y., **Shaffer, S.A.**, Fowler, S.L., Kuhn, C.E., McDonald, B.I., Weise, M.J., Bost, C.-A., Weimerskirch, H., Crocker, D.E., Goebel, M. E., Costa, D. P. (2006) Interpolation of tracking data in a fluid environment. *Journal of Experimental Biology* 209: 128-140.
14. Kuhn, C.E., McDonald, B.I., **Shaffer, S.A.**, Costa, D.P., Barnes, J., Crocker, D.E., and Burns, J. (2006) Diving Physiology and Winter Foraging Behavior of a Juvenile Leopard Seal (*Hydrurga leptonyx*). *Polar Biology* 29: 303-307.
13. **Shaffer, S.A.**, Tremblay, Y., Awkerman, J., Henry, W.R., Teo, S.L.H., Anderson D.J., Croll, D.A., Block, B.A., and Costa, D.P. (2005) Comparison of light- and SST-based geolocation with satellite telemetry in free-ranging albatrosses. *Marine Biology* 147: 833-843.
12. Costa, D.P., Kuhn, C.E., Weise, M.J., **Shaffer, S.A.**, and Arnould, J.P.Y. (2004) When does physiology limit the foraging behaviour of freely diving mammals? In: Animals and Environments (Morris S. and Vosloo A. eds). *Proceedings of the Third International Conference of Comparative Physiology and Biochemistry* 1275C: 359-366.
11. **Shaffer, S.A.**, Costa, D.P., and Weimerskirch, H. (2004) Field metabolic rates of black-browed albatrosses *Thalassarche melanophrys* during the incubation stage. *Journal of Avian Biology* 35: 551-558.
10. **Shaffer, S.A.** (2004) Annual energy budget and food requirements of breeding Wandering Albatrosses (*Diomedea exulans*). *Polar Biology* 27: 253-256.
9. Mabile, G., Boutard, O., **Shaffer, S.A.**, Costa, D.P., and Weimerskirch H. (2004) Patterns of growth and energy expenditure in wandering albatross chicks. *Ibis* 146: 85-94.
8. Arnould, J.P.Y., Luque, S.P., Guinet, C., Costa, D.P., Kingston, J., and **Shaffer, S.A.** (2003) The comparative energetics and growth strategies of sympatric Antarctic and sub Antarctic fur seal pups, at Iles Crozet. *Journal of Experimental Biology* 206: 4497-4506.
7. **Shaffer, S.A.**, Costa, D.P., and Weimerskirch, H. (2003) Foraging effort in relation to the constraints of reproduction in free-ranging albatrosses. *Functional Ecology* 17: 66-74.
6. Weimerskirch, H., **Shaffer, S.A.**, Mabile, G., Martin, J., Boutard, O., Rouanet, J.-L. (2002) Heart rate and energy expenditure of incubating wandering albatrosses: basal levels, natural variation, and the effects of human disturbance. *Journal of Experimental Biology* 205(4): 475-483. (Including Cover Photo).
5. **Shaffer, S.A.**, Costa, D.P., and Weimerskirch, H. (2001) A comparison of methods to evaluate energy expenditure of incubating wandering albatrosses. *Physiological and Biochemical Zoology* 74(6): 823-831.
4. **Shaffer, S.A.**, Costa, D.P., and Weimerskirch, H. (2001) Behavioural factors affecting foraging effort in breeding wandering albatrosses. *Journal of Animal Ecology* 70: 864-874. (Elton Prize winner).
3. **Shaffer, S.A.**, Weimerskirch, H., and Costa, D.P. (2001) Functional significance of sexual dimorphism in wandering albatrosses, *Diomedea exulans*. *Functional Ecology* 15: 203-210. (Including Cover Photo).

## Scott A. Shaffer, Ph.D.

### *Curriculum vitae*

2. Weimerskirch, H., Guionnet, T., Martin, J., **Shaffer, S.A.**, and Costa, D.P. (2000) Fast and fuel-efficient? Optimal use of wind by flying albatrosses. *Proceedings of the Royal Society of London B* 267: 1869-1874.
1. **Shaffer, S.A.**, Costa, D.P., Williams, T.M., and Ridgway, S.H. (1997) Diving and swimming performance of white whales, *Delphinapterus leucas*: An assessment of plasma lactate and blood gas levels and respiratory rates. *Journal of Experimental Biology* 200: 3091-3099. (Including Cover Photo).

#### **Non-peer Reviewed Popular Articles, Reviews, and Technical Reports**

Shaffer, S.A., Orben, R.A., Gutowsky, S.E., and Hyrenbach, K.D. (2018). Population-level assessment of black-footed albatross foraging distributions and habitat use in the central North Pacific. NOAA Technical Memorandum NOS NCCOS.

