

Michael B. Schrimpf, Ph.D.

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Research Interests

I am broadly interested in how birds are distributed across land- and seascapes, and I use that information to measure how their populations change and their communities are structured as those distributions are impacted by humans. Much of my research involves adapting “citizen science” data to address these questions, including studying how those data compare to more traditional forms of data collection. These projects range from mapping distributions of Antarctic and Southern Ocean seabirds to understanding how the decrease in human activity during the COVID-19 pandemic resulted in shifts to avian land use. Fundamentally, I am fascinated by the various reasons why species are distributed where they are, and how new sources of data can expand our knowledge of those patterns to aid in monitoring and conservation.

Educational Background

Ph.D. / Ecology and Evolution, May 2020

Stony Brook University, Stony Brook, NY

Advisor: Dr. Heather Lynch

Dissertation: The distribution and community ecology of breeding birds on the Antarctic Peninsula

M.Sc. / Aquatic and Fishery Sciences, March 2011

University of Washington, Seattle, WA

Advisor: Dr. Julia Parrish

Thesis: Trade-offs in prey quality and quantity revealed through the behavioral compensation of breeding seabirds

B.A. / Biology and German, Magna cum Laude, June 2006

Lawrence University, Appleton, WI

Advisor: Dr. Bart De Stasio

Honors Thesis: The phytoplankton community structure of southern Green Bay: trophic gradient and seasonal dynamics

Selected Honors/Awards

- President’s Award for Excellence in Teaching by a Graduate Student
Stony Brook University (2018)
- Robert R. Sokal Fund for Research in Statistical Biology

- Dept. of Ecology & Evolution, Stony Brook University (2015, 2017)
- Conservation Leadership Award
Dept. of Ecology & Evolution, Stony Brook University (2016)
- Kevin King / John Miller Travel Scholarship; Stony Brook University (2014)
- Dorothy L. Pieper Award; Stony Brook University (2013)
- Best Student Paper; 37th Annual Meeting of the Pacific Seabird Group (2010)
- Best Student Poster; 35th Annual Meeting of the Pacific Seabird Group (2008)
- H. Mason Keeler Endowment for Excellence
School of Aquatic and Fishery Sciences, University of Washington (2007)
- Membership in Phi Beta Kappa (2006)
- Dean's List; Lawrence University (2003-2006)
- Peerenboom Prize Scholarship in the field of Semantics; Lawrence University (2004)
- Trustee Scholarship for academic excellence; Lawrence University (2002)

Publications

Warrington M. H., **M. B. Schrimpf**, P. Des Brisay, M. E. Taylor. & N. Koper. 2022. Avian behaviour changes in response to human activity during the COVID-19 lockdown in the United Kingdom. *Proceedings of the Royal Society B*. 289:20212740. <https://doi.org/10.1098/rspb.2021.2740>

Schrimpf, M. B., P. G. des Brisay, A. Johnston, A. C. Smith, J. Sánchez-Jasso, B. G. Robinson, M. H. Warrington, N. A. Mahony, A. G. Horn, M. Strimas-Mackey, L. Fahrig, & N. Koper. 2021. Reduced human activity during COVID-19 alters avian land use across North America. *Science Advances*. 7:eabf5073. <https://doi.org/10.1126/sciadv.abf5073>

Bates, A., Primack, R., the Pan-Environment Working Group (including **Schrimpf, M. B.**), & C.M. Duarte. 2021. Global COVID-19 lockdown highlights humans as both threats and custodians of the environment. *Biological Conservation*. 263:109175. <https://doi.org/10.1016/j.biocon.2021.109175>

Schrimpf, M. & H. Lynch. 2021. The role of wind fetch in structuring Antarctic seabird breeding occupancy. *Ibis*. <https://doi.org/10.1111/ibi.12910>

Schrimpf, M.B., Che-Castaldo, C. & Lynch, H.J. 2020. Regional breeding bird assessment of the Antarctic Peninsula. *Polar Biol*. 43(2):111-122. <https://doi.org/10.1007/s00300-019-02613-1>

De Stasio, B.T., A.E. Beranek, & **M.B. Schrimpf**. 2018. Zooplankton-phytoplankton interactions in Green Bay, Lake Michigan: Lower food web responses to biological invasions. *Journal of Great Lakes Research*. 44(5):910-923. DOI:[10.1016/j.jglr.2018.05.020](https://doi.org/10.1016/j.jglr.2018.05.020)