Keller, K.E., Anders, A.D., **Shaffer, S.A.**, Kappes, M.A., Flint, B., Friedlander, A. (2009) Seabirds. Pp. 235-274. In: Friedlander, A., Keller, K.E., Wedding, L., Clarke, A., Monaco, M. (eds.). 2009. *A Marine Biogeographic Assessment Of The Northwestern Hawaiian Islands*. NOAA Technical Memorandum NOS NCCOS 84. Prepared by NCCOS's Biogeography Branch in cooperation with the Office of National Marine Sanctuaries Papahānaumokuākea Marine National Monument. Silver Springs, MD. 363 pp.

**Shaffer, S.A.** (2008) Albatross flight performance and energetics. In *Albatrosses: Their World, Their Ways* (De Roy, T., Jones, M., and Fitter, J. eds). David Bateman Ltd., Auckland, New Zealand, pp. 152-153.

**Shaffer, S.A.** and Costa D.P. (2004) Tagging of Pacific Pelagics. In *Global Procellariiform Tracking Workshop Report* (ed J. P. Croxall). BirdLife International, Cambridge, page 83.

**Shaffer, S. A.** Costa, D. P., Suryan, R. M., Hyrenbach, K. D. (2004) North Pacific: breeding and non-breeding. In *Global Procellariiform Tracking Workshop Report* (ed J. P. Croxall). BirdLife International, Cambridge, pages 47-49.

Costa, D. P. and **Shaffer, S. A.** (2004) Marine mammal tracking database. In *Global Procellariiform Tracking Workshop Report* (ed J. P. Croxall). BirdLife International, Cambridge, page 92.

**Shaffer, S. A.** (2003) Eye of the albatross: visions of hope and survival by Carl Safina – A review. *Marine Ornithology*, 31: 92.

Weimerskirch H. and **Shaffer, S. A.** (2003) Spying on Tītī at sea – some far out results! Kia Mau Te Tītī Mo Ake Tōnu Atu Tītī Times, 12: 1-2. (Tītī is the Maori name for Sooty Shearwater).

#### **TEACHING EXPERIENCE**

- 2020 **Graduate Seminar in Ecology** (Graduate level) San Jose State University
- 2020 **Physiological Ecology** (Upper Division, Majors) San Jose State University
- 2020 **Physiological Ecology Lab** (Upper Division, Majors) San Jose State University
- 2019 **Conservation Biology** (Upper Division, Majors) San Jose State University
- 2019 **Ecology** (Upper Division, Majors) San Jose State University
- 2019 **Seminar: Biology of Marine Mammals** (Upper Division, Majors) San Jose State University
- 2019 **Physiological Ecology** (Upper Division, Majors) San Jose State University
- 2019 **Physiological Ecology Lab** (Upper Division, Majors) San Jose State University
- 2018 **Conservation Biology** (Upper Division, Majors) San Jose State University
- 2018 **Ecology** (Upper Division, Majors) San Jose State University
- 2018 **Functional Morphology** (Upper Division, Majors) San Jose State University
- 2018 **Science Communication** (Graduate level) San Jose State University
- 2018 **Physiological Ecology** (Upper Division, Majors) San Jose State University
- 2018 **Physiological Ecology Lab** (Upper Division, Majors) San Jose State University
- 2018 **Principles of Biology II** (Lower Division, Majors) San Jose State University
- 2017 **Ecology** (Upper Division, Majors) San Jose State University
- 2017 **Conservation Biology** (Upper Division, Majors) San Jose State University
- 2017 **Functional Morphology** (Upper Division, Majors) San Jose State University
- 2017 **Principles of Biology II** (Lower Division, Majors) San Jose State University

## Scott A. Shaffer, Ph.D.

### *Curriculum vitae*

2017 **Physiological Ecology** (Upper Division, Majors) San Jose State University  
2017 **Physiological Ecology Lab** (Upper Division, Majors) San Jose State University  
2016 **Conservation Biology** (Upper Division, Majors) San Jose State University  
2016 **Ecology** (Upper Division, Majors) San Jose State University  
2016 **Graduate Seminar in Movement Ecology** (Guest lecture), UC Davis  
2016 **Sabbatical Spring semester**  
2015 **Seminar in Spatial Ecology** (Graduate level) San Jose State University  
2015 **Foundations in Biodiversity** (Lower Division, Majors) San Jose State University  
2015 **Functional Morphology** (Upper Division, Majors) San Jose State University  
2015 **Physiological Ecology** (Upper Division, Majors) San Jose State University  
2015 **Physiological Ecology Lab** (Upper Division, Majors) San Jose State University  
2015 **Foundations in Biodiversity** (Lower Division, Majors) San Jose State University  
2014 **Functional Morphology** (Upper Division, Majors) San Jose State University  
2014 **Ecology** (Upper Division, Majors) San Jose State University  
2014 **Physiological Ecology** (Upper Division, Majors) San Jose State University  
2014 **Physiological Ecology Lab** (Upper Division, Majors) San Jose State University  
2014 **Foundations in Biodiversity** (Lower Division, Majors) San Jose State University  
2013 **Functional Morphology** (Upper Division, Majors) San Jose State University  
2013 **Foundations in Biodiversity** (Lower Division, Majors) San Jose State University  
2013 **Seminar in Spatial Ecology** (Graduate level) San Jose State University  
2013 **Physiological Ecology** (Upper Division, Majors) San Jose State University  
2013 **Physiological Ecology Lab** (Upper Division, Majors) San Jose State University  
2012 **Foundations in Biodiversity** (Lower Division, Majors) San Jose State University  
2012 **Physiological Ecology** (Upper Division, Majors) San Jose State University  
2012 **Physiological Ecology Lab** (Upper Division, Majors) San Jose State University  
2011 **Foundations in Biodiversity** (Lower Division, Majors) San Jose State University  
2011 **Physiological Ecology** (Upper Division, Majors) San Jose State University  
2011 **Physiological Ecology Lab** (Upper Division, Majors) San Jose State University  
2010 **Foundations in Biodiversity** (Lower Division, Majors) San Jose State University  
2010 **Foundations in Molecular Biology and Physiology** (Lower Division, Majors) San Jose State University  
2010 **Seminar in Spatial Ecology** (Graduate level) San Jose State University  
2009 **Foundations in Biodiversity** (Lower Division, Majors) San Jose State University  
2009 **Ecology** (Upper Division, Majors) UC Santa Cruz  
2009 **Physiology and Development of Animals and Plants** (Lower Division, Majors) UC Santa Cruz  
2008 **Marine Biology and Ecology** (Upper Division, Majors) CSU San Bernardino  
2008 **General Ecology** (Upper Division, Majors) CSU San Bernardino  
2008 **Comparative Animal Physiology** (Upper Division, Majors) CSU San Bernardino  
2008 **Advanced Topics in Physiology** (Graduate level) CSU San Bernardino  
2007 **Physiology and Development of Animals and Plants** (Lower Division, Majors) UC Santa Cruz  
2006 **Physiology and Development of Animals and Plants** (Lower Division, Majors) UC Santa Cruz  
2006 **Physiology and Development of Animals and Plants** (Lower Division, Majors) UC Santa Cruz  
2005 **Physiology and Development of Animals and Plants** (Lower Division, Majors) UC Santa Cruz  
2005 **Physiology and Development of Animals and Plants** (Lower Division, Majors) UC Santa Cruz  
2005 **Comparative Physiology of Vertebrates** (Upper Division, Majors) UC Santa Cruz  
2004 **Physiology and Development of Animals and Plants** (Lower Division, Majors) UC Santa Cruz  
2004 **Physiology and Development of Animals and Plants** (Lower Division, Majors) UC Santa Cruz  
2003 **Physiology and Development of Animals and Plants** (Lower Division, Majors) UC Santa Cruz  
2003 **Biology and Ecology of Marine Mammals** (Upper Division, Majors) UC Santa Cruz  
2003 **Bioenergetics** (Upper Division, Majors) UC Santa Cruz  
2002 **Bioenergetics** (Upper Division, Majors) UC Santa Cruz  
2001 **Biology and Ecology of Marine Mammals** (Upper Division, Majors) UC Santa Cruz  
2000 **Biology and Ecology of Marine Mammals** (Upper Division, Majors) UC Santa Cruz