Schrimpf, M., R. Naveen, & H. J. Lynch. 2018. Population status of the Antarctic shag *Phalacrocorax (atriceps) bransfieldensis*. *Antarctic Science*. 30(3):151-159. DOI:[10.1017/S0954102017000530](https://doi.org/10.1017/S0954102017000530)

Humphries, G. R. W., R. Naveen, M. Schwaller, C. Che-Castaldo, P. McDowall, **M. Schrimpf**, & H. J. Lynch. 2017. Mapping Application for Penguin Populations and Projected Dynamics (MAPPPD): data and tools for dynamic management and decision support. *Polar Record* 53:160-166. DOI:[10.1017/S0032247417000055](https://doi.org/10.1017/S0032247417000055)

De Stasio, B.T., **M.B. Schrimpf**, & B.H. Cornwell. 2014. Phytoplankton communities in Green Bay, Lake Michigan after invasion by dreissenid mussels: increased dominance by cyanobacteria. *Diversity*. 6: 681-704. DOI:[10.3390/d6040681](https://doi.org/10.3390/d6040681)

Pearson, S.F., P.J. Hodum, T.P. Good, **M. Schrimpf**, & S.M. Knapp. 2013. A model approach for estimating colony size, trends, and habitat associations of burrow-nesting seabirds. *Condor*. 115(2): 356-365.
DOI: [10.1525/cond.2013.110207](https://doi.org/10.1525/cond.2013.110207)

Schrimpf M.B., J.K. Parrish, & S.F. Pearson. 2012. Trade-offs in prey quality and quantity revealed through the behavioral compensation of breeding seabirds. *Marine Ecology Progress Series*. 460: 247-259.
DOI: [10.3354/meps09750](https://doi.org/10.3354/meps09750)

De Stasio, B.T., **M. B. Schrimpf**, A. Beranek, W. Daniels, & E. Hoyer. 2010. Dreissenid driving tests: going the “wrong” way in Green Bay, Lake Michigan. *Verh. Internat. Verein. Limnol.* 30(10): 1540-1544.

De Stasio, B.T., **M.B. Schrimpf**, A.E. Beranek, & W.C. Daniels. 2008. Increased Chlorophyll *a*, phytoplankton abundance, and cyanobacteria occurrence following invasion of Green Bay, Lake Michigan by dreissenid mussels. *Aquatic Invasions*. 3 (1): 21-27. DOI [10.3391/ai.2008.3.1.5](https://doi.org/10.3391/ai.2008.3.1.5)

Selected reports and other manuscripts

Schrimpf, M.B. 2020. The distribution and community ecology of breeding birds on the Antarctic Peninsula. PhD dissertation. Stony Brook University, Stony Brook, NY. 152pp.

Schrimpf, M.B. 2011. Trade-offs in prey quality and quantity revealed through the behavioral compensation of breeding seabirds. Master’s thesis. University of Washington, Seattle, WA. 51pp.

Pearson, S.F., P.J. Hodum, **M. Schrimpf**, J. Dolliver, T.P. Good, & J.K. Parrish. 2009. Rhinoceros Auklet (*Cerorhinca monocerata*) burrow counts, burrow density, occupancy rates, and associated habitat variables on Protection Island, Washington: 2008 research progress report. Washington Department of Fish and Wildlife, Wildlife Science Division, Olympia.

Schrimpf, M. 2006. The phytoplankton community structure of southern Green Bay: trophic gradient and seasonal dynamics. Lawrence University. Baccalaureate Honors Thesis. 76pp.

Anderson, R. & **Schrimpf, M.** 2005. Bacterial abundance, dissolved oxygen, and nutrient concentrations with depth along a south-north transect in the Atlantic Ocean. C-199. Sea Education Association, Woods Hole, MA.

Selected Presentations

Schrimpf, M. Impacts of COVID-19 lockdowns on avian habitat use across Canada and the USA. International Ornithological Virtual Congress. August 17, 2022. [Oral Presentation]

Schrimpf, M. & N. Koper. Lessons learned from lockdowns: how did North American birds respond to decreased human activity during COVID-19? Canadian Parks and Wilderness Society, Manitoba Chapter. November 19, 2021. [Public Lecture]

Schrimpf, M. & N. Koper. Lessons learned from lockdowns: how did North American birds respond to decreased human activity during COVID-19? Nature Guelph Speaker Series. November 18, 2021. [Public Lecture]

Schrimpf, M. & H. Lynch. Range limits, breeding distributions, and the role of stochasticity in structuring the Antarctic Peninsula seabird metacommunity. 3rd World Seabird Conference. 7 October 2021. [Oral Presentation]