## Scott A. Shaffer, Ph.D.

### *Curriculum vitae*

#### ADVISEES AND EXTERNAL REVIEWS

##### ***Graduated or Completed Advisement***

James Castle (2002-07) Master's thesis committee, Sonoma State University  
Dr. Michelle Kappes (2005-09) Doctoral thesis co-adviser, University of California Santa Cruz  
Bill Henry (2005-11) Non-thesis committee Doctoral adviser, University of California Santa Cruz  
Hillary Young (2007-10) Non-thesis committee Doctoral adviser, Stanford University  
Danielle Frechette (2008-10) Master's thesis co-adviser, Moss Landing Marine Labs  
Autumn-Lynn Harrison (2010-12) Doctoral thesis committee, University of California Santa Cruz  
Erica Donnelly (2010-12) Masters thesis committee, Moss Landing Marine Labs  
Jorg Welcker (2009) External Doctoral thesis examiner, Norwegian Polar Institute, Norway  
Caitlin Vertigan (2010) External Doctoral thesis examiner, University of Tasmania, Australia  
Rachael Alderman (2012) External Doctoral thesis examiner, University of Tasmania, Australia  
Geoff Bower (2012) External Doctoral thesis examiner, Stanford University  
Dr. Matt Rayner (2009-11) Postdoctoral co-advisor, San Jose State University and Univ. of California Santa Cruz  
Nathan Jones (2009-12) Masters thesis committee, Moss Landing Marine Labs  
Jeff Troy (2009-13) Doctoral thesis committee, Texas State University, San Marcos  
Tenaya Norris (2010-13) Masters thesis committee, Moss Landing Marine Labs  
Stacy Moskal (2011-13) Masters thesis adviser, San Jose State University  
Dr. Magali Lucia (2013-13) Postdoctoral advisor, University of California Santa Cruz  
Emma Kelsey (2011-14) Masters thesis adviser, San Jose State University  
Corey Clatterbuck (2011-14) Masters thesis adviser, San Jose State University  
Dr. Lesley Thorne (2012-14) Postdoctoral advisor, University of California Santa Cruz  
Melinda Nakagawa (2011-14) Masters thesis committee, Moss Landing Marine Labs  
Sandra Manzel (2012-14) Masters thesis committee, San Jose State University  
Dr. Rachael Orben (2009-14) Doctoral thesis adviser, University of California Santa Cruz  
Dr. Melinda Conners (2009-15) Doctoral thesis adviser, University of California Santa Cruz  
Anne Cassell (2011-16) Masters thesis adviser, San Jose State University  
Harvey Tran (2011-16) Master Arts adviser, San Jose State University  
Lesley Handa (2014-16) Masters thesis committee, San Diego State University  
Dr. Sarah Gutowsky (2012-16) Doctoral co-advisor, Dalhousie University, Canada  
Jennifer Jelincic (2013-16) Masters thesis adviser, San Jose State University  
Tim Walker (2012-16) Masters thesis co-adviser, San Jose State University  
Catherine Yi (2011-16) Masters thesis adviser, San Jose State University  
Emily Moffit (2014-16) Masters thesis committee, San Jose State University  
Greg Taylor (2014-16) Masters thesis adviser, San Jose State University  
Lindsey Broadus (2015-17) Masters thesis adviser San Jose State University  
Bradley Wilkinson (2015-17) Masters thesis adviser San Jose State University  
Susan Cockerham (2014-18) Masters thesis adviser San Jose State University  
Abram Fleishman (2015-18) Masters thesis adviser San Jose State University  
Dr. Morgan Gilmour (2012-18) Doctoral thesis adviser, University of California Santa Cruz  
Dr. Caitlin Kroeger (2013-19) Doctoral thesis adviser, University of California Santa Cruz  
Dylan Projansky (2018-19) Masters thesis adviser San Jose State University  
Allison Harness (2015-19) Masters thesis coadvisor San Jose State University  
Olivia Townsend (2016-19) Masters thesis adviser San Jose State University

##### ***In Progress***

Cole Jower (2017-present) Masters thesis adviser San Jose State University  
Michael McFarlin (2018-present) Masters thesis adviser San Jose State University  
Sean Gee (2018-present) Masters thesis adviser San Jose State University  
Anqi Chen (2018-present) Masters thesis adviser San Jose State University  
Katherine Douglas (2020-present) Masters thesis adviser San Jose State University  
Sarah Hecoeks (2020-present) Masters thesis adviser San Jose State University

## Scott A. Shaffer, Ph.D.

### *Curriculum vitae*

Danielle Devincenzi (2020-present) Masters thesis adviser San Jose State University

Amy Parsons (2020-present) Masters thesis adviser San Jose State University

#### RELEVANT PROFESSIONAL EXPERIENCE

- 2020-pres. Visiting Scientist. Moss Landing Marine Laboratory, Moss Landing, California
- 2017-pres. Professor of Biology. San José State University, San José, California
- 2013-17 Associate Professor of Biology. San José State University, San José, California
- 2012-15 Associate Research Biologist I. University of California, Santa Cruz, California
- 2009-13 Assistant Professor of Biology. San José State University, San José, California
- 2009-13 Adjunct Professor of Biology. Texas State University, San Marcos, Texas
- 2009-12 Assistant Research Biologist IV. University of California, Santa Cruz, California
- 2008-09 Assistant Professor. California State University, San Bernardino, California
- 2006-07 Assistant Research Biologist II. University of California, Santa Cruz, California
- 2004-06 Assistant Research Biologist I. University of California, Santa Cruz, California
- 2000-07 Lecturer in Biological Science. University of California, Santa Cruz, California
- 2000-04 Post Doctoral Researcher. University of California, Santa Cruz, California
- 2000 Biological Consultant. SRS Technologies, Newport Beach, California
- 1997-00 Graduate Student Researcher. University of California, Santa Cruz, California
- 1997 Seasonal Field Biological Technician. U.S. Fish & Wildlife Service, Anchorage, Alaska
- 1994-96 Graduate Student Researcher. University of California, Santa Cruz, California
- 1991-93 Animal Keeper. SAIC, Maritime Services Division, San Diego, California
- 1993 Seasonal Field Biologist. California State University, Long Beach, California
- 1992 Undergraduate Researcher. Bermuda Biological Station for Research, Bermuda
- 1992 Laboratory Technician. San Diego State University, San Diego, California
- 1991-93 Seasonal Field Biologist. Denver Wildlife Research Center, Denver, Colorado
- 1990-91 Seasonal Field Biologist. San Diego State University, San Diego, California
- 1989-90 Assistant Animal Trainer. SAIC, Maritime Services Division, San Diego, California
- 1988-89 Avian Keeper. Sea World Inc., San Diego, California
- 1987-88 Avian Quarantine Specialist. Sea World Inc., San Diego, California