Sanderfoot, O. V., **M. Schrimpf** [joint presenter], N. Koper, & B. Gardner. Effects of COVID-19 lockdowns on migratory and backyard birds: A review of research approaches and comparative results. Presented during the symposium: Lessons Learned in Lockdown: Impacts of the COVID-19 pandemic on birds at the virtual joint meeting of the American Ornithological Society and the Society of Canadian Ornithologists-Société des ornithologistes du Canada. 11 Aug 2021. [Oral Presentation]

Schrimpf, M., P. Des Brisay, A. Johnston, A. C. Smith, J. Sánchez-Jasso, B. G. Robinson, M. H. Warrington, N. A. Mahony, A. G. Horn, M. Strimas-Mackey, L. Fahrig, & N. Koper. Reduced human mobility during COVID-19 alters avian land use across North America. Bird Strike Canada Seminar Series, Bird Strike Association of Canada. 28 Jan 2021. [Oral Presentation]

Schrimpf, M. Penguins and petrels: Studying seabird communities in the Antarctic. Westman Naturalists, Brandon, Manitoba. November, 20, 2020. [Public Lecture]

Schrimpf, M. & H. Lynch. Species richness patterns and interactions among Antarctic breeding birds. Pacific Seabird Group, 46th Annual Meeting, Kaua'i, HI. March 1, 2019. [Oral Presentation]

Schrimpf, M. & H. Lynch. Interactions among Antarctic breeding seabirds. 27th International Ornithological Congress. Vancouver, British Columbia. August 22, 2018. [Poster Presentation]

Schrimpf, M. & A. Higgins. Petrels, prions, and penguins: the seabird community of the Southern Ocean. Four Harbors Audubon Society, Setauket, NY. April 24, 2018. [Public Lecture]

Schrimpf, M., C. Che-Castaldo, & H. Lynch. 2016. Mapping Antarctic avian biogeography and species overlap with multi-state occupancy models. 6th North American Ornithological Conference, Washington D.C. August 19, 2016. [Oral Presentation]

Schrimpf, M.B. & H. Lynch. 2015. Accounting for non-detection in Antarctic seabird breeding distributions derived from rapid site visits. 2nd World Seabird Conference, Cape Town, South Africa. [Oral Presentation, recognized in the top-ten student papers]

Schrimpf, M.B. & H. Lynch. 2015. Accounting for non-detection in colonial bird breeding distributions derived from opportunistic site visits. Ecological Society of America, 100th Annual Meeting, Baltimore, MD. August 12, 2015. [Oral Presentation]

Schrimpf, M. 2014. Seabirds: sailors of the natural world. SEA Semester Lecture, Woods Hole, MA, May 5, 2014. [Public Lecture]

Schrimpf, M.B., J.K. Parrish, N.A. Zorich, P.L. Madson, & M.R. Jonas. 2011. Comparison of California Gull (*Larus californicus*) diet at two dams along the mid-Columbia River. Society for Northwestern Vertebrate Biology/Washington Chapter of the Wildlife Society Joint Annual Meeting, Gig Harbor, WA. March 24, 2011. [Oral Presentation]

Schrimpf, M.B. 2011. Life on seabird colonies. Washington Ornithological Society Monthly Meeting, Seattle WA. February 7, 2011. [Oral Presentation]

Schrimpf, M.B. & J.K. Parrish. 2010. The influence of bottom-up physical forcing on the provisioning of alcid chicks. 1st World Seabird Conference, Victoria, BC. September 11, 2010. [Oral Presentation]

Schrimpf, M.B. & J.K. Parrish. 2010. The best of times and the worst of times: the role of extrinsic and intrinsic factors in shaping Common Murre (*Uria aalge*) chick diet. Pacific Seabird Group, 37th Annual Meeting, Long Beach, CA. February 18, 2010. [Oral Presentation, awarded best student paper]

Schrimpf, M.B. & J.K. Parrish. 2008. That fish is so last year! Temporal variation in common murre (*Uria aalge*) chick diets. Pacific Seabird Group, 35th Annual Meeting, Blaine, WA. February 28, 2008. [Poster Presentation, awarded best student poster]

Schrimpf, M.B., B.T. De Stasio & T. Reed. 2007. Unusual shifts in trophic structure following dreissenid invasion of Green Bay, Lake Michigan. American Society of Limnology and Oceanography, Aquatic Sciences Meeting, Santa Fe, NM. February 5, 2007. [Oral Presentation]

Schrimpf, M., Daniels, W., Haas, T., & De Stasio, B.T. 2005. Trophic status of Southern Green Bay: persistence of a trophic gradient and recent changes in relative abundance of cyanobacteria. State of the Lake, 4th Biennial Meeting. Green Bay, WI. November 3, 2005. [Oral Presentation]