#### HONORS AND AWARDS

- 2018 College of Science Dean's Scholar Award for Research Excellence
- 2016 Awarded sabbatical leave, San Jose State University
- 2013 Provost's University Scholar, San Jose State University
- 2002 Antarctic Service Medal for service in Antarctica, 2002
- 2001 Elton Prize for best paper published by a young investigator in **Journal of Animal Ecology**
- 2000 Annual Outstanding Student Achievement Award, Ocean Sciences Dept., UCSC
- 2000 Best Student Paper, Pacific Seabird Group conference
- 1999 National Science Foundation Doctoral Dissertation Improvement Award
- 1993 Outstanding Biology Undergraduate, Biology Dept., SDSU
- 1993 Graduated with Distinction (GPA 3.5 in major), SDSU
- 1992 National Science Foundation's Research Experience for Undergraduates (REU) fellowship
- 1992 National Deans List
- 1992 Semester Honors, Deans List, SDSU
- 1991 Semester Honors, Deans List, SDSU

#### RESEARCH ACTIVITIES AND FIELDWORK

- 2019 Southeast Farallon Islands, California (May) Foraging ecology and diet of western gulls
- 2018 Southeast Farallon Islands, California (May) Foraging ecology and diet of western gulls
- 2017 Southeast Farallon Islands, California (May) Foraging ecology and diet of western gulls
- 2017 Año Nuevo Island, California (May - June) Foraging ecology and diet of western gulls
- 2016 Southeast Farallon Islands, California (May) Foraging ecology and diet of western gulls
- 2016 Año Nuevo Island, California (May - June) Foraging ecology and diet of western gulls
- 2016 Midway Atoll National Wildlife Refuge (Jan-Feb) Foraging ecology of Hawaiian albatrosses

## Scott A. Shaffer, Ph.D.

### *Curriculum vitae*

- 2015 Ny-Ålesund, Svalbard Archipelago, Norway, (June) Incubation behavior of black-legged kittiwakes
- 2015 Southeast Farallon Islands, California (May) Foraging ecology and diet of western gulls
- 2015 Año Nuevo Island, California (May - June) Foraging ecology and diet of western gulls
- 2014 Southeast Farallon Islands, California (June) Foraging ecology and diet of western gulls
- 2014 Año Nuevo Island, California (April - July) Foraging ecology and diet of western gulls
- 2013-14 Dumont D'Urville Station, Antarctica (Dec-Jan) Incubation behavior and ecology of petrels
- 2013 Southeast Farallon Islands, California (May) Foraging ecology and diet of western gulls
- 2013 Año Nuevo Island, California (April - July) Foraging ecology and diet of western gulls
- 2013 Midway Atoll National Wildlife Refuge, Hawaii (Jan) Foraging ecology of Hawaiian albatrosses
- 2012 Año Nuevo Island, California (April - July) Diet and growth rates of western gulls
- 2012 Midway Atoll National Wildlife Refuge, Hawaii (Jan) Foraging ecology of Hawaiian albatrosses
- 2011 St. Paul Island, Pribilof Islands, Alaska (July) Foraging ecology of black-legged kittiwakes
- 2011 Midway Atoll National Wildlife Refuge, Hawaii (Jan) Foraging ecology of Hawaiian albatrosses
- 2010 Lehua Island, Hawaii (June) Diet and habitat use of tropical boobies
- 2009 Lehua Island, Hawaii (June) Diet and habitat use of tropical boobies, tropicbirds, and shearwaters
- 2007 Palmyra Atoll (May) Diet and habitat use of tropical boobies
- 2006 Midway Atoll, Hawaii (June-July) First flights of fledgling albatrosses
- 2006 Isla San Ildefonso, Baja, Mexico (Mar) Foraging energetics and ecology of brown and blue-footed boobies
- 2006 Tern Island, Northwest Hawaiian Islands (Jan-Feb) Energetics and ecology of Hawaiian albatrosses
- 2005 Codfish Island, Southern New Zealand (Nov-Dec) Migration of sooty shearwaters
- 2005 Codfish Island, Southern New Zealand (Jan-Feb) Migration of sooty shearwaters
- 2003 Snares Island, Southern New Zealand (Nov-Dec) Foraging ecology of sooty shearwaters
- 2003 Snares Island, Southern New Zealand (Feb-Mar) Foraging ecology of sooty shearwaters
- 2003 Guadalupe Island, Baja California, Mexico (Jan) Foraging ecology of Laysan albatrosses
- 2002 Western Antarctic Peninsula region (Jul-Sep) Foraging ecology and physiology of crabeater seals
- 2002 Ny-Ålesund, Svalbard Archipelago, Norway (Jun-Jul) Physiology of glaucous gulls
- 2001 Amsterdam Island, Southwestern Indian Ocean (Jan-March) Ecology of yellow-nosed albatrosses
- 2000 San Miguel Island, Channel Islands, California (Aug) Monitoring impact of sonic blasts California sea lions
- 1999 Kerguelen Islands, Indian Ocean (Nov-Dec) Ecological energetics of black-browed albatrosses
- 1998-99 Crozet Islands, Indian Ocean (Dec-Feb) Foraging ecology and energetics of wandering albatross
- 1998 Crozet Islands, Indian Ocean (Jan-April) Foraging ecology and energetics of wandering albatross
- 1997 Naked Island, Prince William Sound, Alaska (Jun-Aug) Population monitoring of pigeon guillemots
- 1996 San Clemente Island, 1996 Channel Islands, California (Jul-Nov) Diving physiology of white whales
- 1992 Ferry Reach, St. Georges, Bermuda (Sep-Dec) Ecological physiology of corals