Research/Laboratory Background

<u>Southern Ocean seabird distributions and eBird</u> Cornell Lab of Ornithology & Viking Expeditions	(2021-present)
<u>COVID-19 impacts on birds</u> University of Manitoba, Dr. Nicola Koper	(2020-2021)
<u>Antarctic seabird community ecology</u> Stony Brook University, Dr. Heather Lynch	(2013-2020)
<u>Oceanography and marine education</u> Sea Education Association	(2011-2013)
<u>Pacific Northwest seabird colony monitoring</u> Washington Dept. of Fish and Wildlife, Dr. Scott Pearson	(2010-2011)
<u>Seabird foraging ecology</u> University of Washington, Dr. Julia Parrish	(2007-2011)
<u>Freshwater plankton ecology</u> Lawrence University, Dr. Bart De Stasio	(2006-2007)
<u>Assistant Chemistry Stockroom Manager</u> Lawrence University, Dr. Jerrold Lokensgard	(2006-2007)

Teaching and Mentoring

As instructor:

<u>Applied Ecology and Conservation Biology</u> Stony Brook University Undergraduate Biology/Ecology and Evolution (BIO 356/BEE 587)	(2018)
<u>Ecology Laboratory</u> Stony Brook University Undergraduate Biology/Ecology and Evolution (BIO 352/BEE 571)	(2016-2019)
<u>Introduction to Statistical Thinking and Practice</u> Stony Brook University Center for Science and Math Education (CSM 599)	(2015)

As teaching/laboratory assistant:

Chordate Zoology

Christina Giordano, Kristine Seitz; Stony Brook University
Undergraduate Biology (BIO 344) (2019)

Evolution

Dr. Douglas J. Futuyma, Dr. Joshua S. Rest; Stony Brook University
Undergraduate Biology (BIO 354) (2015)

Applied Ecology and Conservation Biology

Dr. Lev Ginzburg; Stony Brook University
Undergraduate Biology/Ecology and Evolution (BIO 356/BEE 587) (2014, 2015)

Ecology Laboratory

Dr. Catherine Graham; Stony Brook University
Undergraduate Biology/Ecology and Evolution (BIO 352/BEE 571) (2013)

DNA and Evolution

Dr. Jon Herron; University of Washington
Honors Arts & Sciences (HA&S 221) (2010)

Aquatic Ecology

Dr. Bart De Stasio; Lawrence University
Biology (BIOL 330) (2005)

Terrestrial Field Ecology

Dr. Jodi Sedlock; Lawrence University
Biology (BIOL 345) (2004)

As mentor:

Undergraduate Mentor; Undergraduate Research & Creative Activities Symposium
Stony Brook University (2017-2018)

Laboratory Watch Officer/Student Project Advisor
Sea Education Association (2011-2013)

Intern Mentor; Howard Hughes Medical Institute Integrative Research Internship Program
University of Washington (2009)

Project Advisor; Bryant Science Fair
Bryant Elementary School (2009)

Academic/Department Service

Dept. of Ecology & Evolution, Stony Brook University

- Graduate Student Organization Senator (2017-2018)
- Preliminary Exam Committee (2017-2018)
- Secretary, Graduate Student Ecology Club (2016-2017)

- Treasurer, Graduate Student Ecology Club (2015-2016)
- Organizer, Weekly Graduate Student Seminar (2014-2015)
- Committee on Academic Honesty (2016)

Lawrence University

- Honor Council (academic ethics board) (Member: 2003-2006, Co-chair: 2004-2006)

Scientific Societies

American Ornithological Society

Pacific Seabird Group

International Ornithologists' Union

Ecological Society of America

Other Experience and Volunteer Roles

Friends of the Ashley Schiff Park Preserve

www.ashleyschiff.org

Education Committee Chair: 2013-2016

President: 2016-2018

eBird – volunteer data reviewer

www.ebird.org

Selected guest classroom presentations at/in:

- North Country Road Middle School, Miller Place, NY
- The Biology and Conservation of Marine Birds, Stony Brook University (MAR 377/578)
- Study design and quantitative methods for resource and environmental management, University of Manitoba, Natural Resources Institute (NRI 7350)
- Ecological Dimensions of Resource and Environmental Management, University of Manitoba, Natural Resources Institute (NRI 7232)

Public lectures aboard Antarctic expedition cruise vessels.

Skype a Scientist participant

<https://www.skypeascientist.com/>

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