### **SYNERGISTIC ACTIVITIES**

- 2020 Co-chaired themed symposium, Pacific Seabird Group annual meeting, Portland, Oregon
- 2019-20 Chair, Retention, Tenure, and Promotion Committee, Biological Sciences, SJSU
- 2018 Chair, faculty search for Marine Biologist, Dept. of Biological Sciences, San Jose State University
- 2017 Chair, faculty search for Evolutionary Ecologist, Dept. of Biological Sciences, San Jose State University
- 2017 Co-chaired themed symposium, Pacific Seabird Group annual meeting, Tacoma, Washington
- 2015 Chair, faculty search for Biostatistician, Department of Biological Sciences, San Jose State University
- 2015 Chair, local organizing committee of 42<sup>nd</sup> Annual Pacific Seabird Group meeting in San Jose, CA.
- 2013-18 Contributing Editor for Marine Ecology Progress Series
- 2012 Co-chaired themed symposium, Pacific Seabird Group annual meeting, Honolulu, Hawaii
- 2010 Co-chaired workshops on seabird tracking, First World Seabird Conference, Victoria BC, Canada
- 2009 Co-edited themed volume of Marine Ecology Progress Series (v. 391)
- 2009 Public Outreach - Science officer for Seymour Discovery Center, Long Marine Lab, Santa Cruz
- 2008 Organizing committee for 3<sup>rd</sup> International Symposium on Biologging Science
- 2008 Public outreach with National Geographic Magazine photographer, Santa Cruz
- 2007 Pacific Seabird Group Conference organizing committee
- 2007 Pacific Seabird Group Conference Symposium organizer and Session Chair
- 2007 Collaborated with writer and photographer on feature for National Geographic Magazine (Dec 2007)

## Scott A. Shaffer, Ph.D.

### *Curriculum vitae*

- 2006-07 Assisted USFWS Biologists with the creation and draft of Albatross Action Plan published by USFWS
- 2006-08 Assisted TOPP Education and Outreach efforts to increase web traffic on TOPP website
- 2002-08 Given several lectures to local birding and naturalist organizations

### **PROFESSIONAL SOCIETIES, COMMITTEE SERVICE, AND PERMITS HELD**

- Ecological Society of America (1999-2017)
- Pacific Seabird Group (1995-present)
- North Pacific Albatross Working Group (2001-present)
- American Ornithologist Union (1999-2012)
- Institutional Animal Care and Use Committee, UCSC (1998-2006)
- Federal Master Bird Banding, Auxiliary Marking, and Salvage permits (2006-present)
- SJSU Biology Department Retention, Tenure, and Promotion committee (2014-15, 2018-present)
- Council on Ocean Affairs, Science and Technology (COAST), San Jose State University Rep (2010-present)
- Campus Planning Board, San Jose State University (2010-present)
- Institutional Animal Care and Use Committee, SJSU, alternate member (2012-present)

### **PRESENTATIONS (Oral presentations only)**

- 2020 Pacific Seabird Group annual meeting. Portland, OR (symposium organizer and presenter)
- 2019 Understanding Avian Incubation – University of Lincoln, Lincoln, UK (presenter – webinar)
- 2018 Animal Tracking Network – IOOS. Santa Cruz, CA (invited speaker)
- 2018 Hopkins Marine Station of Stanford, Pacific Grove, CA (invited seminar speaker)
- 2018 San Jose State University, LASER 2018, CA (invited speaker)
- 2017 San Jose State University, Environmental Studies, CA (invited seminar speaker)
- 2017 University of San Francisco, CA (invited seminar speaker)
- 2017 Cal Poly, San Luis Obispo, CA (invited seminar speaker)
- 2017 Pacific Seabird Group annual meeting. Tacoma, WA (symposium organizer and presenter)
- 2016 Smithsonian Institute, Washington DC (invited seminar speaker)
- 2015 Stony Brook University, Stony Brook, NY (invited seminar speaker)
- 2015 Moss Landing Marine Labs, Moss Landing, CA (invited seminar speaker)
- 2015 Pacific Seabird Group annual meeting. San Jose, CA (presenter)
- 2014 Pew Fellows Program in Marine Conservation annual meeting, Sausalito, CA (invited symposium speaker)
- 2014 MARINE Symposium. Moss Landing Marine Lab, Moss Landing, CA (presenter)
- 2014 Department of Engineering, San Jose State University, San Jose, CA (invited speaker)
- 2013 Pacific Interisland Climate Change Cooperative Symposium. Honolulu, HI (invited speaker)
- 2013 Pacific Seabird Group annual meeting. Portland, OR (presenter and session moderator)
- 2012 Scripps Institute of Oceanography, San Diego, CA (invited seminar speaker)
- 2012 Pacific Seabird Group annual meeting, Honolulu, HI (presenter and session co-convener)
- 2011 Spatial Habitat Modeling of Seabird, BirdLife International. University of Coimbra, Portugal (presenter)
- 2010 First World Seabird Conference. Victoria, BC, Canada (session chair and presenter)
- 2010 Pacific Seabird Group annual meeting. Long Beach, CA (presenter)
- 2010 Santa Clara University, Santa Clara, CA (invited seminar speaker)
- 2009 San Jose State University, San Jose, CA (invited job candidate)
- 2009 Moss Landing Marine Laboratories, Moss Landing, CA (invited speaker)
- 2008 Sitka Whale Fest. Sitka, AK (invited speaker)
- 2008 Third International Science Symposium on Biologging. Asilomar, CA (presenter)
- 2008 4th International Albatross and Petrel Conference, Cape Town, South Africa (session chair and presenter)
- 2008 Camp Ocean Pines, Cambria, CA (invited speaker)
- 2007 Climate Impacts on Oceanic Top Predators (ClioTOP) Conference. La Paz, Mexico (Plenary speaker)
- 2007 University of California, Santa Cruz, CA (invited speaker)
- 2007 California State University, San Bernardino, CA (invited speaker)
- 2007 University of the Pacific, Stockton, CA (invited speaker)
- 2007 California State University, East Bay, Hayward, CA (invited speaker)
- 2007 Memorial University, St. Johns, Newfoundland, CA (invited speaker)

## Scott A. Shaffer, Ph.D.

### *Curriculum vitae*

- 2007 Pacific Seabird Group annual meeting. Asilomar, CA (session chair and presenter)
- 2006 Scripps Institute of Oceanography, San Diego, CA (invited job candidate)
- 2006 North American Ornithological Congress. Veracruz, Mexico (symposium presenter)
- 2006 University of California, Merced, CA (invited speaker)
- 2005 Environmental Consequences of Underwater Sound Conference. Alexandria, VA (presenter)
- 2004 Third International Albatross and Petrel Conference. Montevideo, Uruguay (presenter)
- 2004 Mt. Diablo Audubon Society. Walnut Creek, CA (invited speaker)
- 2004 San Diego State University. San Diego, CA (invited seminar speaker)
- 2004 American Association for the Advancement of Science, Seattle, WA (presenter)
- 2003 Procellariiform Tracking Database Workshop. Cape Town, South Africa (presenter)
- 2003 Environmental Consequences of Underwater Sound Conference. San Antonio, TX (presenter)
- 2003 OBIS – SEAMAP workshop. Duke University, Durham, NC (presenter)
- 2003 California State University Long Beach. Long Beach, CA (invited speaker)
- 2002 Effects of Sound on the Marine Environment. La Jolla, CA (presenter)
- 2002 Effects of Sound on the Marine Environment. San Diego, CA (presenter)
- 2002 University of Alaska. Fairbanks, AK (invited speaker)
- 2002 Pacific Seabird Group annual meeting. Santa Barbara, CA (presenter)
- 2001 University of British Columbia. Vancouver, BC (invited speaker)
- 2001 Southwest Fisheries Science Center, National Marine Fisheries Service. La Jolla, CA (invited speaker)
- 2001 Sonoma State University. Rohnert Park, CA (invited seminar speaker)
- 2000 Norwegian Polar Institute. Tromsø, Norway (invited seminar speaker)
- 2000 University of California Santa Cruz. Santa Cruz, CA (seminar speaker)
- 2000 Second International Albatross and Petrel Conference. Waikiki, HI (presenter)
- 2000 Mt. Diablo Audubon Society. Walnut Creek, CA (invited speaker)
- 2000 Pacific Seabird Group annual meeting. Napa, CA (awarded best student presentation)

#### **SERVICE TO SCHOLARLY JOURNALS AND FUNDING AGENCIES**

- 2020 *Frontiers in Ecology and Evolution*, *PLoS One*, *Urban Ecology*, *Journal of Herpetology*, *Journal of Experimental Biology*, *Conservation Letters*, National Science Foundation – OPP.
- 2019 *Journal of Herpetology*, *Marine Ornithology*, *Proceedings of the Royal Society B*, *Biology Letters*, *Animals*, *Journal of Experimental Marine Biology and Ecology*, *Marine Ornithology*, National Science Foundation – two Polar Programs grant reviews.
- 2018 *Trends in Ecology & Evolution*, *Journal of Animal Ecology*, *Ibis*, *Functional Ecology*, *Journal of Ornithology*, *Marine Biology*, *Journal of Animal Ecology*, *Frontiers in Marine Science*, NERC grant proposal reviewer, Contributing Editor for *Marine Ecology Progress Series*.
- 2017 *Emu*, *Philosophical Transactions of the Royal Society of London B*. Contributing Editor for *Marine Ecology Progress Series*.
- 2016 *Proceedings of the National Academy of Science*, *Scientific Reports*, *Functional Ecology*, *Current Biology*, *Marine Biology*, external examiner of doctoral thesis, Contributing Editor for *Marine Ecology Progress Series*.
- 2015 *Proceedings of the Royal Society B*, *Movement Ecology*, *Journal of Animal Ecology*, *Endangered Species Research*, *Scientific Reports*; Grant reviews: NSF – Polar Programs, Contributing Editor for *Marine Ecology Progress Series*
- 2014 *Proceedings of the National Academy of Science*, *Functional Ecology*, *Royal Society Open Science*, *Ecology*, *Journal of Avian Biology*, *PLoS One*, *Scientific Reports*, *Journal of Animal Ecology*, *Proceedings of the Royal Society*, *Journal of Ornithology*, *Trends in Ecology and Evolution*, Contributing Editor for *Marine Ecology Progress Series*
- 2013 *Proceedings of the Royal Society of London B*, *PLoS One*, *Journal of Avian Biology*, *Marine Ecology Progress Series*, *Fisheries Oceanography*, *Ecology*, *Methods in Ecology and Evolution*
- 2013 Contributing Editor for *Marine Ecology Progress Series*
- 2012 *Proceedings of the Royal Society Interface*, *Proceedings of the Royal Society of London B*, *Marine Ecology Progress Series*, *Journal of Biogeography*, *Diversity and Distributions*, *PLoS One*; Grant reviewer for *National Geographic Society*, *National Science Foundation*.

**Scott A. Shaffer, Ph.D.**

*Curriculum vitae*

- 2011 Science, Marine Ecology Progress Series, Proceedings of the Royal Society of London, Diversity and Distributions; Grant reviewer for National Science Foundation
- 2011 Invitation to be a Review Editor for Marine Ecology Progress Series
- 2010 Proceedings of the National Academy of Sciences, Biology Letters, PLoS One, Marine Ecology Progress Series, Proceedings of the Royal Society Interface, Functional Ecology, Journal of Experimental Biology, Auk, Polar Biology, Wilson Journal of Ornithology, Grant reviewer for Natural Environmental Research Council (UK)
- 2009 Co-editor of theme section in Marine Ecology Progress Series.
- 2009 Proceeding of the National Academy of Sciences, Oecologia, PLoS One, Proceedings of the Royal Society of London, American Naturalist, Marine Ecology Progress Series, Functional Ecology, Journal of Animal Ecology, Auk, Emu, Marine Biology, Endangered Species Research, Grant reviewer for National Science Foundation and National Geographic Society.
- 2008 Co-editor of theme section in Marine Ecology Progress Series.
- 2008 Marine Ecology Progress Series, Progress in Oceanography, Biological Conservation, Proceedings of the Royal Society of London B, Marine Ornithology, Behavioral Ecology and Sociobiology, Grant reviewer for National Science Foundation, National Geographic Society, and Natural Environmental Research Council (UK).
- 2007 Editorial Board of The Open Zoology Journal.
- 2007 Current Biology, Ibis, Journal of Avian Biology, Physiological and Biochemical Zoology, Journal of Animal Ecology, Functional Ecology, American Naturalist, Endangered Species Research, Ecology, Marine Ecology Progress Series, and Grant reviewer for National Science Foundation, Agence Nationale de la Recherche (ANR, France), National Geographic Society.
- 2006 Functional Ecology, Polar Biology, Journal of Zoology, Journal of Avian Biology, Behavioral Ecology and Sociobiology, and Grant reviewer for National Science Foundation, National Geographic Society, Australian Antarctic Division, and external reviewer for US Fish and Wildlife Service technical report
- 2005 Marine Ecology Progress Series, Journal of Avian Biology, Oecologia, Deep Sea Research, University of California Press, and Grant reviewer for National Science Foundation and National Geographic Society.
- 2004 Marine Biology, Cambridge University Press, Functional Ecology, Journal of Animal Ecology, Marine Ecology Progress Series, and Journal of Avian Biology.
- 2003 Proceedings of the Royal Society of London B and Marine Ecology Progress Series.
- 2002 Physiological and Biochemical Zoology, Proceedings of the Royal Society of London B, and Behavioral Ecology and Sociobiology
- 1999 Journal of Experimental Biology
- 1998 Journal of Experimental Biology